

**PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL
COMMITTEE, ODISHA HELD ON 25th FEBRUARY, 2022**

The SEAC met on 25th February, 2022 through video conferencing in Google Meet under the Chairmanship of Sri. B.P. Singh. The following members were present in the meeting.

1. Sri. B. P. Singh	-	Chairman
2. Dr. K. Murugesan	-	Secretary
3. Dr. D. Swain	-	Member
4. Prof. (Dr.) H.B. Sahu	-	Member
5. Prof. (Dr.) P. K. Mohanty	-	Member
6. Sri. J. K. Mahapatra	-	Member
7. Sri. K. R. Acharya	-	Member
8. Prof. (Dr.) B.K. Satpathy	-	Member
9. Dr. K.C.S Panigrahi	-	Member
10. Dr. Sailabala Padhi	-	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 FOR ANUARY SAND QUARRY MINING ON RIVER MAHANADI OVER AN AREA OF 5.059 HA (12.50ACRE) IN VILLAGE PATUGADADHARPUR UNDER BANKI TAHASIL, CUTTACK DISTRICT, ODISHA (FINAL EIA/EMP SUBMITTED) OF SRI PATITA PABAN SWAIN – EC

1. The proposal is for environmental clearance for Anuary Sand Quarry mining on River Mahanadi over an area of 5.059 Ha (12.50Acre) in village Patugadadharpur under Banki Tahasil, Cuttack district, Odisha of Sri Patita Paban Swain.
2. As per EIA Notification dated 14.09.06 and its subsequent amendments S.O.141 (E) on dated 15.1.2016, the project falls under Category “B” under item No-1(a)-‘Mining of Minerals’.
3. The lease Anuary Sand Quarry has been granted by the Tahsildar cum Competent Authority, Banki vide letter no. 54, dtd. 06.01.2020 for the period of five years to Patita Paban Swain, S/o – Pranakrushna Swain, At- Jhanjarmangala, Po-Badambadi, Banki,Cuttack,Orissa-753009 for five years.
4. The ToR for the said project was approved vide letter no. 8394/SEIAA dated 03.06.2020.
5. Public Hearing was conducted on 17.03.2021 at 11.30 AM at Multipurpose Food shelter at Baigani under Anuary Gram panchayat, under banki tahasil of Cuttack district.
6. Baseline data collection was during the period of December 2019 to February 2020.
7. The mining plan has been approved by the Deputy Director Geology, Directorate of Geology, Bhubaneswar, Odisha on dated 25.06.2019.
8. **Location and connectivity** - The project is located in survey of India toposheet no.73-H/7 & between latitude of 20021’33.20” N to 20021’31.20”N and longitudes of 85026’01.90”E to 85026’19.10”E. Baghamari railway station is at a distance of 35Km SE from the project site.

Proceedings of the SEAC meeting held on 25.02.2022 (Old proposals – compliance received)

Environmental Scientist, SEAC

The site is well connected to NH-224 at a distance of 17 Km South & SH at a distance of 9 Km North & it is sufficient for transportation of material and finished product.

9. The total geological reserve has been estimated as 107616 Cum. Similarly, the mineable reserve of river bed sand is worked out to be 97800 Cum. The project has been proposed for a total production of 162900 Cum of Sand (minor minerals) from this Quarry. During the plan period maximum of 32580 Cum of sand will be produced per annum by Open Cast Manual mining method. Excavation & loading of sand into the dumpers and trucks/tractors will be done manually.
10. **Water Requirement** – The total water requirement will be approx, 5.0 KLD for different purposes like Domestic, Dust suppression, plantation purposes.
11. **Power Requirement** - No use of electric power as the operation will be done in day time. However solar lights will be used for day to day living purposes.
12. **Employment Potential** - Total number of employee will be around 48 from which 2nos are supervisory personnel, 2nos are skilled laborers 14 are semi skilled laborers & remaining 30nos are unskilled employed during mining activities..
13. **Greenbelt plantation** – Plantation will be carried out for an area of 0.89Ha. by the lessee in vicinity of the river bank and avenue plantation to be undertaken in consultation with the concerned authority.
14. The project cost is estimated to be Rs. 10 lakhs and cost towards environmental management plan is Rs. 4 lakhs.
15. The Environment consultant **M/s Kalyani Laboratories Pvt. Ltd., Bhubaneswar** along with the proponent has made a presentation on the proposal before the Committee on 22.12.2021.
16. The SEAC in its meeting held on 22.12.2021 decided to take decision on the proposal after receipt of certain information / documents from the proponent.
17. The project 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)	Information such as width of the river, mining area vis-à-vis lease area, no mining zone, distance of lease boundary from river bank distance of major bridge (S) & Highways / Public civil structure / water installation on both side is up stream & downstream in terms of guideline of MoEF & CC on Sand Mining Management of indicating the standard norms against each such above features.	Width of the river-3.0 km Mining area vis-à-vis lease area- The mining area is 5.059 Ha out of which 3.26 Ha is proposed to be under excavation during the lease period. No mining zone: The quarry lease safety zone around the lease area over 0.32 Ha and the area of soil and alluvium over 1.426 ha situated in the southern part will not be mined out. Distance of lease boundary from river bank-0.7 km Distance of major bridge (S) on both upstream side & downside. The distance of major bridge is 4.85km in the upstream side and 18.3 km in the downstream side which area much beyond the stipulated distance mentioned in the guideline of MoEF & CC.

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Environmental Scientist, SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		<p>Distance of Highways-NH-224 is 17km & NH-5 is 34.31 km from the quarry lease area.</p> <p>Distance of public Civil structure- The nearest public place with civil structure is Banki Town which is 10km away from the source.</p> <p>Distance of water installation on both side in upstream-nil & downstream-The nearest water intake installation is at Nara which is 35km from the source.</p> <p>Mining lease area length 0.5 km and width - 0.09km</p>
ii)	The PP had not indicated during presentation about Replenishment study. If they have undertaken, they need to submit a copy of the same. If not, they need to undertake the study in the second year of mining and based on the findings, they shall make course correction in mining in subsequent years on the recommendation of RQP and Mining Plan Approving Authority. This is to be put as a specific condition.	I Sri Patitapaban Swain, Quarry lease holder of Anuray sand sairat hereby undertake to carry out annual replenishment study of river sand in the source as per prescribed guideline of MoEF & CC, Govt of India during the quarry lease period offer execution of the quarry lease and the reports will be submitted to SEIAA, Odisha
iii)	Confirmation of stone patching on river bank with plantation in between indicating the stretch with dimension, leaving the ramp.	Stone patching exists with toe wall all throughout the southern bank with plantation under taken by dept of water Resources more than 20 years back. In some places the plantations area degraded. I Sri Patitapaban Swain, Quarry lease holder of Anuray sand sairat hereby undertake to carry out plantation in the degraded areas of the stone patching in consultation with the Dept of irrigation, Govt of Odisha, for better stability of the river bank within the quarry lease period after execution of the quarry lease.
iv)	Plantation, specific sprinkling arrangement with SOP to mitigate dust emission on haulage road and avenue plantation.	I Sri Patitapaban Swain, Quarry lease holder of Anuray sand sairat hereby undertake to carry out water sprinkling through tractor mounted water tankers on daily basis on the Panchayat road over a length of 500m connecting the source and the R & B road. I also undertake to carry out avenue plantation over this patch of road on both sides using around 500 saplings during the quarry lease period after execution of the quarry lease.
v)	Permission from BDO in case of use of Panchayat Road (if any)	Permission from BDO, Banki for use of the Panchayat road is enclosed.

Proceedings of the SEAC meeting held on 25.02.2022 (Old proposals – compliance received)

Environmental Scientist, SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	for transportation of sand including maintenance of the same by PP.	
vi)	Provision of Bio-Toilet.	I Sri Patitapaban Swain, Quarry lease holder of Anuray sand sairat hereby undertake to provide bio-toilet to the mine workers for their use during the operation of the sand quarry.
vii)	Construction of ramp on the river bank & haulage road (other than village road)	I Sri Patitapaban Swain, Quarry lease holder of Anuray sand sairat hereby undertake that the river bank will not be used for dispatch of river sand from the source and ramp on both sides of the existing Panchayat road over 500m to be used for transportation of river sand will be constructed by me in consultation with the BDO, Banki
viii)	Stone patching with plantation in between on the river bank as required in connection with W.R deptt, Govt of Odisha.	Stone patching exists with toe wall all throughout the southern bank with plantation undertaken by Water Resources more than 20 years back. In some places the plantations area degraded. I Sri Patitapaban Swain, Quarry lease holder of Anuray sand sairat hereby undertake to carry out plantation in the degraded areas of the stone patching in consultation with the Dept of Irrigation, Govt of Odisha, for better stability of the river bank within the quarry lease period after execution of the quarry lease.
ix)	Maintenance of village road as raised during public hearing.	I Sri Patitapaban Swain, Quarry lease holder of Anuray sand sairat hereby undertake to maintain the Panchayat road over a length of 500m connecting the source and the R & B road which will be utilized for transportation and permission of the BDO, Banki is enclosed.
x)	Avenue plantation besides plantations on both sides' village road & haulage road.	I Sri Patitapaban Swain, Quarry lease holder of Anuray sand sairat hereby undertake to carry out avenue plantation on both sides of the existing Panchayat road over a length of 500m connecting the source and the R & B road using around 500 saplings during the quarry lease period after execution of the quarry lease.
xi)	Perennial sprinkling on haulage road to arrest fugitive dust emissions.	I Sri Patitapaban Swain, Quarry lease holder of Anuray sand sairat hereby undertake to carry out water sprinkling through tractor mounted water tankers on daily basis on the Panchayat road perennially over a length of 500m connecting the source and the R & B road to arrest fugitive dust emissions.

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 for the proposal valid upto lease

period with stipulated conditions as per **Annexure – A** and following specific conditions:

- a) Amended EIA Notification dated 25th July, 2018, Guidelines for sustainable sand mining, 2016 and Enforcement and Monitoring Guidelines for Sand Mining, January 2020 of MoEF&CC, Govt. of India shall be adhered to in execution of Mining.

ITEM NO. 02

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. PENGUIN TRADING & AGENCIES LTD FOR RAIKELA AND TANTRA IRON MINES FOR ENHANCEMENT IN PRODUCTION OF IRON ORE FROM 1.080 MTPA TO 2.160 MTPA OVER ML AREA OF 49.372 HA AT VILLAGE RAIKELA AND TANTRA UNDER KOIRA TAHASIL OF DISTRICT - SUNDARGARH OF SRI RAMAN RASHMI NAYAK – EC

1. The proposal is for Environmental Clearance of M/s. Penguin Trading & Agencies Ltd for Raikela and Tantra Iron Mines for enhancement in production of Iron ore from 1.080 MTPA to 2.160 MTPA over ML area of 49.372 ha at village Raikela and Tantra under Koira Tahasil of District - Sundargarh of Sri Raman Rashmi Nayak.
2. The project falls under category “B” or activity 1 (a) - Mining of minerals under EIA Notification dated 14th September 2006 as amended from time to time.
3. Raikela & Tantra Iron Ore Mines of M/s Penguin Trading & Agencies Limited is spread over an area of 49.372 hectare in Raikela & Tantra village under Koida Tehsil of Sundargarh district, Odisha. The lessee has planned to increase the production of Iron Ore from the permitted quantity i.e. 1.080 million TPA to 2.160 Million TPA.
4. Terms of Reference (ToR) has been granted by SEIAA, Odisha vide letter no. 1352/SEIAA, dated 24th May, 2021.
5. Baseline Data was collected from December 2020 to February 2021 (Winter season).
6. The Public Consultation was conducted successfully on 21.10.2021 at 11.00 AM at existing parking area of M/s PTA Limited, Opposite side of Geetarani Mohanty Hutting School under Dengula GP under Koira Block of Sundargarh District.
7. Mining Lease of Raikela and Tantra Iron Mines was granted in favour of Sri Ramji Lal Bathwal for 20 years on 03.12.1986. The lease was transferred to M/s Penguin Trading & Agencies Ltd on 23.06.1991. 1ST Renewal of lease was applied on 22.02.2005.
8. Subsequently, under Section 8(A) of MMDR Act of 12.01.2015, the lease period was extended up to 02.12.2036 and hence supplementary lease deed was executed on 21.07.2016 between Govt. of Odisha and the lessee.
9. The expansion proposal is as follows:

Particulars	Existing Capacity	Additional Capacity	Total Expanded Capacity
Iron Ore	1.080 Million TOA	1.080 Million TPA	2.160 Million TPA
Crushing Plant	250 TPH	150 TPH	400 TPH
Screening Plant	500 TPH	150 TPH	650 TPH

10. The mining operation within the lease area for production of iron ore has started since 27.07.1987.
11. Out of total lease area of 49.372 ha., 48.632 ha. is forest land. MoEF&CC, Govt. of India in two phases has granted diversion of 45.585 ha. excluding safety zone of 3.047 ha. vide letter no. 8-23/2007-FC, dated 13.5.2009. Further on 15.07.2015 vide letter n. F no. 8-23/2007-FC, the lessee has obtained clearance of forest diversion proposal over safety zone area of 3.047 ha. Further, clearance of safety zone for cluster mining over 0.218 ha has been obtained vide letter no. 10F(Cons)25/2020-12478/F&E, BBSR dated 17.08.2020.
12. Raikela & Tantra Iron Ore Mines had obtained Environmental Clearance from MoEF&CC, Govt. of India vide no. **J-11015/169/2007-IA.II(M)**, dated **17.01.2008** for production capacity of 0.378 million TPA. They had obtained revised Environmental Clearance from SEIAA, Odisha for extension of validity period of EC upto 30 years or the life of the mines which ever is less vide letter no. 3429/SEIAA, dated 30.05.2015. They had obtained Environmental Clearance from SEIAA, Odisha for enhancement of production capacity of Iron Ore from 0.378 MTPA to 1.080 MTPA vide letter no. 354/SEIAA, dated 27.12.2012.
13. Raikela & Tantra Iron Ore Mines had obtained Consent to Establish for production of 1.080 Million TPA of Iron ore and 250 TPH & 500 TPH Mobile Crushing & Screening Plant respectively vide letter no. 390/Ind-II-NOC-5628 Dated 09.01.2013. CTE obtained for additional stationary crushing & screening complex of 300 TPH comprising 100 TPH Crushing and 200 TPH Screening Plant vide letter no. 2970/IND-II-CTE-6281 dated 25.03.2019.
14. Consent to Operate has been issued by SPCB, Odisha for the same quantity vide letter no. 3325/IND-I-CON-4573, dated 25.05.2019, valid upto 31.03.2021. The existing capacity of Mineral Processing Plant comprises of 1X150 TPH & 1X100 TPH Crushing and 2X150TPH & 1X200 TPH Screening Plant. CTO for the requisite quantity is renewed on 04.03.2021 vide letter no. 3351/IND-I-CON-4573 and is valid up to 31.03.2026.
15. Forest Clearance (Stage II) obtained vide letter no. 8-23/2007-FC, dated 13.05.2009 over an area of 45.585 ha excluding Safety Zone. Forest Clearance over Safety Zone Area over 3.047 ha vide letter no. 8-23/2007-FC dated 15.07.2015. For change of land use from safety zone to mining, Clearance granted over 0.218 ha under safety zone obtained vide letter no. 10F(Cons)25/2020/12478/F&E dated 17.08.2020.
16. Site Specific Wildlife Conservation plan approved vide letter no. 27551WL-C-SSP-197/10 dated 13.04.2010.
17. Ground Water (48 KLD) renewal obtained for abstraction of 48 KLD vide letter no. CGWA/NOC/MIN/REN/3/2021/6169, dated 10.10.2021 and is valid up to 09.10.2023.
18. Surface Water (300 KLD) allocation of 0.123 cusecs obtained from Department of Water Resources, Govt. of Odisha vide letter no. 8632/WR dated 01.05.2020.
19. Review of the Mining Plan along with Progressive Mine Closure Plan has been approved for the period 2021-22 to 2025-26 vide letter no. RMP/A/19-ORI/BHU/2020-21/2057, dated 06.11.2020.

20. The mine has planned to produce maximum ROM of 2.160 million TPA (1.389 million TPA of +55% grade iron ore and 0.771 million TPA of +45 to +55% grade iron ore) and Setting up of additional one mobile Crushers & one mobile Screening Plants of 150 TPH Capacity each. The planned production target shall be achieved by working in the existing Raikela-Tantra Quarry and by joint mining operation on the northern side of the ML area which is the common boundary with TRB mine of Jindal Steel & Power Limited from 2021-22.
21. The infrastructure facilities such as site office, weigh bridge, rest shed, First-Aid centre, Blasting shed, Security house etc are already made available within the ML area.
22. The Geological Reserve within the lease area is estimated to be 22.16million tonne whereas the Mineable Reserve is 19.94 million tonne. Based on the rated production of mine and mineable reserve, it is estimated that the life of the mine shall be 15 years.
23. Till the end of the life of the mines, an area of 37.770 hectare shall be mined out of 49.372 hectare of ML area.
24. **Location and Connectivity** - The mining lease area is on southern slope of Kadribara Pahar. The general elevation of the ML area ranges between 620m AMSL (Southern Side of the lease) and 840m AMSL (Northern side of the lease). The general gradient is from north to south and gently sloping towards south east part of the leasehold area. The area is featured in Toposheet No 73G/1 bounded by latitude – 21°52' 18.98232" to 21° 53' 00.94342" N and longitude 85°10' 43.37875"to 85° 11' 05.86014" E. It is easily from Tensa town which is connected through Bandhal to Raikela & Tantra public motorable road. The nearest railhead are Barsuan Railway siding & Barbil railway station which are at a distance of 28km (in SW direction) & 43 km away (in SE direction) respectively. Nearest town is at Tensa (3km away in SW direction) where all facilities like medical, postal, education, etc are available. The ML area of **M/s PTAL** is adjacent to five other mining leases namely TRB Iron Ore Mine of M/s Jindal Steel & Power Limited, Tantra Iron Ore Mine of M/s Korp Resources Pvt. Ltd., Raikela Iron Ore Mine of M/s National Enterprises, Raikela Iron Ore Mine of M/s S.N. Mohanty and Raikela Iron ore Mine of Smt. Gitarani Mohanty.
25. **Method of Mining** - Open cast mechanized method of mining with drilling & blasting on double shift basis is proposed to excavate the 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 : 0.119. The average number of working days in a year shall be 300. The mining will be carried out with the deployment of DTH Drill, Excavators, dumpers/tippers & Crushing & Screening Plant.
26. **The** existing dump over an area of 2.275 ha is already been stabilized and reclaimed with coir matting and plantation. The waste to be generated due to the futuristic mining activity shall be used for backfilling which is already in practice. The existing area already backfilled is covering an area of 2.820 ha.
27. **Water Requirement** - The total water requirement shall be 348 m³/day which will be sourced from Karo river & bore well (Ground Source)..
28. The water table of the region is at 615m AMSL and during post monsoon it goes up to 618m AMSL. This fluctuation of water table is proved by the nearby village wells.

The ultimate working depth of the mining will reach upto 630m AMSL. So, there will be no accumulation of water in the proposed pit by the end of the conceptual period.

29. Employment Potential - The expansion of mining activity shall generate direct employment opportunity for 404 nos. and the locals will get priority in appointment.
30. The capital cost of the project shall be Rs. 37,19,83,450.00 (Rupees Thirty-Seven Crore Nineteen Lakhs Eighty-Three Thousand Four Hundred Fifty Only) and the recurring cost shall be Rs.3,35,23,906.00 (Rupees Three Crore Thirty-Five Lakhs Twenty Three Thousand Nine Hundred Six Only) per year. Provisions have been made to spend Rs.120 Lakhs towards capital expenditure and recurring expenditure of Rs. 70.50 lakhs per annum to be incurred towards environmental control measures.
31. The project proponent along with the consultant **M/s Centre for Envotech & Management Consultancy Pvt. Ltd. Bhubaneswar** made a detailed presentation on the proposal on 17.01.2022.
32. The SEAC in its meeting held on 17.01.2022 decided to take decision on the proposal after receipt of certain information / documents from the proponent.
33. The project 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)	“Red Soil” is stated to have been getting deposited on surrounding Agricultural fields damaging the fertility of the land. Since Agricultural land is about 20-21% of the surrounding area, an “SOP” must be in place & submitted for periodical cleaning / removal of the red soil (if any) including de-silting (if any).	Enclosed in Annexure -1
ii)	To arrest ingress / deposit of red soil/tailings and silt in fertile Agricultural land, “Zero Water balance” / “Zero liquid discharge” must be in place and ensured.	Enclosed in Annexure -2
iii)	“Flying Rock” is stated to have been observed during blasting. So, to avoid any threat of safety due to this, an SOP be submitted to this effect in connection with domain expert.	Enclosed in Annexure -3
iv)	Current dump plan and proposed dump plan with adequate justification.	Enclosed in Annexure -4
v)	Compliances to NEERI recommendations.	Enclosed in Annexure -5
vi)	Current EC conditions wise compliance while addressing the concerns raised during verification of Regional Office of MoEF&CC, Govt. of India.	“Current EC conditions wise compliance” is enclosed in Annexure – 6 “Compliance / action taken report on the concerns raised during verification of Regional Office of MoEF & CC, Govt., of India” is enclosed in Annexure

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Environmental Scientist, SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		-7.
vii)	Number of plants in Safety Zone and Dump stabilization plantations be increased with an average of 2500 plants per hectare while maintaining the biological diversity of area.	Enclosed in Annexure -8

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 with stipulated conditions as per **Annexure – B**.

ITEM NO. 03

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF BHAGABANPUR DECORATIVE STONE DEPOSIT FOR PRODUCTION OF DECORATIVE STONE @ 6,000 CUM / ANNUM SPREAD OVER AN AREA OF 17.547 HA. LOCATED AT VILLAGE-BHAGABANPUR, TAHASIL - KUKUDAKHANDI, DIST- GANJAM, ODISHA OF SRI SOBHAN KUMAR MAHAPATRA - EC

1. The proposal is for Environmental Clearance of Bhagabanpur Decorative Stone Deposit for production of Decorative Stone @ 6,000 cum / annum spread over an area of 17.547 Ha. located at Village-Bhagabanpur, Tahasil - Kukudakhandi, Dist- Ganjam, Odisha of Sri Sobhan Kumar Mahapatra.
2. As per the EIA Notification S.O. 1533, dated 14th September 2006 and subsequent amendments, this project falls under Category B (B1) Project or Activity 1(a) Mining of minerals
3. Terms of Reference (ToR) has been granted by SEIAA, Odisha vide letter no. 9232/SEIAA, dated 14th October, 2020.
4. Baseline Data was collected from October 2020 to December 2020 (Post monsoon season).
5. The Public Consultation was conducted successfully on 27.10.2021 at 11.00 AM at Rajib Gandhi Seva Kendra Building at Lanjia Gram Panchayat of Ganjam district.
6. The Bhagabanpur Decorative Stone Deposit over 43.36 acres or 17.547 Ha in village Bhagabanpur under Kukudakhandi Tahasil of Ganjam District, Odisha has been conditionally granted in favor of Sri Sobhan Kumar Mahapatra, Shreenagar Street, 2nd Line, Chatrapur, Ganjam for 30 years by Directorate of Mines, Govt. of Odisha vide terms & conditions letter No 6556/IV(DS)SM-02/2010/S&M, Bhubaneswar dated 05.09.2019.
7. **Location and Connectivity** - The mining lease area is located in Village Bhagabanpur under Kukudakhandi Tahasil of Ganjam District, Odisha and is on Khata No. 215, Plot No. 10, Kissam - Parbat (Abada Ajogya Anabadi) covers under Toposheet No: E45A11 (74A/11). It is bounded by latitude 19⁰19'50.70" to 19⁰20'05.63" N and longitude 84⁰42'56.28" to 84⁰43'15.50" E. Nearest railway station is Berhampur, 11 km away. Nearest airport is Bhubaneswar, 160 km away. Nearest town is Berhampur, 11 km away. Nearest habitation 1.5km away. Medical facilities are available at Kukudakhandi which is about 9km. Nearest Reserve forest is Ramagurha 1km from please area.

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Environmental Scientist, SEAC

8. The ML area exhibits hilly terrain. The entire area is a small Hillock. The general elevation of the ML area ranges from 70m to 185 m AMSL. The overall slope of the hill is towards north-south side of the area. The area is partly overlain by boulders mixed with soil. There is no forest land within the applied mining lease area. No seasonal and perennial nala flows across the ML area.
9. The Mining Plan prepared under Rule – 15 of Granite Conservation & Development Rules, 1999 along with Progressive Mine Closure Plan under Orissa Minor Mineral Concession Rules, 2016 was duly approved by Director of Mines, GoO vide letter no. 1356/DM dated 15.02.2020.
10. The applied mining lease area is a part of the Eastern Ghat Super Group of Archean Deposit of the decorative stone in Odisha. The major rock types are granite, granite gneiss, granitiferous granite geiss, charnockite, khondalite (Quartz-garnet-sillimanite & Schists/gneiss) etc. Decorative stones predominantly constitute quartz, feldspars, pyroxenes, amphiboles, garnets & biotite etc. The applicant intend to mine Charnockite and Granite Gneiss as Decorative Stone.
11. **Method of Mining** - Mining will be carried out in Opencast semi-mechanised method using machineries like Excavator, Line Offset, Compressor, Jack-hammer, Wire ropes, drill rods etc. The height and width of the quarry benches shall be kept at 3 mtr. Mining operation shall be carried out in single shift basis. Handling and loading of different sized blocks to stock yard will be done by hydraulic excavator. Excavator and rear dump truck combination will remove the rejected blocks or mine waste from quarry face to dump yard. Sizing & shaping the block is done by using the chisels, hammers to give the blocks the final dimensions. Transportation of marketable decorative stone block will be done by trailers/lorries/trucks to the respective destinations.
12. **Geological and Mineable Reserves** - The mine has the Geological reserve 16,38,164 cum and mineable reserve of 12,48,940 cum.
13. **Production and waste management details** - It is proposed to excavate 30000 Cum of ROM per annum out of which 6000 Cum shall be Marketable rock and 24000 Cum will be waste in nature. Total mineable reserve as estimated to be 1248940 Cum of Charnockite and Garnetiferous granite. The life of the mine will be 203 years based on the present reserve estimation as per the approved mine plan. An area of 0.067 ha is earmarked for storage of minerals. An area of 0.680 ha is earmarked for storage of waste. 24000 Cum of waste shall be generated per annum. 40% of the total waste generated during the plan period shall be used for road making and maintenance.
14. **Power Requirement** - 225 KVA shall be required which shall be met through DG Set.
15. **Water Requirement** - 2KLD of water shall be required which will be sourced from nearby villages.
16. **Rain Water Harvesting** - Rain water will be diverted to the mined out pits, which will be used for storage of rain water. A part of rain water will be used for dust suppression and green belt. Ground water will be recharged due to natural percolation method in the worked out pits. Rain Water Harvesting potential of the quarry area at the end of plan period = $1.95 \times 10000 \times 0.7 \times 1300 / 1000 = 17,745 \text{ cum / annum}$. After the plan period,

total water requirement of the mine @4 KLD can be met from harvested rain water.

17. **Green Belt**– 0.275 Ha area will be planted in the 5 year plan period. 440 number of saplings will be planted as per the approved mining plan. 1.414 Ha will be planted by the end of conceptual period. Local species will be selected for plantation in consultation with DFO. Road side plantation will be carried out to control soil erosion and air pollution. Post plantation care will be taken properly to achieve Survival rate of 80-85% to maintain suitable growth & tree density.
18. **Employment Potential** - Total number of employee will be around 30 which includes skilled, semi-skilled & unskilled category in the mine.
19. The **project cost** is ` 73.50 lakhs and Environmental Management Cost – 15.5lakhs and recurring cost is 3.85lakhs.
20. The Environment consultant **M/s Centre for Envotech & Management Consultancy Pvt. Ltd. Bhubaneswar** along with the proponent have made a detailed presentation on the proposal before the Committee on 22.12.2021.
21. The SEAC in its meeting held on 22.12.2021 decided to take decision on the proposal after receipt of certain information / documents from the proponent.
22. The project proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	Dump management with detail calculations of waste utilization / inventory / sale including its chemical characteristics be submitted.	Annexure - 1
i)	Water management with rain water harvesting along with calculation be submitted.	Annexure - 2
ii)	Soil profile study undertaken by approved domain expert be submitted.	Annexure – 3
iii)	Silt management including SOP for silt management for desliting of surrounding water body(s) / Agricultural land be submitted.	Annexure - 4
iv)	Proposed “Zero discharge” mechanism be submitted.	Annexure - 2
v)	“NOC” from CGWA / permission from W.R Deptt. Govt. of Odisha for use of ground water be submitted.	Water requirement for the mine will be @4 KLD (Max) and 2 KLD (Average), which will be sourced from nearby villages. Water will be used for domestic, dust suppression and green belt, After operation of mine, rain water accumulated in the mined out pits will meet the water demand of dust suppression & green belt. Only domestic water (1 KLD max) will be sourced from nearby villages. Hence, permission from concerned authority is not

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		necessary.
vi)	Proposed budget for CSR / CER as per the law with due approval of the Govt. authority be submitted.	Capital cost of the project is Rs. 73.50 Lakhs. As per MoEF & CC Om dated 01.05.2018, it is mandatory to spend 2% of the Capital cost for green filed projects. In addition to environment management cost (Rs. 15.5 Lakhs as capital cost and Rs. 3.85 Lakhs/annum recurring cost), money earmarked on CER head (i.e Rs. 1.47 Lakhs) will be spent separately for social development activities based on the issues raised in public Consultation and other additional developmental activates like providing drinking water facility, sanitation facility, education, health and skill development to local youths etc.
vii)	Certificate from the concerned mining officer that there is no mine within 500m radius of proposed quarry.	Annexure - 5
viii)	Certificate from the concerned DFO that there is no forest land involved in the lease area.	Annexure - 6
ix)	Details of waste management along with the composition of waste is to be provided.	Annexure - 1

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 with stipulated conditions as per **Annexure – C**.

ITEM NO. 04

PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR BIPULINGI STONE QUARRY OVER AN AREA 8.097 HA, PLOT NO- 1770/4091 & 1776/4092, KHATA NO- 797, AT- BIPULINGI, TAHASIL- CHHATRAPUR, DIST- GANJAM OF SMT. G. GAYATRI REDDY – EC

1. This proposal is for Environmental Clearance of Bipulingi Stone Quarry over an area 8.097 ha, plot no- 1770/4091 & 1776/4092, Khata no- 797, at- Bipulingi, Tahasil- Chhatrapur, Dist- Ganjam of Smt. G. Gayatri Reddy.
2. As per EIA Notification dated 14.09.06 and its subsequent amendments S.O.141 (E) on dated 15.1.2016, the project falls under, Category “B1” under item 1(a)-Mining of Minerals in the Schedule of EIA Notification, 2006 & Subsequent amendments thereof.
3. The proposed Bipulingi stone quarry over an area of 8.097ha., located at village – Bipulingi, Tahasil: Chatrapur, Dist: Ganjam of Odisha is in favour of Tahasildar Chatrapur and will be granted to Successful Bidder (Smt. Gayatri Reddy, W/o – G- Bhaskar Reddy, Chhatrapur, Dist – Ganjam) for a period of 5 years after statutory clearances. However application for environmental clearance was applied by Tahsildar Chatrapur as per provision under para 27 (3&4) of OMMC Rule, 2016. Letter of Intent (LOI) was issued from Tahasildar, Chatrapur vide Letter no. 2258 on dated 28.04.2017
4. The TOR was issued for this project vide letter No. 9674/SEIAA on dated 23.11.2020.
5. The Public Hearing meeting was held on 25.10.2021 (11.00 am) over plot no-1740, adjacent to Maa Birasingi Temple of Bipulingi village under Chhatrapur Tahasil of Ganjam District for the project and the final EIA /EMP report is submitted to SEIAA, Odisha
6. Mining Plan with Progressive Mine Closure Plan has been approved by, Authorized Officer and DDG, Directorate of Geology,Bhubaneswar vide memo no. - 11227 dated 31.10.2018
7. Total mining lease area of 8.097ha and Tahasildar, Chhatrapur has certified the area does not fall in forest land.
8. **Location and Connectivity** – The lease area is bounded by Latitude: 19⁰ 23’ 02.15” N to 19⁰ 22’ 85.50” N Longitude: 84⁰ 58’ 16.84” E to 84⁰ 58’ 09.88” E. It is a part of area covered in the Survey of India Toposheet No. 74A/15. The lease area is located at a distance of 6.8 km from Tahasil Chatrapur. Village Bipulingi is at a distance of 1 km from to the mining area. Chatrapur is the nearest place from the lease area for all infrastructure facilities like hospital, school, bus service, market. The Chatrapur Railway Station is at a distance 5 kms from the lease area. Nearest SH is at a distance of 5km from the lease area. Nearest airport is Biju Pattnaik International Airport at a distance of 155km. There is no national park, wild life sanctuary, eco sensitive areas and industrial area situated within 10Kms radius of the lease area.
9. **Total Reserves and Production** - The total geological reserve is 966591cum and mineable reserve is 725442cum & the total production capacity of the proposed project is 80280cum and annual production is 20070cum. At the end of mining plan period, total mined out area will be 1.433ha. Mining operations will be carried out by Semi-mechanized opencast mining method. The cover of Soil/over-burden will be removed manually or by

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semi mechanized manner and will be stacked separately as dumps to the South Western side of the area. To facilitate further mining development the height of the benches is suggested upto 3 m height and 45° face slope. The Jack hammer drills of 4 diameter rods will be deployed to drill blast holes and these will be charged with explosive cartridges. Wet drilling will be carried out & Blasting will be there on contract basis. Muffled blasting will be carried to reduce the ground vibration, noise, fly rock etc. due to blasting.

10. **Transportation** - Mined out material will be loaded into the dumpers with the help of JCB and will be sent to the nearby established crusher outside the lease area and finally the material of commercial use as per the demand of the market will be transported by Covered trucks / dumpers to its final destination.
11. **Water Requirement** - The total water requirement for the proposed project will be 3.0 KLD for Dust Suppression and other mining activities, greenbelt development and domestic uses and will be sourced from the nearby available water tanker, rain water in mined out pits for various purposes except domestic uses.
12. **Green Belt** - During the plan period there is the proposal for plantation of about 236 saplings over an area of 0.148Ha.
13. Baseline studies were carried out in the study area (10 km radius) during the winter season from Oct 2020 to Dec 2020.
14. **Employment Potential** - A total of 18 nos. of workers are to be employed in sand quarry.
15. The total cost of the project is ` 10 lakhs. The cost towards EMP is proposed to be Rs. 50000.
16. The project proponent along with the consultant **M/s Green Circle. Inc., Vadodara** made a detailed presentation on the proposal on 05.01.2022.
17. The SEAC in its meeting held on 05.01.2022 decided to take decision on the proposal after receipt of certain information / documents from the proponent.
18. The project 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)	Land schedule and kissam of land shall be submitted.	Authenticated Land schedule is attached as Annexure - A .
ii)	What are the surrounding nearby streams as stated and their distance (s) from the lease boundary?	Bendalia nalal at distance of 29.7 km is available; no other stream is available surrounding to the quarry.
iii)	De-siltation Management/ SOP since surrounding area is 73 percent Agricultural land.	There is no Agriculture land surrounding of quarry lease area hence De-siltation not required.
iv)	Present Depth of Mine pit from surface to be submitted with Authentication by Tahasildar & Local Geology/Mining Department.	The approved Surface plan showing present depth of Mine pit from surface with authentication is attached as Annexure – B
v)	The extent of Haulage Road within	The approved surface plan showing extent

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	Lease area & in other category roads may be submitted with Authentication by District Authorities.	of 200 meters Haulage Road & other category roads within lease area is authenticated, is attached herewith as Annexure – C.
vi)	Provision of Water Sprinkling on the haulage road may be mentioned.	During the moment Truck & Tractor to transfer the stone material appropriate action will be taken like water sprinkling to minimize the dust pollution.
vii)	Development of Avenue plantation along the haulage road & Village Road may be furnished.	Development of Avenue plantation along with the haulage road & village road is attached as herewith as Annexure – D.
viii)	Development of Green Belt around the Mining Lease area to be furnished.	Development of Green belt around the Mining Lease area is attached herewith as Annexure-E.
ix)	Environmental Clearance status and legal status of mine if it is an operating mine and if earlier EC granted, half yearly condition wise compliance Report on Environmental Clearance conditions submitted to MoEF&CC, Regional Office, Bhubaneswar duly certified by the letter to be submitted.	Since it is a new source. It is not applicable.
x)	Point wise commitment made on the issues raised by the public during the public hearing.	We have already committed & assured at the time of public hearing to fulfill the condition raised by the local people. And that will be followed after issue of Environment Clearance in favor us/before starting of the quarry operation.
xi)	Traffic study and management with mitigation measures for decongestion by an expert of repute at intersection with public road be submitted.	The road is connected to State high way at distance of 2.4 km which is directly connected to quarry only, hence no traffic on the quarry road.
xii)	Storm and surface runoff water management during monsoon be submitted.	Strom and surface runoff water management during monsoon is attached herewith as Annexure – F.
xiii)	Post mining plans.	Post Mining plans is attached herewith as Annexure – G.
xiv)	Distance of lease boundary from nearby habitation duly certified by the Tahasildar.	Certificate Lease boundary distance from nearby habitation is enclosed herewith as Annexure - H.
xv)	Certificate from the concerned DFO / Tahasildar that there is no DLC land involved in the lease area.	Certificate showing there is no other mines located within 500meter from the boundary of the lease area is attached herewith as Annexure – J.

Considering the information furnished and the presentation made by the consultant **M/s Green Circle. Inc., Vadodara** along with the project proponent, the SEAC recommended for grant of Environmental Clearance with stipulated conditions as per **Annexure – D**

ITEM NO. 05

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. RISHABH MINING PVT. LTD FOR DANGARAPARA DECORATIVE STONE MINES OVER AN AREA OF 4.047 HA IN VILLAGE DANGARAPARA NO. 97 UNDER TITILAGARH TAHASIL OF BALANGIR DISTRICT, ODISHA OF SRI SUMANT CHAND JAIN (DIRECTOR) - EC

1. The proposal is for Environmental Clearance of M/s. Rishabh Mining Pvt. Ltd for Dangarapara decorative stone mines over an area of 4.047 Ha in Village Dangarapara No. 97 under Titilagarh Tahasil of Balangir District, Odisha of Sri Sumant Chand Jain (Director).
2. The project falls under category "B2" or activity 1(a) – Mining of Minerals projects under EIA Notification dated 14th September 2006 as amended from time to time.
3. The Quarry/Mining lease is over an area 4.047 ha or 10.00 acres for decorative stone/Granite. Accordingly, the lease area of 10 acres has been depicted as Khata no.-86 and Plot no-9/917 Village Dangarapara No. 97 under Titilagarh Tahasil of Balangir District, Odisha has been granted on 06.09.1999 for a period of 10 (ten) years in favour of M/s. Rishabh Mining Pvt. Ltd. The lease period was expired on 05.09.2009 and the lessee had applied for renewal of the same and has been recorded as RML No. 11, Dt. 19.05.2009. Meanwhile, OMMC Rules, 2016 came into force which is subsequently amended on 21.05.2018 and show-cause notice for rejection of RML vide letter no. 7984/S&M, dtd. 23.09.2020 has been issued from Department of Steel & Mines, Govt. of Odisha. The lessee has submitted the compliance letter dtd.10.10.2020 furnishing the evidence of setting up of cutting & polishing unit at Titilagarh, Dist. Bolangir, Odisha w.e.f.15.10.2001 towards the requirement of the show cause and requested for the extension of the lease period. Based on this compliance and as per rule-8A of OMMC Amendment Rules, 2018 the lease is likely to be extended up to 06.09.2029.
4. Modification of Mining Plan was approved by the Director of mines, Bhubaneswar vide letter No. letter no. 6244/DM, dated 18.08.2021.
5. **Location and Connectivity** - The lease area is located in survey of India Toposheet No. 64 P/4 (F 44 X4) Latitude-20°12'22.22" N to 20°12'29.13" N Longitude-83°04'00.93" E to 83°04'11.52" E. The entire M L area of 4.047 Hectares is a barren hilly terrain and comes under KISSAM PATITA in village Dangarapara no 97 under Titilagarh Tahasil of Balangir District. The village Dangarapara no 97 is situated at a distance of 11 km from Titilagarh. The area is accessible from Balangir at a distance of 80 km on Titilagarh -Balangir road. The nearest place of importance is Titilagarh which lies at a distance of 12 km from the area. Nearest rail-head is at Titilagarh. The area approach from NH 201 – 14.5 Km and SH 16 – 4.8 Km.
6. Approval of mining plan and PMCP in respect to Dangarapara Decorative stone mine over 10.00 Acr. or 4.047 ha in village Dangarapara under Titilagarh Tahasil of Balangir district of Rishabh Mining Private Limited was approved by Directorate of Mines, Odisha, Bhubaneswar vide letter no. MXXII(b)-06/2021/ 5787/DM dated 03.08,2021.

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7. **Method Of Mining** - The method of mining belongs to Opencast semi-mechanized method using machineries such as Excavator, Line offset compressor, jack-hammer, wire ropes and drill rod etc.
8. **Total Reserves & Production** - As per the reserve calculated the geological reserve of the lease area is 69315cu.m and mineable reserve is 31810cu.m. The annual production from the lease area will be 6000cu.m of decorative stone and total production from the lease area will be 29985cu.m. Height and width of the benches will be maintained at 6m each and overall slope angle will be at around 45° with the horizontal. The details of the proposed production during the plan are given below the table.

Year	Total Vol. of Excavation (m3)	Vol. of Decorative Stone (m3)	Vol. of Presently non-saleable Rock mass (m3)	Vol. of Waste (m3)	Vol. of Soil mixed Boulder (m3)	Total Vol. of Waste (m3)	Swell Vol. of Waste (m3)
2021-22	23970	5993	3596	14382	3162	17544	22807
2022-23	23970	5993	3596	14382	408	14790	19227
2023-24	10098	2525	1515	6059	714	6773	8805
	13900	3475	2085	8340	2200	10540	13702
Sub-Total	23998	6000	3600	14399	2914	17313	22507
2024-25	24000	6000	3600	14400	1000	15400	20020
2025-26	24000	6000	3600	14400	900	15300	19890
TOTAL	119938	29985	17991	71963	8384	80347	104451

9. **Waste generation and utilization** - During the total of rock mass 80347m³ (in-situ) or 104451m³ swollen (swell factor of 1.3) waste/rejects is likely to be generated during the plan period. These wastes will be utilized con-currently for construction and maintenance of road in the lease area. Remaining wastes will be sold time to time for construction purpose, after obtaining required permission of Govt. authorities. For temporary storing of these wastes, an area of 0.822 Ha has been earmarked in the north eastern part of the M.L area at an average of 3m height maintaining the overall slope of the dump at 22° presently non-saleable stones of 17991m³ at an average of 3m height maintaining the overall slope of the dump at 22°.
10. **Green Belt** - There will be proposed for green belt in and along the periphery of the quarry lease area of during the plan period using 1000nos. of saplings (Amla, Neem, Mango, Gamhari, Kasi, Bahada, Jamun, and Bamboo) for rehabilitation over an area of 0.580m² (safety zone) and in conceptual period 980 nos. of saplings over an area of 1.232m² (around water reservoir and dumping area).
11. **Water Requirement** - Daily water requirement for the project will be 3500 liters per day which will be sourced by tanker from the Panchayat.
12. **Power Requirement** - Power Requirement will be met through DG sets.

13. **Employment Potential** - There are total 35 personnel engaged in the mining operation which includes include Permit manager-01, Mining mate-01, Office asst-02, Mechanical Engineer-1 (part time), Skilled Worker-12, Unskilled Worker-18.
14. The project cost is ` 200 lakhs.
15. The Environment consultant **M/s Kalyani Laboratories (Pvt) Ltd. Pahala, Bhubaneswar** along with the proponent has made a presentation on the proposal before the Committee on 22.11.2021.
16. The SEAC in its meeting held on 22.11.2021 decided to take decision on the proposal after receipt of certain information / documents from the proponent.
17. The project 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)	Dump management with detail calculations of waste utilization / inventory / sale including its chemical characteristics be submitted.	Details of waste generation and waste management for the plan period is given in Annexure 1 . Chemical analysis report of decorative stone waste is attached as Annexure 2 .
ii)	Water management with rain water harvesting along with calculation be submitted.	Water management and Rain water harvesting details has been given in Annexure 3 .
iii)	Soil profile study undertaken by approved domain expert be submitted.	Soil profile study of the lease area is attached Annexure 4 .
iv)	Silt management including SOP for silt management for delisting of surrounding water body(s) / Agricultural land be submitted.	Details of sit management practice is attached as Annexure 3 .
v)	Proposed "Zero discharge" mechanism be submitted.	Proposed mechanism for zero liquid discharge is attached as Annexure 3 .
vi)	"NOC" from CGWA / permission from W.R Deptt. Govt. of Odisha for use of ground water be submitted.	Total water requirement for the mines will be 5 KLD. The water will be only used for domestic purpose, dust suppression and plantation purpose, for first 2 years the water will be sourced by tankers. Latter only drinking water will be sourced by tankers and water required for dust suppression and plantation purpose will be sourced from Rain water harvesting pond. No ground water will be used for the mines.
vii)	Proposed budget for CSR / CER as per the law with due approval of the Govt. authority be submitted.	The CSR budget has been approved by Sarpanch Kholan. Copy attached as Annexure 5 .
viii)	Certificate from the concerned mining officer that there is no mine	Copy of the certificate from the concerned mining officer that there is no mine within

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	within 500m radius of proposed quarry.	500m radius of proposed quarry Annexure 6.
ix)	Certificate from the concerned DFO that there is no forest land involved in the lease area.	Copy of concerned DFO that there is no forest land involved in the lease area copy attached Annexure 7.
x)	Details of waste management along with the composition of waste is to be provided.	Details of waste generation and waste management for the plan period is given in Annexure 1.

Considering the information furnished and the presentation made by the consultant **M/s Kalyani Laboratories (Pvt) Ltd. Pahala, Bhubaneswar** along with the project proponent, the SEAC recommended for grant of Environmental Clearance with stipulated conditions as per **Annexure – E.**

ITEM NO. 06

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR JARIPADA SAND QUARRY ON SIDHUA RIVER OVER AN AREA OF 25.00 ACRES OR 10.11 HA LOCATED IN VILLAGE - SIDHUA, TAHASIL- SADAR CUTTACK, DISTRICT- CUTTACK OF SRI PRANAKRUSHNA NAYAK – EC

1. The proposal is for environmental clearance for Jaripada sand quarry on Sidhua river over an area of 25.00 acres or 10.11 ha located in village - Sidhua , Tahasil- Sadar Cuttack, District- Cuttack of Sri Pranakrushna Nayak.
2. As per EIA Notification dated 14.09.06 and its subsequent amendments S.O.141 (E) on dated 15.1.2016, the project falls under Category “B” under item No-1(a)-‘Mining of Minerals’.
3. Sidhua R/S Jaripada Sand Quarry over an area of 25.00 acres or 10.11 ha is located in village Jaripada, Tahasil- Sadar Cuttack in Cuttack district of Odisha.
4. The lease Jaripada Sand Quarry has been granted by the Tahsildar, Sadar Cuttack vide letter no. 5052, dtd. 21.07.2017 for the period of five years i.e. 2017-18 to 2021-22 to Pranakrushna Nayak. Plot No- 244, Sector-A, Zone-B, Mancheswar Industrial Estate, Bhubaneswar-10, Odisha
5. The TOR was issued for this project vide letter No. 8402/SEIAA, dt. 3rd June, 2020.
6. Public Hearing was conducted on 22.12.2020 for the project and the final EIA /EMP report is submitted to SEIAA, Odisha.
7. Mining Plan and Progressive Mine Closure Plan for Sidhua River Jaripada Sand Quarry is approved by Deputy Director Geology, Directorate of Geology, Bhubaneswar vide letter No.GXV(k)-24/17/DG, dated 15.09.2017.
8. **Location and connectivity** - The lease area is bounded by Latitude 20° 24’ 16.9” N to 20° 24’ 33.6”N & Longitude 85° 54’ 08.3” E to 85° 54’ 15.6”E. It is a part of the area covered in the Survey of India Open series No. F45T15 & F45T14 and is on plot no- 395 of Khata no- 428, Kisam- “Nadi”. The lease area is approachable about 1km from village Jaripada. The nearest railway station Cuttack at a distance of 8 Km. There is no existence of public road and railway line within the lease area. The nearest airport is Bhubaneswar at a distance of 26 km.

9. As per the replenishment study, approx. 95% replenishment can be done and proposed production is 140220cum/annum or 700700 cum & replenishment quantity of sand is 133209cum/annum or 665665 cum.
10. The total geological reserve has been estimated as 1,87,632 Cum. Similarly, the mineable reserve of river bed sand is worked out to be 1,68,018 Cum. The project has been proposed for a total production of 700700 Cum of Sand (minor minerals) from this Quarry. During the plan period maximum of 140220 Cum of sand will be produced per annum by Open Cast Manual mining method. Excavation & loading of sand into the dumpers and trucks/tractors will be done manually.
11. Water Requirement – The total water requirement will be approx, 3.0 KLD for different purposes like Domestic, Dust suppression, plantation purposes.
12. Power Requirement - No use of electric power as the operation will be done in day time. However solar lights will be used for day to day living purposes.
13. Employment Potential: Total number of employee will be around 100 (one supervisor, 50 unskilled laborers, 19 skilled laborers and 30 semiskilled laborers) in the mine.
14. Greenbelt plantation will be by planting @50 saplings of suitable species per annum by the lessee in vicinity of the river bank as avenue plantation to be undertaken in consultation with the concerned authority.
15. The baseline data was collected for the pre-monsoon season i.e. Dec-19 to February 2020 in the 10 km study area results.
16. The project cost is estimated to be Rs. 1.5 crores and there is a budgetary provision of Rs. 50 lakhs as capital cost towards environmental protection measures. Rs 3.0 Lakhs per annum i.e. approx. 2.0 % of the Project cost is budgeted as Corporate Environmental Responsibility..
17. The Environment consultant **M/s Centre for Envotech & Management Consultancy Pvt. Ltd., Bhubaneswar** along with the proponent has made a presentation on the proposal before the Committee on 02.08.2021.
18. The SEAC in its meeting held on 02.08.2021 decided to take decision on the proposal after receipt of certain information / documents from the proponent.
19. The project 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)	Stone patching and plantation to be carried out around river embankment.	Water Resource Dept., Govt. of Odisha is already undertaking the stone patching & strengthening of the entire river bank from Jaripada to Saindha. However, we will develop green belt with plantation of 250 nos. of saplings of local species around river embankment with due permission from block administration and local Panchayat.
ii)	Physical measures towards issues raised in public hearing.	The demand raised by the public during Public Hearing will be complied within 2 years.
iii)	Development and maintenance of 700m kacha road.	We will develop & maintain 700m Kach road, outside the lease area up to embankment, so that dust emission is minimum during the transportation.

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		The regular maintenance include; i. The 700m kacha road will adequately compacted before being put into use. ii. Water sprinkling 2 to 3 times a day depending on season iii. Regular cleaning of road & filling of pot holes. iv. Overloading of vehicles will be avoided as spillage of sand can damage the road.
iv)	Details of transportation route to NH5.	Trucks to be used for transporting sand will travel 4.2 km from the lease area to reach Gopalpur Chhak, on NH-16. This transportation route map is attached as Route 1 in Annexure -1 .
v)	Distance of embankment is 100 meter. Details of safety zone to protect the embankment.	Following measures will be taken to protect the embankment; i) The lessee shall not damage the embankment of the river; neither during mining nor during transportation. ii) As per sustainable Sand Management Guideline, 2016 by MoEF & CC, since the embankment is more than 6m high, the borrow area selected should not be less than 50m away from the toe/ heel of the embankment. iii) The green cover development/tree plantation is to be done in an area equivalent to 20% of the total leased area i.e 2.1 ha along road side (Avenue plantation) with due permission from block administration and local Panchayat. Local plant species like Amba, Jamu, Neem, Karanj, anla will be planted with tree guards and maintained upto 3 years. iv) Sand Mining depth will be restricted to 3 meters from the top surface. v) Temporary access roads or Katcha roads shall be formed between the banks of the river and the mining area with locally available biodegradable materials such 0.55km from the lease area. However, this bridge will not be used for moment of trucks of our project.
vi)	Distance of bridge from the lease boundary.	Not furnished
vii)	Confirmation for provision of portable Bio-Toilet.	We are committed to provide portable Bio-Toilets to workers during the mining period so that the sand bed & mining period so that the sand bed & the environment remain clean and hygienic.
viii)	To indicate the traffic study findings vis-a-vis the norm as per IRC.	A traffic study was carried out at Gopalpur Chhak, Approximately, 117 trucks will carry sand from the mining lease area. These trucks will enter the lease area from one route and will come to the main road in another route. Detail traffic study is attached in Annexure-2 .

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 with stipulated conditions as per **Annexure – F** and following specific condition:

- a) Amended EIA Notification dated 25th July, 2018, Guidelines for sustainable sand mining, 2016 and Enforcement and Monitoring Guidelines for Sand Mining, January 2020 of MoEF&CC, Govt. of India shall be adhered to in execution of Mining.

ITEM NO. 07

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR KHEMABEDA DECORATIVE STONE MINES DEPOSIT OVER AN AREA OF 3.805 HECTARES OR 9.40 ACRES LOCATED IN VILLAGE KHEMABEDA UNDER BOIPARIGUDA TAHASIL OF KORAPUT DISTRICT OF SMT. DEVARA LATHA – EC

1. The proposal is for Environmental Clearance for Khemabeda decorative stone mines deposit over an area of 3.805 Hectares or 9.40 Acres located in village Khemabeda under Boipariguda Tahasil of Koraput District of Smt. Devara Latha.
2. The project falls under category “B2” or activity 1(a) – Mining of Minerals projects under EIA Notification dated 14th September 2006 as amended from time to time.
3. The Department of Steel & Mines, Government of Odisha has issued the letter of Intent (LOI) vide Letter No.6547/S&M, Bhubaneswar dated 05.09.2019 for a period of 30 years. Subsequently, the precise area map along with boundary description & land schedule of the area has also been issued to the lessee vide letter No. 7500/DM., Dated 25.09.2019.
4. Mining Plan was approved by the Director of mines, Bhubaneswar vide letter No. letter no. 1448/DM dated 22.02.2021.
5. **Location and Connectivity** - The lease area is located in survey of India Toposheet No. 65 J/6 (E 44 K6) Latitude - 18°38'11.2"N to 18°38'19.7"N & Longitude 82°24'36.6"E to 82°24'48.8"E. The land use pattern of the mining lease area comes under the non forest agricultural land (Abada Ajogya Anabadi), bearing Khata no: 315, Plot no: 1337. The nearest railway stations is Koraput Railway Station at an aerial distance of 37 Km. The lease area can be approached from NH: 43 & SH: 25 at a distance of 36 Km & 6 Km, nearest Airport is Jeypore Airport which is at a distance of 85 Km. 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.
6. **Method Of Mining** - The method of mining belongs to Opencast semi-mechanized method using machineries such as Excavator, Line offset compressor, jack-hammer, wire ropes and drill rod etc.
7. **Total Reserves & Production** - As per the reserve calculated the geological reserve of the lease area is 238152cu.m and mineable reserve is 104656cu.m. The annual production from the lease area will be 1654cu.m of decorative stone and total production from the lease area will be 8112cu.m. Height and width of the benches will be maintained

at 6m each and overall slope angle will be at around 45° with the horizontal. The details of the proposed production during the plan are given below the table.

Year	Total Vol. of excavation (m3)	Vol. of Waste@ 50% (m3)	Volume of Presently non saleable stone@ 20% (m3)	Vol. of Decorative Stone (Block & Khanda) @ 30% (m3)
1st	5200	2600	1040	1560
2nd	5408	2704	1082	1622
3rd	5408	2704	1082	1622
4th	5512	2756	1102	1654
5th	5512	2756	1102	1654
	27,040	13,520	5,408	8,112

8. **Waste generation and utilization** - During the total rock mass 13520m³ (in-situ) or 16224m³ swollen (swell factor of 1.2) waste/rejects is likely to be generated during the five year plan period. Depending upon the essentiality about 70% of these waste/rejects will be utilized con-currently for construction and maintenance of road in the lease area and will be disposed of as minor mineral other than decorative stone with the permission of the competent authority. The remaining wastes will be confined to be dumped on the demarcated area towards north-west over 0.132hectares at an average of 3m height maintaining the overall slope of the dump at 22°.
9. Water table occurs at a depth of 5m (at 215mRL) in rainy season and 8m (at 212mRL) in summer season from the general surface level (at 220mRL). The mine working is proposed up to 724mRL. So there will be no possibility of puncture of water table during the plan period.
10. **Green Belt** - There will be proposed for green belt in and along the periphery of the quarry lease area of during the plan period using 1500nos. of saplings for rehabilitation over an area of 7810m² (safety zone) and in conceptual period 910 nos. of saplings over an area of 4550m² (around quarry boundary and dumping area).
11. **Water Requirement** - Total water requirement for the project will be 5 KLD out of which 2 KLD will be required for drinking and domestic purpose and 1.5 KLD for dust suppression and 1.5 KLD for plantation purpose. Source of domestic water will be nearby village well.
12. **Power Requirement** - Power Requirement will be met through DG sets.
13. **Employment Potential** - There is total 25nos personnels engaged in the mining operation include 5nos Managerial Staff, 8nos Skilled worker and 12nos Unskilled Worker.
14. The project cost is ` 200 lakhs.
15. The Environment consultant **M/s Kalyani Laboratories (Pvt) Ltd. Pahala, Bhubaneswar** along with the proponent has made a presentation on the proposal before the Committee on 22.11.2021.
16. The SEAC in its meeting held on 22.11.2021 decided to take decision on the proposal after receipt of certain information / documents from the proponent.

17. The project 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)	Dump management with detail calculations of waste utilization / inventory / sale including its chemical characteristics be submitted.	Details of waste generation and waste management for the plan period is given in Annexure 1 . Chemical analysis report of decorative stone waste is attached as Annexure 2 .
ii)	Water management with rain water harvesting along with calculation be submitted.	Water management and Rain water harvesting details has been given in Annexure 3 .
iii)	Soil profile study undertaken by approved domain expert be submitted.	Soil profile study of the lease area is attached Annexure 4 .
iv)	Silt management including SOP for silt management for de-slitting of surrounding water body(s) / Agricultural land be submitted.	Details of slit management practice is attached as Annexure 3 .
v)	Proposed "Zero discharge" mechanism be submitted.	Proposed mechanism for zero liquid discharge is attached as Annexure 3 .
vi)	"NOC" from CGWA / permission from W.R Deptt. Govt. of Odisha for use of ground water be submitted.	Total water requirement for the mines will be 5 KLD. The water will be only used for domestic purpose, dust suppression and plantation purpose, for first 2 years the water will be sourced by tankers. Latter only drinking water will be sourced by tankers and water required for dust suppression and plantation purpose will be sourced from Rain water harvesting pond. No ground water will be used for the mines.
vii)	Proposed budget for CSR / CER as per the law with due approval of the Govt. authority be submitted.	The CSR budget has been approved by Sarpanch Khemabeda. Copy attached as Annexure 5 .
viii)	Brief write up why the proposed quarry is not approached under cluster?	There are 4 other mining lease exists in the same Khembada village. However, none of the lease area is coming within 500m radius of this lease area. Further the Mining officer also certified that there is no mine within 500m radius of proposed quarry Annexure 6 .
ix)	PM _{2.5} and PM ₁₀ data is to be submitted for the study area.	Ambient air quality monitoring was carried out during the period of December 2021 at lease area and Khemabeda Village. Result attached Annexure 7 .
x)	Certificate from the concerned DFO that there is no forest land involved in the lease area.	Copy of concerned DFO that there is no forest land involved in the lease area copy attached Annexure 8 .

Proceedings of the SEAC meeting held on 25.02.2022 (Old proposals – compliance received)

Environmental Scientist, SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
xi)	Details of waste management along with the composition of waste is to be provided.	Details of waste generation and waste management for the plan period is given in Annexure 1 .

Considering the information furnished and the presentation made by the consultant **M/s Kalyani Laboratories (Pvt) Ltd. Pahala, Bhubaneswar** along with the project proponent, the SEAC recommended for grant of Environmental Clearance with stipulated conditions as per **Annexure – G**.

ITEM NO. 08

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR RIVER SAND MINING OF 14440 CUM/ANNUM OVER MADHYASASAN SAND QUARRY (ML AREA 5.99HA) AT VILLAGE MADHYASASAN, TAHASIL - BIRIDI, DIST- JAGATSINGHPUR (FINAL EIA/EMP SUBMITTED) OF TAHASILDAR, BIRIDI – EC

1. This proposal is for Environmental Clearance of Madhyasasan Sand Quarry over an area of 14.82 ac. / 5.99 ha. on Devi river located at village – Madhyasasan, under Tahasil – Biridi, District - Jagatsinghpur of Tahasildar, Biridi.
2. As per EIA Notification dated 14.09.06 and its subsequent amendments S.O.141 (E) on dated 15.1.2016, the project falls under, Category “B1”.
3. The proposed Madhyasasan Devi nadi sand quarry project is granted to Banshidhar Swain, At/PO - Brahmigaon, Cuttack being the successful bidder vide letter no - 38 dated 05.01.2021 from Tahsildar cum- Competent Authority, Biridi Odisha. However application for environmental clearance was applied by Tahsildar Biridi as per provision under para 27 (3&4) of OMMC Rule, 2016.
4. The TOR was issued for this project vide letter No. 1253/SEIAA dtd: 09.04.2021.
5. The Public Hearing meeting was held at the scheduled venue & time i.e on 28.09.2021(10:30 am) at Uttaradasana Hata (in front of R.I Office) of Jagatsinghpur district for the project and the final EIA /EMP report is submitted to SEIAA, Odisha.
6. The Mining Plan of the Mining Project has been approved by Joint Director of Geology, Dhenkanal, Odisha vide memo no.1172 on dated 20.10.2020.
7. **Location and Connectivity** - The lease area is bounded by longitude: 86° 01' 11.78"E to 86° 01' 20.22"E & latitude: 20° 21' 48.22"N to 20° 21' 57.39"N. It is a part of the area covered in the Survey of India Toposheet No. 73-L/3 in Khata No- 994, Plot No - 53, Kisam - Nadi. The lease area is located at a distance of 5.2 km from District Jagatsinghpur. The nearest railway station is Kandarpur is at a distance 3.5 kms from the lease area and nearest airport is Biju Patnaik International Airport, Bhubaneswar at 50km.NH-16 is at a distance of 16.5km and SH-43 is at a distance of 1.0 km from the lease area. There is no national park, wild life sanctuary, eco sensitive areas and industrial area situated within 10Kms radius of the lease area. Nearest canal is Machhagan Canal at 0.25 Km and nearest nala is Hansua Nala at 1.6 Km.
8. The Geological Reserve is 149937.5cum and Mineable Reserve is 128572.5cum. The

Proceedings of the SEAC meeting held on 25.02.2022 (Old proposals – compliance received)

Environmental Scientist, SEAC

Mining will be done with opencast Manual method for excavation & loading into trucks/tractors for transport to the users' destination. The quarry will be worked for five years. The average proposed rate of production is 14400 Cu. m per annum (in five years, total production will be 72000 Cu.m). Excavation & loading of sand into the trucks/tractors will be done by manual means.

9. **Replenishment Study Report** concludes that replenishment rate is 72% i.e. Amount of sand Replenishment within the quarry area is 10368Cum & proposed production is 14400 cum. Therefore the areas for sand exploitation within the lease area is been divided into two zones, one for First-Third-Fifth years' mining and the other for Second-Fourth years' mining.
10. **Water Requirement** – Water requirement is mainly for drinking purpose, domestic Use, green belt development and for sprinkling on Mine haulage roads. The water shall be drawn from nearby village through water tankers. The domestic waste water shall be sent to septic tank followed by soak pit. Water require for the mine is 3.0 KLD. For Water sprinkling 1.5 KLD, domestic 1.0 KLD and green belt purpose is 0.5 KLD.
11. **Power Requirement** - No use of electric power as the operation will be done in the day time. However solar lights will be used for day to day living purposes.
12. **Green Belt Development:** Out of the total area, green belt will be developed over an area of 3.11ha. and 3000 tress will be planted along the safety zone and haulage road and nearby.
13. **Employment Potential** - A total of 35 nos. of workers are to be employed in sand quarry.The details of personnel to be employed are Skilled: 2no.employee, Semi-skilled: 3no.employee, Unskilled: 25no.employee.
14. The baseline data was collected for the pre-monsoon season i.e. Dec-20 to February 2021.
15. PM10 ranges within 37.2- 75.4 $\mu\text{g}/\text{m}^3$, PM2.5 ranges within 13.4 – 39.0 $\mu\text{g}/\text{m}^3$, SO2 ranges within 4.0-9.1 $\mu\text{g}/\text{m}^3$ & NOx ranges within 9.0-15.1 $\mu\text{g}/\text{m}^3$. The parameters monitored at the project area as per NAAQ standards are found to be within limits. It may be observed that the all parameters at all stations are well within the limits prescribed by Central pollution control Board.
16. The project cost is 25 lakhs and EMP Capital Cost is 14.30lakh and EMP Recurring Cost is 5.860 lakhs.
17. The Environment consultant **M/s Ardra Consulting Services Pvt. Ltd. Bhubaneswar** along with the proponent has made a presentation on the proposal before the Committee on 17.12.2021.
18. The SEAC in its meeting held on 17.12.2021 decided to take decision on the proposal after receipt of certain information / documents from the proponent.
19. The project proponent has furnished the compliance and the SEAC verified the same as follows.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
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Proceedings of the SEAC meeting held on 25.02.2022 (Old proposals – compliance received)

Environmental Scientist, SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
i)	Information such as width of the river, mining area vis-à-vis lease area, no mining zone, distance of lease boundary from river bank distance of major bridge (S) & Highways / Public civil structure / water installation on both side is up stream & downstream in terms of guide line of MoEF&CC on Sand Mining Management of indicating the standard norms against each such above features.	Width of the Devi river is 1.50 Km, As per approved mining plan mining and allied area shall be carried out over 5.99 Ha of area, however mineable area is 2.8 Ha only and 3.11 Ha shall be remain untouched. There is one bridge over Mahanadi river at an distance of 5 km There is no other public civil structures within one km radius of periphery of mines (Google image showing distance bridge over Mahanadi River, other major civil structure within 1 Km radius of the project is attached as Annexure-1) NH-16 is at a distance of 16.5 km from the project and Kandarpur - Jagatsinghpur State Highway -55 is at 0.83 KM from the periphery of mines.
ii)	It is stated by PP that replenishment (deposition) is 75% of extraction of sand. Detail replenishment study undertaken with findings be submitted indicating the norm for it by MoEF&CC or Sand Mining Management.	Replenishment study was carried out by engaging NABET accredited Consultant report attached as Annexure -2 . However similar study shall be carried out after commencement of the project for better result about replenishment.
iii)	Confirmation of stone patching on river bank with plantation in between indicating the stretch with dimension, leaving the ramp.	Stone patching shall be done at slope of river bund at entrance and exit point of the quarry. It is estimated same shall be done over 220sqm of area. Plantation shall be done as per greenbelt plan attached as Annexure-3 .
iv)	Plantation, specific sprinkling arrangement with SOP to mitigate dust emission on haulage road and avenue plantation.	Plantation planning is given in green belt development plan (attached as Annexure-3) and SOP for water sprinkling is attached as Annexure-4 .
v)	It is stated that 400 mtrs of Madhyasasan village shall be used as haulage road which was objected during Public Hearing and diversion is separated haulage road was claimed. Specific measures indicating diversion of this portion of haulage road with sketch & dimensions be submitted.	The state Highway is at 830 meter aerial distance away from the project, which is concerned through the Kathajodi river bund. Transport vehicle will reach SH-through the existing river bund at Kaijunga Chowk. No village road shall be used for transportation, so diversion of any village road is not envisaged. Google Image showing the Transport route is attached as Annexure -5 .
vi)	Permission from BDO in case of use of Panchayat Road (if any) for transportation of sand including	No Panchayat Road shall be used for transportation of sand. If it is require to use panchayat road in future, necessary

Proceedings of the SEAC meeting held on 25.02.2022 (Old proposals – compliance received)

Environmental Scientist, SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	maintenance of the same by PP.	permission shall be taken from BDO. Undertaking regarding same attached as Annexure-6 .
vii)	Provision of Bio-Toilet.	Bio-Toilet shall be installed at mines for the manpower to be engaged after commencement of project. Undertaking regarding same attached as Annexure -7 .

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

- a) Amended EIA Notification dated 25th July, 2018, Guidelines for sustainable sand mining, 2016 and Enforcement and Monitoring Guidelines for Sand Mining, January 2020 of MoEF&CC, Govt. of India shall be adhered to in execution of Mining.

ITEM NO. 09

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/s KUSHALESWAR MINERALS FOR RAIKA- KALAPARBAT IRON AND MANGANESE MINES FOR PRODUCTION OF 53,990 TPA ROM OVER AN AREA 9.8136HA. LOCATED IN THAKURANI R.F., NEAR VILLAGE- RAIKA, UNDER CHAMPUA SUBDIVISION OF KEONJHAR DISTRICT, ODISHA OF SRI. BASANTA KUMAR MOHANTY (MANAGING PARTNER) - EC

1. The proposal is for Environmental Clearance of M/s Kushaleswar Minerals for Raika-Kalaparbat Iron And Manganese Mines for Production of 53,990 TPA ROM over an area 9.8136ha. located in Thakurani R.F., near village- Raika, under Champua Subdivision of Keonjhar District, Odisha.
2. Raika-Kalaparbat Iron and Manganese Mines of M/s. Kushaleswar Minerals is spread over an area of 9.8136 hectare in Thakurani Reserve Forest, near Raika village under Champua subdivision of Keonjhar district, Odisha.
3. Raika-Kalaparbat Iron and Manganese Mine was executed initially on 09.04.1981 for 30 years. Later on, the mining lease was transferred to M/s Kushaleswar Minerals vide Govt. of Odisha order no. 1788/III(A)SM-42/91, dated 13.02.1992 and the transfer deed was executed on 12.05.1992.
4. The mining operation has been stopped within the lease area since 19.01.1997 by the DDM, Joda as the mining operation was carried out in the forest land included in the ML area without having required Forest Clearance.
5. 1st renewal of ML area over 9.8136 ha. was applied by the lessee for 20 years w.e.f. 09.04.2011 to 08.04.2031. The period of ML applied for renewal is deemed to have been extended for 50 years in total w.e.f 09.04.1981 to 08.04.2031 as per section 8A(3) of MM(D&R) amendment Act, 2015.
6. Surface right of the entire lease area has been granted by the Collector, Keonjhar on 14.01.1982.

Proceedings of the SEAC meeting held on 25.02.2022 (Old proposals – compliance received)

Environmental Scientist, SEAC

7. Public Hearing was conducted on 05.01.2010 for the project and the final EIA /EMP report was submitted for EC to SEIAA, Odisha. Then, SEIAA, Odisha asked for the original file with all documents from MoEF, Govt. of India (as TOR was issued by them) to consider their case. During this transfer, the file was misplaced and their case could not proceed further.
8. As per suggestion of SEIAA, Odisha, they have applied a fresh and obtain Terms of Reference (ToR) for their Raika-Kalaparbat Iron and Manganese Mines over an area of 9.8136 Ha on 19.10.2019 vide letter no. 321/SEAC-11/19.
9. The ML area of 9.8136 ha entirely comprises of forest land. Stage – I Clearance for the forest land involved in the lease area has been obtained vide letter no. 5-ORC229/2014-BHU, dated 09.07.2015.
10. 8.5476 ha. of non-forest govt. land has been identified in village Tana (Khata No. 75-AAA, Plot No. 40 (P)) of Telkoi Tahasil (now in Banspal Tahasil) in BJP Forest Range of Keonjhar Forest Division in lieu of forest land involved in the ML area for compensatory afforestation.
11. DFO, Keonjhar Forest Division has prepared a Compensatory Afforestation Scheme in Block model at an estimated cost of Rs 18,48,000/- including 10 years maintenance.
12. Certificate under Forest Right Act has been issued by the Collector, Keonjhar for the forest land of 9.8136 ha. in two phases.
13. The user agency has submitted the DGPS survey map of the forest area proposed for diversion by ORSAC and duly authenticated by the DFO, Keonjhar Forest Division.
14. NPV of Rs. 71,64,220, for the forest land involved in the ML area, has been paid on 23.07.2010.
15. Right now, the proposal is pending at DFO, Keonjhar Forest Division for submitting the compliances stipulated in the Stage-1 conditions for the final approval of the forest clearance.
16. **Location And Accessibility:** The proposed mining project is located in Thakurani Reserve Forest of Keonjhar district of Odisha. The ML area is featured under the SOI toposheet No. 73 F/8 bounded by latitude $22^{\circ} 03' 24.96600''$ to $22^{\circ} 03' 35.84160''$ N and longitude $85^{\circ} 25' 15.12120''$ to $85^{\circ} 25' 32.45160''$ E. All-weather 3.5km long road connects the mines with NH-520. The mining lease area is also accessible from Barbil town through 8.5km long all weather road. The nearest railhead is Bansapani, located at a distance of 6km. Full-fledged market facilities, postal and medical facilities are available at Barbil. Interstate boundary between Odisha and Jharkhand lies at distance of 9.5km in North-East direction from the proposed project site.
17. **Topography:** The proposed Raika-Kalaparbat Iron and Manganese mines lease hold area over 9.8136 ha of reserve forest land displays a rugged mountainous topography with slope towards west having highest altitude of 664.5m AMSL in the south-east part and the lowest altitude of 617.5m AMSL on the south-west side. The mining lease area is located in

tropical region where climate is characterized by hot summers and cool winters. There is no human settlement within the applied lease area.

18. The mine is planned to produce maximum ROM of 53,990 TPA and Setting up a Crusher & Screening Plant of 100 TPH Capacity; maximum production of Iron Ore & Manganese Ore to be 53,040 TPA and 950 TPA respectively.
19. Mining will be carried out by opencast semi-mechanized with drilling and blasting on single shift basis. The float ores and loose strata will be excavated by 0.9 m³ capacity excavator and loaded into 10t tippers. ROM will be fed into 100 TPH crushing & screening unit within the lease area to get saleable ore.
20. The mining activity shall generate direct employment opportunity for 75 nos. Out of this total (skill, semi-skill & un-skill type) workers will be 64.
21. The peak water requirement shall be 17 cum/ day and shall be met from Kundra nala by tanker & ground water source with due permission.
22. The last mining plan was approved by IBM on 09.04.2012. Later review of mining plan was approved by Regional Controller of Mines, IBM, Bhubaneswar on 10th April, 2019 vide letter no. MSOTFM/54-ORI/BHU/2018-19/84.
23. **Geology and Mining:** Mining shall commence from the southern part of the leasehold. Based on the exploration input, it is planned to produce maximum 53,990 TPA of ROM (Iron ore: 53,040 TPA & Manganese ore: 950 TPA). Mineable reserves of 189,645 MT of iron ore & 6,610 MT of manganese ore have been assessed in the lease area. Opencast method of mining on single shift basis with drilling & blasting is proposed to excavate the ore to gradually achieve the production target. ROM iron ore from mines will be crushed and screened for preparation of saleable ore. Dry processing plant in the ML area consists of crushing unit of 100 TPH capacity & screening plant of 100 TPH capacity for iron ore breaking & sizing only. The entire ROM manganese ore will be broken, sorted & sized manually. Height and width of the benches will be maintained at 3m & 6m respectively; the individual benches will be kept at 75^o while overall quarry slope angle will be maintained at around 30^o with horizontal.
24. With the production of 53,040 TPA of iron ore, the life of the mines will be about 4 years whereas with production of 950 TPA of manganese ore, the life of the mines will be about 7 years. So, as a whole, the life of the mines will be 7 years. An area of 5.701 ha land is likely to be degraded for mining & ancillary activities in the conceptual period; only quarry area will occupy an area of 3.776 ha., which will be in the southern part of the lease area. Ore is planned to be extracted up to a depth of 15m (618m AMSL is the pit limit at the end of the life of the mines) from the surface level by the end of the life of the mines. At the end of the conceptual period, 43,906m³ of waste is likely to be generated; out of these, 24,080m³ waste to be generated in remaining 2years of the plan period (i.e. first 2 years of mining) will be dumped over 0.301 ha. at 10m height (maximum) in one terrace in north-west part of the lease area as Dump-4 and remaining 19,826m³ will be utilize for backfilling of 1ha. mined out area at 2m thick average filling. There is a proposal to plant a total of 14646 saplings in the afforested /reclaimed /rehabilitated area; of these, 6042 saplings will be

planted over 1ha. backfilled area & 2.776 ha. mining benches @ 1600 per ha. The saplings proposed for plantation are Amba, Chakunda, Neem, Mahaneem, Panas, Jamu, etc. Species of the saplings are proposed to be kept at 2.5m apart.

25. Baseline data on Ambient Air Quality, Water Quality, Noise level, Soil, Flora & Fauna has been collected for Post Monsoon Season starting from October to December of 2019.
26. **Project Cost:** The project cost is estimated to be Rs. 1.73 crores and there is a budgetary provision of Rs. 31 lakhs as capital cost for pollution control measures & environmental monitoring at Raika-Kalaparbat Iron and Manganese ore mines and Rs 13 lakhs as annual recurring cost. There is also Rs 3 lakhs allocated for Occupational health and Rs 20 lakhs for green belt development as capital cost. The company has also allocated Rs 4 lakhs as fund to spend under Social and Infrastructure Development Activities to fulfill the demands of public hearing.
27. The Environment Consultant **M/s Centre for Envotech & Management Consultancy Pvt. Ltd., Bhubaneswar** along with the proponent made a detailed presentation on the proposal before the Committee on 10.08.2021.
28. The SEAC in its meeting held on 10.08.2021 decided to take decision on the proposal after receipt of certain information / documents from the proponent.
29. The project 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)	Tabulated form of quantity of overburden generated, its storage and usage with layout map.	<p>During the plan period of 5 years from 2021-22 to 2025-26, 41,540m³ overburden / waste is likely to be generated in the following order:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">Year</th> <th style="text-align: center;">Waste (in cubic meter)</th> <th style="text-align: center;">Waste (in metric tonnes)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1st (2021-22)</td> <td style="text-align: center;">12,040</td> <td style="text-align: center;">24,080</td> </tr> <tr> <td style="text-align: center;">2nd(2022-23)</td> <td style="text-align: center;">12,040</td> <td style="text-align: center;">24,080</td> </tr> <tr> <td style="text-align: center;">3rd (2023-24)</td> <td style="text-align: center;">5,820</td> <td style="text-align: center;">11,640</td> </tr> <tr> <td style="text-align: center;">4th(2024-25)</td> <td style="text-align: center;">5,820</td> <td style="text-align: center;">11,640</td> </tr> <tr> <td style="text-align: center;">5th(2025-26)</td> <td style="text-align: center;">5,820</td> <td style="text-align: center;">11,640</td> </tr> <tr> <td style="text-align: center;">Total</td> <td style="text-align: center;">41,540</td> <td style="text-align: center;">83,080</td> </tr> </tbody> </table> <p>These waste materials of 41,540m³ generated in plan period is proposed to be dumped in non-mineralized area as Dump-4 over an area of 4,154m² or 0.416 hectare at 10m average height in one terrace of 12m maximum height. Depending upon the requirement, these waste materials will be dispatched for construction and maintenance of nearby roads as minor minerals under the purview</p>	Year	Waste (in cubic meter)	Waste (in metric tonnes)	1 st (2021-22)	12,040	24,080	2 nd (2022-23)	12,040	24,080	3 rd (2023-24)	5,820	11,640	4 th (2024-25)	5,820	11,640	5 th (2025-26)	5,820	11,640	Total	41,540	83,080
Year	Waste (in cubic meter)	Waste (in metric tonnes)																					
1 st (2021-22)	12,040	24,080																					
2 nd (2022-23)	12,040	24,080																					
3 rd (2023-24)	5,820	11,640																					
4 th (2024-25)	5,820	11,640																					
5 th (2025-26)	5,820	11,640																					
Total	41,540	83,080																					

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		of Odisha Minor Mineral Concession Rules (OMMCR), 2016 & 2017. Layout map showing year wise dumping of overburden has been enclosed as Annexure- I .
ii)	NEERI recommendation point regarding whether 80% production achieved with details of capacity and corresponding production duly authenticated by Steel and Mines Deptt. Govt. of Odisha- this is required in case of manganese ore mining.	The mine is not operated since 19.01.1997 due to want of forest and environmental clearance. Proposed rate of production of manganese ore is only 950 TPA which is likely to be produced while producing iron ore @53,040 TPA since manganese ore occurs in association with iron ore in iron ore zone.
iii)	Details of measures to be taken towards issues raised in Public Hearing in physical terms. A legible copy of minutes of Public Hearing is also to be submitted.	Public hearing for Raika-Kalaparbat Iron and Manganese ore Mines of M/s Kushaleswar Minerals was held on 05.01.2010 at 11.00 A.M. in Raika village. Details of the Public Hearing & it's implementation action plan is attached as Annexure- II. A legible copy of Proceeding of Public Hearing is also attached after that.
iv)	Re-evaluation of PM ₁₀ and PM _{2.5} as quantity is less and study was undertaken during lockdown.	Monitoring of Environmental Parameters was carried out during Post Monsoon period i.e. October to December of 2019. During that time no lockdown /shutdown had taken place anywhere in Odisha/ India. No mining operation is taking place within the lease area for last 24 years; also no other mines are operating adjacent to it. That's why the AAQ monitoring value for the lease area and forest area was recorded low. Whereas the monitoring value for the sites on NH or in habitational /urban area near main roads are comparatively much higher.
v)	Ambient Air Quality Monitoring Stations in haulage roads, Entry and Exit gates to be incorporated and monitoring data to be submitted.	This is a mining project, which is under shut down since 1997. So no separate entry & exit gate, haul roads are there in the lease area. However, we have tried to monitor the air quality at the proposed entry gate, exit gate & haul road and the monitoring values are attached as Annexure- III . We assure you to set up monitoring stations at haul roads, entry and exit gates once the production starts from the mines and shall submit the same in every half yearly EC compliance report.
vi)	Details of number of trees existing and proposed to be planted in safety zone and non-mineral zone.	As per the tree enumeration report, 3,165 numbers of trees exist in the safety zone. Within the lease area, non-mineralized/ untouched area shall be 2.8466 ha, which will be covered under plantation within 3years of nines at the rate of 2500 plantations/ ha. Watering and manuring will be done periodically; post plantation care such as soil working, pruning etc will be conducted. Proper watch and ward

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Environmental Scientist, SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		<p>will be there to save the trees from fire & grazing. Monitoring & Maintenance of the plantation site will be undertaken in such way that there will be at least 80% survival rate through casualty replacement.</p> <p>Local plant species like Neem (<i>Azadirachta indica</i>), Subabool (<i>Leucaena leucocephala</i>), Bada Chakunda (<i>Cassia siamea</i>), Karanja (<i>Pongamia pinnata</i>), Acacia (<i>Acacia leucophloea</i>), Bahada (<i>Terminalia bellirica</i>), etc will be planted at 2m spacing.</p>
vii)	Status of stage – II forest clearance.	<p>The entire mining lease area is in Reserve Forest. Stage-I clearance has been obtained vide letter no. 5-ORC229/2014-BHU dated 09.07.2015. NPV of Rs.71,64,220 was paid on 23.07.2010 for the forest land involved in the ML area. The NPV payment copy is attached as Annexure- IV.</p> <p>Right now, the proposal is pending at DFO, Keonjhar Forest Division for submitting the compliances stipulated in the Stage-1 conditions for the final approval of the forest clearance.</p>
viii)	Detailed plan and measures undertaken so that ground water will not be intersected during mining as it is just 3m below.	<p>The ultimate mine working depth will be at 618m AMSL (this is as per approved mining plan), whereas the water table of the area varies between 605m AMSL in post monsoon to 595m AMSL in pre monsoon. Thus, the minimum distance between ultimate working depth and maximum level of water table is 13m. So the chance of ground water contamination due to quarry pit can be ruled out. A schematic diagram showing ground water table in mining lease area is attached as Annexure- V.</p> <p>However, during rainy season the accumulated rain water in the quarry pit shall be pumped out to settling pond via 350m long garland drain to arrest solid particles, if any.</p>
ix)	Number of vehicles to be added and its route map.	<p>Looking at the quantity of manganese ore & iron ore production, it is estimated that with 300 working days in a year,</p> <p>Saleable iron ore – 169.1 T /day Saleable manganese ore – 2.9 T /day OB /Waste generation – 40.1 m³/day</p> <p>To transport the mineral & waste, 3 nos. of 10T tippers will be deployed within the lease area.</p> <p>In all, the heavy vehicles like 28 MT capacity truck /tippers plying on the road to transport ores to consumer sites will be only 7, if used ones daily.</p> <p>The mineral shall be transported through 3.5km all-weather road to NH- 520 at Lahanda or to Barbil, 8.5km away. The lease map with transport route is attached as Annexure- VI.</p>
x)	Copy of Wildlife Conservation Plan with	The buffer zone of the lease area is not part of any National park, Wildlife Sanctuary, Biosphere Reserve,

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Environmental Scientist, SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	details of biodiversity in area and measures to conserve.	Tiger Reserve and Elephant Corridor. During the survey of the core & buffer zone, no endangered or rare plant species were observed. There is no rare /endangered /unique species of flora and fauna found in the applied area. However, due to presence of Sloth Bear, Elephant, Python (some Schedule- I species), a Site Specific Conservation Plan has been prepared & approved by Principal Chief Conservator of Forest (Wildlife) & Chief Wildlife Warden, Odisha with a budgetary provision of Rs 68.71 lakhs on 16th March, 2021, vide letter no. 2983/7WL-FD&WLC-141/2020. The approved copy of Site Specific Wildlife Conservation Plan along with approval letter is attached as Annexure-VII .
xi)	As per SWOT of NEERI recommendation, carrying capacity of the mineral carriers to be confirmed.	As per SOTM of NEERI, mines having EC for <1 million TPA ore transport mode will be 100% by 10 /17 Ton Truck or above options. So we have decided to use 28 Ton trucks to transport ore.
xii)	Provision of Solar power with plan and detailed calculation be submitted.	M/s Kushaleswar Minerals wishes to install solar power plant on the roof top of the office building to reduce the dependency for electricity on state grid. The details of the energy generation calculation is given as Annexure-VIII .
xiii)	Plan for rain water harvesting considering maximum rainfall and its reuse. a. Comprehensive water management. b. Pre monsoon and post monsoon water balance.	Water management (including storm water drainage) scheme by a network of garland drains/ diversion ditches and catch-pits has been planned. No water from the ML area shall be allowed to drain out of the lease area. a. The surface runoff from the mines will be collected through garland drains & finally discharged to settling ponds; then used for recharging ground water aquifers as well as for sprinkling & plantation. The Collection, Storage & Use of rain water is discussed in Annexure- IX . b. The project being a mining project, the water consumption during post monsoon & pre monsoon are almost same. However during rainy season, water sprinkling in the road and watering the plantation are usually not required. Water Balance is attached as Annexure- X .
xiv)	Network with dimensions of concrete cement road inside ML area and haulage road from/ to entry and exit of the mines till the interesting point of public road be submitted.	M/s Kushaleswar Minerals is committed to construct 80m cement concrete road with proper drainage & road side plantation from mines entry & exit to all weather road connecting to Lahanda (on NH 520) to Barbil. This road construction will be completed once the mines are ready for production. Along with it, 300m long X 8m wide cement concrete road inside the mining lease will be constructed and put into use.
xv)	Parking plaza at entry and	The ML area of Raika-Kalaparbat Iron & Manganese ore

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Environmental Scientist, SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent																					
	exit point of the mines with Basic amenities to be shown and confirmed.	mines is only 9.8136ha. and conceptually 2.8466 ha. area will remain untouched. So the company has planned to develop a parking plaza near the entry gate over and area of 0.1 ha. area with basic facilities like drinking water, toilets, rest shed for drivers & helpers. The location of the parking area with separate entry & exit gate is shown in map attached as Annexure- XI .																					
xvi)	Detailed plan and SOP for water sprinkling inside mines and outside in haulage road including regular vacuum cleaning and “zero Dust resuspension system” to arrest fugitive dust emission be submitted.	Dust generated from the roads due to moment of vehicles can be minimized by water sprinkling & vacuum cleaning; because such dust have significant impact on the habitats, environment and the equipment in the mines. The detailed plan for water sprinkling inside mines and outside in haulage road including regular vacuum cleaning are discussed in Annexure- XII .																					
xvii)	Details of grade of Fe to be mined, cutoff grade, management of off grade, quantity of each year wise and the dumping or storage plan of off grade and wastes to be provided.	<p>As per the Notification of Ministry of Mines (Indian Bureau of Mines), Nagpur vide No.C-284/3/CMG/2017, dated 25.04.2018, threshold value of iron ore is 45% Fe while cut-off grade considered by the Lessee for iron ore is 55% Fe. Therefore, mineral resources has been estimated under +45-55% Fe and +55 % Fe separately. Iron ore of +55 % Fe has been termed as iron ore and +45%-55% Fe is termed as sub grade ore. Rock mass containing less than 45% Fe is considered as waste materials.</p> <p>Year wise generation of off-grade materials (subgrade ore / mineral reject as per approved mining plan) will be as follows:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Volume (in cubic meter)</th> <th>Quantity (in metric tonnes)</th> </tr> </thead> <tbody> <tr> <td>I (2021-22)</td> <td>884</td> <td>2316</td> </tr> <tr> <td>II (2022-23)</td> <td>884</td> <td>2316</td> </tr> <tr> <td>III (2023-24)</td> <td>418</td> <td>1095</td> </tr> <tr> <td>IV (2024-25)</td> <td>418</td> <td>1095</td> </tr> <tr> <td>V (2025-26)</td> <td>418</td> <td>1095</td> </tr> <tr> <td>Total</td> <td>3,022</td> <td>7,917</td> </tr> </tbody> </table> <p>These off-grade materials will be initially stacked over an area of 1008m² at 3m average height and dispatched subsequently as per demand after blending with upper grade ores.</p>	Year	Volume (in cubic meter)	Quantity (in metric tonnes)	I (2021-22)	884	2316	II (2022-23)	884	2316	III (2023-24)	418	1095	IV (2024-25)	418	1095	V (2025-26)	418	1095	Total	3,022	7,917
Year	Volume (in cubic meter)	Quantity (in metric tonnes)																					
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IV (2024-25)	418	1095																					
V (2025-26)	418	1095																					
Total	3,022	7,917																					

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 with stipulated conditions as per **Annexure – I**.

ITEM NO. 10

PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR NARASINGHPUR MORRUM QUARRY OVER AN AREA 12.303 HA. KHATA NO: 666, PLOT NO: 1503, 1511, 1515, AT: NARASINGHPUR, TAHASIL: CHATRAPUR, DIST: GANJAM OF TAHASILDAR CHHATRAPUR – EC

1. This is a proposal for Environmental Clearance of Narasinghpur Morrur quarry over an area 12.303 ha./ 30.403Ac. Khata no: 666, plot no: 1503, 1511, 1515, at: Narasinghpur, Tahasil: Chatrapur, Dist: Ganjam.
2. As per EIA Notification dated 14.09.06 and its subsequent amendments S.O.141 (E) on dated 15.1.2016, the project falls under, Category “B1” under item 1(a)-Mining of Minerals in the Schedule of EIA Notification, 2006 & Subsequent amendments thereof.
3. The proposed Narasinghpur Morrur quarry over an area of 12.303 ha., located at village – Narasinghpur, Tahasil: Chatrapur, Dist: Ganjam of Odisha is in favour of Tahasildar Chatrapur and will be granted to Successful Bidder for a period of 5 years after statutory clearances. However application for environmental clearance was applied by Tahasildar Chatrapur as per provision under para 27 (3&4) of OMMC Rule, 2016.
4. The TOR was issued for this project vide letter No. 1263/SEIAA on dated 09.04.2021.
5. The Public Hearing meeting was held on 10.11.2021 (11.00 am) adjacent to U.P. School, Narasinghpur village under Chhatrapur Tahasil of Ganjam District for the project and the final EIA /EMP report is submitted to SEIAA, Odisha
6. Mining Plan with Progressive Mine Closure Plan has been approved by, Authorized Officer & Deputy Director of Geology, O/o Joint Director Geology, South zone, Berhampur vide letter no. - nil dated 17.12.2020
7. Total mining lease area of 12.303 ha and Forest Ranger Officer, Berhampur Range has verified the area does not fall in forest land.
8. **Location and Connectivity** – The lease area is bounded by Latitude: 19° 21’ 14.2”N To 19° 21’ 30.1”N Longitude: 84° 55’ 06.3” E To 84° 55’ 25.3” E. It is a part of area covered in the Survey of India Toposheet No. 74A/15. The lease area is located at a distance of 9.4 km from Tahasil Chatrapur. Village Narasinghpur is at a distance of 2.1 km from to the mining area. District Ganjam is at a distance of 49 km. Chatrapur is the nearest place from the lease area for all infrastructure facilities like hospital, school, bus service, market. The Chatrapur Railway Station is at a distance 9.4 kms from the lease area. NH-16 is at a distance of 2.9 km and SH-36 is at a distance of 11.2 m. from the lease area. Nearest airport is Biju Pattnaik International Airport at a distance of 158km. There is no national park, wild life sanctuary, eco sensitive areas and industrial area situated within 10Kms radius of the lease area.
9. **Total Reserves and Production** - The total geological reserve is 1834236cum and mineable reserve is 1561933cum & the total production capacity of the proposed project is 280000cum and annual production is 56000cum. At the end of mining plan period, total mined out area will be 3.389ha. Mining operations will be carried out by Semi-mechanized opencast mining method. The cover of Soil/over-burden will be removed manually or by semi mechanized manner and will be stacked separately as dumps to the

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South Western side of the area. To facilitate further mining development the height of the benches is suggested upto 3 m height and 45° face slope. The Jack hammer drills of 4 diameter rods will be deployed to drill blast holes and these will be charged with explosive cartridges. Wet drilling will be carried out & Blasting will be there on contract basis. Muffled blasting will be carried to reduce the ground vibration, noise, fly rock etc. due to blasting.

10. **Transportation** - Mined out material will be loaded into the dumpers with the help of JCB and will be send to the nearby established crusher outside the lease area and finally the material of commercial use as per the demand of the market will be transported by Covered trucks / dumpers to its final destination.
11. **Water Requirement** - The total water requirement for the proposed project will be 3.0 KLD for Dust Suppression and other mining activities, greenbelt development and domestic uses and will be sourced from the nearby available water tanker, rain water in mined out pits for various purposes except domestic uses.
12. **Green Belt** - During the plan period there is the proposal for plantation of about 500 saplings over an area of 0.237Ha.
13. Baseline studies were carried out in the study area (10 km radius) during the winter season from Oct 2020 to Dec 2020.
14. **Employment Potential** - A total of 26 nos. of workers are to be employed in sand quarry.
15. The total cost of the project is ` 12 lakhs and recurring cost is 2lakhs/Annum. The cost towards EMP is proposed to be Rs. 80000 and recurring cost is Rs.50000.
16. The project proponent along with the consultant **M/s Green Circle. Inc., Vadodara** made a detailed presentation on the proposal on 05.01.2022.
17. The SEAC in its meeting held on 05.01.2022 decided to take decision on the proposal after receipt of certain information / documents from the proponent.
18. The project 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)	Land schedule and kissam of land shall be submitted.	Authenticated Land scheduled is attached as Annexure –A.
ii)	Details of unused portion of the lease.	Land use details showing untouched area, is attached as Annexure – B.
iii)	Run off/ wash off/silt management since 73percent of surrounding area is Agricultural land.	There is no Agriculture land surrounding of quarry lease area hence De-siltation not required.
iv)	Environmental Clearance status and legal status of mine if it is an operating mine and if earlier EC granted, half yearly condition wise compliance Report on Environmental Clearance conditions submitted to MoEF&CC, Regional Office, Bhubaneswar duly	Since it is a new source, It is not applicable.

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	certified by the letter to be submitted.	
v)	Point wise commitment made on the issues raised by the public during the public hearing.	We have already committed & assured at the time of public hearing to fulfill the condition raised by the local people. And that will be followed after issue of Environmental Clearance in favor us/before starting of the quarry operation.
vi)	Traffic study and management with mitigation measures for decongestion by an expert of repute at intersection with public road be submitted.	The road is connected to high way at distance of 4.1 km and there is no traffic at the road connecting to high way.
vii)	Storm and surface runoff water management during monsoon be submitted.	Storm and surface runoff water management plan during monsoon, is attached herewith as Annexure – C.
viii)	Post mining plans.	Post Mining conceptual plans, is attached herewith as Annexure – D.
ix)	Distance of lease boundary from nearby habitation duly certified by the Tahasildar.	Certificate of lease boundary distance from nearby habitation is enclosed herewith as Annexure – E.
x)	Certificate from the concerned DFO / Tahasildar that there is no DLC land involved in the lease area.	Certificate from the Berhampur DFO that there is no DLC land involved in the lease area is attached as Annexure – F.
xi)	Certificate from the concerned Tahasildar that there is no other mines located within 500 meter from the boundary of the lease area.	Certificate that there is no other mines located within 500meter from the boundary of the lease area is attached as Annexure – G.
xii)	Permission for Sarpancha of concerned Gram Panchayats and BDO for use of the road for Haulage of Morrum.	NOC from Sarpanch of Gram Panchayats and BDO for use of the road for Haulage of Morrum is attached as Annexure – H.

Considering the information furnished and the presentation made by the consultant **M/s Green Circle. Inc., Vadodara** along with the project proponent, the SEAC recommended for grant of Environmental Clearance with stipulated conditions as per **Annexure – J.**

ITEM NO. 11

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S STALWART PROJECTS PVT. LTD. FOR PROPOSED CONSTRUCTION OF B+S/G+8 COMMERCIAL-CUM-RESIDENTIAL APARTMENT & B+S+5 STORIED RESIDENTIAL APARTMENT BUILDING OVER AN AREA OF 4912.80SQM./1.214AC./0.4912HA., LOCATED AT MOUZA-BARAMUNDA BHUBANESWAR, DIST – KHURDA WITH TOTAL BUILT UP AREA-22555.99SQM. OF SRI SHARAT KUMAR SAHU (MANAGING DIRECTOR) - EC

1. M/s Stalwart Projects Pvt. Ltd. for proposed construction of B+S/G+8 Commercial-cum-Residential Apartment & B+S+5 storied Residential Apartment building over an area of 4912.80sqm./1.214Ac./0.4912Ha., located at Mouza-Baramunda Bhubaneswar, Dist – Khurda with total built up area-22555.99sqm. of Sri Sharat Kumar Sahu.

2. The project falls under category “B” or activity 8 (a)-Building and Construction projects under EIA Notification dated 14th September 2006 as amended from time to time.
3. The proposed project comprises of B+S/G+8 floors building (Block-A) is coming under “Commercial-Cum-Residential Building” as per Odisha Development Authorities (Planning and Building Standards) Rules, 2020 and Mixed occupancy of “Mercantile-Cum-Residential” building as per NBCI-2016 and the proposed B+S+5 floors building (Block-B) is coming under “Residential Building” as per Odisha Development Authorities (Planning and Building Standards) Rules, 2020 and Residential Apartment (Group-A, Sub-Division A-4) as per NBCI-2016.
4. The proposed building plan (Existing) has been approved by Bhubaneswar Municipal Corporation vide letter no. 89618, dtd. 10.12.2020 having built-up area 19,489.69 sqm (20,000 sqm as per 2006 EIA Notification, Environmental Clearance is not required). Now the proponent is willing to increase the built-up area from 19,489.69 sqm to 22,555.99 sqm. for which Environment Clearance is mandatory.
5. The Environmental Clearance (EC) application has been submitted in line with the MoEF&CC Notification No. S.O 804(E) dtd. 14.03.2017.
6. **Location and Connectivity** - The project will be constructed over Revenue Plot No. – 1483, 1119, 1120, 1118/3115, 1118/2940/5188, 1118, 1118/2950, 1118/2940, 1118/2562, 1484/2563, 1104/2241/6460, 1105/3493, 1105/2619/3401, 1105/3400, 1105, 1105/2285, 1103/2984, 1105/3400/6171, 1105/2619/3401/6172, 1105/2285/3900, 1106&1105/2619 located at - Soubhagyanagar, Mouza- Baramunda, Bhubaneswar, Dist- Khordha. The Geographical co-ordinates of the project site are: Latitude 20°16'10.90"N to 20°16'11.15"N & Longitude 85°48'10.04"E to 85°48'9.26"E and is in Toposheet No - F45T11, F45T12, F45T15 & F45T16. The project site is at a distance of 1.16 KM-N from NH-16/NH-5. Bhubaneswar Railway Station at a distance of about 4.16 Km in E direction from the project site. Project Site is well connected to a network of existing University-Agriculture-Farm Road (S), connected to Jagamara Road and Jagamara –Bramunda Road (W) and connected to Azad Marg Road at a distance of 0.35 km (E). The project site has two gates that serve the dual purpose of entry and exit. The same service road acts as connecting link between one part of the city with the other which is used by the visitors and tenant. Biju Patnaik International Airport at a distance of about 2.08 Km in SSE direction from the project site. Nearest protected forest is Bharatpur PF – 2.07 km (NE). Nearest Reserve forest is Dasapur RF – 9.91 km (NW). Nearest River is Kuakhai River – 8.80 km (NE) Nearest canal is Daya Canal – 5.04 km (ESE).
7. The Total plot area- 4912.80 sqm or 1.21 Acres or 0.9412 Ha and total super built-up area- 22555.99 sqm. The Building Details of The Project:

Particular	Proposed
Project Name	M/s. Stalwart Projects Pvt. Ltd
Plot Area	4912.80 Sqm.
Ground Coverage	2833.32 sqm (57.7 %)
FAR (Floor Area Ratio)	Block A – 13476.64sqm and Block B – 4068.58sqm = 17605.05sqm

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Built up Area	22555.99sqm
Total Parking Area	5037.3sqm
Green Belt Area	725.74 sqm (14.8 %)
Power/Electricity Requirement & Sources	Total - 1167 KW
No. of DG sets	1x400 KVA + 1x320 KVA Transformers – 1x630 KVA + 1x400 KVA + 1x315 KVA
Water requirement	71 KLD (Fresh)
Sewage Treatment Plant	STP Capacity - 100 KLD
Total Dwelling Units	116 nos.

8. **Water requirement:** Water will be sourced from Ground Water sources (Public Health Department). Total Fresh Water requirement will be 72 m³/day, whereas Flushing Water requirement will be 39 m³/day. Therefore, Total water requirement will be 111 m³/day. The quality of water is good conforms to the desirable drinking water standards as per IS 10500. Raw water will treat & recycle the waste water generated from this project. Recycled water will be used within the project area. The treated water recovered from STP will be (70 KLD) recycled and will be used for toilet flushing, for horticulture in the project site and excess 8 KLD of water will be discharged into the Drain.
9. **Power requirement:** The total power requirement for the purpose project is 1167kW. The power will be entirely supplied by Tata Power Central Odisha Distribution Limited (TPCODL). For this purpose a diesel generator having 400KVA (1 Nos.) & 320KVA (1 nos.) capacity will be provided and Stack height of the D.G Set is 34. 15kW of solar power will be used for common purpose out of 60 kW meant for common use.
10. **Rain Water Harvesting:** The 3 Nos. of recharge pit is required for harvesting rain water from terrace are, hard paved area and natural ground.
11. **Parking Requirement:** Total parking area required 5037.3sqm will be provided.
12. **Fire fighting Installations:** All controls and monitoring of fire alarm systems, pressurization systems, smoke management systems shall happen from this room. Fire Command Centre shall have provisions in accordance with Clause-3.4.12 of Part-4, NBCI-2016. Fire Suppression as per NBC-2016.
13. **Green Belt Development:** An adequate landscape on area of 725.74 sqm (14.8 %) of the plot area) inside the project site will be developed.
14. **Solid Waste Management:** Solid waste generated from the project shall mainly be MSW (Municipal Solid Waste) approx. 557 kg/day. Total biodegradable waste generated will be 330.5 kg/day & non-biodegradable waste generated will be 227 kg/day. These will be collected in separate coloured bins. Proper waste management practices will be adopted during the collection, storage, and disposal of the generated solid waste, construction and demolition waste.
15. The total population of project will be 116 persons.

16. The estimated project cost is ` 45.06 Crores and cost for EMP is 69.7 lakhs.
17. The project proponent along with the consultant **M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar, Odisha** made a detailed presentation on the proposal.
18. The SEAC in its meeting held on Dt: 24.09.2021 decided to take decision on the proposal after receipt of the following information / documents from the proponent followed by visit of the sub-committee of SEAC to the site.
19. The project proponent has furnished compliances as desired by the committee and same has been verified as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC										
i)	Layout of drainage system and exact distance of project site to nearest drain and outfall of drain.	Layout map showing drainage line and Google map shows natural drainage line is attached as Annexure-1 . In rainy season the storm water along with excess treated waste water will be discharge to nearby existing municipal Drain which connects to main drain system of Bhubaneswar (Drain no. -VIII) near Sidhivihar at a distance of 1 km from project site. Elevation measures at the point of discharge is 35 m and confluence point of Drain no. -8 is 30 m.	Ownership/ROW of the land between project side and the drain is not submitted. Hence partially not complied.										
ii)	Status of NOC from BMC/ appropriate authority for the above drain for STP treated water disposal to be submitted.	We are already applied to BMC for discharge treated waste water to nearby Municipal Drain. Application letter to BMC is attached as Annexure-2 .	No "NOC" or permission from BMC is available.										
iii)	Proposal to increase in usage of treated waste water in premises and thereby reducing quantity of discharge to drain. Revised water balance to be submitted to meet zero discharge of water from premises.	Revised water balance is attached as Annexure-3 .											
iv)	Adequate parking in terms of ECS for dwelling units with locations including compatibility with the proposed parking space provided needs to be submitted in tabular form with number and %.	<table border="1"> <thead> <tr> <th>PARKING REQUIRED</th> <th>AREA IN SQM</th> </tr> </thead> <tbody> <tr> <td>SHOPPING (40% OF 3848.36 SQM)</td> <td>1537.34</td> </tr> <tr> <td>RESIDENTIAL BLOCK (A)-MIG (25% OF 8852.99 SQM)</td> <td>2213.24</td> </tr> <tr> <td>RESIDENTIAL BLOCK (A) (30% OF 780.29 SQM)</td> <td>234.08</td> </tr> <tr> <td>RESIDENTIAL BLOCK (B)-MIG (25%</td> <td>1017.14</td> </tr> </tbody> </table>	PARKING REQUIRED	AREA IN SQM	SHOPPING (40% OF 3848.36 SQM)	1537.34	RESIDENTIAL BLOCK (A)-MIG (25% OF 8852.99 SQM)	2213.24	RESIDENTIAL BLOCK (A) (30% OF 780.29 SQM)	234.08	RESIDENTIAL BLOCK (B)-MIG (25%	1017.14	Parking for four wheelers, two wheelers and bicycles with demarcation in layout map not submitted including calculation of ECS compatible with the proposed parking space.
PARKING REQUIRED	AREA IN SQM												
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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC						
		<table border="1"> <tr> <td>OF 4068.58 SQM)</td> <td></td> </tr> <tr> <td>TOTAL PARKING REQUIRED</td> <td>5001.80</td> </tr> <tr> <td>PARKING PROVIDED</td> <td>5037.3</td> </tr> </table> <p>TOTAL ECS PROVIDED – 420 NOS</p>	OF 4068.58 SQM)		TOTAL PARKING REQUIRED	5001.80	PARKING PROVIDED	5037.3	
OF 4068.58 SQM)									
TOTAL PARKING REQUIRED	5001.80								
PARKING PROVIDED	5037.3								
v)	Parking space calculated in terms of ECS (both two and four wheelers need to be checked and confirmed. This need to be compatible with the number of dwelling units, commercial complex visitors for both floating population.	Same as Sl. No. IV of above.							
vi)	Fire clearance from the appropriate authority need to be obtained and their observations is to be submitted.	The Fire Safety Recommended for the Proposed B+S/G+8 Commercial –cum- Residential Apartment & B+S+5 storey Residential Apartment building over Rev plot no-1483, 1119, 1220 & others, Mouza-Baramunda under Bhubaneswar Municipal Corporation, Bhubaneswar, Dist – Khordha of M/s. Stalwart Projects Pvt Ltd is attached as Annexure-5.							
vii)	Increase percentage of solar power with exact calculations to be submitted item wise and as % of total power consumption.	<ul style="list-style-type: none"> ❖ Maximum Demand in KW = I) 528+II)362+III)277(KW) =1167 KW ❖ DG Selected =1 no. of 400KVA+1 no. of 320 KVA DG Sets ❖ Recommended Transformer Capacity = 1 Nos x 630 KVA +1 Nos x 400 KVA + 1 Nos x315 KVA Transformer ❖ Power will be sourced from TPCODL. ❖ On Block –A, 5 KVA Rooftop solar inverter backup will be provided for emergency lighting of basement, common area and CCTV power supply, <p>Details of power calculation and solar power provided in Annexure-6.</p>	Detailed calculation of solar power consumption Vs the generation is not submitted as sought.						
viii)	Breakup percentage of green belt i.e. trees and landscape area.	Total green area measures 725.74 sqm (approx.14% of total plot area). Two patched of land provided for green belt: 242 sqm & 198m ² in periphery of the project. Total greenbelt area : 1165 sqm (23.7 % of the Total plot area) Details of greenbelt and landscape plan area attached as Annexure – 7.							
ix)	Mitigation measures to prevent water logging.	We are taking adequate measures for water logging.							

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
x)	Separate entry and exit gates for commercial purpose and residential purpose with bifurcation in parking area.	There are two separate entry and exit gates provided for commercial purpose and residential purpose. Provided adequate parking area for commercial and residential purpose. Details of parking area provided in above point no.4.	
xi)	DG set location including installation layout and drawing of the chimney its height be submitted.	The proposed DG sets will be equipped with acoustic enclosure to minimize noise generation and adequate stack height for proper emission and dispersion. Proposed stack height as per norms-33m. Location of DG set with respect to annually average wind direction is attached as Annexure-8 .	
xii)	Details of rainwater harvesting and recharge pit designs.	Details of Rainwater harvesting and recharge pit designs is attached as Annexure – 9 .	RWHP requirement needs to be calculated taking in to consideration maximum rainfall in 24 hours in past 30 years based on logical climate data to avoid local flooding as sought.
xiii)	Letter from BMC/appropriate authority to be submitted and they cannot provide letter so that ground water drawl is unavoidable.	Requirement of water during operation phase will be sourced from PHD Supply. So there is no need of Ground water for met the requirement of water during operation phase.	----
xiv)	Provision of Solar power with detail calculation submitted.	Same as above point no-7	----
xv)	Status of NOC from CGWA and permission from WR department Govt. of Odisha for drawl of ground water of required quantity submitted.	Requirement of water during operation phase will be sourced from PHD supply. So there is no need of Ground water for met the requirement of water during operation phase.	----
xvi)	Traffic study by domain expert to be undertaken at the intersection point with public road.	Traffic study report is attached as Annexure-10 .	----
xvii)	Since it is a low laying area, detail proposal and water logging management to be submitted.	We are taking adequate measures for water logging.	----

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
xviii)	Structural stability certificate from authorized structural engineer of BDA/BMC for proposed additional floors to be submitted including permission from Airport authority of India for increasing tower height.	Structural stability certificate from authorized structural engineer of BDA/BMC is attached as Annexure-11 .	-----

20. The proposed site was visited by the sub-committee of SEAC on 16.12.2021. Following are the observations of the sub-committee and proponent needs to submit relevant documents as below:

- i) The project for B+S+5 has been progressed a lot at the back side blocks whereas in the front side blocks only basement is in progress.
- ii) The proponent could not show the fire clearance NOC for the composite construction (Old building of B+S+5 Residential and new B+G+8 Commercial cum Residential). Composite NOC or permission is required and to be complied (Proponent informed that they have applied).
- iii) The plot has drain in front of it which will be connected by the drains of apartments. However, Proponent needs to submit the drain layout with permission from BMC for discharging the treated excess water.
- iv) While the front B+G+8 blocks have 20-27 ft road (varying) surrounding the sides, the back side blocks (B+S+5) whose construction is already progressed has 8-10 ft road at both sides and back side. Further, they need to keep 3-4 ft for green belt surrounding both blocks (excepting the portion like- Gate).
- v) Green belt calculation could not be shown (there is no tree in site at present), needs to submit the plan with percentage in the revised map considering point 4.
- vi) DG set and stack location could not be shown. Details of stack height vis-à-vis maximum building height, direction of emission and DG set location to be shown in the revised map and submitted.
- vii) All 3 sides of the project are surrounded by residential buildings and the front road is traffic intensive. Traffic study shown was having typo errors, signed by some individual. Traffic study needs to be carried out by a reputed institute and submitted with recommendation/summary at the end.
- viii) Structural validation (as the additional floors are planned), from reputed structural authority may be submitted with regard to the safety and stability of apartment.

- ix) Initial approval was for about 19489 sq mt and final (after expansion) is for 22555 sq mt with 116 dwelling units and G+2 commercial complex. The parking provided for Residential units (4 wheelers, 2 wheelers), Commercial Units and for visitors (both residents and commercial) needs to be submitted in a table with number as well as area for each. Also, to be shown in the revised map. Further, area of residential, commercial with percentage parking for each residential, commercial and for visitors to be submitted with norms and ECS vs norms. All area to be shown in the revised map and submitted.
- x) The project is compact and traffic management inside the complex would be a concern. The proponent needs to separately provide parking for residential and commercial/visitors with separate entries and exits. Proponent was advised to reduce few commercial areas in GF to maintain more parking and movements of vehicle of floating population. Thus, proponent may address the mitigation measure and submit for safe movement of vehicles.
- xi) Solar calculations could not be shown, needs to be submitted with % of total power planned from solar power generation.
- xii) The compliances after submission needs to be examined for further recommendation.

21. The SEAC in its meeting held on 05.01.2022 decided to take decision on the proposal after receipt of certain information / documents from the proponent.

22. The project 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)	The project for B+S+5 has been progressed a lot at the back side blocks whereas in the front side blocks only basement is in progress. The proponent has to clarify why this will not be treated as a violation case.	<p><u>Proposed project description</u></p> <ul style="list-style-type: none"> ➤ Construction of B+S/G+8 Commercial-cum-Residential Apartment & B+S+5 storey Residential Apartment building over Rev plot no-1483, 1119, 1220 & others, MouzaBaramunda under Bhubaneswar Municipal Corporation, Bhubaneswar, Dist-Khurda of M/s Stalwart Projects Pvt. Ltd. ➤ Total Built up area area- 	<p><u>According to previous approval project description</u></p> <ul style="list-style-type: none"> ➤ Construction of B+S/G+6 Commercial-cum-Residential Apartment & B+S+5 storey Residential Apartment building over Rev plot no-1483, 1119, 1220 & others, MouzaBaramunda under Bhubaneswar Municipal Corporation, Bhubaneswar, Dist-

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Environmental Scientist, SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	
		22555.99	Khurda of M/s Stalwart Projects Pvt. Ltd ➤ Total Built up area =19489.69 m2
		<p>The proposed building plan (Existing) has been approved by Bhubaneswar Municipal Corporation vide letter no. 89618, Dtd.10.12.2020 having built up area 19489.69 sqm (<20,000, as per 2006 EIA Notification Environment Clearance is not required). The copy of previous approval letter is enclosed as Annexure-1.</p> <p>The project for B+S+5 has been completed upto 4900.24 sqm at the back side.</p> <p>Building structure of the back site Block-B is same as previous building structure approved by previous BDA Approval and <20,000 sqm. In view of above, it does not comes under violation. Now only the building of block – A (Commercial-cum-Residential) will to increase the built up area in upward direction in addition of two floors.</p>	
ii)	<p>The proponent could not show the fire clearance NOC for the composite construction (Old building of B+S+5 Residential and new B+G+8 Commercial cum Residential). Composite NOC or permission is required and to be complied (Proponent informed that they have applied).</p>	<p>Fire NOC for the composite construction (Old building of B+S+5 Residential and new B+G+8 Commercial cum Residential) is attached as Annexure-2.</p>	
iii)	<p>The plot has drain in front of it which will be connected by the drains of apartments. However, Proponent needs to submit the drain layout with permission from BMC for discharging the treated excess water.</p>	<p>Drainage Layout map is attached as Annexure-3. Applications have been submitted to the Commissioner, Bhubaneswar Municipal Corporation, Bhubaneswar for disposal of rain water and excess water only during the rainy season. Receiving letter is attached as Annexure-4. We undertake through this legal affidavit (copy enclosed as Annexure-4A) that we will make the project operation only after obtaining the permission from BMC for discharge of excess treated water/rain water.</p>	
iv)	<p>While the front B+G+8 blocks have 20-27 ft road (varying) surrounding the sides, the back side blocks (B+S+5) whose construction is already progressed has 8-10 ft road at both sides and back side. Further, they need to keep 3-4 ft for</p>	<p>Total green area measures 725.74 sqm (approx. 14 % of total plot area area). Two patches of land provided for greenbelt: 242 sqm & 198 m2 in periphery of the project. Total greenbelt area : 1165 sqm (23.7 % OF THE TOTAL PLOT AREA) Details of greenbelt and landscape plan are attached as Annexure-5.</p>	

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent														
	green belt surrounding both blocks (excepting the portion like- Gate).															
v)	Green belt calculation could not be shown (there is no tree in site at present), needs to submit the plan with percentage in the revised map considering point 4.															
vi)	DG set and stack location could not be shown. Details of stack height vis-à-vis maximum building height, direction of emission and DG set location to be shown in the revised map and submitted.	<p>The height of the project is higher than all the buildings around it. The height of the stack will be 4 m higher than the building height (28.5 m). The emission from the stack of DG sets will not have any impact on the buildings around them.</p> <p>The proposed DG sets will be equipped with acoustic enclosure to minimize noise generation and adequate stack height for proper emission dispersion.</p> <p>Proposed stack height as per norms-33 m. Location of DG Set with respect to annually average wind direction is attached as Annexure- 6.</p>														
vii)	All 3 sides of the project are surrounded by residential buildings and the front road is traffic intensive. Traffic study shown was having typo errors, signed by some individual. Traffic study needs to be carried out by a reputed institute and submitted with recommendation/summary at the end.	<p>There are two separate entry and exit gates provided for commercial purpose and residential purpose. Provide adequate parking area for commercial and residential purpose.</p> <table border="1"> <thead> <tr> <th>PARKING REQUIRED</th> <th>AREA IN SQM</th> </tr> </thead> <tbody> <tr> <td>SHOPPING (40% OF 3848.36 SQM)</td> <td>1537.34</td> </tr> <tr> <td>RESIDENTIAL BLOCK (A) - MIG (25% OF 8852.99 SQM)</td> <td>2213.24</td> </tr> <tr> <td>RESIDENTIAL BLOCK (A)(30% OF 780.29 SQM)</td> <td>234.08</td> </tr> <tr> <td>RESIDENTIAL BLOCK (B) - MIG (25% OF 4068.58 SQM)</td> <td>1017.14</td> </tr> <tr> <td>TOTAL PARKING REQUIRED</td> <td>5001.80</td> </tr> <tr> <td>PARKING PROVIDED</td> <td>5010.7</td> </tr> </tbody> </table> <p>Traffic study report is attached as Annexure-7.</p>	PARKING REQUIRED	AREA IN SQM	SHOPPING (40% OF 3848.36 SQM)	1537.34	RESIDENTIAL BLOCK (A) - MIG (25% OF 8852.99 SQM)	2213.24	RESIDENTIAL BLOCK (A)(30% OF 780.29 SQM)	234.08	RESIDENTIAL BLOCK (B) - MIG (25% OF 4068.58 SQM)	1017.14	TOTAL PARKING REQUIRED	5001.80	PARKING PROVIDED	5010.7
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PARKING PROVIDED	5010.7															
viii)	Structural validation (as the additional floors are planned), from reputed structural authority may be submitted with regard to the safety and stability of apartment.	Structural stability certificate from authorized structural engineer of BDA/BMC is attached as Annexure-8.														
ix)	Initial approval was for about 19489 sq mt and final (after expansion) is for 22555 sq mt with 116	Parking details are provided in point no. 7. Parking plan is attached as Annexure- 9.														

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	<p>dwelling units and G+2commercial complex. The parking provided for Residential units (4 wheelers, 2 wheelers), Commercial Units and for visitors (both residents and commercial) needs to be submitted in a table with number as well as area for each. Also, to be shown in the revised map. Further, area of residential, commercial with percentage parking for each residential, commercial and for visitors to be submitted with norms and ECS vs norms. All area to be shown in the revised map and submitted.</p>	
x)	<p>The project is compact and traffic management inside the complex would be a concern. The proponent needs to separately provide parking for residential and commercial/visitors with separate entries and exits. Proponent was advised to reduce few commercial areas in GF to maintain more parking and movements of vehicle of floating population. Thus, proponent may address the mitigation measure and submit for safe movement of vehicles.</p>	<p>As per requirement, we provided parking area in basement and ground floor. There are two Gates for entry and Exit.</p> <p>Parking plan in basement and Ground floor are attached as Annexure- 9.</p>
xi)	<p>Solar calculations could not be shown, needs to be submitted with % of total power planned from solar power generation.</p>	<p>On Block-A, 5 kVA Rooftop solar inverter backup will be provided for emergency lighting of basement, common area and CCTV power supply.</p> <p>Total maximum Demand -1167 KW</p> <p>More Than 5% of Maximum Demand will be planned from solar power generation.</p> <p>Details are providing in Annexure-10.</p>
xii)	<p>Ownership/ROW of the land between project side and the drain is not</p>	<p>The proposed project site has drain in front of it in the South direction which connects to main drain system of Bhubaneswar (Drain no. –VIII) near Sidhivihar at a</p>

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	submitted. Hence partially not complied. No "NOC" or permission from BMC is available.	distance of 1 km from project site. An elevation measure at the point of discharge is 35 m and confluence point of Drain no. -8 is 30 m.
xiii)	Parking for four wheelers, two wheelers and bicycles with demarcation in layout map not submitted including calculation of ECS compatible with the proposed parking space.	Parking plan is attached as Annexure- 9 .
xiv)	Detailed calculation of solar power consumption Vs the generation is not submitted as sought.	<ul style="list-style-type: none"> ❖ Maximum Demand in KW = I) 528 + II) 362 + III) 277 (KW) = 1167 KW ❖ DG Selected = 1 no.of 400 KVA + 1 no.of 320 KVA DG Sets ❖ Recommended Transformer Capacity = 1 Nos x 630 KVA + 1 Nos x 400 KVA + 1 Nos x 315 KVA Transformer ❖ Power will be sourced from TPCODL. ❖ On Block-A, 5 kVA Rooftop solar inverter backup will be provided for emergency lighting of basement, common area and CCTV power supply. Details of Power calculation and solar power provided in Annexure- 10 .
xv)	RWHP requirement needs to be calculated taking in to consideration maximum rainfall in 24 hours in past 30 years based on logical climate data to avoid local flooding as sought.	RWHP details area given in Annexure-11 .

Considering the information furnished and the presentation made by the consultant, **M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar, Odisha** along with the project proponent, the SEAC recommended for grant of Environmental Clearance valid for 7 years with stipulated conditions as per **Annexure – K** in addition to the following specific conditions.

- i) "Khatian" (Patta after Mutation) for the entire land from the appropriate Revenue Authority with 'Kisam' as Gharabari shall be obtained along with ownership before which construction work shall not start. **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 from the appropriate authority for discharge of excess treated water if any to the nearest existing drain. 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 of 5% as proposed.

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- iv) Trees located within the project area shall be de-rooted and re-rooted / transplanted to alongside the boundary green development area instead of cutting. If there will be any tree cutting required, requisite permission for the same shall be obtained from the Forest Department.
- v) 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.
- vi) The proponent shall implement the Pollution Control Measures and safeguards as proposed in the Environment Management Plan (EMP) of project report.
- vii) **All the compliances submitted/ committed by PP (s) shall be strictly adhered to by them.**

ITEM NO. 12

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S CHARIOT CEMENT COMPANY (CSPPL) (A UNIT OF CHARIOT STEEL AND POWER PVT. LTD.) FOR PROPOSED NEW CEMENT GRINDING UNIT TO BE ESTABLISHED AT KALUNGA INDUSTRIAL ESTATE, TAHASIL - LATHIKATA, DISTRICT - SUNDARGARH OF SRI SURESH JOSHI – EC

1. The proposal is for Environmental Clearance of M/s Chariot Cement Company (CSPPL) (a unit of Chariot Steel and Power Pvt. Ltd.) for proposed new Cement Grinding Unit to be established at Kalunga Industrial Estate, Tahasil-Lathikata, District-Sundargarh.
2. The project falls under schedule 3 (b) "Cement plants" Category-B as per the EIA notifications, 2006 amendments thereafter.
3. Chariot Cement Company, A unit of Chariot Steel & Power (P) Ltd. (CSPPL) has acquired the assets of M/s Saraf Agencies Pvt. Ltd. (SAPL) at Kalunga Industrial Estate. The old plant is already dismantled / disposed. Required land is already under possession of CSPPL.
4. Therefore, CSPPL will set up a new cement grinding plant at the same location for production of 0.99 Lakh TPA PSC/PPC/OPC Cement (300 TPD) over an area of 6.6 acres.
5. SEAC granted **TOR** vide Letter no. 319/SEAC-12/19 dated **19.10.2019** or conducting EIA/EMP study.
6. EIA study has been carried out collecting Baseline Data from **December 2019 to February 2020 (Winter Season)**.
7. **Public Hearing** was conducted successfully on **04.12.2020** at IDC Field, Jhartarang, Near Tarini Mandir, Lathikata, Sundargarh
8. The project is located in Plot No- 202, Industrial Estate, Kalunga, Tehsil-Lathikata, District- Sundargarh, Odisha, bounded by Latitude 22^o 13' 35" N to 22^o 13' 39" N and Longitude 84^o 45' 41" E to 84^o 45' 49" E & which falls on Toposheet No- F 45 G 16 (73 B/16). The site is well connected by road (NH – 23 at 1.7km and SH – 10 at 1.1km) and by rail nearest is Kalunga Railway Station, on Kolkata – Mumbai trunk route of South

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Eastern Railway, is only 2.9 KM from site. Nearest Airport is Jharsuguda Airport is 90km southwest. Nearest habitation is Village Jhartarang located at distance of 1.7 KM SE. Nearest River is Koel River at 2.3 KM. No national park or sanctuary is present within 10km radius from project site. Nearby industries are Sri Trinetra Iron & Steel (P) Ltd. around 50meters, Shree Jagannath Engineers Pvt. Ltd., Kalunga around 450meters, Nixon and Steel and power around 700meters and Times Steel & Power Pvt. Ltd., Kalunga around 750meters.

9. Rake loading exists at Kalunga Railway Station which is at a distance of 2.9 km (WSW) from the site.
10. Raw materials like Clinker, Fly ash, Slag, Gypsum & Coal will be required for production of cement and the raw materials will be sourced from open market / industries.
11. Clinker, Slag, Fly Ash & gypsum will be grounded at required proportion in the Ball Mill to produce different types of cement (PSC/PPC/OPC) as per the market demand. Cement will be stored in silo for onward dispatch through road / rail. Hot air required for the purpose of drying of slag shall be generated through coal fired Hot Air Generator (HAG) of 10 TPH capacity.
12. Water Requirement - Water will be required for equipment cooling, dust suppression, green belt, domestic & Fire fighting purposes. 8.33 KLD water (2.5 KLD Domestic & 5.83 KLD Industrial water) will be sourced from industrial water supply facilities available in Kalunga Industrial Estate.
13. Power Requirement - 1200 KVA power will be required for operation of proposed cement grinding unit. This will be sourced from WESCO's substation catering 33 KVHT line to site. In case of power failure, D.G. Set shall be used (250 KVA capacity) in Emergency only. Renewable Solar energy is about 75KW i.e 7.5% of total power consumption.
14. About 95 persons will be engaged in the plant as direct manpower and indirectly more than 200 people will be engaged due to establishment of proposed cement plant.
15. Cement grinding unit does not generate any industrial waste water. Domestic waste will be discharged to soak pit through septic tank. Back wash of Raw Water Treatment Plant shall be reused for mill spray. Dust collected by the Bag Filters will be completely reused in the cement manufacturing process. Other solid waste will be in the form of rejected conveyor belts, torn / damaged cement bags, paper / wooden / plastic waste etc. which are not hazardous in nature and will be sold to recyclers on regular basis.
16. Plantation will be carried out in 3.3 Acres out of 10 Acres of acquired land.
17. Baseline data was collected from Dec 2019 to Feb 2019 for environmental components like AAQ, Ground & surface water quality, soil quality, noise level, traffic study, ecology and socioeconomic study. Concentrations of all monitored parameters are below the permissible limits of CPCB. There is no endangered and endemic species in the 10km radius study area.
18. Environment Management Plan - Bag filters will be installed at cement grinding mill, packing plant and coal dryer to control air pollution. Water sprinkling will also be carried out to suppress fugitive dust. Cement grinding unit does not generate any industrial waste water. Domestic waste will be treated in STP and reused for green belt. Back

wash of Raw Water Treatment Plant shall be reused for mill spray. Dust collected by the Bag Filters will be completely reused in the cement manufacturing process. The equipments shall be provided with acoustic shields or enclosures to limit the sound level inside the plant. The proposed green belt over 2.45 acre will also help to prevent noise and dust generated within the plant from spreading beyond the plant boundary.

19. An Environment Management Cell (EMC) will be established in the plant which will be responsible for environmental monitoring, developing greenbelt, ensuring good housekeeping, ensuring statutory compliance as well as creating environmental awareness among work forces. Regular monitoring of the important environmental parameters will be taken up.
20. Public Consultation was conducted successfully on 04.12.2020 at IDC Field, Jhartarang, Near Tarini Mandir, Lathikata, Sundargarh under the Chairmanship of Addl. District Magistrate and assisted by Regional Officer, Rourkela. Compliance to the points raised by the public and time bound action plan was prepared.
21. As per the TOR, 2.5% of the project cost i.e. about ` 31.2 Lakhs will be earmarked towards the Enterprise Social Commitment (ESC) to implement the activities complying to the points raised by public during public hearing.
22. Capital cost of the project is estimated as ` 12.47 Crores. For environment management, capital cost is estimated as ` 65 Lakhs with recurring cost of ` 11.5 Lakh/annum.
23. The Environment Consultant **M/s Centre for Envotech and Management Consultancy Pvt. Ltd. Bhubaneswar** along with the proponent made a detailed presentation on the proposal before the Committee.
24. The SEAC in its meeting held on dated 07.12.2021 decided to take decision on the proposal after receipt of the following information / documents from the project proponent followed by a site visit by the sub-Committee of SEAC to verify the constructional status of the project.
25. The project proponent has furnished compliances as requested by the SEAC and same has been verified as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
i)	“Kisam” of the land conversion to “Industrial use” from appropriate Revenue Authority to be submitted	Land Kisam has already been converted to industrial land (Plot No.131). Copy of RoR is enclosed as Annexure-1 .
ii)	To confirm specific measures including permanent arrangement of water sprinkling against fugitive dust emission	<ul style="list-style-type: none"> • Nuisance Dust collector will be installed to collect the fugitive dust from the transfer points and put it back into the cement grinding system for recycling. • Plant roads, approach roads, truck parking areas will be made of concrete and fixed water sprinklers will be installed along the roads. • Dry fog system will be installed at

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		<p>hopper of coal crusher.</p> <ul style="list-style-type: none"> • Silo vents will be connected to Bag Filter. • To prevent fugitive dust from being air borne, Covered sheds will be provided for coal, slag and gypsum. Fly ash will be stored in silo.
iii)	Provision of solar power with plan & exact calculation for consumption vis-à-vis the generation and the percentage of total power demand to be submitted	Details is attached in Annexure-2 .
iv)	Design capacity of STP to be submitted for about 200 manpower	Details are attached in Annexure-3 .
v)	Design of coal & Gypsum shed with garland drain to be submitted so that no fines enter into the drain. Also submit the justification why Gypsum cannot be stored in "Silo" i.e silo provision for Gypsum?	<p>Design of Coal & Gypsum shed with garland drain is enclosed as Annexure-4.</p> <p><u>Justification for Gypsum Storage:</u> Gypsum contains moisture about 8 to 12% and is cohesive in nature. If it is stored in silo, lumps will be created inside silo and extraction shall be very difficult. Also gypsum cannot be dried before use, because its chemical properties will be altered, which may render it unsuitable for production of cement. Therefore it is proposed to store gypsum in the covered shed and not in the silo.</p>
vi)	"Carbon balance" with carbon neutrality be submitted as against and carbon emission furnished	<p>Plantation will be carried out in 37% of plant area, which will convert CO₂ to O₂ by photosynthesis process.</p> <p>"Carbon Dioxide Scrubber" may be installed at the outlet of coal burning furnace to neutralize the proposed CO₂ emission from the plant.</p> <p><u>Function of CO₂ Scrubber:</u></p> <ol style="list-style-type: none"> 1. Air polluted with carbon dioxide is pumped into the CO₂ scrubber. 2. The air comes into contact with an ion exchange resin, which attracts the carbon dioxide molecules. 3. The cleaned air is then pumped out of the CO₂ scrubber.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		4. The ion exchange resin will be cleaned periodically to retain its usefulness.
vii)	Inversion / Dispersion modeling study be undertaken by domain expert and finding be submitted with mitigation measures (if required)	Dispersion Modelling has been carried out by domain expert, Dr. C. R. Panda who is NABET accredited EIA Coordinator and FAE in the area of Air Pollution. Findings of modelling and mitigations measures are enclosed as Annexure-5 .
viii)	Finding of traffic study undertaken be compared with IRC norms and accordingly, traffic decongestion plan as & if required be submitted	TRAFFIC STUDY has been conducted taking the Indian Road Congress Guidelines i.e. IRC – 106:1990. Findings of study and management plan are enclosed as Annexure- 6 .
ix)	Water management with rain water harvesting details be submitted	<p>In order to minimize consumption of fresh water from the source, industrial water after treatment is proposed to be recycled and reused. After cooling and suitable treatment makeup water will be added to compensate for the losses in closed circuit circulation system.</p> <p><u>Roof Top Rain Water Harvesting</u></p> <p>Roof Top of the admin building, canteen, First-aid room, Security Shed and time office are proposed for roof top rain water harvesting. As per the land utilization plan, the area of roof top will be about 0.8 acre.</p> <p>Area of roof top = 0.8 acre X 4046 = 3237 sqm.</p> <p>Run-off coefficient of Roof Top = 0.85</p> <p>Annual Rain Fall of the area = 1300 mm</p> <p>Rain Water Harvesting potential = $3237 \times 0.85 \times 1300 / 1000 = 3577$ cum / annum. This quantity of rain water will be diverted to the raw water reservoir and will be used for plant utilization purpose or can be recharged to increase the level of ground water.</p>
x)	Cement being dust prone industry and values of PM _{2.5} & PM ₁₀ are close to prescribed standards, detail dust suppression	<p><u>Dust Control / Suppression System to control particulate Matter Emission:</u></p> <ul style="list-style-type: none"> • Efficiency of Bag filters will be more than 99 % in order to

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	management be submitted	<p>reduce dust emission from point sources as per the norms i.e. < 30 mg/Nm³.</p> <ul style="list-style-type: none"> • Plant internal roads and connecting roads will be concreted. • Fixed water sprinklers will be installed along the roads. • Dry fog system will be installed at hopper of coal crusher. • Covered sheds will be provided for coal, slag and gypsum. Fly ash will be stored in silo.
xi)	Detail “Zero Discharge” Management (specific) be submitted	<p>“ Zero Discharge” Management :</p> <ul style="list-style-type: none"> • No waste water will be generated from cement manufacturing process. • Domestic waste water (2 KLD) to be generated from toilets will be treated in Sewage Treatment Plant (Capacity 5 KLD) and treated water will be reused in plantation. • Raw Water Treatment plant back wash water (0.43 KLD) will be used for mill spray / dust suppression etc. • Cooling tower blow down water (2 KLD) will be reused for dust suppression / fire fighting. • CSPPL will construct storm water drains inside the plant area, so that during rain, storm water will not be mixed with other sources. • All storm water drains will be channelized to garland drain around the plant to collect surface run-off during rainy season. • A settling pond of size 20m X 17m X 4m will be constructed for collection of surface run-off water. After settlement, clear water will be diverted to the raw water storage pond and excess water if any will be discharged to outside. <p>Calculation of Settling Tank Size: Area of Plant= 6.6 Acre Hourly rain fall = 20mm Surface run off = 6.6 Acre X 4047 X 20 X 0.6/1000 X 4 hrs= 1282 m³ (Maximum) Size of settling pond proposed= 20m X 17m X 4m.</p>
xii)	Copy of Land allotment letter of	Land was allotted by Govt. of Odisha prior to

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	IDCO for the purpose of Cement Plant	formation of IDCO and the copy of lease agreement with Govt. of Odisha is enclosed as Annexure-7 .

26. The SEAC in its meeting held on 28.01.2022 decided to take decision on the proposal after site visit by the sub-Committee of SEAC to verify the constructional status of the project.

27. The Sub-Committee of SEAC visited the site on 28.01.2022 and observed the following:

- i) No permanent construction has been carried out within the lease area. Only removal of debris and preparatory work is being carried out at the site at the moment.
- ii) The team also visited the site of the proposed settling tank and noted that the size of the proposed tank which is based on hourly rainfall basis will not be adequate. It is suggested that the settling tank be designed considering the peak of daily rainfall obtained from the long-term rainfall data series available for the region. The excess water if discharged outside should meet the prescribed water quality standards.

Considering the information furnished and the presentation made by the consultant, **M/s Centre for Envotech and Management Consultancy Pvt. Ltd. Bhubaneswar, Odisha** along with the project proponent, the SEAC recommended for grant of Environmental Clearance valid for 7 years with stipulated conditions as per **Annexure – L** in addition to the following specific conditions.

- i) The settling tank shall be designed considering the peak of daily rainfall obtained from the long-term rainfall data series available for the region. The excess water if discharged outside should meet the prescribed water quality standards.
- ii) The proponent shall maintain "Zero Liquid Discharge (ZLD)" concept as proposed.


SECRETARY, SEAC

Approved

28.02.2022
CHAIRMAN, SEAC

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STANDARD ENVIRONMENTAL CLEARANCE CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR SAND MINING

Stipulated Conditions:

1. The project proponent should carry out River bed sand mining manually by engaging local laborers in force to check over exploitation of sand at the source.
2. Any change in the plan or quantity to be produced shall require prior approval of SEIAA.
3. There shall be a 'no working zone' to protect the embankment on both sides, road or rail bridge in the vicinity, if any, dam, weir, water intake structure of irrigation or drinking water project, or any cross drainage structure. 10 % of the width of river shall be left intact along the embankments on both sides as 'no mining zone'. Further, no mining shall be allowed within 200 m of any existing structures dam, weir, water intake structure of irrigation or drinking water project, or any cross drainage structure. In case of River Bridge, this no mining zone shall extend upto a minimum stretch of 200 meters from the bridge and it may extend upto 500 meters in sensitive locations. The lease area shall be accordingly curtailed to carve out the actual sand mining area within the leasehold. Exact map of the lease area, and the 'no mining zone' shall be drawn to scale, showing the DGPS coordinates of all corner points, and the location of the bridge, embankment, extraction route & other structures; and such map has to be submitted to SEIAA by the project proponent through the Tahasildar within three months of the date of issue of the EC. The quantum of sand allowed to be extracted will be worked out on the basis of the actual working area.
4. The lease area and the actual working area shall be demarcated on the ground by erecting durable masonry /concrete pillars by the project proponent.
5. The project proponent shall take prior statutory and regulatory clearance as required from the concerned authorities in respect of the project, before carrying out any operation.
6. Mining is not permissible within the water channel or stream flow area. No stream shall be diverted for the purpose of mining and no natural water course shall be obstructed. The mining or any ancillary activity shall not in any way disturb the flow pattern of the river water during the non monsoon period. There shall be no sand mining in the river during the rainy season or when there is flow of water in the river.
7. Sand mining operations shall not affect the existing sources for irrigation / drinking water / industrial purpose.
8. The natural sand dunes, if any, near or surrounding the lease area shall not be disturbed.
9. No transportation of the minerals shall ordinarily be allowed on any road passing through villages/habitations/forest land without prior explicit permission. Transportation

of minerals through existing rural roads can be allowed only by the concerned Govt. Department/BDO and only after required strengthening, such that the carrying capacity of road is increased to handle the sand truck traffic. The project proponent shall bear the cost towards the widening and strengthening of existing public roads in case the same is proposed to be used for the project. No movement on any road is allowed on existing village road network without appropriately increasing the carrying capacity of such roads. 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 traffic density. Plying of sand extraction trucks may be allowed on roads / path ways passing close to schools, temples, hospitals and such other public places only with prior written permission of competent authority.

10. Vehicles hired for transportation of sand from the site should be in good condition and should have pollution check certificate and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.
11. The vehicles shall not be overloaded and shall be covered with Tarpaulin. The Tahasildar may collect an appropriate road maintenance levy from the lessee as part of the lease conditions on the basis of quantum of sand transported, and utilize the proceeds of the levy for proper maintenance of the extraction paths and roads to prevent their degradation on account of plying of sand trucks.
12. The project proponent shall take all precautionary measures against causing damage to flora and fauna of the locality. The PP shall plant and nurse to full establishment a minimum of 50 number of saplings of native tree species along the approach roads, river banks and in community areas in consultation with the Gram Panchayat.
13. Water spray should be made on the road/extraction paths to control dust emission during transportation of sand.
14. The Project Proponent shall undertake phased restoration, reclamation and rehabilitation of land affected by mining and completes this work before abandonment of mine.
15. Environmental Management Plan (EMP) shall be implemented by PP to ensure compliance with the environmental conditions specified above. The year wise funds earmarked for environmental protection measures shall be kept in separate account and shall be spent according to the plan proposed. Year wise progress of implementation of EMP shall be reported to the SEIAA, Odisha and OSPCC along with the compliance report.
16. The proponent shall take necessary measures to ensure that there is no adverse impact of the mining operations on the human habitation if any, existing nearby.
17. It shall be mandatory for the project management to submit quarterly compliance reports on the status of implementation of the above stipulated environmental safeguards to the SEIAA, Odisha / SPCB, Odisha/ Regional Office of the MoEF&CC, Bhubaneswar, in hard and soft copies on 1st day of January, April, July, October of each calendar year, failing which EC is liable to be revoked.

18. River Bank stabilization shall be made through stone patching. Plantation of adequate number native species on river banks and both sides of haulage roads shall be made.
19. Since NH200, Kuccha Road and temple are only at a distance of 800 mtr, 570 mtr and 500 mtr respectively, all traffic safety measures shall be taken to avoid any kind of accidents.
20. Bio - toilet provision shall be made.
21. As raised during public Hearing and committed by PP, Loknathpur Sasan village road shall not be used for transportation of sand.
22. Stone patching on river bank with plantation in-between and the ramp construction shall be done in consultation with and advice of concerned W.R.Deptt, Government of Odisha.
23. Necessary sprinkling on Haulage Road and Avenue plantation shall be done.
24. At the end of mine closure, the proponent shall immediately remove all the sheds put up in the quarry and all the equipment in the area before closure of the quarry.
25. The conditions stipulated in the environmental clearance will be closely monitored on the ground by the lease granting authority, i.e. the Tahasildar, who shall ensure compliance of the stipulated conditions and take corrective measures promptly in case of any non- compliance and also ensure that the project proponent submits quarterly compliance reports.
26. The concerned Regional Office of the MoEF&CC/ SPCB, Odisha shall periodically monitor compliance of the stipulated conditions as applicable for this project. The project authorities should extend full cooperation to the MoEF&CC officer(s)/SPCB officer(s) by furnishing the requisite data / information / monitoring reports.
27. A copy of the clearance letter shall be sent by the proponent to concerned Gram Panchayat /Panchayat Samiti /Zilla Parisad /Municipal Corporation / Urban Local Body as the case may be.
28. Project proponent shall obtain Consent to Operate from the OSPCB 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 State Pollution Control Board.
29. The SEIAA, Odisha may revoke or suspend this EC, if implementation of any of the above conditions is not satisfactory. The SEIAA, Odisha reserves the right to alter /modify the above conditions or stipulate any further condition in the interest of environment protection.
30. The Project Proponent (lease holder) shall inform the SEIAA of any change in ownership of the mining lease. In case, there is any change in ownership or mining lease is transferred, then mining operation can be carried out only after transfer of EC as per provisions of the para 11 of EIA Notification, 2006, as amended from time to time.

31. Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this environment clearance besides attracting penal provisions in the Environment (Protection) Act, 1986.
32. 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.
33. 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.
34. 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.

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR M/S PENGUIN TRADING & AGENCIES LTD FOR RAIKELA AND TANTRA IRON MINES FOR ENHANCEMENT IN PRODUCTION OF IRON ORE FROM 1.080 MTPA TO 2.160 MTPA OVER ML AREA OF 49.372 HA AT VILLAGE RAIKELA AND TANTRA UNDER KOIRA TAHASIL OF DISTRICT - SUNDARGARH OF SRI RAMAN RASHMI NAYAK – 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-I1013/57/2014-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 in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board 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) Air quality monitoring and preservation

- (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. PM₁₀, PM_{2.5}, NO₂, CO and SO₂ etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.
- (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 PM₁₀ and PM_{2.5} 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.

(III) Water quality monitoring and preservation

- (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 supernatant 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) Public hearing and human health issues

- (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 14 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.

**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 to prevent 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.

SPECIFIC CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE OF BIPULINGI STONE QUARRY OVER AN AREA 8.097 HA, PLOT NO- 1770/4091 & 1776/4092, KHATA NO- 797, AT- BIPULINGI, TAHASIL- CHHATRAPUR, DIST-GANJAM OF SMT. G. GAYATRI REDDY – EC.

1. This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court of Odisha, Hon'ble NGT and any other Court of Law, if any, as may be applicable to the quarry lease.
2. The Environmental Clearance is subject to obtaining requisite NBWL Clearance, if any, from the Standing Committee of National Board for Wildlife for Mining project.
3. The lessee shall implement the Pollution Control Measures and safeguards as proposed in the approved EIA/Environment Management Plan (EMP).
4. The lessee 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.
5. 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 lessee 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.
6. The lessee shall obtain NOC from concerned Block Development Officer (BDO) for usage of haulage road/Panchayat Road.
7. The lessee shall ensure safety of human life and livestock from accidents in case village / any habitation is very nearby the mining lease area.
8. The lessee 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 MOEF&CC and SEIAA, Odisha.
9. The lessee/concerned Tahasildar shall follow the detailed procedure for De-reservation of Gochar kissam land if involve in the lease area before going for mining activity.
10. Under no circumstances, the lessee shall use wagon drilling blasting during mining activity.
11. The lessee shall not store and use blasting materials/explosives inside the lease area without obtaining license/permission/authorization from competent Authority as per Indian Explosives Rules, 1983.
12. The lessee shall obtain NOC from CGWA and permission from WR department, Govt. Of Odisha for use of ground water.

13. No mining activities shall be allowed in forest area, if any, for which the Forest Clearance is not available.
14. No change in mining technology and scope of working should be made without prior approval of the SEIAA, Odisha.
15. No change in the calendar plan including excavation, quantum of mineral and waste should be made.
16. Mining shall be carried out as per the provisions outlined in the approved mining plan.
17. 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.
18. The illumination and sound at night at the lease area 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. Project Proponents 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.
19. 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.
20. The soil to be generated during mining activity shall be stacked in the earmarked temporary soil stack and shall be utilized for the plantation purpose to be undertaken around the respective hill/patch and adjacent to haul roads of the same in lease area.
21. The abandoned mine pit shall be converted to rain water storage tank and the rain water stored in pit shall be utilized for plantation as well as dust suppression.
22. Total Plantation shall be carried out within 2-3 years of mining activity and maintenance shall be continued in remaining years. Trees present in mining area shall be uprooted & transplanted in safety zone.
23. All the lease holders in a cluster should join hand for grading of the main haulage road to maintain the gradient facilitating smooth movement of vehicles.

SPECIFIC CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE OF BIPULINGI STONE QUARRY OVER AN AREA 8.097 HA, PLOT NO- 1770/4091 & 1776/4092, KHATA NO- 797, AT- BIPULINGI, TAHASIL- CHHATRAPUR, DIST-GANJAM OF SMT. G. GAYATRI REDDY – EC.

1. This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court of Odisha, Hon'ble NGT and any other Court of Law, if any, as may be applicable to the quarry lease.
2. The Environmental Clearance is subject to obtaining requisite NBWL Clearance, if any, from the Standing Committee of National Board for Wildlife for Mining project.
3. The lessee shall implement the Pollution Control Measures and safeguards as proposed in the approved EIA/Environment Management Plan (EMP).
4. The lessee 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.
5. 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 lessee 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.
6. The lessee shall obtain NOC from concerned Block Development Officer (BDO) for usage of haulage road/Panchayat Road.
7. The lessee shall ensure safety of human life and livestock from accidents in case village / any habitation is very nearby the mining lease area.
8. The lessee 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 MOEF&CC and SEIAA, Odisha.
9. The lessee/concerned Tahasildar shall follow the detailed procedure for De-reservation of Gochar kissam land if involve in the lease area before going for mining activity.
10. Under no circumstances, the lessee shall use wagon drilling blasting during mining activity.
11. The lessee shall not store and use blasting materials/explosives inside the lease area without obtaining license/permission/authorization from competent Authority as per Indian Explosives Rules, 1983.
12. The lessee shall obtain NOC from CGWA and permission from WR department, Govt. Of Odisha for use of ground water.

13. No mining activities shall be allowed in forest area, if any, for which the Forest Clearance is not available.
14. No change in mining technology and scope of working should be made without prior approval of the SEIAA, Odisha.
15. No change in the calendar plan including excavation, quantum of mineral and waste should be made.
16. Mining shall be carried out as per the provisions outlined in the approved mining plan.
17. 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.
18. The illumination and sound at night at the lease area 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. Project Proponents 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.
19. 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.
20. The soil to be generated during mining activity shall be stacked in the earmarked temporary soil stack and shall be utilized for the plantation purpose to be undertaken around the respective hill/patch and adjacent to haul roads of the same in lease area.
21. The abandoned mine pit shall be converted to rain water storage tank and the rain water stored in pit shall be utilized for plantation as well as dust suppression.
22. Total Plantation shall be carried out within 2-3 years of mining activity and maintenance shall be continued in remaining years. Trees present in mining area shall be uprooted & transplanted in safety zone.
23. All the lease holders in a cluster should join hand for grading of the main haulage road to maintain the gradient facilitating smooth movement of vehicles.

**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 to prevent 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.

STANDARD ENVIRONMENTAL CLEARANCE CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR SAND MINING

Stipulated Conditions:

1. The project proponent should carry out River bed sand mining manually by engaging local laborers in force to check over exploitation of sand at the source.
2. Any change in the plan or quantity to be produced shall require prior approval of SEIAA.
3. There shall be a 'no working zone' to protect the embankment on both sides, road or rail bridge in the vicinity, if any, dam, weir, water intake structure of irrigation or drinking water project, or any cross drainage structure. 10 % of the width of river shall be left intact along the embankments on both sides as 'no mining zone'. Further, no mining shall be allowed within 200 m of any existing structures dam, weir, water intake structure of irrigation or drinking water project, or any cross drainage structure. In case of River Bridge, this no mining zone shall extend upto a minimum stretch of 200 meters from the bridge and it may extend upto 500 meters in sensitive locations. The lease area shall be accordingly curtailed to carve out the actual sand mining area within the leasehold. Exact map of the lease area, and the 'no mining zone' shall be drawn to scale, showing the DGPS coordinates of all corner points, and the location of the bridge, embankment, extraction route & other structures; and such map has to be submitted to SEIAA by the project proponent through the Tahasildar within three months of the date of issue of the EC. The quantum of sand allowed to be extracted will be worked out on the basis of the actual working area.
4. The lease area and the actual working area shall be demarcated on the ground by erecting durable masonry /concrete pillars by the project proponent.
5. The project proponent shall take prior statutory and regulatory clearance as required from the concerned authorities in respect of the project, before carrying out any operation.
6. Mining is not permissible within the water channel or stream flow area. No stream shall be diverted for the purpose of mining and no natural water course shall be obstructed. The mining or any ancillary activity shall not in any way disturb the flow pattern of the river water during the non monsoon period. There shall be no sand mining in the river during the rainy season or when there is flow of water in the river.
7. Sand mining operations shall not affect the existing sources for irrigation / drinking water / industrial purpose.
8. The natural sand dunes, if any, near or surrounding the lease area shall not be disturbed.
9. No transportation of the minerals shall ordinarily be allowed on any road passing through villages/habitations/forest land without prior explicit permission. Transportation

of minerals through existing rural roads can be allowed only by the concerned Govt. Department/BDO and only after required strengthening, such that the carrying capacity of road is increased to handle the sand truck traffic. The project proponent shall bear the cost towards the widening and strengthening of existing public roads in case the same is proposed to be used for the project. No movement on any road is allowed on existing village road network without appropriately increasing the carrying capacity of such roads. 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 traffic density. Plying of sand extraction trucks may be allowed on roads / path ways passing close to schools, temples, hospitals and such other public places only with prior written permission of competent authority.

10. Vehicles hired for transportation of sand from the site should be in good condition and should have pollution check certificate and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.
11. The vehicles shall not be overloaded and shall be covered with Tarpaulin. The Tahasildar may collect an appropriate road maintenance levy from the lessee as part of the lease conditions on the basis of quantum of sand transported, and utilize the proceeds of the levy for proper maintenance of the extraction paths and roads to prevent their degradation on account of plying of sand trucks.
12. The project proponent shall take all precautionary measures against causing damage to flora and fauna of the locality. The PP shall plant and nurse to full establishment a minimum of 50 number of saplings of native tree species along the approach roads, river banks and in community areas in consultation with the Gram Panchayat.
13. Water spray should be made on the road/extraction paths to control dust emission during transportation of sand.
14. The Project Proponent shall undertake phased restoration, reclamation and rehabilitation of land affected by mining and completes this work before abandonment of mine.
15. Environmental Management Plan (EMP) shall be implemented by PP to ensure compliance with the environmental conditions specified above. The year wise funds earmarked for environmental protection measures shall be kept in separate account and shall be spent according to the plan proposed. Year wise progress of implementation of EMP shall be reported to the SEIAA, Odisha and OSPCB along with the compliance report.
16. The proponent shall take necessary measures to ensure that there is no adverse impact of the mining operations on the human habitation if any, existing nearby.
17. It shall be mandatory for the project management to submit quarterly compliance reports on the status of implementation of the above stipulated environmental safeguards to the SEIAA, Odisha / SPCB, Odisha/ Regional Office of the MoEF&CC, Bhubaneswar, in hard and soft copies on 1st day of January, April, July, October of each calendar year, failing which EC is liable to be revoked.

18. River Bank stabilization shall be made through stone patching. Plantation of adequate number native species on river banks and both sides of haulage roads shall be made.
19. Since NH200, Kuccha Road and temple are only at a distance of 800 mtr, 570 mtr and 500 mtr respectively, all traffic safety measures shall be taken to avoid any kind of accidents.
20. Bio - toilet provision shall be made.
21. As raised during public Hearing and committed by PP, Loknathpur Sasan village road shall not be used for transportation of sand.
22. Stone patching on river bank with plantation in-between and the ramp construction shall be done in consultation with and advice of concerned W.R.Deptt, Government of Odisha.
23. Necessary sprinkling on Haulage Road and Avenue plantation shall be done.
24. At the end of mine closure, the proponent shall immediately remove all the sheds put up in the quarry and all the equipment in the area before closure of the quarry.
25. The conditions stipulated in the environmental clearance will be closely monitored on the ground by the lease granting authority, i.e. the Tahasildar, who shall ensure compliance of the stipulated conditions and take corrective measures promptly in case of any non- compliance and also ensure that the project proponent submits quarterly compliance reports.
26. The concerned Regional Office of the MoEF&CC/ SPCB, Odisha shall periodically monitor compliance of the stipulated conditions as applicable for this project. The project authorities should extend full cooperation to the MoEF&CC officer(s)/SPCB officer(s) by furnishing the requisite data / information / monitoring reports.
27. A copy of the clearance letter shall be sent by the proponent to concerned Gram Panchayat /Panchayat Samiti /Zilla Parisad /Municipal Corporation / Urban Local Body as the case may be.
28. Project proponent shall obtain Consent to Operate from the OSPCB 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 State Pollution Control Board.
29. The SEIAA, Odisha may revoke or suspend this EC, if implementation of any of the above conditions is not satisfactory. The SEIAA, Odisha reserves the right to alter /modify the above conditions or stipulate any further condition in the interest of environment protection.
30. The Project Proponent (lease holder) shall inform the SEIAA of any change in ownership of the mining lease. In case, there is any change in ownership or mining lease is transferred, then mining operation can be carried out only after transfer of EC as per provisions of the para 11 of EIA Notification, 2006, as amended from time to time.

31. Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this environment clearance besides attracting penal provisions in the Environment (Protection) Act, 1986.
32. 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.
33. 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.
34. 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.

**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 to prevent 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.

STANDARD ENVIRONMENTAL CLEARANCE CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR SAND MINING

Stipulated Conditions:

1. The project proponent should carry out River bed sand mining manually by engaging local laborers in force to check over exploitation of sand at the source.
2. Any change in the plan or quantity to be produced shall require prior approval of SEIAA.
3. There shall be a 'no working zone' to protect the embankment on both sides, road or rail bridge in the vicinity, if any, dam, weir, water intake structure of irrigation or drinking water project, or any cross drainage structure. 10 % of the width of river shall be left intact along the embankments on both sides as 'no mining zone'. Further, no mining shall be allowed within 200 m of any existing structures dam, weir, water intake structure of irrigation or drinking water project, or any cross drainage structure. In case of River Bridge, this no mining zone shall extend upto a minimum stretch of 200 meters from the bridge and it may extend upto 500 meters in sensitive locations. The lease area shall be accordingly curtailed to carve out the actual sand mining area within the leasehold. Exact map of the lease area, and the 'no mining zone' shall be drawn to scale, showing the DGPS coordinates of all corner points, and the location of the bridge, embankment, extraction route & other structures; and such map has to be submitted to SEIAA by the project proponent through the Tahasildar within three months of the date of issue of the EC. The quantum of sand allowed to be extracted will be worked out on the basis of the actual working area.
4. The lease area and the actual working area shall be demarcated on the ground by erecting durable masonry /concrete pillars by the project proponent.
5. The project proponent shall take prior statutory and regulatory clearance as required from the concerned authorities in respect of the project, before carrying out any operation.
6. Mining is not permissible within the water channel or stream flow area. No stream shall be diverted for the purpose of mining and no natural water course shall be obstructed. The mining or any ancillary activity shall not in any way disturb the flow pattern of the river water during the non monsoon period. There shall be no sand mining in the river during the rainy season or when there is flow of water in the river.
7. Sand mining operations shall not affect the existing sources for irrigation / drinking water / industrial purpose.
8. The natural sand dunes, if any, near or surrounding the lease area shall not be disturbed.
9. No transportation of the minerals shall ordinarily be allowed on any road passing through villages/habitations/forest land without prior explicit permission. Transportation

of minerals through existing rural roads can be allowed only by the concerned Govt. Department/BDO and only after required strengthening, such that the carrying capacity of road is increased to handle the sand truck traffic. The project proponent shall bear the cost towards the widening and strengthening of existing public roads in case the same is proposed to be used for the project. No movement on any road is allowed on existing village road network without appropriately increasing the carrying capacity of such roads. 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 traffic density. Plying of sand extraction trucks may be allowed on roads / path ways passing close to schools, temples, hospitals and such other public places only with prior written permission of competent authority.

10. Vehicles hired for transportation of sand from the site should be in good condition and should have pollution check certificate and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.
11. The vehicles shall not be overloaded and shall be covered with Tarpaulin. The Tahasildar may collect an appropriate road maintenance levy from the lessee as part of the lease conditions on the basis of quantum of sand transported, and utilize the proceeds of the levy for proper maintenance of the extraction paths and roads to prevent their degradation on account of plying of sand trucks.
12. The project proponent shall take all precautionary measures against causing damage to flora and fauna of the locality. The PP shall plant and nurse to full establishment a minimum of 50 number of saplings of native tree species along the approach roads, river banks and in community areas in consultation with the Gram Panchayat.
13. Water spray should be made on the road/extraction paths to control dust emission during transportation of sand.
14. The Project Proponent shall undertake phased restoration, reclamation and rehabilitation of land affected by mining and completes this work before abandonment of mine.
15. Environmental Management Plan (EMP) shall be implemented by PP to ensure compliance with the environmental conditions specified above. The year wise funds earmarked for environmental protection measures shall be kept in separate account and shall be spent according to the plan proposed. Year wise progress of implementation of EMP shall be reported to the SEIAA, Odisha and OSPCB along with the compliance report.
16. The proponent shall take necessary measures to ensure that there is no adverse impact of the mining operations on the human habitation if any, existing nearby.
17. It shall be mandatory for the project management to submit quarterly compliance reports on the status of implementation of the above stipulated environmental safeguards to the SEIAA, Odisha / SPCB, Odisha/ Regional Office of the MoEF&CC, Bhubaneswar, in hard and soft copies on 1st day of January, April, July, October of each calendar year, failing which EC is liable to be revoked.

18. River Bank stabilization shall be made through stone patching. Plantation of adequate number native species on river banks and both sides of haulage roads shall be made.
19. Since NH200, Kuccha Road and temple are only at a distance of 800 mtr, 570 mtr and 500 mtr respectively, all traffic safety measures shall be taken to avoid any kind of accidents.
20. Bio - toilet provision shall be made.
21. As raised during public Hearing and committed by PP, Loknathpur Sasan village road shall not be used for transportation of sand.
22. Stone patching on river bank with plantation in-between and the ramp construction shall be done in consultation with and advice of concerned W.R.Deptt, Government of Odisha.
23. Necessary sprinkling on Haulage Road and Avenue plantation shall be done.
24. At the end of mine closure, the proponent shall immediately remove all the sheds put up in the quarry and all the equipment in the area before closure of the quarry.
25. The conditions stipulated in the environmental clearance will be closely monitored on the ground by the lease granting authority, i.e. the Tahasildar, who shall ensure compliance of the stipulated conditions and take corrective measures promptly in case of any non- compliance and also ensure that the project proponent submits quarterly compliance reports.
26. The concerned Regional Office of the MoEF&CC/ SPCB, Odisha shall periodically monitor compliance of the stipulated conditions as applicable for this project. The project authorities should extend full cooperation to the MoEF&CC officer(s)/SPCB officer(s) by furnishing the requisite data / information / monitoring reports.
27. A copy of the clearance letter shall be sent by the proponent to concerned Gram Panchayat /Panchayat Samiti /Zilla Parisad /Municipal Corporation / Urban Local Body as the case may be.
28. Project proponent shall obtain Consent to Operate from the OSPCB 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 State Pollution Control Board.
29. The SEIAA, Odisha may revoke or suspend this EC, if implementation of any of the above conditions is not satisfactory. The SEIAA, Odisha reserves the right to alter /modify the above conditions or stipulate any further condition in the interest of environment protection.
30. The Project Proponent (lease holder) shall inform the SEIAA of any change in ownership of the mining lease. In case, there is any change in ownership or mining lease is transferred, then mining operation can be carried out only after transfer of EC as per provisions of the para 11 of EIA Notification, 2006, as amended from time to time.

31. Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this environment clearance besides attracting penal provisions in the Environment (Protection) Act, 1986.
32. 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.
33. 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.
34. 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.

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR M/s KUSHALESWAR MINERALS FOR RAIKA- KALAPARBAT IRON AND MANGANESE MINES FOR PRODUCTION OF 53,990 TPA ROM OVER AN AREA 9.8136HA. LOCATED IN THAKURANI R.F., NEAR VILLAGE- RAIKA, UNDER CHAMPUA SUBDIVISION OF KEONJHAR DISTRICT, ODISHA OF SRI. BASANTA KUMAR MOHANTY (MANAGING PARTNER) - 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-I1013/57/2014-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 in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board 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) Air quality monitoring and preservation

- (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. PM₁₀, PM_{2.5}, NO₂, CO and SO₂ etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.
- (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 PM₁₀ and PM_{2.5} 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.

(III) Water quality monitoring and preservation

- (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 supernatant 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) Public hearing and human health issues

- (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 14 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.

**CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR
MORRUM QUARRY**

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 to prevent 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.

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR M/S STALWART PROJECTS PVT. LTD. FOR PROPOSED CONSTRUCTION OF B+S/G+8 COMMERCIAL-CUM-RESIDENTIAL APARTMENT & B+S+5 STORIED RESIDENTIAL APARTMENT BUILDING OVER AN AREA OF 4912.80SQM./1.214AC./0.4912HA., LOCATED AT MOUZA-BARAMUNDA BHUBANESWAR, DIST – KHURDA WITH TOTAL BUILT UP AREA-22555.99SQM. OF SRI SHARAT KUMAR SAHU (MANAGING DIRECTOR) - 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 ground water shall not exceed 71 KLD.
10. A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed, the

quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring that there is no impact on other users.

11. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC and SEIAA, Odisha along with six monthly Monitoring reports.
12. Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc. and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.
13. Use of water saving devices/ fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc.) for water conservation shall be incorporated in the building plan.
14. Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.
15. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
16. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain water harvesting recharge pits of 03 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 100 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, murrum and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site. Sand, murrum, 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. All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Rules, 2016. All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.
40. **Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance shall be complied with.**
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 m² 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. 1165 m² i.e. (23.7 % of the 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(II) of the said O.M. appropriate funds shall be earmarked for the activities such as infrastructure creation for drinking water supply, sanitation, health, education, skill development, roads, cross drains, electrification including solar power, solid waste management facilities, scientific support and awareness to local farmers to increase yield of crop and fodder, rain water harvesting, soil moisture conservation works, avenue plantation, plantation in community areas etc. The activities proposed under CER shall be restricted to the affected area around the project. The entire

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

PART B – GENERAL CONDITIONS

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

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

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

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE OF M/S CHARIOT CEMENT COMPANY (CSPPL) (A UNIT OF CHARIOT STEEL AND POWER PVT. LTD.) FOR PROPOSED NEW CEMENT GRINDING UNIT TO BE ESTABLISHED AT KALUNGA INDUSTRIAL ESTATE, TAHASIL - LATHIKATA, DISTRICT - SUNDARGARH OF SRI SURESH JOSHI – 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-1 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/ Committee.
- v. The project proponent shall obtain the necessary permission from the Central Ground Water 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.
- vii. The construction and demolition wastes to be generated from the proposed project shall be disposed of in accordance with the provisions of "Construction & Demolition Wastes Management Rules 2016".
- viii. Municipal Solid Waste shall be disposed off as per the Solid Waste Management Rules, 2016 and amendment thereafter.

II. Air quality monitoring and preservation

- i. The project proponent shall install 24x7 Continuous Online Emission Monitoring System at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 612 (E) dated 25th August, 2014 (Cement) and subsequent amendment dated 9th May, 2016 (Cement) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. 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.

- iii. The project proponent shall install system carryout to Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO₂ and NO_x in reference to SO₂ and NO_x emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.
- iv. 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 the SEIAA, Odisha, Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six- monthly monitoring report.
- v. 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.
- vi. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
- vii. Pollution control system in the cement plant shall be provided as per the CREP Guidelines of CPCB.
- viii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- ix. Ensure covered transportation and conveying of raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash.
- x. Provide wind shelter fence and chemical spraying on the raw material stock piles and have separate truck parking area and monitor vehicular emissions at regular interval.
- xi. The proponent shall provide designated parking space, both inside and outside the plant to avoid traffic congestion and conflict.
- xii. The proponent shall not use pet coke as fuel in Hot Air Generator (HAG).
- xiii. The proponent shall install permanent water sprinklers either on internal roads or dust prone area at loading-unloading, transfer, transportation inside the plant to control fugitive emission.

III. Water quality monitoring and preservation

- i. The project proponent shall install Continuous Online Effluent Monitoring System with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 612 (E) dated 25th August, 2014 (Cement) and subsequent amendment dated 9th May, 2016 (Cement) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. 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.

- iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to SEIAA, Odisha, Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- iv. All the treated wastewater shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No wastewater shall be discharged outside the factory premises and 'Zero Liquid Discharge (ZLD)' shall be adopted.
- v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- vi. 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.
- vii. The project proponent shall practice rainwater harvesting to maximum possible extent.
- viii. Water meters shall be provided at the inlet to all unit processes in the cement plant.
- ix. The project proponent shall make efforts to minimize water consumption in the cement plant complex by segregation of used water, practicing cascade use and by recycling treated water.

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 SEIAA, Odisha as well as Regional Office of the MoEF&CC, Govt. of India, Bhubaneswar 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 rooftops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly. The proponent shall use Solar / Renewable energy of 5 % of the expected actual power requirement.
- ii. Provide the project proponent for LED lights in their offices and residential areas.
- iii. Maximize utilization of fly ash, slag and sweetener in cement blend as per BIS standards.

VI. Waste management

- i. The waste oil, grease and other hazardous shall be disposed of as per the Hazardous & Other waste (Management & Trans-boundary Movement) Rules, 2016.
- ii. Garbage / food waste from Colony, Canteen & Guest House shall be used for vermicomposting and to be used as manure for green belt development.

- iii. Ash generated from Hot Air generator (HAG) and dust generated from APC Devices shall be completely reused in Cement manufacturing process. Spent oil and batteries shall be sold to authorized recyclers / re-processors only.
- iv. STP sludge shall be used as manure for greenbelt development / plantation.

VII. Green Belt

- i. Green belt shall be developed in an area equal to 33% (as proposed) 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 proponent shall make plantation in the gap area to have uniformity alongside the boundary / periphery of the project including developing a suitable nursery as well.
- iii. 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.

VIII. Public hearing and 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 PP shall provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- iii. The proponent shall comply to the CER related issues raised in the proceedings of the public hearing held on 06th March 2019.
- iv. 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.
- v. 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 MoEF&CC, Govt. of India OM vide F.No. 22-65/2017-IA.III, dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approved 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 SEIAA, Odisha as well as MoEF&CC 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 report 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 SEIAA, Odisha, Regional Office, MoEF&CC, Govt. of India, Bhubaneswar 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 cement 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 project proponent shall monitor the criteria pollutants level namely; PM10, SO₂, NO_x (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.
- v. 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.
- vi. 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.
- vii. The project proponent shall inform the Regional Office as well as the Ministry, 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.

- viii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- ix. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the State Level Expert Appraisal Committee.
- x. No expansion or modifications in the plant shall be carried out without prior approval of the SEIAA, Odisha.
- xi. 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.
- xii. The SEIAA, Odisha may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xiii. The SEIAA, Odisha reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiv. The Regional Office of the 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.
- xv. 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 Trans-boundary 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.
- xvi. 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.