PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL COMMITTEE, ODISHA HELD ON 22nd JANUARY, 2021

The SEAC met on 22nd January, 2021 at 03:00 PM in the Conference Hall of Odisha State Pollution Control Board, Bhubaneswar under the Chairmanship of Sri B.P. Singh. The following members were present in the meeting.

1.	Sri. B. P. Singh	-	Chairman
2.	Dr D. Swain	-	Member
3.	Sri. J. K. Mahapatra	-	Member
4.	Prof. (Dr.) B.K. Satpathy	-	Member
5.	Er. K.R. Acharya	-	Member
6.	Prof (Dr.) P.K. Mohanty	-	Member
7.	Dr. K.C.S Panigrahi	-	Member

CONSIDERATION OF CATEGORY B PROPOSALS (COMPLIANCE RECEIVED):

A. PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR PAIKADAKULGUDA SEMI PRECIOUS GARNET STONE MINES (CAT'S EYE) OVER AN AREA OF 40.946 HA. IN VILL. PAIKADAKULGUDA & KANDHADAKULGUDA, TAHASIL: BISAM CUTTACK, DIST RAYAGADA OF SRI BIJAY KUMAR BANSAL (TOR ISSUED VIDE LETTER NO. 955/SEAC-159, DATED 19.11.2018) (EC)

1. The proposal is for Environmental Clearance of Paikadakulguda Semi Precious Garnet Stone Mines (Cat's Eye) over an area of 40.946 Ha. in Vill. Paikadakulguda & Kandhadakulguda, Tahasil: Bisam Cuttack, Dist Rayagada of Sri Bijay Kumar Bansal.
2. This is a proposal for gemstone mining project with production capacity of 41 kg / annum gemstone over mining lease of 40.946 ha.
3. The grant of mining lease for semi-precious stone (Cat's Eye) in favour of Sri Bijay Kumar Bansal in villages Paikadakulguda and Kandhadakulguda for a period of fifty (50) years vide letter No.250/SM, Bhubaneswar dated 07.01.2017. Subsequently, the precise area map along with Boundary description & Land schedule of the granted area has also been issued to the lessee letter No. 2108 dated 29.05.2008, Department of Steel and Mines, Govt. of Odisha, Bhubaneswar.
4. Previously, the mining lease area over 41.485 hectares was granted in favour of Sri Bijay Kumar Bansal vide grant proceeding No.9245 / SM dated 12.11.2007 for 20 years after receipt of approved mining plan on 03.05.2007 and Collector Rayagada requested the department of Steel & Mines, Govt. of Odisha for execution of M.L area over 40.946 hectares after final survey and demarcation vide his letter No.2108 dated 29.05.2008.
5. Previous mining plan for Paikadakuluguda Cat's Eye Deposit in the M.L area over 41.485 hectares prepared under Rule 22 of MCR, 1960 was approved by the Indian Bureau of Mines, Govt. of India for a period of five (5) years vide letter No.BBS/RGD/Cat's Eye/MP-298 dated 03.05.2007. Since extent of the M.L area over 41.485 hectares as per terms & condition letter dated 15.10.2001 has been reduced to 40.946 hectares dated 07.10.2017. Modification of Mining Plan has been prepared for 40.946 hectares under

Rule 17(3) of MCR, 2016 for 5 years and approved vide letter no. MPM/OTFM/18-ORI/BHU/2018-19 dated 27.07.2018.

6. Terms of Reference (TOR) was issued vide SEAC letter. No. 955, SEAC-159 dated 19.11.2018
7. The lease area in favour of Lessee Sri Bijay Kumar Bansal for excavation of Chrysoberyl cat's Eye Gem Stone is located in village Paikadakuluguda under Bissamcuttack Tehsil of Rayagada District. Lease area is a part of Survey of India toposheet No 65 M/10 on 1:50,000 scale and is bounded by the latitudes from 19˚34'37.09" to 19°35'05.51"N and longitudes from 83°32'05.35" to 83°32'31.17"E as per geodetic survey. The area is at a distance of 5 km from Muniguda town. The nearest railway siding is at Muniguda located at a distance of about 5 km from the lease area respectively.
8. The major portion of the lease area coming under waste land, water way & road. Soil-alluvium exposure is found to cover the total lease area. Mineable reserve is same to that of geological reserve as there will no loss due to M.L boundary & over all slope factors. Hence, mineable reserve for Cat's eye bearing zone is 555 kg. Keeping the maximum production of 41kg/ annum, the mineable reserve will be exhausted in 14 years time including the mining plan period.
9. Opencast method of mining will be adopted in the M.L area manually on single shift basis with deployment of equipments like hand shovels, pick axe, crow bar, baskets etc. overburden will be excavated & loaded manually and transported through 10 t capacity truck / tippers to the dumping site. The maximum production of cat's eye from the lease area will be 41 Kg/ Annum. With this rate of production the life of mine will be 14 years which include the present plan period of five years. A washing unit is proposed to be established for recovery of the Cat's eye. Mining will be carried out around the existing pit. Proposed rate of excavation varies between 1170 m3 to 518 m3 from 1st year to 5th year of development, washing unit is located at close proximity of the quarry
10. The proposed mining project will able to create employment opportunities for 83 personnel among which 8 will be administrative and technical personnel and rest 75 will be skilled, semiskilled and unskilled labours.
11. Tube well is the source of water for drinking purpose in nearby villages. Vasundhara & Kani Jorhi River and tanks provide water for non-domestic use. The water requirement of the washing plant is 9.8m3 / day. Out of total water used, 90% is recycled where as 10% is required as daily make up water.
12. During the plan period, 98450 m3 OB / waste will be generated. These wastes will be dumped inside the lease area over an area of 1.231 Ha. at 8m average height in one terrace of 10m height. Construction of retaining wall and plantation around proposed dump will be carried out. Waste removed from the pit will be utilized for backfilling once the pit is exhausted. Therefore, there will be no dump in the lease area during the conceptual period.
13. The existing nala near the lease area will remain untouched as it is 0.2 km far from lease area and protected stone pitching on both the banks and plantation of small grasses to restore the soil erosion. There is the proposal for construction of check dam in the nala to store water which will be utilized in the process of washing. Garland drains will be

constructed along the quarries and dumps which are routed through settling pits of size 10m x5mx2m.

14. During the plan period there is the proposal for plantation of about 750 saplings over an area of 0.3 Ha and during conceptual period 6.05 Ha of the land will be covered under plantation with about 10500 saplings.

15. The Public Hearing has been conducted on 15.11.2019 at 10.30 AM at Paikadakulguda of Kutraguda R.I. Circle, in the district of Rayagada in accordance with the Ministry of Environment, Forest & Climate Change, Govt of India, EIA Notification No.SO-1533(E) on dated 14.09.2006.

16. The major issued raised by public include conservation of the forest near the mines, employment generation, developmental work like road construction, educational development in the villages. The lessee agreed to conduct the CSR activities shall be carried out in consultation with co-ordination committee formed under Gram Sabha of the local Panchayat to get local villagers involvement. Budget allocated for peripheral developmental acitivities will be 16.5 Lakhs

17. Baseline study was conducted in pre monsoon season (March to May 2018).

18. The cost of the project is ` 320 Lakhs.

19. The project proponent along with their consultant **M/s Kalyani Laboratories Pvt. Ltd. Plot no.-78/944, Pahala, Bhubaneswar -752101** made a detailed presentation on the proposal before the SEAC on 17.07.2020.

20. The SEAC in its meeting held on Dt: 17.07.2020 decided to take decision on the proposal after receipt of the following information / documents from the proponent followed by a site visit by the Sub-Committee of SEAC to the proposed site.

21. The project proponent has furnished compliances as desired by the committee vide letter no. Nil dated 07.11. 2020 and same has been verified by the SEAC in its meeting held on 02.12.2020 as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
(i)	Specific measures to be taken in case of deep mining and slope failure as the mining area is sandy soil type. Slope study to be done preferably by an Institute of National repute	The details regarding slope failure measures has been given in **Annexure 1.**
(ii)	Remedial Measures to be taken so that natural drainage of nala is not affected. A detailed proposal to this effect to be submitted.	Remedial Measures to be taken so that natural drainage of nala detailed as **Annexure 2**
(iii)	Since the mining activity will intercept ground water table, ground water study to be undertaken and report is to be submitted	With reference to approved mining plan: Ultimate pit depth = 324 mRL (42m from top level i.e. 366 mRL. Surface level = 290 mRL Ground water table during rainy season = 15m below surface level (275mRL) Ground water table during Summer season = 20m below surface level

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		(270mRL) Hence, there is no possibility of ground water intersection during the period of mining. Map showing ultimate pit depth and depth of ground water attached for reference. Copy of the portion of the mining plan describing the pit limit attached. **Annexure 3**
(iv)	Details of proposed bench height and slope	Height and width of the benches will be maintained at 6m each. Individual benches will be maintained at 800 and overall quarry slope angle will be maintained at 340 with respect to horizontal. Benches will be formed and worked in a top downward manner. Footsteps will be provided between the pit top, bench floors and pit bottom for the movement of workers with or without loads
(v)	Type of retaining wall to be provided with design/dimensional details	Retaining wall will be constructed around the OB dump to retain the wash-off materials. Boulders / bricks of waste materials will be utilized for construction of retaining wall. Sand and cement will be used for the binding of the boulders / bricks to prevent loose waste materials. Dimension of Retaining wall, garland drain and Settling tank have been submitted.
(vi)	A natural nallah is passing inside the lease area. A detailed proposal to protect the nallah is to be submitted	As described in point no. 2 **Annexure 2**
(vii)	A public road passing through the lease area. A detailed proposal to be submitted to provide alternative passage to the public	The public road is passing through the lease area in the northern part. Up to the conceptual period a total area of 4.880 Ha only will be utilized for mining and allied activity. The mining activity along with dumping will be completely carried out in the South – Eastern part of the lease area. So the mining activity will not interfere the public road. Further the public road is located at a distance of 600 m from the ultimate quarry boundary. The map showing the ultimate quarry limit, location of public road is given in **Annexure- 4**
(viii)	Details of the mining pits to be operated for a particular time	During the proposed period of mining one pit will be operated. During the

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		conceptual period the area of the pit will be 2.384 Ha. The map showing the conceptual mining pit area has given in **Annexure 5.**

22. The SEAC in its meeting held on Dt: 02.12.2020 decided to take decision on the proposal after a site visit by the sub-committee of SEAC.

23. The sub-Committee of SEAC visited the project site on dated 29.12.2020 and following observations and recommendations were made:

i) No water way and road was found inside the lease area as stated by the lessee.

ii) Engineering mechanism of recycling process of 90% of used water i.e. about 9 M^3/day is not explained including the source of about 1 M^3/day as make up water be indicated.

iii) Slope study done and recommendation made thereof for OB / waste dump and the pit / quarry be endorsed / authenticated by a domain expert from an Institution of national repute as the soil type is sandy to avoid any threat to safety of the workmen.

iv) No nala (natural / perennial) was seen at a distance of 0.2 km (200 mtrs) from the lessee boundary as stated by the lessee including their proposal for stone pitching on both the banks including plantation of small grasses to restore soil erosion and construction of check dam in the nala to store water to utilize in the process of washing be clarified and explained.

v) Minutes of meeting of public hearing be submitted and action proposed to be taken to mitigate the environmental issues raised in physical terms be submitted.

vi) Though it is mentioned that the proposed mining activity is manual opencast without any drilling, blasting and chemical intrusion, it is also stated that detonators / blasting will be used / done and hence, a contradiction.

It was conceded by the lessee as well as the consultant that minor blasting will be done during the site visit. In such a situation, explosive license for storage and use be obtained from the appropriate authority.

vii) Two numbers of settling tanks have been provided in the reclamation plan map of the mining plan connected to the garland drain proposed around (i) top soil & (ii) proposed OB/waste dump for settling of wastewater and recycling of clean water after settling of solid particles. In fact, one more settling tank is advised for channelizing run-off water / wash pits / washing tank in to it including run-off through rain-cuts and settling it and recycling the clean water to ensure zero discharge outside the lease boundary.

viii) A “Seasonal Nala” has been shown in the “Reclamation Plan Map” passing from inside the lease area to beyond the lease boundary and connected to other seasonal nala in the South-East side of the lease boundary, which is not seen physically.

So, a revised Reclamation Plan Map (mining plan map) be re-submitted showing the physical features existing inside the lease boundary and beyond (nearby) including

the suggestion / recommendations made above incorporating other physical features.

ix) A heap of sandy soil was also seen inside the lease area which is probably an unauthorized mining and the management of the same also need to be submitted.

x) Few grown trees are seen inside the lease / mining area. A proposal be submitted as to restoration of the same without damaging the same.

xi) The exploration data / bore well location in the lease area to be submitted to ascertain the geological formation / mineralized zone.

After detailed discussion, the SEAC decided to take decision on the proposal after receipt of the following information / document as recommended by the sub-Committee of SEAC.

a) Slope study done and recommendation made thereof for OB / waste dump and the pit / quarry be endorsed / authenticated by a domain expert from an Institution of national repute as the soil type is sandy to avoid any threat to safety of the workmen.

b) No nala (natural / perennial) was seen at a distance of 0.2 km (200 mtrs) from the lessee boundary as stated by the lessee including their proposal for stone pitching on both the banks including plantation of small grasses to restore soil erosion and construction of check dam in the nala to store water to utilize in the process of washing be clarified and explained.

c) Minutes of meeting of public hearing be submitted and action proposed to be taken to mitigate the environmental issues raised in physical terms be submitted.

d) A “Seasonal Nala” has been shown in the “Reclamation Plan Map” passing from inside the lease area to beyond the lease boundary and connected to other seasonal nala in the South-East side of the lease boundary, which is not seen physically.

So, a revised Reclamation Plan Map (mining plan map) be re-submitted showing the physical features existing inside the lease boundary and beyond (nearby) including the suggestion / recommendations made above incorporating other physical features.

e) A heap of sandy soil was also seen inside the lease area which is probably an unauthorized mining and the management of the same also need to be submitted.

f) Few grown trees are seen inside the lease / mining area. A proposal be submitted as to restoration of the same without damaging the same.

g) The exploration data / bore well location in the lease area to be submitted to ascertain the geological formation / mineralized zone.

B. PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. CHROME SAGAR FOR CHROME ORE BENEFICIATION UNIT OF THROUGHPUT CAPACITY 18,500 TPA & REFRACTORY MIX PLANT, AT VILLAGE PUBALA, DISTRICT OF JAJPUR, ODISHA - EC

1. This is a proposal for Environmental Clearance of of M/s. Chrome Sagar for Chrome Ore Beneficiation Unit of throughput capacity 18,500 TPA & Refractory mix plant, at village Pubala, district of Jajpur, Odisha of Sri Rajendra Kumar Thatoi.
2. The project falls under Category 2 (b), B2 (Throughput <20,000 TPA) as per schedule of EIA Notification dated 14th Sep, 2006, as amended from time to time.
3. The proposed expansion project is for additional installation of chrome ore beneficiation

unit with throughput of 18500 TPA within the existing campus of M/s Chrome Sagar at Vill: Pubala, P.O. Sukinda, Dist: Jajpur, Odisha.

4. The existing project for production of Chrome mortar and Chrome monolithic and again obtained Consent to establish for the existing chrome monolithic unit and Chrome refractory mortar of 12,000 TPA capacity obtained from Odisha state pollution control Board vide letter no. 1482/KNG/IND-266 dated 09.08.2019 and Consent to Operate for the unit has been obtained vide letter no. 1687/KNG/IND-266 dated 07.09.2019
5. ToR was issued vide Online Proposal No: SIA/OR/IND/48689/2019 and SEIAA File No: 48689/09-IND/12-2019. The presentation at SEAC, Odisha for approval of ToR was held on 29.01.2020 and ToR Approved Vide letter no: 8365/SEIAA dated 17.07.2019. Application for Environment Clearance was made on 21.08.2020.
6. The proponent has applied to consider their project as Category-B2 as per MoEF&CC, Govt. of India O.M. No. J/13012/12/2013-IA-II(I), dated 24.12.2013 as throughput of Mineral Beneficiation activity is less than 20,000 TPA involving only physical beneficiation.
7. The MoEF&CC, Govt. of India O.M. No. J/13012/12/2013-IA-II(I), dated 24.12.2013 stipulates the Mineral Beneficiation activity listed in the schedule as Category-B will be treated as Category-B2 with throughput ≤ 20,000 TPA, involving only physical beneficiation.
8. The total land of M/s Chrome Sagar is 2.2 Acres which is purchased by the project proponent. No additional land is required for the above additional installation of beneficiation unit. No forest land involved. The nearest river is Brahamani river located at a distance of 8.5 Km from the project site. There is the proposal for construction rain water harvesting structure for fulfilment of water requirement for the project over an area of 728 Sq.m.
9. The land area required for the project will be 2.2 acres which comes under agricultural waste land category which has been converted Gharabari Kissam and belongs to the project proponent. Plot No: 1138, 1139/1640 & 1278/1641; Khata No.: 267/39.
10. The proposed area is featured under the topo sheet No. 45T/13 bounded by Latitude:20^0 12' 36"N Longitude:85^0 31' 31"E. The mining lease area is also accessible NH-200 at 2.5 km. and Sukinda – Hatibari road 5 km. The nearest railway station is Sukinda Road railway station and Jajpur road railway station which are situated at a distance of 17 km and 25 km from the proposed area. Nearest airport is Biju Pattnaik Bhubaneswar Airport 80 Kms from project site. Nearest river is Brahmani River at 9.5 km and Jhamra river at 5 km. Nearest town is Sukinda at 4.5 km. Nearest forest Pubala Protected forest at 0.5km. Nearest habitation is within 3km from project site. There is no wild life sanctuary, corridor, National park, biosphere reserve located within 10 Km buffer zone of the project site.
11. Raw material linkage has been established for the proposed plant from M/s B.C. Mohanty Mines, Sukinda and from OMC Ltd. The project is well accessible for transportation of raw material and product. The project is accessible through a 50 ft wide road which connect to NH – 200 and Sukinda road railway station also located at a distance of 17Km from the project site.
12. The process is a beneficiation process of conversion of low grade chrome ore having content less than 40% of Cr_2O_3 into semi high grade ore having content 50-65% of Cr_2O_3.

13. Generation of solid waste (tailings generated = 3600 TPA having <10% Cr_2O_3) will be properly stored in an impervious platform in earmarked area and will be blended with chrome refractory mortar and sold. So there will be no waste generation from the proposed project. However taking into consideration of maximum storage of 6 years an area of 0.648 Acres has been demarcated for tailing pond.
14. **Total Water Requirement:** The total water requirement of the project is estimated as 68 KLD. The makeup water requirement for beneficiation plant will be 5 KLD and 2 KLD water required for dust suppression and green belt development will be sourced from Rain water reservoir and the drinking water requirement of1 KLD will be sourced from bore well.
15. **Power Requirement:** The total power requirement is estimated as 100 KVA. It is proposed to draw the power from the NESCO.
16. **Green area:** Greenbelt is being/ will be developed in 2938 Sq.m 33 % of total project area. There is the proposal for plantation of 675 saplings within the project site.
17. **Baseline Environmental Studies** were conducted during winter season i.e. from 01-December-2019 to 29th February 2020. Ambient air quality monitoring has been carried out at 8 locations during 01-December-2019 to 29th February 2020 (winter season) and the data submitted.
18. No/ R&R is involved. The proposed expansion is within the existing plant premises without any further land acquisition.
19. The tailing generated from the project will be 6500 TPA (10% Cr2O3) which will be completely utilized in the existing chrome monolithic unit resulting in zero discharge form the proposed beneficiation plant.
20. The project generates employment opportunities for 10 personnel which includes operator -2, supervisor 2, 3 no of semi-skilled labour and 3 no of unskilled labour.
21. The project has been considered under B2 Category (Mineral beneficiation with throughput <20,000 TPA) and exempted from public hearing.
22. The capital cost of the project is ` 1.05 Crores and the capital cost for environmental protection measures is proposed as ` 16 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as ` 4.5 Lakhs. The detailed CER plan has been provided in the EIA and cost of CER will be 9.5 Lakhs.
23. The proponent has mentioned that there is no court case or violation under EIA Notification for the project or related activity.
24. The Environment consultant **M/s Kalyani Laboratories (Pvt) Ltd. Pahala, Bhubaneswar** along with the proponent has made a briefing on the proposal before the Committee.
25. The SEAC in its meeting held on Dt: 30.09.2020 decided to take decision on the proposal after receipt of the following information / documents from the proponent followed by site visit of sub-Committee of SEAC.
26. The project proponent has furnished compliances as desired by the committee vide letter

no. Nil dated 02.11. 2020 and same has been verified in its meeting held on 02.12.2020 as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
(i)	Detailed proposal for Zero Liquid Discharge (ZLD) with water balance	The proposed project will be operated with zero liquid discharge. The detail proposal for ZLD and water balance attached as Annexure 1
(ii)	Tailing pond capacity is exactly to the waste generation which might overflow / leaked. This shall be clarified how it will be managed. Showing tailing pond design with dimensions taking in to account tailing generation of 20MT/day (32 M3/ day) and the waste water inside it	Capacity of the proposed settling tank for tailing= 5m x 5m x4m = 100 cu.m. Tailing generated per day = 32 Cu.m Water with tailing = 24 Cu.m Total tailing with water = 56 Cu.m 56 Cu.m of tailing will be settled in the settling tank and water is being pumped to the process and settled material will pass through filter press and tailing will be disposed in tailing dumping yard. The tailing generated daily basis will be shifted as raw material in the monolithic unit.
(iii)	Adequacy of Tailing pond, its capacity and steps to prevent leaching of hexavalent chromium shall be furnished	As described above the Settling tank (Tailing pond) is of 100 cu.m capacity and it is adequate for settling of 56 cu.m of tailing generated from the process. The tailing pond will be provided with 150mm RCC which is enough to prevent leaching of hexavalent chromium.
(iv)	Detailed design and specifications of ETP and its adequacy	Detail design and specification of ETP has been attached as Annexure 2
(v)	Detailed design and specification of chrome ore storage area	The raw material requirement for beneficiation unit will be 18500 TPA i.e. 66 TPD. The raw material of chrome ore beneficiation plant is low grade chrome ore (26-40% Cr2O3). The storage area demarcated for raw material will be 1274 Sq.m. which can store raw material for 60 days. (6400 cu.m capacity) Raw material will be stored in a silo of 5 m depth of above capacity as per the advice of the Hon'ble Committee. The raw material storage silo will be provided with RCC wall and flooring to prevent leaching and airborne of dust particle.
(vi)	Mitigation measures to control $PM_{2.5}$ and PM_{10}. Predictive simulated value of $PM_{2.5}$ and PM_{10} with commissioning of this project and surrounding similar new projects be submitted using the model for three-dimensional concentration	The proposed beneficiation plant will be established within the existing campus of the chrome monolithic unit. The simulation modeling was carried out taking into account of both the existing and proposed expansion unit. There is no similar project exists within 5 km radius of the project site. The details of the modeling study carried out for the project and the proposed mitigation measures for control of PM10 and PM2.5 has been attached as Annexure 3.
(vii)	Soil testing report showing actual value of hexavalent chromium	Soil testing report showing the actual value of hexavalent chromium attached as Annexure 4
(viii)	Traffic density study result is to be submitted w.r.t future vehicular movements. Traffic density study	The daily additional traffic load due to the plant operation in full capacity will be as follows: 1. Raw material transported from Mining to plant

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	process details be furnished. Are MCC AND MCTC methods of traffic density study is recommended for this kind of traffic? Is a standard commission viza-vis the findings of the study be indicated. Has this study been undertaken with important traffic intersection points at public roads i.e NH/SH/District road etc?. The study and the recommendation be rectified by a domain expert. Otherwise, a fresh study be undertaken by a domain expert	site =66 TPD 2. Truck capacity - 15 Tons 3. Trucks utilized for transportation of Raw material = 5 nos per day (Max) 4. Product transport from the plant to user agency = 40 TPD 5. Trucks utilized for transportation of product = 3 nos per day (max) 6. So the additional truck load for the road = 8 nos / day (Max) The traffic for finished product and raw material from the plant site to the highway metering point will be maximum 8 nos of trucks per day. This traffic has no additional load on this way till metering point. MCC method is being followed here for traffic density study due to easier and less time consuming method as per recommendation of IRC. The details of traffic study has been attached as Annexure 5.
(ix)	Status of road side plantation on kaliapani plant road 25 km with steps proposed for its continuity	The distance from Kaliapani mining site to Ichapur metering point on NH is 22 Km. There is existing plantation on the road side and being maintained. The connecting road from Ichapur (on NH 200) to the plant site is of 3 Km distance. The proponent proposed for plantation along both side of throad connecting the plant site and the highway a distance of 3.0 Km. There will be proposal for plantation of 2000 saplings along both side of the road with a spacing of 2.5m. The saplings proposed for plantation are *Mangifera indica, Azadiracta indica, Bombax ceiba, Delonix regia, Cassia siamea, Albizzia lebbeck, Terminalia chebulae*, *Terminalia bellirica, Emblica officinalis, Mangifera indica, Terminalia arjuna, Terminalia alata, Gmelia arborea, Syzyzium cuminii, Cassia fistula, Anthocephalus kadamba, Acacia nilotica, Eucalyptus sps*
(x)	Tabulated form of existing features and proposed features is to be submitted	Submitted in compliance report.
(xi)	Details of Rain water harvesting. Adequacy of rain water harvesting pond with scope for increasing its capacity shall be furnished	Details of rain water harvesting and scope for increasing the capacity is being attached **Annexure 6**
(xii)	Five Reserve forests are nearby to the project site. Details about how to reduce impact of chrome leaching to the nearby forest area. Additional impact on the environment due to the	Though there are 5 RF within the 10 Km buffer zone of the project site out of which Pubala protected forest is located at a distance of 500m from the project site. As the project operate with zero liquid discharge technology no waste water discharge will be there

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	establishment of chrome ore beneficiation unit	outside the plant premises. The anticipated impact of the proposed Chrome ore beneficiation unit on the surrounding environment is as below: • Dust generation due to vehicular movement may have an impact on the nearby scrub vegetation. • The transport route and its periphery does not possess an active agricultural field. • As per the air quality modeling the maximum incremental ground level concentration is 1.05 µg/m3 and resultant concentration at a distance of 100m in SE direction (140°) will be 78.65 µg/m3, which is within the plant premises. There is no direct impact of dust pollution on the protected forest. • There is no wild animal under schedule I/ schedule II found within the protected forest. • The proposed mitigation measure will be as below • The crushing unit will be provided with pollution control measures like bag filter and stationary water sprinklers to settle down the dust within the plant premises thereby reducing the fugitive dust. • Water sprinklers will be installed at the dust prone areas to reduce the dust generation. • The plant operation will be carried out in the day time and transportation of raw material and products will be limited to day time only. • There will be three tier green belt development along the boundary to attenuate air and noise pollution. Plantation has been already initiated within the plant premises
(xiii)	Alternative Biological Method for conversion of Hexavalent Chromium	Considering the plant capacity as a tiny plant the method being selected as a established and easy operative method. Considering the investment capacity, the chemical dosing method is best feasible at present. The important point for consideration here is the treatment is applicable for surface runoff during rainy season only. In other season the water is being completely recycled and preserved for process. Hence no treatment is required. Biological process may be recurring a continuous maintenance of the microbes which may not be feasible for this tiny plant.
(xiv)	Land schedule and kissam of land	The proposed beneficiation plant will be established within the existing premises of monolithic unit. No

<table>
<tr><th>Sl. No.</th><th>Information Sought by SEAC</th><th>Compliance furnished by the proponent</th></tr>
<tr><td></td><td></td><td>additional land acquisition will be there for the unit. Existing Land Document attached Annexure 7</td></tr>
<tr><td>(xv)</td><td>Land conversion document for industrial use</td><td>The proposed beneficiation plant will be established within the existing premises of monolithic unit. No additional land acquisition will be there for the unit. Existing Land Document attached Annexure 7</td></tr>
<tr><td>(xvi)</td><td>Certificate from the State Pollution Control Board w.r.t. to compliance to Consent to Establish and Consent to Operate conditions of existing units</td><td>Certificate from regional office, OSPCB attached Annexure 8</td></tr>
<tr><td>(xvii)</td><td>Area required for the expansion</td><td>Total area available is 8904 Sq.m. with already constructed boundary wall. The existing monolithic unit covers an area of 3128 sq.m. The proposed COB and accessory plant require 5776 sq.m. Hence no additional land acquisition is required for this beneficiation plant.</td></tr>
<tr><td>xviii)</td><td>Existing product with capacity</td><td><table><tr><th>Product</th><th>Quantity</th></tr><tr><td>Existing Unit</td><td></td></tr><tr><td>Chrome monolithic</td><td>12000 TPA</td></tr><tr><td>Chrome Refractory mortar</td><td>12000 TPA</td></tr><tr><td>Proposed Expansion</td><td></td></tr><tr><td>Chrome Concentrate Unit</td><td>18500 TPA (Throughput)</td></tr></table></td></tr>
<tr><td>(xix)</td><td>Year of commencement of production of existing unit</td><td>Consent to operate was granted vide letter no. 2355/Con-266 dated 06.12.2018 only for production of Chrome refractory mortar and Chrome monolithic.
Copy of CTE and CTO attached. Annexure 9</td></tr>
<tr><td>(xx)</td><td>Detailed Material Balance</td><td>Material balance attached Annexure 10</td></tr>
<tr><td>(xxi)</td><td>Temporary changes in condition of nearby forests and contribution of project in it with steps for improvement shall be furnished</td><td>The impact on the forest is only due to dust emission due to vehicular movement.

The pollution control measures will be adopted for reducing the pollution within the plant premises and proper green belt will be developed to reduce the emission from the plant area.

The air pollution due to the proposed beneficiation process will be confined within the premises. Only impact on forest is due to vehicular transportation which will be minimized by following measures

• There is the proposal for plantation along both side of the road connecting to the main road.

• The trucks used for transportation of raw material and product will be covered reducing dust emission.

• There will be water sprinkling (12 KL tanker) arrangement on the connecting road to reduce dust emission.</td></tr>
<tr><td>(xxii)</td><td>Leachate management from tailing</td><td>The tailing will be settled in the settling pit of 5x5x2m</td></tr>
</table>

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	stack and tailing disposal management be submitted if tailings are not used just in time on generation	capacity. After settling the tailing will be stacked in the tailing dump yard. Garland drain will be constructed along the tailing stack and any leachate out of the tailing dump will pass through the garland drain which connects to the ETP.
xxiii)	Has any socio-economic study undertaken? If so, the report be submitted. Is not, be undertaken by an institute of repute and report submitted	The socio-economic study has been carried out for the project and incorporated as a part of EIA report. Further the report is attached for reference. **Annexure 11**

27. The SEAC in its meeting held on Dt: 02.12.2020 decided decided to take decision on the proposal after a detailed site visit by the Sub-Committee of SEAC.

28. The sub-Committee of SEAC visited the project site on dated 21.12.2020 and following observations and recommendations were made:

I) A narrow kucha road (about 3 km) inside the forest from Ichhapur (on NH 200) exists up to the plant side and in a very bad shape & appeared to have not maintained at all.

The proponent stated that this is a revenue road and dedicatedly used by their monolithic unit for transportation of their raw materials and finished goods.

II) The existing unit is found to have the following:

a) Only one gate is being used both for material entry and exit including employees.

b) About 60 small sal trees (may be one- to two-year-old) found alongside the boundary of the unit.

c) Heaps (stacks) of raw material (chrome ore), lumps of chrome ore after screening and finished material (monolithic) found without cover (except finished goods) in the open yard without garland drain and leachate arresting arrangement.

d) A small pond looking like a ‘Chua’ full with water without RCC embankment and flooring was found and must be overflowing during rainy season and getting discharged to outside, contaminating soil nearby agricultural fields and ground water with hexavalent chromium and cannot be treated as a “zero Discharge Unit”.

e) No open drain was found inside the existing plant and a half constructed concrete tanks found at North-East corner, which is claimed to be the settling tanks under construction by the proponent.

f) The existing ramp for to & fro movement of the loaded raw material vehicle for screening is found to be very unsafe.

g) Lateral space (road) between South side boundary wall and the existing monolithic unit is very narrow and no road / space is available for free movement of any vehicle including a fire tender if necessary.

h) On verification of the land documents, it was seen that the kisam of the land is “Gharabari” instead of conversion to “Industrial use”, contrary to the condition of Consent to Establish of State Pollution Control Board, Odisha.

i) During the discussion at the time of site visit, the proponent stated that they will be purchasing the adjacent land shortly for better management by revising the plant layout.

j) The vehicles carrying the finished goods ply through the Govt. land till it reaches village roads about 500 meters away from the plant site and passes through few villages till it reaches the main NH.

k) A bore well without necessary NOC / permission from appropriate authority exists.

l) No provision of renewable power.

With the above observations, it may be inferred that the existing monolithic unit is operating without following any standard norms for Environment Protection and pollution control including without conversion of the land to “Industrial use”.

In view of the above facts, the sub-committee recommend the following for compliance by the proponent before consideration of EC for addl. chrome ore beneficiation unit inside the existing premises.

1) Conversion of the “Kisam” of the land to “Industrial use”.

2) Revised lay out of the plant incorporating all the required features, namely:

a) Documents that the narrow road being use from NH 200 to plant site is revenue road inside the forest and permission from Revenue authority for the purpose being used now and in future including construction and perennial maintenance of the road as per the advice of the appropriate Govt. authority.

b)

(i) Material gate (entry & exit) separately with separate gates for employees.

(ii) Green belt, covered stack yard both for raw material and finished material with garland drain and leachate management, Tailing ponds (settling tanks) – more than one with proper embankment design and flooring to prevent leachate with design by subject expert having tailing management drain management, water harvesting pond with recharging pits (if any), fire tender corrider, ETP, STE, WTP etc.

(iii) Construction of hard RCC surface to handle raw-material and finished products.

(iv) Re-built of the ramp.

(v) Provision & detail plan thereof for use of renewable energy / solar power.

c) To superimpose the existing set up / infrastructure / features of the plant on the revised layout to make assessment of the adequacy of the space of the existing unit for addl. Beneficiation plant.

d) Necessary permission from the appropriate authority of the Govt. to use the land (about 500 mtrs) as haulage road for plying of vehicles carrying finished materials till it reaches the village road, the construction of the some road and perennial maintenance of the same with plantation on both sides of the haulage road as necessary in consultation of the local Govt. forest authority.

e) Permission from village Panchayat to use the village road passing through few villages.

After detailed discussion, the SEAC decided to take decision on the proposal after receipt of the following information / document as recommended by the sub-Committee of SEAC.

1) Conversion of the "Kisam" of the land to "Industrial use".

2) Revised lay out of the plant incorporating all the required features, namely:

a) Documents that the narrow road being use from NH 200 to plant site is revenue road inside the forest and permission from Revenue authority for the purpose being used now and in future including construction and perennial maintenance of the road as per the advice of the appropriate Govt. authority.

b)

(i) Material gate (entry & exit) separately with separate gates for employees.

(ii) Green belt, covered stack yard both for raw material and finished material with garland drain and leachate management, Tailing ponds (settling tanks) – more than one with proper embankment design and flooring to prevent leachate with design by subject expert having tailing management drain management, water harvesting pond with recharging pits (if any), fire tender corrider, ETP, STE, WTP etc.

(iii) Construction of hard RCC surface to handle raw-material and finished products.

(iv) Re-built of the ramp.

(v) Provision & detail plan thereof for use of renewable energy / solar power.

c) To superimpose the existing set up / infrastructure / features of the plant on the revised layout to make assessment of the adequacy of the space of the existing unit for addl. Beneficiation plant.

d) Necessary permission from the appropriate authority of the Govt. to use the land (about 500 mtrs) as haulage road for plying of vehicles carrying finished materials till it reaches the village road, the construction of the some road and perennial maintenance of the same with plantation on both sides of the haulage road as necessary in consultation of the local Govt. forest authority.

e) Permission from village Panchayat to use the village road passing through few villages.

C. PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR PROPOSED EXPANSION OF RESIDENTIAL CUM COMMERCIAL COMPLEX 'MANI TRIBHUVAN' (FORMERLY KNOWN AS "MANI TIRUMALA") AT MOUZA-KALARAHANGA, PS CHANDRASEKHARPUR, NANDAN KANAN ROAD, DIST- KHORDHA OVER TOTAL BUILTUP AREA OF 1,46,550.86M^2 (EXISTING : 76050.80 + PROPOSED EXPANSION : 70500.06 M^2) – SUBMITTED UNDER VIOLATION CASE. (TOR)

1. Mani Tirumala Projects Pvt. Ltd., the project proponent is intending to take up expansion of the residential complex "MANI TRIBHUVAN" (Previously known as "MANI TIRUMALA") at Plot Nos.13, 15, 21 To 31, 33, 36, 37, 38, 28/2573, 40 To 49, 58, 59 & 125 (Part) Mouza: Kalarahanga, P.S: Chandrasekharpur, Nandan Kannan Road,

District Khurda, Odisha. The Geographical coordinate of the project site is: Latitude - 20^0 22' 9.08" N & Longitude - 85^0 50' 3.35" E.

2. The project proponent under existing part of the project had constructed 11 Blocks of Building of G+14 configuration comprising of 625 dwelling units on 9.83 acres (as sanctioned).

3. Environmental Clearance for the existing project was already granted by the SEIAA, Odisha on dated 02.04.2011. The proponent has also obtained Consent to Establish from the State Pollution Control Board, Odisha vide OM no. 6449/ IND-II/NOC-5402, dated 16.04.2011.

4. The project proponent now intends to take-up an expansion programme as follows, under which Tower-12 (A & B) of configuration B+G+27 will be constructed. In addition, 11 blocks of Duplex of configuration G+6 & G+7 will be constructed. 154 residential units will be accommodated in the proposed Tower - 12 and there will be 71 units in the Duplex blocks.

Existing project	Expansion project
• 11 Blocks, B+G+14 • 603 units	• 22 units in 11 Towers of Phase-1. • Tower 12 (twin tower with common podium) having 154 units of a total height of 91 mtrs. • 3 nos. single storied utility shops have been proposed at the ground floor of Tower 12 to cater to the population of the development. • Duplex low rise bungalows: • 5 nos. G+7 duplex bungalow. Each bungalow is of 23.95 mtr. Height having 7 units each. Hence 5 bungalow buildings are having 35 units in total • 6 nos. G+6 duplex bungalow. Each bungalow is of 20.95 mtr height having 6 units each. Hence 6 bungalows buildings are having 36 units in total.
Built-up Area - **76050.80 m^2**	• Built-up Area - **70500.06 m^2**

5. The proposed expansion activity is covered under category B of item 8 (a) of Schedule to the EIA Notification, 2006, and requires prior EC from the SEIAA in Odisha based on the appraisal by SEAC.

6. **Proposed Land Use:**

Sl. No.		phase -1 (block 1-11)	Phase - 1 (block 12 and single storied shops)	Phase - 2 (duplex)	Total: extension	Total: overall	Overall percentage of the entire project
1	2	3	4	5	4 + 5 = 6	3 + 6 = 7	8
		Area (sqm)	**Area (sqm)**	**Area (sqm)**	**Area (sqm)**	**Area (sqm)**	**%**
1	Gross Land Area					52325.42	
2	Ground Coverage	17745.4	3279.21	3110.9	6390.11	24135.51	46.12
3	Total Green					18448.895	35.26

Sl. No.		phase -1 (block 1-11)	Phase - 1 (block 12 and single storied shops)	Phase - 2 (duplex)	Total: extension	Total: overall	Overall percentage of the entire project
	Area						
	Tree Plantation Area	8007.40	714.41	2106.07	2820.48	10827.88	20.7
	Other Green Area	861.15		1131.67	1131.67	1992.82	
	50% of Semipaved area & parking areas	1671.63	1113.54	2843.025	3956.565	5628.195	
4	Total Paved Area					9741.015	18.61
	Road area at stilt level	3665.50	-	-	-	3,665.50	
	50% of Semi Paved Area/open parking	1671.63	1113.54	2843.025	3956.565	5628.195	
	Other hard paved areas					447.32	
5	**TOTAL** (Ground covered + total green area+ Hard paving area)					**52,325.42**	**100%**

7. **Water Supply, Wastewater Generation, Recycling and Discharge:**

Total water demand for the proposed expansion part of the Residential Complex project during operation stage will be around 219.03 KLD. Daily fresh water requirement to the tune of 123.56 KLD will be sourced from BDA Water Supply System and groundwater abstraction shall be done. Relevant permission from the respective authorities has already been obtained. In addition, treated wastewater to the tune of 95.47 KLD will be utilized in non-critical purposes like toilet flushing, landscaping, car washing, etc.

8. **WASTE WATER:**

A. WASTE WATER GENERATION FOR TOWER 12

Sl. No.	Category	Water requirement (kld)		Waste water to the STP (kld)
		Fresh Water (kld)	Treated Wastewater (kld)	
1.	Residential Population	69.65	34.30	83.16
2.	Floating Population	0.38	0.77	0.92
3.	O & M Population	2.32	1.14	2.77

Sl. No.	Category	Water requirement (kld)		Waste water to the STP (kld)
		Fresh Water (kld)	Treated Wastewater (kld)	
4.	Club	7.56	1.89	7.56
5.	Irrigation		4.51	-
6.	Car Wash (nos.)		7.12	7.12
	TOTAL	**79.91**	**49.74**	**101.54**
- Raw Wastewater to S.T.P.			INPUT	101.54
-Treated Wastewater from S.T.P.			OUTPUT	99.00
- Treated Wastewater to REUSE				49.74
- Treated Wastewater disposal				49.26

B. WASTE WATER GENERATION FOR DUPLEX

Sl. No.	Category	Water requirement (KLD)		Waste water to the STP (KLD)
		Fresh Water (KLD)	Treated Wastewater (KLD)	
1	Residential Population	32.11	15.82	38.34
2	Floating Population	0.18	0.36	0.43
3	O & M Population	1.07	0.53	1.28
4	Irrigation		17.24	-
5	Car Wash(nos)		5.68	5.68
	TOTAL	**33.36**	**39.62**	**45.72**
• Raw Wastewater to S.T.P.			INPUT	45.72
• Treated Wastewater from S.T.P.			OUTPUT	44.58
• Treated Wastewater to REUSE				39.62
• Treated Wastewater disposal				4.96

C. WASTE WATER GENERATION FOR ADDITIONAL 22 UNITS IN THE 11 TOWERS OF THE EXISTING UNIT

Sl. No.	Category	Water requirement		Waste water to the STP (Kld)
		Fresh Water (Kld)	Treated Waste water (Kld)	
1	Residential Population	9.9	4.95	11.88
2	Floating Population	0.06	0.11	0.136
3	O&M Population	0.33	0.17	0.4
4	Car Wash	-	0.88	0.88
	Total	10.29	6.11	13.30
			Raw Wastewater to S.T.P	13.3
			Treated Wastewater from S.T.P.	12.97
			Treated Wastewater for Reuse	6.11
			Treated Wastewater for disposal	6.86

9. **Wastewater Treatment**

2 STPs based on SBR (Sequential Batch Reactor) Technology of capacities 100 KL & 50 KL shall be set up for the Towers and the Duplex respectively, i.e. for expansion part of the project. Wastewater from the additional 22 flats in 11 Towers of existing project shall be treated in the existing STPs with existing part of the project. Treated water,

meeting the relevant norms, to the tune of 95.47 KLD, will be used for non-critical purposes like toilet flushing, car washing & irrigation purposes, etc. within the complex. Treated wastewater in excess (61.08 KLD) will be discharged into the public sewer system.

10. **Municipal Solid Waste Generation and Its Management:**

    During Construction phase, discarded cement bags, waste paper and cardboard packing material etc. will be sold off to recyclers. Unusable steel bits and pieces will be collected at site and sold to the recyclers. Construction debris and excavated earth will be used for land development purposes within the project site.

    Solid waste generated during operational phase of expansion part of the project (around 674.8 kg/day) will be domestic in nature. These solid wastes will be segregated into biodegradable and non-biodegradable wastes and collected in separate bins. The non-biodegradable recyclable wastes will be sold to recyclers and the biodegradable and non-biodegradable inert / unusable wastes will be collected by BDA for final disposal on regular basis.

11. **Rain Water Harvesting:**

    Rain Water Recharging pits are being proposed for artificial rain water recharge within the project premises. 5 nos. of rainwater recharge pits have been proposed.

12. **Storm Water Management**

    A well-designed storm drainage system will be constructed in the complex. Storm drains of the complex will collect and convey the rain water into the adjacent public sewer / drainage system. While designing the internal drainage system, invert level of the public rain in-front of the project site will be given due consideration to avoid any floods or water logging in the site.

13. **Electricity, DG sets, Stack height**

    Electricity will be supplied by CESU. The connected load will be about 1603 KVA. Electricity will be sourced from CESU. The expansion part of the project shall be provided with 2 DG sets of 500 KVA capacity each. The emission from DG sets will be discharged through a 4.5 meter stack for each DG set above the roof of the building. Low sulphur diesel will be used.

14. **Project Cost**: Estimated Project cost is around 80 Crores.

15. **Plantation / greenbelt**: 20.7 % has been earmarked for greenbelt area.

16. The proponent had started construction work on site without prior Environmental Clearance under EIA Notification 2006. 22 additional flats have been constructed in phase – I. In phase – II excavation work has been started for duplex low rise bungalow nos. 1,8,9,10,11. Raft foundation has been completed and tie beam work is going on for duplex low rise bungalow nos. 2,3,4,5,6,7. Hence, this a violation case.

17. The proponent submitted the proposal to MoEF&CC, Govt. of India on 12.09.2017 as violation case as per MoEF&CC, Govt. of India Notification S.O. 804 (E) dated 14.03.2017.

18. The MoEF&CC, Govt. of India had issued Office Memorandum No. Z-11013/22/2017-IA-II (M), dated 15.03.2018, which stipulates that all the proposals of category 'B'

projects/activities pertaining to different sectors, received within six months only i.e. up to 13th September, 2017 on the MoEF&CC, Govt. of India portal, but yet not considered by the EAC of MoEF&CC, Govt. of India, shall be transferred online to the SEAC/SEIAAs in the respective States/UTs.

19. This proposal was not considered by the EAC of MoEF&CC, Govt. of India. Hence, the MoEF&CC, Govt. of India had transferred the proposal to SEIAA, Odisha for consideration as per MoEF&CC, Govt. of India Notification S.O. 804 (E) dated 14.03.2017.

20. The proponent along with the consultant Envirotech East Pvt. Ltd. UNF-13, Unnayan Commercial Complex, 1050/1, Survey Park, Kolkata-700075 made a detailed presentation before the SEAC.

21. The SEAC on its meeting held on 10-08-2018 after detailed deliberations on the proposal in terms of the provisions of the MoEF&CC, Govt. of India Notification dated 14th March, 2017, confirmed the case to be of violation of the EIA Notification, 2006 and recommended to take decision on the proposal after receipt of the following. A site visit to the existing project also to be conducted by the Sub-Committee of SEAC to verify the present development.

    a) Detailed construction status of existing project for which Environmental Clearance obtained including greenbelt, drainage system, STP and Solid Waste Management.

    b) Details of the proposed project along with modified approval of BDA for the proposed project.

    c) Details of construction already done for the proposed project for which the case has been considered as a violation case whether the section of column of foundation is sufficient for proposed extension of project.

    d) Status of clearance from Water Resources Department, Govt. of Odisha for drawal of water for existing project.

    e) Greenbelt area of 20% to be justified for the existing as well as proposed project.

    f) Solid waste management plan for the proposed project.

    g) Detailed water balance of existing as well as proposed project.

22. The Sub-Committee of SEAC had visited the site on 17-08-2018. The Committee observed the following during the visit:

    a) Construction work for the proposed project is going on.

    b) Greenbelt in the existing complex is found missing / not available except decorative plants.

23. The Sub-Committee recommended that the construction of any nature should be immediately stopped forthwith by appropriate authority.

24. The SEAC in its meeting held on 29-09-2018 decided to request the SEIAA, Odisha to issue direction to the proponent to stop construction activity immediately and accordingly the SEIAA, Odisha was requested vide letter no: 859/SEAC-59, 22-10-2018 to issue direction to the proponent.

25. Now the project proponent has furnished compliances in hard copy as desired by the committee vide letter dated 06.12.2019 as follows. The proponent has not uploaded the information / documents as sought for in online portal and same is showing pending at the proponent level.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
(i)	Detailed construction status of existing project for which Environmental Clearance obtained including greenbelt, drainage system, STP and Solid Waste Management.	• Greenbelt development has already been initiated at site. 786 numbers of trees have already been planted at site. Additional 400 trees are under plantation. Total 1186 number of trees shall be there at site. The details of plantation are as per **Annexure -1.** • The project premises has an efficient drainage system which has been designed taking into consideration the ground profile and the different drainage channels in the neighborhood and it has been ensured that there is no water logging within the premises. As such, no impact on the natural drainage pattern of the area is envisaged due to operation of this project. • Two STPs of 330 KL capacity (for Block -1 to 8) and 100 KL capacity (Block -9 to 11) have already been installed at site. STP details and related documents have been provided in **Annexure -2A & 2B.** • 2 Garbage rooms adding up to 1700.75 sqft. area has been provided for segregation of municipal solid waste. Agreement with a private agency has been already done for collection and disposal of MSW. So as to keep the development in line with the modern day requirements, additionally 2 Nos. of composter plants of 250 Kg capacity for Block 9 -11 and 750Kg capacity for Blocks 1-8 have been ordered for management of organic waste. Attached offer letter and order copy of composters – **Annexure -3**. This will be at site within the next 5-6 weeks. • MSW collection agreement has been provided in **Annexure – 4.**
(ii)	Details of the proposed project along with modified approval of BDA for the proposed project.	Modified approval of BDA for the proposed project has been presented in **Annexure - 5**
(iii)	Details of construction already done for the proposed project for which the case has been considered as a violation case whether the section of	Additional 22 flats have been built in the 11 blocks of Phase 1, details in **Annexure - 6**. Status report of expansion (Phase -2) is attached as **Annexure -7**. Structural Stability Certificate for 22 additional flats have been attached as **Annexure – 8**.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	column of foundation is sufficient for proposed extension of project.	
(iv)	Status of clearance from Water Resources Department, Govt. of Odisha for drawal of water for existing project.	Ground Water Clearance letter no. 21-4(276)/CGWA/SER/2010-2547 Dated 5th Nov, 2010, by Central Ground Water Authority has been presented in **Annexure - 9**
(v)	Greenbelt area of 20% to be justified for the existing as well as proposed project.	Greenbelt area has been considered based on the total land area and the land use plan. Calculation for the number of trees has been done taking into consideration 700 trees / hectare. Greenbelt details have been provided in **Annexure -1**
(vi)	Solid waste management plan for the proposed project.	2 Garbage rooms adding up to 1700.75 sqft. Area has been provided for segregation of municipal solid waste. Agreement with a private agency has been already done for collection and disposal of MSW. 2 nos of composter plants of capacity 250 Kg capacity for Blocks 9-11 and 750 kg capacity for Blocks 1-8 have been ordered for management of organic waste. MSW garbage collection agreement has been provided in **Annexure – 4**. Order copy composter plants are provided in **Annexure - 3**
(vii)	Detailed water balance for existing as well as proposed project	Detailed water balance for existing as well as proposed project has been provided in **Annexure - 10**.

26. The SEAC in its meeting held on 24.12.2019, recommended the following:

    (i) The SEIAA, Odisha may be requested to intimate the status of direction if any issued to the proponent as requested vide letter no. 859/SEAC-59, dated 22.10.2018.

    (ii) The proponent may be requested to upload the information / documents as sought for by the SEAC vide letter no. 743(2)/SEAC-Misc.28, dated 10.09.2018 in online portal for further processing of the application of the proponent.

27. The SEIAA, Odisha has already issued direction to the proponent vide letter no. 8455/SEIAA, dated 19.06.2020 to stop all construction activities. However, the proponent has not yet uploaded the information / documents as sought for by the SEAC in the online portal.

28. The SEAC in its meeting held on Dt: 03.07.2020 decided to issue a reminder to the proponent to upload information / documents as sought for by the SEAC vide letter no. 743(2)/SEAC-Misc.28, dated 10.09.2018 in the online portal.

29. Now the project proponent has uploaded the information / documents as sought for in online portal.

After detailed discussion, the SEAC decided to take decision on the proposal after a site visit to the project area by the Sub-Committee of SEAC to verify the present status.

D. PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR KAKUDI AND KISHORIPAL SAND MINES OVER AN AREA 41.885 HA. IN VILLAGE-KAKUDI AND KISHORIPAL, UNDER TAHASIL-TALCHER, DIST-ANGUL OF M/S. MAHANADI COALFIELDS LIMITED (MCL) – EC

1. This is a proposal for Environmental Clearance for Kakudi and Kishoripal Sand Mines over an area 41.885 Ha. in village-Kakudi and Kishoripal,under Tahasil-Talcher, Dist-Angul of M/s. Mahanadi Coalfields Limited (MCL).
2. Kakudi/ Kishoripal Sand Mine is an existing sand mine project located in the river bed of Brahmani at village Kakudi and Kishoripal, Angul district, Odisha. The sand from this mine was mined between 1991-92 to 2003-04. This sand mine has leasehold area of 41.885 Ha & existing annual production capacity of 0.25 Million M3 per annum.
3. TOR granted from MoEF & CC, New Delhi vide No.J-11015/33/2015-IA.II(M) on 17.04.2015
4. The sand mining lease had been granted by Govt. of Odisha from 14.11.1990 to 14.11.2010, afterwards it was extended upto 31.03.2020 and now it has been further extended upto 13.11.2040.
5. Mining Plan had been approved by Ministry of Coal vide letter no.34012/(4)/2011-CPAM, dt: 21.08.2013.
6. The sand from this mine is required for stabilization purpose at one operating mine i.e. Nandira Colliery and three discontinued mines viz. Deulbera, Handidhua and Talcher collieries.
7. As per the directives of DGMS, stabilization to be done at identified underground workings of Deulbera & Handidhua Colliery at the earliest for ensuring the safety of Talcher town as a whole.
8. The mining lease area is located in Village - Kakudi and Kishoripal in the Tahasil of Talcher, Dist. Angul, Odisha bearing Plot No. 949(P), 948(P) & 947(P), Khata No.70 in village Kakudi and Plot No.927(P) & 928(P) , Khata No. 120 in village Kishoripal. NH-149 passes through Talcher town at a distance of about 2.5 km & connects to NH-55.Talcher railway station on branch line of East Coast Railway at a distance of about 5.5 km.
9. The total Mining Lease Area of the project is 41.885 Ha, out of which only 19.07 Ha will be used for mining, rest of the area will left for protection and sand barrier. The annual production of the project is 0.25Mm3/year. Geological Reserve is 0.846Mm3. And Mineable Reserve is 0.35 Mm3. Life of mine is 20 years.
10. Mining will be carried out in Strip Mining by Mechanical winning of sand by hydraulic excavator (Back-hoe shovel) loading onto tipping truck & transport. For transport of sand to mines, temporary roads / cause ways have been envisaged inside the river bed. A 50m sand barrier against river bank will be left un-mined for protection of the bank.
11. Baseline data generation was during Nov'15 to Feb'16.
12. Public Hearing conducted by OSPCB on Dt: 20.12.2016.

13. Water Requirement – 102.93KLD of water shall be required for domestic and mining activities. Treated water from Deulbera/ Handidhua mines will be used for dust suppression. Wastewater generated from transportation vehicles will be treated in ETP of nearby adjacent mines and the estimated quantity of wastewater generation is 53.22 KLD.
14. Employment Potential: Total number of employee will be around 92 which includes skilled, semi-skilled & unskilled category in the mine.
15. The project cost is ` 747.74 lakhs. Funds for Environment Management : ` 22.0 Lakhs (Capital)
16. The Environment consultant **M/s Central Mine Planning & Design Institute Ltd., Ranchi – 834 031, Jharkhand** along with the proponent have made a detailed presentation on the proposal before the Committee.
17. The SEAC in its meeting held on Dt: 11.09.2020 decided to take decision on the proposal after receipt of the following information / documents from the proponent followed by a site visit of SEAC Sub-Committee.
18. 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 the SEAC
(i)	One season fresh baseline data to be submitted as the data so collected is more than 3 years old	Reports of recent months (March, June, July & August'2020) are enclosed as **Annexure-I** for kind reference. During April & May'2020, Air quality could not measure due to COVID-19 pandemic. Data has been submitted. It is our invocation to consider the routine environment monitoring data as baseline report and kindly exempt the project for generating a fresh baseline data, while considering the urgent and immediate requirement of sand from this mine vide their letter dated 13.10.2020.	One season fresh baseline data has not been submitted. March, June, July & August'2020 data had been submitted.
(ii)	Mitigation measures to reduce fluoride content in surface water and ground water	MCL is monitoring surface water and ground water quality throughout Talcher Coalfields. And it is observed that none of the sample has fluoride content excess than permissible/acceptable limit. Latest reports of nearby Surface Water & Ground Water sources are enclosed an **Annexure-II** for ready reference. Moreover, Kakudi & Kishoripal mine being a sand mining project, the contamination of any fluoride in the ground/surface due to sand mining does not arise.	Water quality reports on Water & Ground Water sources are enclosed which shows Fluoride content < 0.3 mg/L.
(iii)	Minutes of public hearing to be submitted	Public Hearing proceedings along with Attendance sheet has already been submitted in Final EIA/EMP report vide Annexure-VI. However, a copy of the same is enclosed as **Annexure-III** for your kind reference.	Compiled

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC
(iv)	Details of CSR & CER activities covered under proposed sand quarry	Details of CSR & CER activities covered under K&K sand mine is enclosed as **Annexure-IV**	Compiled
(v)	Details of plantation to be done alongside haulage road and river embankment and details of planation done in last ten years year wise with survival rate and the plants/trees available at present with location, type and age	The project has committed to take up gap/avenue plantation all along sand transportation road and block plantation at periphery of the mine, where free space available. Detail of proposal is given in **Annexure-V**, Previous plantations details in compliance report and in **Annexure VI**	Compiled in form of maps.
(vi)	Location of sampling points undertaken to be shown in map	A map showing location of sampling points is enclosed as **Annexure-VII**	Compiled
(vii)	Certificate from concerned Tahasildar about the geo coordinates and distance of the Bridge from the boundary of the lease area and other mines located within 500 meter from the periphery of the lease boundary	Tahasildar, Talcher vide Letter No.4261/Dtd:12.10.2020 has certified. **Annexure-VIII**	There is no bridge and other mines located within 500 meter from the periphery of the lease boundary. Distance of nearby villages had been submitted.
(viii)	Techno economic feasibility study for sand transportation in slurry form through pipes be made and submitted as a long term measure to avoid air pollution due to trucks, dumpers etc. movements. The possibility of slurry transportation to a common point may also be studied so that users may carry further by dumpers	There is no scope of conducting techno economic feasibility study.	-
(ix)	Any bridge or structure near to the sand mining area. If	No bridge or any other structure is located near to the sand mining area. Certificate in this regard obtained from Tahsildar, Talcher is	Compiled

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC
	so, details to be given	enclosed as **Annexure-VIII**.	
(x)	Any electric HT line inside and within 500 meter of lease area if existing be indicated	No electric HT line is located inside or within 500 meter of leasehold area of the mine	Compiled
(xi)	Operation time/movement time of vehicles carrying sand and empty vehicles including types of vehicles , no. of vehicles to be engaged and the frequency of movements be submitted	Production capacity of the mine - 0.25 Mm3/day Effective working days per annum (Excluding monsoon period) - 175 days Quantity required per day - 1430 m3/day (Approx.)	Compiled
(xii)	Traffic study and management at haulage road, roads passing through villages and junction of public road (20% as stated by the proponent including internal roads of MCL with decongestion plans and measures through an expert of repute	Traffic study has been done by CMPDI and the details are already given in Mining Plan (Approved by Ministry of Coal) and EIA/EMP report. A copy of the same is enclosed as **Annexure-IX**.	Compiled
(xiii)	Distance of lease boundary from nearby habitation duly certified by the Tahasildar	Tahasilar, Talcher vide Letter No.4261/ Dtd: 12.10.2020 has authenticated the details. Copy is enclosed as Annexure-VIII. A copy of Mining Plan showing the portion left for protection of Kakudi village & 50m sand barrier are enclosed as **Annexure-X**	Compiled

19. The SEAC in its meeting held on Dt: 11.09.2020 decided decided to take decision on the proposal after a detailed site visit by the Sub-Committee of SEAC.

20. The sub-Committee of SEAC visited the project site on dated 19.11.2020 and following observations and recommendations were made:

    a) There is no embankment and the river bank has irregularly erosed along a stretch of about 740 meters alongside the stretched sand bed. No plantation is found over 100 meters width just from the bank.

    For protection of the bank, it is recommended that the entire bank of about 740 meters stretch is stone patched to protect the river bank from erosion in consultation and on advice of the domain expert with due permission of Water Resources

Department, Govt. of Odisha. This must be completed within a month or two for which they need to submit a legal affidavit.

Systematic and organized plantation must be done alongside the same stretch to cover the gap laterally between the stone patching and the plants / trees available in consultation with the local state forest authority with the recommended species by the later.

A ramp with WBM materials in consultation with the Civil Engineers for plying of vehicles (to & fro) from the sand bed to the top of the river bank and vice-versa is required to be constructed.

b) Besides 50 mtrs of sand barrier, safety zone must be left between the river bank and the mining area as per the available guideline to this effect.

c) There is a gap (inclined) of about 500 meters from the river bank to reach the public road (R&B/RD) of Govt of Odisha for which a strong two lane WBM road to be constructed for plying of loaded / empty sand carrying vehicles like Hywa etc.

d) This public single road is about 2.5 km long through which the sand vehicles will travel to reach NH-149 that passes through Talcher town and connected to NH-55. Along since this road, there exists few habitations / shops etc. All safety measures need to be taken to avoid any accident while vehicles plying.

Besides, the following action has to be taken by MCL:

(i) They need to take permission from the authority of the road to use the same for this purpose and they undertake to maintain the road perpetually till they use as per the advice of the authority concerned in form of a legal affidavit.

(ii) They will make plantation along both sides of this road of about 2.5 KM in vacant patches of desired species in consultation with the local forest authority of Govt. of Odisha.

e) The major part of the about single road of about 2.5 KM will be used by MCL for this purpose temporarily as stated by them during the visit by their officials present since they will be constructing a separate haulage road of about 1.8 km dedicatedly for this purpose and MCL representatives present showed the proposed haulage road to the sub-committee.

It is recommended that haulage road must be two laned and either concrete /WBM road in consultation with the experts and plantation of required species and number must be made on both sides of the haulage road in consultation with the local forest authority.

The village “Kishoripal” will also be around 500 mtrs away from the proposed haulage road and all safety measures need /must be taken to avoid any kind of accident.

The land for the proposed road, if does not belong to MCL, is to be acquisitioned by them as per the laid down rules.

21. The SEAC in its meeting held on Dt: 16.12.2020 decided to take decision on the proposal after the proponent submit the compliance to the observations of the sub-committee of SEAC during site visit and submission of one season fresh baseline data at the earliest.

22. 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 the SEAC
(i)	For protection of the bank, it is recommended that the entire bank of about 740 meters stretch is stone patched to protect the river bank from erosion in consultation and on advice of the domain expert with due permission of Water Resources Department, Govt. of Odisha. This must be completed within a month or two for which they need to submit a legal affidavit.	The proposal had been submitted to Irrigation Department, Angul vide letter no. GM(TA)/Envt/K&K sand mine/2020/155, Dt:18.12.2020 and as per the advice of Executive Engineer, Irrigation Deptt. Angul a letter has been submitted to Engineer-in-chief, Water Resources Deptt. Bhubaneswar vide letter No. GM(TA)/Envt/K&K sand mine/2020/1, Dt:28.12.2020. Both letters are enclosed. Legal affidavit in this regard has been submitted. (Annexure 1& 2)	Specific condition to be stipulated in EC.
(ii)	A ramp with WBM materials in consultation with the Civil Engineers for plying of vehicles (to & fro) from the sand bed to the top of the river bank and vice-versa is required to be constructed.	Proposal for ramp construction has already been prepared. After approval from competent authority, the work will be executed & completed by Feb 2021.	Specific condition to be stipulated in EC.
(iii)	Besides 50 mtrs of sand barrier, safety zone must be left between the river bank and the mining area as per the available guideline to this effect.	Besides 50 mtrs of sand barrier (3.567 Ha.), another 19.248 Ha. Of lease area will be left for safety purpose. Copy of surface plan is attached as Annexure-III.	Specific condition to be stipulated in EC.
(iv)	There is a gap (inclined) of about 500 meters from the river bank to reach the public road (R&B/RD) of Govt of Odisha for which a strong two lane WBM road to be constructed for plying of loaded / empty sand carrying vehicles like Hywa etc.	Proposal for two lane WBM road construction has already been prepared. After approval from competent authority, the work will be executed & completed by Feb 2021.	Specific condition to be stipulated in EC.
(v)	This public single road is about 2.5 km long through which the sand vehicles will travel to reach NH-149 that passes through Talcher	It has been assured by Project proponent for taking safety measures during transportation of minerals.	Specific condition to be stipulated in EC.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC
	town and connected to NH-55. Along this road, there exists few habitations / shops etc. All safety measures need to be taken to avoid any accidents while vehicles plying.		
(vi)	They need to take permission from the authority of the road to use the same for this purpose and they undertake to maintain the road perpetually till they use as per the advice of the authority concerned in form of a legal affidavit.	A letter has been submitted to Sub-Collector, Talcher & Executive Officer, Talcher Municipality vide No. 156, Dt:18.12.2020 & No.165, Dt:06.01.2020 respectively for grant of permission to use the public road of about 2.5Km.copy of letters enclosed as Annexure-IV&II.	Specific condition to be stipulated in EC.
(vii)	They will make plantation along both sides of this road of about 2.5 KM in vacant patches of desired species in consultation with the local forest authority of Govt. of Odisha.	MCL will make plantation (during monsoon 2021) along both sides of the public road of 2.5km in vacant patches of desired/indigenous species in consultation with the Forest Deptt. Angul/Talcher. Timeline: July'2021	Specific condition to be stipulated in EC.
(viii)	The haulage road must be two laned and either concrete /WBM road in consultation with the experts and plantation of required species and number must be made on both sides of the haulage road in consultation with the local forest authority.	Proposal for two lane WBM road has already been initiated. After obtaining approval from competent authority, the work will be executed & completed by June 2021. A thick green belt has already been developed on one side. Plantation on other side will be completed in July 2021.	Specific condition to be stipulated in EC.
(ix)	The land for the proposed road, if does not belong to MCL, is to be acquisitioned by them as per the laid down rules.	The land for the proposed haulage road has already been acquisitioned by MCL. Hence, no further land needs to be acquisitioned.	---------
(x)	Submission of one season fresh baseline data at the earliest	Tender for conducting baseline study is under progress. The work will be taken up during summer season (March-May 2021) and report will be submitted by June 2021.	They have to submit one season fresh baseline data for consideration of EC.

After detailed discussion, the SEAC decided to take decision on the proposal after the proponent submit one season fresh baseline data for consideration of EC.

22.01.2021
SRI B.P. SINGH
CHAIRMAN, SEAC

22/01/2021
(DR.) D. SWAIN
MEMBER, SEAC

ER. K.R. ACHARYA
MEMBER, SEAC

22/1/21
SRI. J. K. MOHAPATRA
MEMBER, SEAC

22/1/21
PROF.(DR.) B.K. SATPATHY
MEMBER, SEAC

22.01.2021
PROF.(DR.) P.K. MOHANTY
MEMBER, SEAC

22/1/21
DR. K.C.S PANIGRAHI
MEMBER, SEAC

APPROVED

22.01.2021
CHAIRMAN, SEAC