

**PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL
COMMITTEE, ODISHA HELD ON 12TH OCTOBER, 2020**

The SEAC met on 12th October, 2020 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.

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| 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. Dr. K.C.S Panigrahi | - | Member |

CONSIDERATION OF OLD PROPOSALS (COMPLIANCE RECEIVED):

(I) PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF JINDAL CHROMITE MINES FOR ENHANCEMENT IN THE PRODUCTION CAPACITY OF CHROME ORE FROM 1.0 LTPA TO 2.15 LTPA OVER MINING LEASE AREA OF 89 HA. AT VILLAGE KALIAPANI, SUKINDA TEHSIL, JAJPUR DISTRICT OF M/S. JINDAL STAINLESS LTD – REGARDING SUBMISSION UNDER VIOLATION CASE (EC).

1. The proposal is for Expansion in production from 0.1 million TPA (MTPA) to 0.215 Million TPA (MTPA) of Chrome Ore from 89 ha Mine lease area with common boundary mining located at Village-Kaliapani, Tehsil Sukinda, District Jajpur, Odisha. Khasra No. / Plot No. / Block Range /Survey No/Gut No Survey No/Gut No :Forest Block 27.
2. The project proponent has obtained Environment Clearance for production of 0.1 MTPA vide letter No J – 11015/12/2000-IA. II(M), dated 13.02.2001.
3. The latitude and longitude of the site are

Corner	Latitude North	Longitude East
J1	21°02'03.53184"	85°45'30.76020"
J2	21°01'56.10432"	85°45'18.17352"
J3	21°01'39.80028"	85°45'29.13624"
J4	21°01'52.37472"	85°45'50.06628"
J5	21°01'04.39824"	85°46'22.37448"
J6	21°01'09.93252"	85°46'31.69704"
J6-C	21°01'33.76560"	85°46'15.70188"
J7	21°02'01.48668"	85°45'57.09528"
J7-B	21°01'53.59836"	85°45'44.30016"
J8	21°01'50.68092"	85°45'39.48048"

4. The earlier proposal for (i) enhancement of production from mines from 0.1 MTPA to 0.215 MTPA with (ii) enhancement of capacity of Chrome Ore Beneficiation Plant (COBP) from 36,000 to 60,000 MT per annum was applied to MoEF&CC for obtaining Environment Clearance (EC) and was presented for TOR on 22nd January, 2010.
5. EAC has approved TOR for the proposal on 15th February, 2010. Based on the Approved TOR - EIA/EMP was prepared and Public Hearing was successfully completed on 31st August, 2010 covering both proposals as mentioned above.

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Nodal Officer, SEAC

6. After Public Hearing was completed for 0.215 MTPA, JSL has dropped the proposal of expansion from 0.1 MTPA to 0.215 MTPA and obtained Environmental Clearance for Chrome Ore Beneficiation Plant (COBP) to enhance the production capacity from 36,000 to 60,000 MT per annum on 24th February, 2016.
7. Obtained Consent to Establish for 60,000 TPA COBP vide letter No. 20031/Ind-II-NOC-5299 Dated 30/11/11 from State Pollution Control Board, Odisha.
8. Obtained Consent to Operate for 60,000 TPA COBP vide letter No. 4258/Ind-I-CON-2562 Dated 20/03/17 from State Pollution Control Board, Odisha and valid upto 31/03/2018.
9. M/s JSL applied for obtaining fresh ToR for enhancement of Production capacity from 0.1 MTPA to 0.215 MTPA, which was considered by the EAC, MoEF&CC, Govt. of India on 21st July, 2016. Based on the presentation made, the committee sought additional information which was presented on 16th December, 2016 & 27th April, 2017.
10. The EAC recommended the proposal for grant of standards TOR conditions subject to submission of authenticated past production details to ascertain violation of EIA notification, if any.
11. The MoEF&CC, Govt. of India received the past production details vide our Letter of 04th August, 2017, wherein the Ministry observed the mineral production in excess of Environmental Clearance granted capacity of 0.1 MTPA. Based on the facts, the MoEF&CC, Govt. of India has put the case under violation of EIA Notification.
12. The MoEF&CC, Govt. of India issued the letter to close down the mining operation vide letter no-J/11015/163/2016-IA-II(M) on dated 21/02/2018 with immediate effect due to excess granted capacity production from 2002-03 to 2007-08 and also dispatched more than 0.1MTPA from 2006-07 to 2007-08 and treated as Violation case in 21/02/2018.
13. State Pollution Control Board did not issue Consent to Operate for the year 2018-19 vide letter No 3860/IND-CON-2562 , dated 29.03.2018, due to excess production beyond the approved limit and with a remark to obtain necessary permission from MOEF &CC.
14. M/S Jindal Stainless Limited applied to MOEF & CC for issuance of TOR from 0.1MTPA to 0.215MTPA vide our proposal no. 1A/OR / MIN/74317/2018 dated 13/04/2018, as per MoEF&CC Circular on violation case. M/s-JSL requested to MoEF&CC to give permission to run all COBP related operation.
15. The MoEF&CC, Govt. of India vide letter no J-11015/163/2016-1A. 11(M) dated 26.09.2018 asked M/s. JSL to submit the details after examining their letter of 26.07.2018.
16. The MoEF&CC, Govt. of Indiavide their letter J-11015/163/2016-IA.II(M) dated 26/12/2018, directed to ADDL PCCF (C) MoEF&CC, Regional Office (E/Z),Bhubaneswar to submit the factual report on PP's submission vide letter no. 3.10.2018 as well as compliance report of both E.C.'s(No. J- 11015/12/2000-IA.II(M) dated 13/02/2001 and J-11015/369/2016-IA.II(M) dated 24.02.2016.
17. Joint Director(S), Regional Office, MoEF&CC, Bhubaneswar issued Certified Compliance report after monitoring the site on 10.01.2019,as desired by MoEF&CC , New Delhi.

18. Closure report w.r.t. certified compliance report submitted to MoEF&CC, New Delhi vide letter No 101-664/EPE/467, dated 07.03.2019 duly signed by Joint Director /Scientist –D.
19. As per violation case, M/S Jindal Stainless Limited applied to MoEF&CC for issuance of TOR from 0.1 MTPA to 0.215 MTPA vide proposal no. 1A/OR/MIN/74317/2018 dated 13.04.2018.
20. MoEF&CC transferred the case vide proposal no SIA /OR/MIN/28926/2018 to Member Secretary SEIAA, Odisha as per notification no. dated SO 3977(E) dated 14.8.2018, as the lease area is less than 100 ha.
21. The Proposal was transferred to SEIAA, Odisha due to change in notification (Category – A to Category-B). Presentation was made before SEIAA/SEAC and TOR has been issued vide letter no 1098/SEAC-180 dated 14.12.2018 for enhancement of production of chrome ore from 0.1 MTPA to 0.215 MTPA.
22. The mine lease area is 89 Ha which is forest land. Mining scheme approved for the period 2012-13 to 2016-17 vide letter no. 314 (3)/2011/MCCM (CZ) / MS-58 of 2nd May, 2012 and subsequently approved for 0.215 MTPA of opencast mining with common boundary mining till 31st March, 2022 vide letter No: MS/FM/13-ORI/BHU/2016-17/7383, dated 29th December, 2016.
23. Forest land 22.80 ha is already diverted vide letter no.8-68/2000-FC/2327(F), dated 05th July 2001. As per Hon'ble Supreme Court guidelines of 10th March, 2015 remaining non-forest area of 66.20 Ha is forest as per sabik record has been taken under forest diversion proposal and is under process at the State Govt.
24. The mining lease 89.00 ha. of forest land(in village Kaliapani and forest block-27) was executed in favour of M/s Jindal Strips Ltd. on 04.01.2002 for a period of 20 years w.e.f 04.01.2002 to 03.01.2022. Subsequently name of lessee M/s Jindal Strips Ltd. was changed to M/s Jindal Stainless Ltd. On 26.12.2007 after obtaining necessary permission from Govt. of Odisha. As per section 8A(3) of MM(D&R) Amendment Act 2015 mining lease period is deemed to be extended for 50 years .i.e. 04.01.2002 to 03.01.2052.
25. It is reported by the project proponent that mine is proposed for annual production of 0.215 MTPA.
26. Open cast mining method will be adopted for production of chrome ore. Since, the maximum annual production is 0.215 MTPA (i.e. 2,15,000 TPA), fully Mechanized mining method will be followed.
27. Drilling and blasting is being carried out to disintegrate the hard ore and associated rocks. At present the mRL of bottom most working bench is 122 mRL. Top RL of the lease with at 300 m in south and bottom RL at 122 m. The dimension of the working quarry is around 289m long and 306 m wide.
28. Development and Production from the Quarry-2 and common boundary mining i.e. Eastern boundary of M/s Jindal Stainless Limited and western boundary of M/s Balasore Alloys Limited is the proposed area of working. From common boundary mining the blocked ore shall be mined out/recovered by both the lessees.
29. Method of mining will be Opencast Fully mechanized. Development and production will carry out by deploying excavator and tipper combination. Drilling and blasting will carried

out to loosen the strata and hard rock, to minimize the secondary blasting Rock breaker also engaged for breaking of hard rocks.

30. Mining operation will be continued by both the lessees simultaneously. The direction of the quarry shall be north-south.
31. For the purpose of transportation of ROM, 25 tonne capacity tippers will be deployed. Haul road shall be developed wherever required at a gradient of 1:14.
32. Run off Mine (ROM) Friable band and Lumpy band in this area is overlain by Laterite, Silicified Chert and others such as diorites Lateritic limonite etc. The wall rock in the area is mainly Laterite and weathered Serpentinites. For recovery of chromite ore it would be essential to remove Overburden (OB) since opencast mechanized method of mining is continued.
33. Around the waste dumps, retaining wall of substantial strength shall be constructed. Perforation (weep holes) shall be left at intervals to allow for passage of water. Adjacent to this, garland drain shall be provided to prevent any wash off or leaching of dump materials during heavy rains. Dump height will be increased to 15 m (max) from existing level. Individual slopes shall not exceed 37° and the overall shape of the dump shall be 28°. Catch drains shall be provided at the inward side of the terrace. Catch drains of the terrace shall be connected to the garland drain outside the periphery of the dump. Each terrace shall have provision of berms at the outer end to reduce gully formation due to rainwater wash offs. The existing area waste dump area is 28.377 Ha which will be increased to 28.782 Ha by the end of scheme period. In course of time plantation on the dead end slopes of waste dumps with local species shall be done in consultation with forest authorities.
34. It has been proposed to dump the overburden or waste at Dump No-1. Presently garland drain of 2360 m long, retaining wall of 440 m and two no of settling tanks exist. Towards south side of dump – 1 and north side of reclaimed area, garland drain of 380 m long and retaining wall of 380 m shall be constructed. Check dams shall be constructed intermittently across the garland drain to check / arrest sediments flowing with water.
35. About 815 KLD of water will be required out of which 55 KLD will be sourced through Ground water and 760 KLD from mine quarries.
36. It was reported by the PP that there is no wildlife sanctuary/tiger reserve/national park, etc. within the 10 km radius area around the mine lease.
37. Damsala nala is the main perennial which flows in the south west direction and is located towards the northern side of the leasehold at a distance of 0.6 km away from the northern boundary. Various first and second order streams both from the northern and southern slopes of Mahagiri and Daitary hill range join on to the Damsala nala which finally discharge in to the Brahmani river.
38. The southern part of the area is bounded by a dry nala .The drainage pattern of the buffer zone has natural drainage such as Damsala nala in the near vicinity of the leasehold. The dry nala in the southern part carries the surface run-off during monsoon and ultimately converge with Damsala nala towards north-western part of the leasehold.
39. The cost of the project is ` 4.00 Crore.

40. It was reported by the PP that there is no court case/litigation pending against the project.
41. From 2002-03 to 2007-08 (i.e. 6 years), the production figure was in excess of 0.1 MTPA. From 2006-07 to 2007-08 (2 years) and 2016-17, the dispatch figure was in excess of 0.1 MTPA.

Authenticated Production/Dispatch Details

Sl. No.	Year	Actual Production (TPA)	Actual Dispatch (TPA)
1.	2001-02	23354.580	8992.630
2.	2002-03	152163.250	56887.100
3.	2003-04	191746.000	68227.326
4.	2004-05	114578.000	52190.260
5.	2005-06	194021.730	64136.750
6.	2006-07	158712.000	111046.860
7.	2007-08	120189.000	135342.300
8.	2008-09	79794.000	83950.990
9.	2009-10	62335.000	62780.070
10.	2010-11	74000.000	90374.490
11.	2011-12	66000.000	58733.470
12.	2012-13	96022.622	43667.800
13.	2013-14	64086.842	89708.110
14.	2014-15	69298.000	66775.190
15.	2015-16	87988.000	99313.690
16.	2016-17	99847.218	100232.890
17.	2017-18 (June-2017)	30577.679	33316.750

42. During 2002 -03 to 2007-08 (6years) the production figure has exceeded 0.1 MTPA for which Deputy Directorate of Mines, Govt. of Odisha has raised a demand note of ` 77,52,97,589 /- vide office letter no. 568/Mines dated 11.04.2018. as per judgment of Hon'ble Supreme Court of India.
43. The lessee filed a revision application in the revision authority Ministry of Mines, New Delhi vide. Case no. 22/(43)/2018/RC-I.
44. The revision authority considered the case and passed an order "The Impugned order" be stayed till the next hearing vide order on 10.05.2018.
45. They have given undertaking by way of affidavit to comply with all the statutory requirements and judgment of Hon'ble Supreme Court dated. 02.08.2017 in writ petition (Civil) No. 114 of 2014. The undertaking inter-alia include commitment of the PP not to repeat any such violation in future. This is in accordance with OM of MoEF&CC, vide F. No. 3-50/2017-IA.III(Pt.), dated 30.05.2018.
46. The SEAC issued ToRs for EIA study under violation case vide letter no. 1098/SEAC-180, dated 14.12.2018.
47. Conducting a fresh Public Hearing for the proposal was exempted by the SEAC as same has already been conducted for the proposal earlier on 31st August, 2010.

48. The proponent had furnished EIA/EMP report as per the ToRs issued by the SEAC under violation case.
49. The project proponent along with the consultant **M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar** made a detailed presentation on the proposal.
50. The SEAC on its meeting held on 26-07-2019 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.
- (i) Study on effect of chromite mines to nearest human habitation which is about 1.3 km.
 - (ii) Pandara nallah is adjacent to the project site. Hence study on impact of mining activity on Pandara nallah is to be carried out and report to be submitted.
 - (iii) Repeat the estimation of Arsenic, Lead, Cadmium, Hexa-chromium, Copper, Zinc, Selenium on surface water analysis and it should have absolute figures. A fresh analysis report is to be submitted.
 - (iv) Distance of sampling stations from project site should be mentioned.
 - (v) Copy of valid explosive licence.
 - (vi) Status of permission from Water Resources Department, Govt. of Odisha for drawal of Ground Water.
 - (vii) Number of existing bore-wells and proposed for the expansion proposal along with the NoC from CGWA and permission for Water Resources Department, Govt. of Odisha.
 - (viii) Detailed water balance including compensating water balance mentioning requirement.
 - (ix) Details of depth of Quarry No. 1 and 2.
 - (x) Quality of water present in Quarry 1 & 2 need to be assessed and analysis report to be submitted.
 - (xi) Copy of Annual compliance Report on CGWA to be submitted
 - (xii) Plant layout showing previous plantation and proposed plantation.
 - (xiii) List of plant species used for plantation on dump area.
 - (xiv) Traffic Density study in mines area covering neighboring mines to be carried out by Operational Research (OR) expert and report to be submitted.
 - (xv) Specific occupational health study for employees and surrounding villages.
 - (xvi) Pollution Control Measures on common haulage roads.
 - (xvii) Details of CSR activities covered under Company Act 2013 in year 2012-13 including study of Socio-Economic conditions of the periphery with an institute of repute.
 - (xviii) Details of Renewable energy to be used in the mines.
 - (xix) Calculation of life of Quarry Dump 1 & 2 and alternative suggested if any other than these 2 dump sites.

- (xx) Mass Balance diagram related to treatment of hexavalent chromium and its zero discharge from the mines.
 - (xxi) Details of drainage management previously operated and proposed.
 - (xxii) Submission of complete set of listed annexures in the EMP.
 - (xxiii) Year wise details of groundwater drawn.
 - (xxiv) Details of rainwater harvesting proposed in the mine and amount compensated towards water requirement.
 - (xxv) Status of Forest Clearance (Stage-I) for remaining forest land.
 - (xxvi) In surface water analysis Standards as per IS-2296:1992 Class –‘C’ has been used, hence it should be upgraded to 2012 and submitted.
 - (xxvii) The model simulations are done for the air pollutant arising from the mining operations, namely PM₁₀, PM_{2.5}, SO₂, NO_x& CO. Ground Level Concentration (GLC) have been computed using hourly meteorological data for 2 scenarios namely without control measures & with control measures. Details of control and without control parameters shall be submitted.
 - (xxviii) Copy of application to State Govt. to execute supplementary deed and other clearances subsequently.
 - (xxix) Copy of Steel and Mines Department, Govt. of Odisha letter about mining lease and ownership of lease and its validity.
 - (xxx) Copy of Wildlife Conservation Plan.
 - (xxxi) Measures taken for treatment of surface runoff.
 - (xxxii) Water quality of Damsala Nallah and analysis report of Damsala Nallah for last 3 months.
 - (xxxiii) Analysis report of soil samples w.r.t hexavalent chromium for last 3 months.
 - (xxxiv) Analysis of ground and surface water sample w.r.t hexavalent chromium for last 3 months.
 - (xxxv) Copy of certified compliance report of earlier Environmental Clearance conditions issued by MoEF&CC, Regional Office, Bhubaneswar.
 - (xxxvi) Copy of order of Reviewing Authority (RA) and final order if any.
 - (xxxvii) Copy of MoEF&CC closure order and cancellation of ToR.
 - (xxxviii) Preparation of EMP comprising remediation plan and natural and community resource augmentation plan corresponding to the ecological damage assessed and economic benefits derived due to violation. The remediation plan and the natural and community resource augmentation plan to be prepared as an independent chapter in the EIA report by the accredited consultants.
 - (xxxix) Compliance to issues raised in public hearing conducted on 31st August, 2010.
51. The proponent has not yet furnished the information / documents as sought by the SEAC.

52. The Sub-Committee of SEAC conducted site visit on 16th October, 2019 and the vital observations of the Sub-Committee are as follows:

- a) Rain water harvesting & recharging thereof to compensate the ground water being drawn to meet their domestic need was not found and missing as a condition of compliance to CGWA 'NOC' for the purpose

Therefore, it is mandatory for the proponent to Comply the same i.e. rain water harvesting and recharging it after due treatment since it is contaminated with hexavalent chromium.

- b) Out of two tailing ponds, the one adjacent to ETP was found not to be in good shape including its embankment and expected to have been over flowing in monsoon with danger for contamination of soil & water by hexavalent chromium.

Therefore, the Proponent is required to submit the following w.r.t tailing pond.

- (i) Tailing Pond capacity & design of its embankment.
 - (ii) Embankment ingress / flow of water in to it during monsoon and non-monsoon Period and corresponding quantity of water recycled for the process during both the period, similarly, feeding of corresponding balance water to ETP in both of the periods.
 - (iii) Solid / residue of tailing pond in both the periods and SOP of disposal of the same.
 - (iv) Redesign of this tailing pond is to be submitted with its water balance.
- c) The height of the embankment of the other tailing pond (North side) was found to be low compared to south side and apprehension of overflow is not ruled out. So to arrest overflow and contamination of soil & water by hexavalent chromium, the height of embankment of north side must be increased adequately as necessary in conformity to the design.
- d) Capacity of ETP need to be indicated including quantity of treatment both during Monsoon & Non- Monsoon period and recycling of the same as process water. Thus, a complete water balance is to be submitted.
- e) Intermittent land sliding / soil erosion and gully formation across the beds of the quarry was observed on west side. So, remedial measures to prevent such land / slope sliding be submitted.
- f) Retaining wall heights were found to be low to arrest overflow of runoff water during terrestrial rain. So, the height should be increased as necessary in consultation with the relevant expert and a detailed engineering action plan be submitted.
- g) Besides all the studies sought and report asked for to the proponent, the following are felt potentially essential immediately and report be submitted before consideration of Environmental Clearance.
- (i) Quantitative estimation of Hexavalent chromium in surface water nearby nallah / river & ground water in vicinity.
 - (ii) Traffic density study in mines area covering the neighboring mines & public traffic through an operation Research Expert is reiterated and report to be submitted.

- (iii) Hydrological study / Hydrogeological study.
 - (iv) Details of Process Technology planned for treatment of Hexavalent Chromium to make the effluent free from pollutant meeting the standards.
- h) Further, two more relevant studies in context of this sensitive site with reference to Hexavalent chromium Contamination are found necessary.
- (i) Core drilling permeability test through MECL, Nagpur or any other competent bodies.
 - (ii) Selection of Core sample study for porosity / permeability test to ascertain ground water flow & direction through competent organization.
53. The SEAC in its meeting held on 19.11.2019, decided to take decision on the proposal after receipt of the information / documents / clarification on the observation made by the sub-Committee of SEAC during the visit on 16.10.2019 in addition to information / documents / compliances sought by SEAC vide letter no. 208 (3)/SEAC-Misc-28, dated 21.08.2019.
54. The proponent has furnished hard copy of the information / documents as well as uploaded the same in online portal. However, there is a mismatching in the documents submitted in hard copy and in documents uploaded in online portal.
55. The SEAC in its meeting held on 18.08.2020, decided to take decision on the proposal after the proponent uploads the actual documents submitted in hard copy in online portal for evaluation.
56. The proponent has uploaded the actual documents in online portal for evaluation. The SEAC verified the same as follows:

Sl. No.	Clarification sought by the SEAC	Compliance submitted by the proponent	Views of SEAC
(i)	Study on effect of chromite mines to nearest human habitation which is about 1.3 km	Detailed study report furnished which shows the pollution and health hazards related to hexavalent chromium are acute, causing irreparable (damage) to human health". There is acute dust problem in the area. It irritates their skin, nose and throat. People also suffer from asthma. The proponent has also furnished detailed mitigative measures.	Specific conditions to be stipulated in EC to implement the mitigative measures as suggested in the study report.
(ii)	Pandara nallah is adjacent to the project site. Hence study on impact of mining activity on Pandara nallah is to be carried out and report to be submitted	M/s Jindal Chromite Mine has been granted a lease area of 89.00 ha. Pandara Nallah is about 2.64 KM away (aerial distance) from the south boundary of the lease area. Therefore it can be envisaged that the mining activity of this project have not any significant impact on Pandara nallah. At Present existence Pandara Nallah is of no significance. No water is flowing from Mines to Nallah due to topography features as hilly terrain is there between mines and Pandara Nallah. Working of the mines & COBP is based on ZLD. So as such no impact is envisaged on Pandara Nallah	Specific conditions to be stipulated in EC to adopt Zero Liquid Discharge (ZLD).

Sl. No.	Clarification sought by the SEAC	Compliance submitted by the proponent	Views of SEAC
(iii)	Repeat the estimation of Arsenic, Lead, Cadmium, Hexa chromium, Copper, Zinc, Selenium on surface water analysis and it should have absolute figures. A fresh analysis report is to be submitted	Fresh analysis report has been furnished.	-----
(iv)	Distance of sampling stations from project site should be mentioned	Detailed distance of sampling stations have been given.	-----
(v)	Copy of valid explosive license	Certificate of licence for possession for use of Explosives has been obtained from Petroleum & Explosives Safety Organisation (PESO) vide letter No. E/EC/OR/22/335 (E40370), dated: 27.09.2016 and valid till 31st March 2020	Specific conditions to be stipulated in EC to revalidate the explosive license beyond 31.03.2020 without which explosives shall not be stored / used.
(vi)	Status of permission from Water Resources Department, Govt. of Odisha for drawl of Ground Water	JSL Mines is having an agreement with Executive Engineer, Jaraka Irrigation Division of Department of Water Resources for drawl of 0.019619 cusec (48 KLD) of ground water. Copy of agreement furnished.	Specific conditions to be stipulated in EC that they will operate the bore well water, when valid NoC for the quantity of water to be used.
(vii)	Number of existing bore-wells and proposed for the expansion proposal along with the NoC from CGWA and permission for Water Resources Department, Govt. of Odisha	At present JSL Mines is having one no. of bore well for drawl of water for domestic use. No proposal for additional bore well for proposed expansion of mine has been envisaged as the mine pit water will suffice the purpose. Jindal Chromite Mines had obtained NOC for drawl of 1030m ³ /day ground water from Central Ground Water Authority (CGWA) on 03 rd November, 2010. Further, another NOC was obtained for drawl of 755 m ³ /day ground water (excluding 1030m ³ /day) from Central Ground Water Authority (CGWA) on 05 th July, 2011. The validity period was not stated in NOC approved by Central Ground Water Authority. As per the Public Notice issued by CGWA dated 04.10.2017 vide notice no. 26-1/CGWA/2015, Jindal Chromite Mines has applied for obtaining permission for drawl of	Specific conditions to be stipulated in EC.

Sl. No.	Clarification sought by the SEAC	Compliance submitted by the proponent	Views of SEAC
		48m ³ /day (only for domestic purpose) from CGWA on dated 15/10/2019 for which permission is awaited	
(viii)	Detailed water balance including compensating water balance mentioning requirement	Total requirement of water post expansion of the project is 815 KLD. Out of 815 KLD 48 KLD water shall be drawn from existing bore well for domestic purpose and balance 767 KLD water shall be drawn from mine pit for mining operation purpose. Detailed water balance has been given.	Specific conditions to be stipulated in EC.
(ix)	Details of depth of Quarry No. 1 and 2	<ul style="list-style-type: none"> • Depth of Quarry-1: 90 meter. (Top mRL : 147 meter & Bottom mRL : 57 meter) • Depth of Quarry-2: 50 meter. (Top mRL : 172 meter & Bottom mRL : 122 meter) 	-----
(x)	Quality of water present in Quarry 1 & 2 need to be assessed and analysis report to be submitted	Quality of water present in Quarry 1 & 2 is assessed and analysis report has been furnished.	-----
(xi)	Copy of Annual compliance Report on CGWA to be submitted	Application is under process for approval. After obtaining permission from CGWA, compliance report of the stipulated conditions to be issued in granting NOC will be submitted regularly as prescribed.	Specific conditions to be stipulated in EC.
(xii)	Plant layout showing previous plantation and proposed plantation	Map Showing Existing and Proposed Plantation have been furnished.	-----
(xiii)	List of plant species used for plantation on dump area	The area proposed for diversion was initially under non-forest category in Hal records. So, as approved in mining scheme & for development of green belt, plantation work has been carried for more than 13 years. During this period plantation was done approximately over 18.20 ha under phased reclamation scheme as per the Table given in the compliance. Beside, some plantation has also been done on the periphery of the Mineral Beneficiation/ Separation Plant and around the Effluent Treatment Plant area, ANFO shed, etc. on environmental point of view.	Specific conditions to be stipulated in EC.
(xiv)	Traffic Density study in mines area covering neighbouring mines to be carried out by Operational Research (OR) expert and report to be submitted	Traffic Density study report has been furnished.	Specific conditions to be stipulated in EC.
(xv)	Specific occupational health study for employees and surrounding villages	Total Seventy (70) nos. of employees residing surrounding villages undergone occupational health check-up and comprehensive occupational health report has been furnished.	Occupational health check-up has to be done by occupational health expert

Sl. No.	Clarification sought by the SEAC	Compliance submitted by the proponent	Views of SEAC
			periodically for employees as well as nearby villagers to be put as specific condition in EC.
(xvi)	Pollution Control Measures on common haulage roads	The control measures to be adopted for controlling of air pollution and dust emissions from the proposed capacity expansion of mining activity has been furnished.	Specific conditions to be stipulated in EC.
(xvii)	Details of CSR activities covered under Company Act 2013 in year 2012-13 including study of Socio-Economic conditions of the periphery with an institute of repute	Details of CSR activities covered under Company Act 2013 in year 2012-13 including study of Socio-Economic conditions of the periphery with an institute of repute has been furnished.	Specific conditions to be stipulated in EC.
(xviii)	Details of Renewable energy to be used in the mines	Post revocation of closure of mining operation, JSL has proposed to install solar panel inside the mine to generate 5KW of power required for Administrative Building.	Specific conditions to be stipulated in EC.
(xix)	Calculation of life of Quarry Dump 1 & 2 and alternative suggested if any other than these 2 dump sites.	Details has been furnished.	-----
(xx)	Mass Balance diagram related to treatment of hexavalent chromium and its zero discharge from the mines.	The mine pit Quarry-1 water to be treated in ETP during Non-monsoon. As per the analysis report it reveals that, Hexavalent Chromium Content in Quarry-1 water is well within the limit. However, during monsoon period, in addition to water from Quarry-1, additional water from surface runoff of mine lease area is to be treated in ETP. During monsoon, maximum of 4500 KLD water to be treated in ETP. Consider maximum of 1 mg/l Hexavalent Chromium content in surface runoff water, mass balance has been made.	Specific conditions to be stipulated in EC.
(xxi)	Details of drainage management previously operated and proposed.	Details of drainage management previously operated and proposed has been furnished.	Specific conditions to be stipulated in EC.
(xxii)	Submission of complete set of listed annexures in the EMP.	A complete set of listed annexures in the EMP has been furnished including certified copy of half yearly compliance report to EC conditions given by the MoEF&CC, Govt. of India on 13.02.2019.	-----

Sl. No.	Clarification sought by the SEAC	Compliance submitted by the proponent	Views of SEAC												
(xxiii)	Year wise details of groundwater drawn.	Year wise details of groundwater drawn has been furnished.	----												
(xxiv)	Details of rainwater harvesting proposed in the mine and amount compensated towards water requirement.	Details of rainwater harvesting proposed in the mine and amount compensated towards water requirement has been furnished.	Specific conditions to be stipulated in EC.												
(xxv)	Status of Forest Clearance (Stage-I) for remaining forest land.	<table border="1"> <thead> <tr> <th>Total Mining Lease Area</th> <th>89.000 ha.</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>Forest Area in Mining Lease</td> <td>89.000 ha.</td> <td>Forest Area as per Sabik Settlement</td> </tr> <tr> <td>MOEF Granted Forest Clearance Over: (On dated.05.07.2001)</td> <td>22.800 ha.</td> <td>Forest Area as per Hal Settlement</td> </tr> <tr> <td>Approval sought for balance forest land : - U/s 2 (ii) and U/s 2 (iii) of FC Act 1980 Including Safety Zone Area (5.040Ha.)</td> <td>66.200 ha.</td> <td>Forest Clearance (Application no FP/OR/MIN/2 0736/2016) of balance forest land over 66.20Ha. is under progress and at office of the PCCF, Odisha.</td> </tr> </tbody> </table>	Total Mining Lease Area	89.000 ha.	Remarks	Forest Area in Mining Lease	89.000 ha.	Forest Area as per Sabik Settlement	MOEF Granted Forest Clearance Over: (On dated.05.07.2001)	22.800 ha.	Forest Area as per Hal Settlement	Approval sought for balance forest land : - U/s 2 (ii) and U/s 2 (iii) of FC Act 1980 Including Safety Zone Area (5.040Ha.)	66.200 ha.	Forest Clearance (Application no FP/OR/MIN/2 0736/2016) of balance forest land over 66.20Ha. is under progress and at office of the PCCF, Odisha.	Specific conditions to be stipulated in EC to obtain stage-I clearance before issue of Environmental Clearance. EC can be issued only after obtaining Stage-I Clearance.
Total Mining Lease Area	89.000 ha.	Remarks													
Forest Area in Mining Lease	89.000 ha.	Forest Area as per Sabik Settlement													
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(xxvi)	In surface water analysis Standards as per IS-2296:1992Class -'C' has been used, hence it should be upgraded to 2012 and submitted.	There is no evidence found for up gradation on BIS Online & Offline data for revised Standard of IS- 2296 from 1992 to 2012. Details of Portal copy has been furnished.	Specific conditions to be stipulated in EC.												
(xxvii)	The model simulations are done for the air pollutant arising from the mining operations, namely PM ₁₀ , PM _{2.5} , SO ₂ , NO _x & CO. Ground Level Concentration (GLC) have been computed using hourly meteorological data for 2 scenarios namely without control measures & with control measures. Details of control and	Prediction of impacts on Air Environment has been carried out using Mathematical model based on a steady state Gaussian Plume Dispersion Model designed for Area Sources and Line Sources for short term. Details have been furnished.	Specific conditions to be stipulated in EC.												

Sl. No.	Clarification sought by the SEAC	Compliance submitted by the proponent	Views of SEAC
	without control parameters shall be submitted.		
(xxviii)	Copy of application to State Govt. to execute supplementary deed and other clearances subsequently.	Details have been furnished.	----
(xxix)	Copy of Steel and Mines Department, Govt. of Odisha letter about mining lease and ownership of lease and its validity.	Detailed copy has been furnished	----
(xxx)	Copy of Wildlife Conservation Plan.	Copy of Wildlife Conservation Plan has been furnished.	Specific conditions to be stipulated in EC.
(xxxii)	Measures taken for treatment of surface runoff.	A detailed measures taken for treatment of surface runoff has been furnished.	Specific conditions to be stipulated in EC.
(xxxiii)	Water quality of Damsala Nallah and analysis report of Damsala Nallah for last 3 months.	Water quality of Damsala Nallah and analysis report of Damsala Nallah for last 3 months has been furnished.	Specific conditions to be stipulated in EC.
(xxxiv)	Analysis report of soil samples w.r.t hexavalent chromium for last 3 months.	Analysis report of soil samples w.r.t hexavalent chromium for last 3 months has been furnished.	----
(xxxv)	Analysis of ground and surface water sample w.r.t hexavalent chromium for last 3 months.	Analysis of ground and surface water sample w.r.t hexavalent chromium for last 3 months has been furnished.	----
(xxxvi)	Copy of certified compliance report of earlier Environmental Clearance conditions issued by MoEF&CC, Regional Office, Bhubaneswar.	Copy of certified compliance report of earlier Environmental Clearance conditions issued by MoEF&CC, Regional Office, Bhubaneswar has been furnished.	----
(xxxvii)	Copy of order of Reviewing Authority (RA) and final order if any	Copy of order of Reviewing Authority (RA) has been furnished. The case is still pending in Reviewing Authority.	Specific conditions to be stipulated in EC.
(xxxviii)	Copy of MoEF&CC closure order and cancellation of ToR	Copy of MoEF&CC closure order and cancellation of ToR has been furnished.	----
(xxxviii)	Preparation of EMP comprising remediation plan and natural and	Preparation of EMP comprising remediation plan and natural and community resource augmentation plan corresponding to the	• Specific conditions to be stipulated in

Sl. No.	Clarification sought by the SEAC	Compliance submitted by the proponent	Views of SEAC
	community resource augmentation plan corresponding to the ecological damage assessed and economic benefits derived due to violation. The remediation plan and the natural and community resource augmentation plan to be prepared as an independent chapter in the EIA report by the accredited consultants	ecological damage assessed and economic benefits derived due to violation. The remediation plan and the natural and community resource augmentation plan to be prepared as an independent chapter in the EIA report by the accredited consultants has been Furnished. <ul style="list-style-type: none"> • Remedial action cost = ` 39,48,900/- • Natural Resources Cost = ` 10,00,000/- • Ecologically damage assessment cost = ` 49,50,000/- • Community augmentation cost = ` 19,00,000/- 	EC. <ul style="list-style-type: none"> • Bank guarantee of amount ` 1,17,98,900/- to be submitted before issuing of EC.
(xxxix)	Compliance to issues raised in public hearing conducted on 31st August, 2010	Compliance to issues raised in public hearing conducted on 31st August, 2010 has been furnished.	Specific conditions to be stipulated in EC.

57. The sub-Committee of SEAC visited the mine on 16.10.2019. The proponent was asked to comply to the observations of sub-committee of SEAC vide letter no. 377(5), dated 19.11.2019. The proponent has furnished the compliance as follows:

Sl. No.	Observations of Sub-Committee of SEAC	Compliance furnished by the proponent	Views of SEAC
1.	Rain water harvesting & recharging there off to compensate the ground water being drawn to meet their domestic need was not found and missing as a condition of compliance to CGWA 'NOC' for the purpose Therefore, it is mandatory for the proponent to Comply the same i.e. rain water harvesting and recharging it after due treatment since it is contaminated with Hexavalent chromium.	Details have been furnished.	Specific conditions to be stipulated in EC.
2.	Out of two tailing ponds, the one adjacent to ETP was found not to be in good shape including its embankment and expected to have been over flowing in monsoon with danger for contamination of soil & water by Hexavalent chromium. Therefore, the Proponent is required to submit the following w.r.t tailing pond. Therefore, the Proponent is required to submit the following w.r.t tailing pond.	(i) Tailing pond capacity and design of its embankment has been furnished. (ii) Embankment ingress / flow of water in to it during monsoon and non-monsoon Period and corresponding quantity of water recycled for the process during both the period, similarly, feeding of	Specific conditions to be stipulated in EC.

Sl. No.	Observations of Sub-Committee of SEAC	Compliance furnished by the proponent	Views of SEAC
	<p>(i) Tailing Pond capacity & design of its embankment.</p> <p>(ii) Embankment ingress / flow of water in to it during monsoon and non-monsoon Period and corresponding quantity of water recycled for the process during both the period, similarly, feeding of corresponding balance water to ETP in both of the periods.</p> <p>(iii) Solid / residue of tailing pond in both the periods and SOP of disposal of the same.</p> <p>(iv) Redesign of this tailing pond is to be submitted with its water balance</p>	<p>corresponding balance water to ETP in both of the periods has been furnished.</p> <p>(iii) Solid / residue of tailing pond in both the periods and SOP of disposal of the same has been furnished.</p> <p>(iv) Redesign of this tailing pond is to be submitted with its water balance has been furnished.</p>	
3.	<p>The height of the embankment of the other tailing pond (North side) was found to be low compared to south side and apprehension of overflow is not ruled out. So to arrest overflow and contamination of soil & water by hexavalent chromium, the height of embankment of north side must be increased adequately as necessary in conformity to the design.</p>	<p>Tailing ponds are provided with adequate freeboard of 1mtr. to avoid any surface runoff flow in to the pond and vice versa. However embankment height towards north side will be raised by another 0.5 meter of concrete structure</p>	<p>Specific conditions to be stipulated in EC.</p>
4.	<p>Capacity of ETP need to be indicated including quantity of treatment both during Monsoon & Non- Monsoon period and recycling of the same as process water. Thus, a complete water balance is to be submitted.</p>	<p>Effluent Treatment Plant has already been installed with a capacity of 250m³ /hr. During non-monsoon period, ETP will operate @ 5-6 hours a day. In monsoon period the ETP will operate @16-20 hours a day.</p>	<p>Specific conditions to be stipulated in EC.</p>
5.	<p>Intermittent land sliding / soil erosion and gully formation across the beds of the quarry was observed on west side. So, remedial measures to prevent such land / slope sliding be submitted</p>	<p>Adequate measures will be taken to stabilize the benches from Soil erosion and gully formation as per DGMS norms after reopening of the Mine</p>	<ul style="list-style-type: none"> • Specific conditions to be stipulated in EC. • A legal affidavit to be submitted to this effect.
6.	<p>Retaining wall heights were found to be low to arrest overflow of runoff water during terrestrial rain. So, the height should be increased as necessary in consultation with the relevant expert</p>	<p>As per approved Mining plan the retaining wall were constructed 1.5m x1mx 1m to arrest the over flows of runoff water</p>	<p>Specific conditions to be stipulated in EC.</p>

Sl. No.	Observations of Sub-Committee of SEAC	Compliance furnished by the proponent	Views of SEAC
	and a detailed engineering action plan be submitted	during rain. However as suggested height of retaining wall will be raised upto another 0.5 meter based on the site feasibility.	
7.	<p>Besides all the studies sought and report asked for to the proponent, the following are felt potentially essential immediately and report be submitted before consideration of Environmental Clearance.</p> <p>(i) Quantitative estimation of Hexavalent chromium in surface water nearby nallah / river & ground water in vicinity.</p> <p>(ii) Traffic density study in mines area covering the neighboring mines & public traffic through an operation Research Expert is reiterated and report to be submitted.</p> <p>(iii) Hydrological study / Hydrogeological study.</p> <p>(iv) Details of Process Technology planned for treatment of Hexavalent Chromium to make the effluent free from pollutant meeting the standards</p>	<p>(i) Quantitative estimation of Hexavalent chromium in surface water nearby nallah / river & ground water in vicinity has been furnished.</p> <p>(ii) Traffic density study in mines area covering the neighbouring mines & public traffic and report has been furnished.</p> <p>(iii) Hydrological study / Hydrogeological study has been furnished.</p> <p>(iv) Details of Process Technology planned for treatment of Hexavalent Chromium to make the effluent free from pollutant meeting the standards has been furnished.</p>	Specific conditions to be stipulated in EC.
8.	<p>Further, two more relevant studies in context of this sensitive site with reference to Hexavalent chromium Contamination are found necessary.</p> <p>(i) Core drilling permeability test through MECL, Nagpur or any other competent bodies.</p> <p>(ii) Selection of Core sample study for porosity / permeability test to ascertain ground water flow & direction through competent organization.</p>	The study will be carried out and report will be submitted to the statutory authority within one year of the reopening of the mine.	<ul style="list-style-type: none"> • Specific conditions to be stipulated in EC. • Study report need to be submitted within 6 months of the reopening of the mine.

58. The SEAC observed the following:

- a) The proposal was considered by the State Level Expert Appraisal Committee (SEAC), Odisha in its meeting held on 06th December, 2018 for appraisal of the proposal for ToR in pursuance of the MoEF&CC, Govt. of India Notification dated 14th March, 2017. The

SEAC, after deliberations on the proposal in terms of the provisions of the Notification dated 14th March, 2017, confirmed the case to be of violation of the EIA Notification, 2006 and recommended for the following:

- (i) The State Government to take action against the project proponent under the provisions of section 19 of the Environment (Protection) Act, 1986, and further no Consent to Operate to be issued till the project is granted Environmental Clearance.
 - (ii) The project proponent shall be required to submit a bank guarantee equivalent to the amount of remediation plan and natural and community resource augmentation plan with the SPCB prior to the grant of Environmental Clearance. The quantum is recommended by the SEAC based on EIA report and finalized by the regulatory authority i.e. SEIAA, Odisha. The bank guarantee shall be released after successful implementation of the EMP, followed by recommendations of the SEAC and approval of the regulatory authority i.e. SEIAA, Odisha.
 - (iii) Public hearing has already been conducted for the proposal earlier on 31st August, 2010, a copy of which is also furnished with EIA/EMP. For this reason, conducting a fresh Public Hearing has been exempted. But, CER issues raised as per MoM of public hearing will be put as physical as specific condition.
- b) EIA/EMP study report has been prepared by a NABET Accredited / NABL Accredited Consultant namely **M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar**.
 - c) Detailed assessment of Ecological Damage, Remediation Plan and Natural and Community Resource Augmentation Plan has been incorporated in the EIA report.
 - d) An amount of ₹ 1,17,98,900/- (Rupees One Crores Seventeen lakh Ninety-Eight thousand Nine Hundred only) has been estimated in the EIA / EMP report towards the cost of assessment of Environmental / Ecological damage due to violation as well as Natural and Community Resource Augmentation Plan.
 - e) There is no specific guideline issued by the MoEF&CC, Govt. of India for assessment of Environmental and Ecological Damage as well as estimation of cost for remediation plan as well as Natural and Community Resource Augmentation Plan.
 - f) In the absence of any guidelines, the cost as suggested by the proponent in the EIA report above to be taken into account for remediation plan as well as Natural and Community Resource Augmentation Plan. However, the proponent has to abide by the guidelines if issued by the MoEF&CC, Govt. of India in future and accordingly the proponent has to comply. To this effect, they have to submit an undertaking in form of a legal affidavit.
 - g) No record is available in the file about initiation of legal action against the project proponent by the State Govt./SPCB under the provisions of section 19 of the Environment (Protection) Act, 1986 for violation of the EIA Notification, 2006. To this effect, they have to submit a legal affidavit that no legal action is either initiated or pending against them.

After detailed discussion, the SEAC recommended for grant of Environmental Clearance for expansion in production from 0.1 million TPA (MTPA) to 0.215 million TPA (MTPA) of Chrome Ore from 89 ha Mine lease area with common boundary mining located at

Village-Kaliapani, Tehsil Sukinda, District Jajpur, Odisha. Khasra No. / Plot No. / Block Range /Survey No/Gut No Survey No/Gut No :Forest Block 27 with the following specific conditions in terms of the provisions of the MoEF&CC, Govt. of India notification dated 14th March, 2017 in addition to the conditions stipulated as per **Annexure – A. However, the Environmental Clearance shall be issued by the SEIAA after receipt of Stage-I Forest Clearance from the proponent as stipulated in MoEF&CC, Govt. of India office memorandum no. J-11013/41/2006-IA.II(I), dated 09.09.2011 and office memorandum no. J-11013/41/2006-IA.II(I), dated 18th May, 2012 and relevant bank guarantee stated above and legal affidavit as indicated on the column “views of SEAC” and recommendations below.**

- (i) The SEAC recommended for an amount of ` 1,17,98,900/- (Rupees One Crores Seventeen lakh Ninety-Eight thousand Nine Hundred only) towards Remediation plan and Natural and Community Resource Augmentation plan as the proponent has gone for excess production of chromite Ore without prior Environmental Clearance under EIA Notification, 2006.
- (ii) The project proponent shall be required to submit a bank guarantee of an amount of ` 1,17,98,900/- (Rupees One Crores Seventeen lakh Ninety-Eight thousand Nine Hundred only) towards Remediation plan and Natural and Community Resource Augmentation plan with the State Pollution Control Board, Odisha prior to the grant of Environmental Clearance.
- (iii) The bank guarantee shall be released after successful implementation of the EMP, followed by recommendations of the SEAC, Odisha and approval of the regulatory authority (i.e. SEIAA, Odisha).
- (iv) The SEIAA, Odisha may consider to request to the Govt. in F&E Deptt., Govt. of Odisha to take action against the project proponent under the provisions of section 19 of the Environment (Protection) Act, 1986 for violation of the EIA Notification, 2006. Environmental Clearance is to be issued after initiation of legal action against the project proponent.
- (v) The proponent has to abide by the guidelines if issued by the MoEF&CC, Govt. of India in future for assessment of Environmental and Ecological Damage as well as estimation of cost for remediation plan as well as Natural and Community Resource Augmentation Plan. To this effect, the proponent shall submit a legal affidavit.
- (vi) During 2002 -03 to 2007-08 (6years) the production figure has exceeded 0.1 MTPA for which Deputy Directorate of Mines, Govt. of Odisha has raised a demand note of ` 77,52,97,589 /- vide office letter no. 568/Mines dated 11.04.2018. as per judgment of Hon'ble Supreme Court of India. The lessee filed a revision application in the revision authority Ministry of Mines, New Delhi vide. Case no. 22/(43)/2018/RC-I. The revision authority considered the case and passed an order “The Impugned order” be stayed till the next hearing vide order on 10.05.2018. This Environmental Clearance is to be issued without prejudice to the case filed before Revisional Authority (RA), Ministry of Mines, New Delhi. The proponent shall submit an undertaking to this effect in form of a legal affidavit before grant of EC.

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

- (a) Haulage road shall be developed and maintained perennially and perpetually by the proponent in construction with the concerned authority of the Govt. and to this effect, the proponent shall submit an undertaking in form of a legal affidavit.
- (b) Slope study by an expert of repute of water dumps to be done and submitted within six months from the date of issue of EC to SEAC / SEIAA.
- (c) CER related issues as per MoM of public hearing held on 31.08.2010 by prescribed as special condition in EC.
- (d) Traffic density study if not done by domain expert, then the expert to be ratified / authenticated by domain expert and submitted within a month time.

(viii) The site will be visited by the sub-Committee of SEAC after six months to review the progress of recommendations of SEAC on specific conditions.

(II) PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR MAHAPARBAT (UNCHABALI) IRON ORE MINES FOR ENHANCEMENT OF IRON ORE PRODUCTION FROM 0.07 MTPA TO 1.0 MTPA OF OVER AN AREA 68.00 HA AT VILLAGE UNCHABALI & BALDA, JODA BLOCK, TAHASIL-BADBIL, SUB-DIVISION-CHAMPUA, DISTRICT-KEONJHAR OF OMC LTD. (EC) – 15-02-2020

1. The Proposal is for Environmental Clearance for Mahaparbat (Unchabali) Iron Ore Mines for Enhancement of Iron Ore Production from 0.07 MTPA to 1.0 MTPA of over an area 68.00 ha at Village Unchabali & Balda, Joda Block, Tahasil-Badbil, Sub-Division-Champua, District-Keonjhar of M/s Odisha Mining Corporation Ltd. (OMC Ltd.)
2. M/s OMC Ltd. envisages expansion of Mahaparbat (Unchabali) Iron Ore Mine from 0.07 MTPA to 1.0 MTPA. Mahaparbat (Unchabali) mine is spread over an area of 68.0 ha in village Unchabali & Balda, Joda Block, Champua Sub-Division, Keonjhar District, Odisha. The mine is an existing iron ore mine and has obtained Environmental Clearance (vide J-11015/779/2007-IA.II(M) dated 16.01.2009) and other statutory clearances for 0.07 MTPA.
3. The ML is spread over an area of 68.00 ha under village Unchabali (49.34 ha) and Balda (18.66 ha). The lease was executed on 09.06.2008 and is valid till 08.06.2058. The 'Review of Mining Plan' along with progressive Mine Closure Plan was approved by IBM vide MS/FM/34-ORI/BHU/2017-18 on 27.12.2017. The Stage-I Forestry clearance has been accorded by MoEF&CC (Forest Division), Govt. of India vide letter No. F. No. 8.21/2018-FC dated 16.11.2018.
4. The EIA-EMP Report has been prepared on the basis of Terms of reference (ToR) prescribed by Ministry of Environment, Forest and Climate Change (MoEF&CC), Govt. of India vide letter No. J-11015/55/2018-IA.II (M) dated 17.07.2018 and one full season baseline data monitored during Post-Monsoon season 2018 covering the months (October, November and December) and public hearing held on 28.08.2019.
5. The geographical co-ordinates of the project site is: Latitude – 21°52'42.54705" to 21°53'23.54719"N & Longitude - 85°25' 5.66779" to 85°25' 36.49480"E which falls under Topo sheet No- F45N5 (old topo-sheet no. 73G/5). Nearest railway station Banspani on Padapahar-Barajamda-Gua branch line of South-eastern railway is located at an aerial distance of ~12 km north. Another railway station Barbil, on South-eastern railway's Barajamda – Bolani branch line is located at an aerial distance of ~25 km north-west-

north. The nearest National Highway is NH-215 located at an aerial distance of ~16 Km north-west. A State Highway passes through northern tip of ML. The nearest major airport is at Bhubaneswar located at ~185 km south-east from Mahaparbat (Unchabali) ML.

6. A State Express Highway passing through north-west corner of the lease area and a nala on southern part of the lease area will not be disturbed. A safety zone of 50 m width on either side of the State Highway and nala will be maintained. Remaining portion will come under active utilization.
7. There is no proposal to acquire any private land. Hence there shall be no land oustees and no R&R required. There is no National Park, Wildlife Sanctuary, Biosphere Reserves, Ramsar site, Tiger/Elephant Reserve (existing as well as proposed), Critically Polluted Area or CRZ Area within 10 km of the project site.
8. The Schedule-I faunal / avifaunal species present in the Study Area. Site specific Wild life Conservation Plan has been approved by PCCF (WL)-cum-Chief Wildlife Warden, Odisha vide letter no. 7364/1 WL-FC-Mine-SSP-95/2018 dated 04.09.2019. OMC deposited Rs. 2.57 Cr. approved to State CAMPA for implementation of Wild life Conservation Plan in the impact zone to be executed by Forest Department.
9. An area of about 14.178 ha area will be maintained as safety zone (7.5 m along ML, 50 m on either side of road and nala) and the remaining 53.822 ha will come under active utilisation. About 68.00 ha non-forest Govt. land in Kerapaiand Dalimgudavillage, ThuamulRampur tehsil, district Kalahandi has been identified as compensatory afforestation land. OMC has deposited Rs. 3,03,22,480/- as CA cost and maintenance cost of 10 years. It has been envisaged to plant Neem, Karanj, Amla, Harida, Bahada, Mango, Arjun, Teak, Sissoo, Char, Mahul etc. for afforestation.
10. Method of mining shall be Opencast Mining. Based on proved mineral reserve (7,651,594 T) and production of 1.0 MTPA, the life of mine is estimated to be ~8 years. The few trenches and quarries were developed by previous lease owner which was prior to execution of mining lease in favour of OMC. No mining activities have been carried out by OMC till date.
11. The Mahaparbat (Unchabali) mine will be developed as mechanised opencast mine. During 1st year of working, Pit-1 (1A, 1B, 1C & 1D) located on north-west side will be developed sequentially and OB will be kept in Dump-1. During 2nd year of working, Pit-2 (located on north-north-west side) and Pit-3 (located on eastern side) will be developed. Initially, the OB from Pit-1 and Pit-2 will be kept in Dump-1 afterward backfilling will start. During 2nd year working, Pit-2 will exhaust and Dump-1 will cease. During 3rd year of working, only Pit-3 will be developed and the OB will be backfilled to Pit-1 and Pit-2. Subsequently, the waste generated in 4th year onwards will be used for backfilling of Pit-2. In next stage of mine working, Pit-3 will be mined till end of work followed by subsequent, backfilling to Pit-2 and Pit-3.
12. Dry crushing and screening process for sizing of iron ore has been envisaged for mineral processing. Due to dry processing there will be no tailings generation. Sub-grade ore containing 45-55% Fe will be blended with high grade ore at mine site itself. ROM will be sized to the desired range suitable for its use in the steel plants by two-stage crushing-screening plant in proposed mobile crushing and screening plant. The ROM will be transported to the in-pit mobile crusher while overburden will be transported to either

Dump site or backfilling site by dumpers. The sub-grade ore will be stacked beside the mineral storage yard located at northern side of the lease boundary. Top soil will be stored at specified location for future use in plantation. There will be no mineral rejects from the mine.

13. The fuel consumption in the mine operating at full capacity is estimated to be 3 KL/day. The explosives consumption is expected to be 145 kg/day. Peak water requirement of the mine is estimated to be 155 m³/day. Of this 90 m³/day will be required for industrial use and 25 m³/d of water for drinking at site. Water requirement for greenbelt is 25 m³/d, equipment & vehicle washing is 25 m³/d and for dust suppression is 45 m³/d. Drinking water will be sourced from ground water while surface water from nearby Kashi nala will be drawn for industrial use. The recycled water will be used for green belt and plantation purpose. There will not be any discharge to surface stream from mine lease. Water management (including storm water discharge) has been carried out through a network of garland drains and catch pits. The estimated peak power requirement for Mahaparbat (Unchabali) Iron Ore Mines will be 0.5 MW.
14. The proposed project will employ a ~270 people. Employment is expected in transportation activities, vehicle repair & maintenance, service providers for the enlarged work-force etc. Majority of the unskilled and semiskilled workers will be from local village.
15. Existing land use in the study area has been studied through satellite image processing (Resource Sat-2 LISS IV of April, 2018). Forest is the predominant land use covering about 67.84% of the study area.
16. 12 Ambient Air Quality (AAQ) monitoring locations were set up in the study area. The water quality samples were collected from twelve (12) locations. The air & water quality meets norms specified by CPCB. Noise monitoring has been carried out at 8 locations. Ambient noise levels are within the norm. The soil samples were collected from six (6) locations during the monitoring season for physio-chemical analysis. Overall the soil in the area is suitable for Plant growth.
17. About 3.3184 Mm³ of waste is estimated to be generated from mine. The waste generated will be kept in Dump-1 for initial two years of working. The external waste dumping will continue till 2nd year of working and afterward it will cease. Thus no external dumping will be practiced after 2nd year of working. Only backfilling will be practiced from 2nd year and will continue till end of work. The dump will be re-handled to Pit-3 at conceptual stage. Thus the entire generated waste will be used for backfilling purpose.
18. More than one lakh trees will be planted progressively in a phase wise manner till end of work. Saplings will be planted at the rate of 1600 trees/ ha in backfilled areas & safety zone.
19. Public hearing was conducted on 28.08.2019 at Unchabali village, Joda Block, Champua Sub-Division, Keonjhar District, Odisha. Dr. Bhakta Charan Pradhan, ADM Keonjhar chaired the public hearing meeting along with Shri Pusker Chandra Behera, Regional Officer, SPC Board, Keonjhar. About 447 people attended the Public Hearing. The issues raised by the public were mainly related to employment of local people, protection of nallah flowing through village, provision of good school in village, good medical facilities, construction of road in villages, arrangement tube well facilities, construction of community toilets, installation of solar lighting system and tree plantation. Few people showed their concern about deforestation, dust pollution, water pollution etc.

20. The Corporate Environment Responsibility (CER) applicable for the proposed project is @1.0% of the Capital Investment (₹ 20.00 crore). The CER is estimated to be ₹ ~20 lakhs and however OMC has decided to spend ₹ 65.0 lakhs will be spent over the period of validity of the EC granted for the project on various identified social areas. The amount will be spent separately as CER over and above CSR.
21. The major CSR activities of OMC includes (i) medical camps & supply of medicines, (ii) improving drinking water supply systems and infrastructure, (iii) improvement of education facilities in villages, (iv) Setting up of solar powered street lights in villages, (v) repair and maintenance of roads, (vi) setting up of community toilets, (vii) financial assistance to village festivals, cultural events and sports activities, (viii) training, skill development and women empowerment, (ix) improvement in agricultural activities etc.
22. There is no litigation pending against the project.
23. The approximate project cost is estimated to be approx. ₹ 20.00 Crore.
24. The project proponent along with the consultant **M/s MECON Limited, Ranchi – 834002** made a detailed presentation on the proposal.
25. The SEAC in its meeting held on 15-02-2020 decided to take decision on the proposal after receipt of the following information / documents from the proponent.
26. Now the project proponent has furnished compliances as desired by the committee vide letter 10079/ OMC/ F&E/ 2020 dated 24.08.2020 as follows.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC
(i)	Letter from DDM that no mining activity has been done.	The Dy. Director of Mines, Joda vide letter enclosed as Annexure-I has certified that no mining activity has been undertaken in Unchabali (Mahaparbat) Mines.	Specific conditions to be stipulated in EC.
(ii)	Analysis of top soil for biological activity so that it can be reused	The analysis result of top soil for Biological activity is enclosed as Annexure-II . The brief note on suitability of the soil for biological activities is enclosed as Annexure-III for reference.	Specific conditions to be stipulated in EC.
(iii)	Development of nursery by the project proponent towards plantation activity	OMC has selected a suitable patch of non-forest Govt, land to develop a dedicated full time nursery within Dubna-Sakradihi mining lease area of OMC to cater the requirement of plants of five mining leases of OMC in Barbil Region. An undertaking by OMC at Annexure-IV is enclosed to develop a full time nursery within a period of one year from the date of grant of Forest and Environmental clearance pertaining to Unchabali	Specific conditions to be stipulated in EC.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC
		mines.	
(iv)	Final rating result of traffic density study.	The rating result of traffic density study prepared by MECON is enclosed as Annexure-V .	Specific conditions to be stipulated in EC.
(v)	Slope study shall be done and report to be submitted.	This is a virgin mine. The slope stability studies require data on strength of rock strata, structural behavior of the rock, hydro-geological information of the mine etc. These data are essentially needed to run a numerical model for slope study. All these information can be obtained once the mine is put in to operation. Similar study is being undertaken in nearby working mines of OMC by engaging an institute of national repute. An undertaking by OMC in this regard is enclosed as Annexure-VI to complete the study within a period of one year from the date of opening the mines.	Specific conditions to be stipulated in EC. The slop study is also required to be done for waste. An undertaking in form of legal affidavit is to be submitted by the authorized signatory of OMC to this effect.
(vi)	List of CSR activities to be covered under this project. This should not be overlapped with the activities carried out by the district administration.	The copy of the list of proposed peripheral development activities in compliance to the specified mandates in the schedule VII of the Companies Act under Barbil Region including the impact zone of the project is enclosed as Annexure - VII . As per the prevailing practice, the proposal for various developmental projects are received by OMC from the Sarpanch of the peripheral villages of the mines every year and scrutinized by in-house committee. The Committee short listed the proposals and cost structure is estimated by OMC and submitted to the Collector for further action. On receipt of the proposal with financial outlay, it is sent to the BDOs concerned for discussion in the co-ordination committee meeting at Block Level. The proposed site is ground checked by BDO, Sarpanch	Specific conditions to be stipulated in EC.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC
		and Revenue Inspector. The financial outlay, if necessary, is modified at Block Level and sent to Collector for approval. The proposal is approved by the Collector and demand is placed for transfer of the amount by OMC to Collector for execution of the work by BDO. Therefore, there is no possibility of overlapping the CSR activities.	
(vii)	Details of Rain water harvesting system is to be submitted	Following rain water conservation measures shall be implemented within the mining lease area: <ul style="list-style-type: none"> • Prefabricated structures with provision of rain water harvesting design have been planned to be placed inside the ML with ground water recharge system. • Garland drains, settling tanks and check dams of appropriate size, gradient and length will be constructed both around the mine pit and around temporary over burden dumps to prevent run off of water to facilitate recharge the ground water. 	Specific conditions to be stipulated in EC.
(viii)	Occupational Health Hazards are to be identified for employees and surrounding villages. Centralized dedicated health check-up camps should be set up with doctor having specialization in occupational health	OMC has initiated to develop a centralized occupational health checkup facility for OMC employees working at all operating mining leases of Barbil Region and villagers near Mahaparbat (Unchabali) mines) by engaging a Doctor having specialization in Occupational health. An undertaking by OMC to develop such facility within a period of two years from the date of opening of the mines is given as Annexure-VIII .	Specific conditions to be stipulated in EC. An undertaking in form of a legal affidavit is to be submitted by the authorized signatory of OMC to develop a permanent occupational health centre within 2 years from opening of mine as stated in their compliance.
(ix)	Certificate of Regional Office, MoEF&CC, Govt. of India, Bhubaneswar w.r.t compliance to earlier Environmental Clearance conditions.	The copy of the certificate of Regional Office, MoEF&CC, Govt. of India, Bhubaneswar with respect to compliance to earlier Environmental Clearance conditions is given as Annexure - IX .	Specific conditions to be stipulated in EC.

Considering the information furnished and the presentation made by the consultant **M/s MECON Limited, Ranchi – 834002** along with the project proponent, the SEAC recommended for grant of Environmental Clearance with stipulated conditions as per **Annexure – B**. However, issues raised and recorded in MoM of public hearing w.r.t. environment / pollution / CER shall be put as specific condition.

(III) PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR CONSTRUCTION OF COMMERCIAL PROJECT “HOTEL RASHMI PLAZA” AT JAYADEV VIHAR, PLOT NO. – J1, B/1334, BHUBANESWAR, DISTRICT KHORDHA OF M/S. HOTEL RASHMI PLAZA – AMENDMENT OF ENVIRONMENTAL CLEARANCE NOW PP HAS CHANGED THE BUILT UP AREA FROM 28,278.31 SQMT TO 29021.73 SQ MT) OF M/S. HOTEL RASHMI PLAZA; RASMI RANJAN ROURTRAY – (AMENDMENT EC).

1. This is a proposal for amendment of Environmental Clearance of M/s. Hotel Rashmi Plaza for construction of commercial project “Hotel Rashmi Plaza” at Jayadev Vihar, Plot No. – J1, B/1334, Bhubaneswar, District Khordha of Rasmi Ranjan Rourtray.
2. M/s. Hotel Rashmi Plaza has obtained Environment Clearance from SEIAA, Odisha vide letter no. 8696/SEIAA, dated 10.12.2013.
3. The proposal got extension of EC for 7 years vide letter no: 6208/SEIAA, dated 09.11.2018.
4. The project proponent had completed the construction and BDA verified the construction work and it was found that the built up area has increased from 28,278.31 m² to 29,021.73 m². However, the plot area remains same i.e. 6515.38 m².
5. Building permission from BDA was obtained vide letter no. 10206/BDA, Bhubaneswar, dated 05.04.2019 for built up area - 29,021.73 m².
6. The project proponent has applied for amendment of EC due to increase in total built up area along with half yearly compliance report on EC conditions for the period October 2017 to March 2018.
7. The Commercial Project is located at Plot No. B/1334, Jayadev Vihar, Bhubaneswar, Odisha. The Co-ordinates of the project site are 20018’41.42” N & 85049’1.45” E. The project site is well connected through Nandankanan Road which is 0.33km away from the project site towards East direction. The nearest National highway is NH-5 which is 2.05km away from the project site towards South South East direction. The nearest railway station is Mancheswar railway station, about 3.18 km away from the project site. The nearest airport is Bhubaneswar airport at 6.42 km from the project site.
8. The proponent made a detailed presentation on the proposal before the Committee.
9. 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 of the SEAC sub-committee.
10. Now the project proponent has furnished compliances as desired by the committee vide letter nil dated 09.09.2020 as follows.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
(i)	Certified copy of latest half yearly compliance Report (October, 2019 to March, 2020) to Environmental	A latest half yearly compliance report to Environmental Clearance condition submitted to MoEF&CC

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	Clearance conditions submitted to MoEF&CC, Regional Office, Bhubaneswar	Regional office, Bhubaneswar. Copy attached Annexure-I.
(ii)	Detailed on which portion of construction activity, the deviation in built-up has taken	The deviation in built-up layout plan and BDA approval copy attached Annexure-II.
(iii)	Details of Greenbelt area. Details of Plantation previously and proposed to be carried out	Details of greenbelt area, Details of plantation Copy attached as Annexure-III
(iv)	Submission of revised layout showing green belt, parking area, DG set location and drainage map	Submitted the revised layout showing green belt, parking area, DG set location and drainage map Copy attached as Annexure-III(a).
(v)	Details of Parking area with regards to previously and proposed area may be furnished with percentage	Have Submitted the revised layout showing green belt, parking area furnished with percentage copy attached as Annexure-III(b).
(vi)	Details of Solar system for previously and proposed plan (with actually done and proposed to be done) and percentage of total power to be provided	Now our project is not in operation stage due to some hotel interior work going on. After completion of the interior work we shall go for the solar plan accordingly.
(vii)	A comparative statement of consumption of water, generation of waste water, solid waste generation etc. for approved built-up area and deviation built-up area	A comparative statement report of consumption of water generation of waste water, solid waste generation etc. for approved built-up area and deviation built-up area. In view of the above minor deviation of the built up area no pollution load like consumption of water generation of waste water , solid waste generation etc. rise in environment. Copy attached as Annexure-V.
(viii)	A short write up by project proponent why the proposal may not be considered under violation of EC Category	A short write up mentioning why that the proposal is not to be considered under violation of EC Category. Copy attached as Annexure-VI.
(ix)	Copy of approval letter along with building plan of BDA	Copy of approval letter along with building plan of BDA. Copy attached as Annexure-VII

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

(IV) PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. GEETARANI MOHANTY FOR RAIKELA IRON ORE MINES FOR ENHANCEMENT OF IRON ORE PRODUCTION CAPACITY FROM 0.864 MTPA TO 2.99 MTPA ALONG WITH CRUSHING AND SCREENING FACILITY OVER AN MINING LEASE AREA OF 67.586 HA. AT VILLAGE – RAIKELA, TAHASIL - KOIRA, DISTRICT- SUNDARGARH – EC. 24-08-2020.

1. The proposal is for Environmental Clearance for Raikela Iron ore Mines for enhancement of Iron Ore Production Capacity from 0.864 MTPA to 2.99 MTPA along with Crushing and Screening Facility over an mining lease area of 67.586 Ha. At Village – Raikela, Tahasil - Koira, District- Sundargarh of M/s Geetarani Mohanty.
2. This expansion project falls under category B1 as per MoEF&CC, Govt. of India notification.
3. ToR for this project has been issued by SEAC, Odisha vide letter No. 435, dated 11.12.2019. Public hearing was conducted on 26.02.2020 in Playground near Geetarani Hutting, Koira Tehsil, Sundargarh district, through Additional District Magistrate, Sundargarh. Final EIA/EMP report was uploaded online along with necessary documents
4. Location of the mine is at Village Village-Raikela, Tehsil-Koira, District– Sundargarh, Odisha. The site Coordinates is Latitude: 21⁰ 51' 54.47" to 21⁰ 52' 35.39"N. In the north side ML area of M/s Penguin Trading and in the southern side ML area of M/s C P Sharma are situated
5. Initially the mining [lease](#) was executed in favor of Smt. Geetarani Mohanty for a period of 20 years w.e.f 02.07.1991 up to 01.07.2011. Renewal application was made on 20.05.2010 under rule 24A (6) of MCR 1960 for a period of further 20 years i.e. up to 01.07.2031. All the statutory clearances were obtained during 2014. In the mean time under section 8A(3) of the MMDR amendment act, 2015 the state government has [extended](#) the validity period of the mining lease up to 01.07.2041 i.e. 50 years from the date of original mining lease 02.07.1991. State Govt. asked for payment of [compensation](#) against EC violation.
6. In pursuance of the supreme court order dated 30.12.2017 in CWP no. 114/2014, DDM, Koira raised the demand notice vide no. 5054 dated 02.09.2017 towards environmental clearance matter, the project proponent has paid the compensation of Rs [207,94,42,000.00](#) as directed. Further a sum of Rs [44,37,71,760.00](#) for production made in excess of the lower of the approved limit under MP & CTO as per the demand of State Govt.
7. After payment of compensation, [supplementary](#) lease deed was executed and registered in favor of lessee vide regd. No1721900263 on dated 27.05.2019. As per the supplementary lease deed, the validity of the lease period is now extended up to 01.07.2041. Subsequently, the state government has allowed to work within the ML area and accordingly, mining operation has been started since [22.08.2019](#).
8. Modification of review of the mining plan is approved by Indian Bureau of Mines, Bhubaneswar vide letter no [MSM/FM-10/ORI/BHU/2019-20](#) dated 20.09.2019.
9. Out of the 67.586ha of mining lease area, forest land under DLC category is 66.671ha and 0.915ha is non-forest land. Ministry of environment and forest, Govt. of India has accorded the stage-II (final stage) forest clearance over an area of 66.671ha vide letter no [8-37/2007-FC](#) dated 22.10.2014.

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10. Environment Clearance for the project has been obtained for the production capacity of 0.864MTPA vide letter No [J-11015/380/2006-IA.II](#) dated 02.07.2008
11. The lessee has obtained the consent to establish under section 25/26 of the water (PCP) act 1974 and under section 21 of air (PCP) act 1981 for the production capacity of 0.864 MTPA vide the letter no [1764/IND-NOC-3700](#) dated 31.01.2006.
12. The lessee has obtained the consent to operate under section 25/26 of the Water (PCP) act 1974 and under section 21 of Air (PCP) act 1981 for the production capacity of 0.864MTPA, valid up to 31.03.2021.
13. The mining lease area is approachable from Koira town (8 km) by Bhadrasahi – Rourkela NH–215. And from Tensa town ship which is on NH – 215 at a distance of 2 km. Nearest Rail is Barsuan Railway station located at 17 km. District Headquarters is at Sundargarh – 110 km from lease area.
14. The nearest water bodies are Sarkunda Nala- 4.2 km, Kuradhi Nadi- 8km and Karo Nala -3km respectively. There is no reserve forest in the core zone. However, the reserve forests found in the buffer zone are as follows - Sarkunda R.F - 2.5 Km (South), Tohra R.F - 3.3km (South), Karo R.F - 9.5km (North-east), Kathmal R.F - 8.2km (East).
15. The topography of mining lease area is hilly terrain with maximum elevation of the area is 840m AMSL at NW part of the area whereas the lowest elevation is 630m AMSL at eastern part.
16. The total geological and mineral reserve of iron ore is estimated to be 40.882 MT and 28.387 MT. Proposed production during the plan period is 4980210 MT. The life of mines is 10 years. Open cast fully mechanized method category 'A' (FM) will be used for mining.
17. The proposal is to increase production capacity from existing 0.864 MTPA to 2.99 MTPA. During plan Period 2020-21, total excavation will be 20, 84,357MT consisting 19, 82,165 MT ROM and 1, 02,192 MT waste & during Plan period 2021-22, total excavation will be 32, 95,780 MT consisting 29, 90,000 MT ROM and 3, 05,780 MT waste
18. During 2yrs of Plan period there will be generation of 4, 07,972MT waste which comes to 2,03,986 m³ and out of which 30%, i.e. 61,195.80cum will be used for internal road maintenance and balance 1,42,790.20to be disposed at dumping site. Retreating method will be adopted for the disposal of waste at proposed dumping site. The average height of the proposed dump will be 18m maximum. At the end of plan period the existing dump will attend a height up to 680m RL. During dumping about 0.21Ha additional land will be utilized
19. Out of 51.699Ha, back filling of mined out land will be done over an area of 5.40Ha. The total conceptual waste will be utilized for back-filling with average thickness of 9m. Balance 46.299Ha will be reclaimed by means of bench plantation
20. During Plan period it has been planned for plantation over an area of 1.00 Ha with 4,600 nos. of saplings consisting Mango, Karanj, Chakunda, Neem etc. At the ultimate stage, about 15.887 ha area shall be covered under plantation.
21. The Water Requirement is 180KLD and Source is Ground Water. The Existing water requirement is 64.5KLD for which NOC has been obtained. Water will be sourced from bore well inside the premises for 8 months. Rain water will be harvested and stored in pond and utilized for 4 months of summer.

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22. The Power Requirement is about 300KVA and the source is from WESCO. 50 KVA generators for semi mobile crushing plant and 300 KVA standby DG set are available.
23. The total man power is 500 Persons (Directly Including Processing and Logistic Persons).
24. The cost of Project is ` 80 Crore. A sum of ` 213 Lakh will be spent towards capital cost for EMP and a sum of ` 74.8 Lakh will be spent towards annual recurring cost of EMP.
25. The baseline data on micro- meteorology, ambient air quality, Water quality, noise level, soil and flora & fauna are collected during Summer Season (Mar 2019 – May 2019).
26. The Environment Consultant **M/s Global Tech Enviro Experts Pvt. Ltd. Bhubaneswar** along with the proponent made a detailed presentation on the proposal before the Committee on Dt: 24-08-2020.
27. The SEAC in its meeting held on Dt: 24-08-2020 decided to take decision on the proposal for recommendation of Environmental Clearance after receipt of the following information / documents from the proponent.
28. Now the project proponent has furnished compliances as desired by the committee vide letter nil dated 09.09.2020 as follows.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC
(i)	Details of Exploration study made	As per the approved Mining Plan, it has been envisaged to drill 59 core type bore holes at 100m x 100m grid interval to convert the entire Mining Lease area (67.586Ha) under G1 Level of Exploration. Accordingly, the work has been awarded to M/s Natural Resource exploration and Mining Pvt Ltd on 25.10.2019 (Copy of the work order is enclosed as Annexure-1 . The agency has completed 34 bore holes till date. Copy of the photo graphs of some of the core box is attached as Annexure-2 .	-----
(ii)	Details of methods adopted for de silting and maintenance of retaining walls	The project proponent has constructed 1180m of Retaining wall (Height 2m x width 1m) and settling pond of (10m x 8m x 2m) within the lease area. Further, check dams has been constructed at strategic locations in which rain water passes in rainy season. Finally, the excess supernanted after sedimentation is allowed to spill away through stone pitch structure to the nearby valley. Methods adopted for de-silting and maintenance of Retaining wall Maintenance of Retaining wall The retaining wall some time broken down due to heavy rain. After rainy season the same retaining wall is being maintained as per the requirement. The waste materials	Specific condition to be stipulated in EC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC
		<p>available from the mines like BHJ/BHQ, Lateritic boulders are being used for the purpose. Local labourers are being engaged to maintain the retaining wall. Once the retaining wall is being heightened, cementing of boulder wall are being undertaken to strengthen the same.</p> <p>Maintenance of settling pond During rainy season the wash off came from mines generally settle down within these locations. After rainy season, during the month of October of every year de-silting work undertaken by engaging excavator as well labourers. Copy of the photo graphs showing de-silting work has been enclosed as Annexure-3</p>	
(iii)	A SOP for 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 through a legal affidavit	A detail Standard operating procedure for desilting of agricultural land in buffer zone and beyond including nearby Nala/River perennially periodically and perpetually caused to wash up off minerals/OB/dumps through a legal affidavit is attached as Annexure-4	Specific condition to be stipulated in EC A legal affidavit to be submitted to this effect with periodicity of desilting by the proponent.
(iv)	Detail design of the existing retaining wall and the proposed for the expansion from a chartered Civil engineer to ensure that no silt after wash ups is escaped from the core / buffer zone of the mines	Existing Retaining wall and garland drain. 1180m retaining wall, and 2070m garland drain has been constructed around the waste dump, sub-grade dump etc till date. The details of dimension of retaining wall and garland drain constructed and proposed are furnished. Copy enclosed as Annexure 5.	Specific condition to be stipulated in EC This is to be ratified / authenticated by a chartered Civil Engineer and submitted.
(v)	Details of Greenbelt area. Details of Plantation previously and proposed to be carried out for the existing vis-a-vis the expansion in a matrix form	<p>Existing Plantation Details The lease is in operation since 1993. As it is an old mines, hence, the project proponent has already undertaken plantation within lease area at safety zone area, toe of the dump and other un used area. Total Lease area is 67.586Ha. Out of which 11.23Ha has been covered under plantation.</p> <p>Proposed Plantation for Expansion An area of 3.40Ha will be kept for public use as pond and road. Hence, remaining 52.956Ha will be planted during life of the mine in a phased manner i.e within a period of 20 years. Details are submitted.</p>	Specific condition to be stipulated in EC
(vi)	Slope study for dump and mining for the existing and Stimulated for expansion	The detail Geo Technical investigation was carried out by CIMFR, Dhanbad (an institute of repute including the mechanical	Specific condition to be stipulated in EC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC
	with the findings including measures to be taken for deviation in case of existing ones, if any	property of the face as well as dump material. The detail is furnished in the report enclosed as Annexure-6 .	
(vii)	Comparative statement of all the parameters such as water requirement, waste water generation including all relevant salient environment and Pollution parameters generation etc. of existing mining activity and proposed expansion	Project proponent has submitted the comparative table for water requirement, Power requirement, waste water generation, Air pollution - TSP generation, Mineral Reject Generation. Copy enclosed.	-----
(viii)	Detailed plan of action for socioeconomic benefit through a socio economic study by an expert of National repute/ through a National institute of repute	Geetarani Mohanty has formulated socio economic policy under CSR. The project, does not involve any displacement of human habitation, hence no habitation package needed for displacement. The socio economic study was conducted jointly by CSIR-CIMFR in collaboration with scientist from Tata institute for fundamental research. Proposed Action plan and Cost involvement for different CSR Activity is given in (Annexure-7)	Specific condition to be stipulated in EC
(ix)	Specific measures taken for occupational health of employees and villagers surrounding plant. Any Occupational health hazards identified caused due to the existing mining activity for the employees and the local people and measures taken thereof be submitted. A commitment in form of an undertaking for periodical occupational health check up of the employee and the local people must be done through an occupational health expert and a detail action plan for the same be submitted	The company has earmarked Rs.2.5 lakhs per annum for expenditure against occupational health management under heads like Safety instruments, equipment's etc., Up-gradation of Dispensary and carrying out health monitoring. Details are enclosed in compliance report. (Annexure-8)	Specific condition to be stipulated in EC An undertaking to be submitted to this effect by the proponent as sought by SEAC.
(x)	Document supporting grade of Fe products to be sold	Major buyers of low grade ores are Mohashakti Forging Pvt Ltd, Bagadiya Brothers, Sursadhana Sponge & Ispat Pvt Ltd, VVEB Impex Private Ltd & Kai International Pvt Ltd. The detail supporting document in respect to sale of material is attached as Annexure-9	-----

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC
(xi)	Detailed material balance including low grade and tailing generation is to be submitted	The details of Material Balance of Iron ore production of 2.99MTPA (ROM) is enclosed as Annexure-10 . Since, there is no proposal of beneficiation plant, tailings generation is nil.	----
(xii)	Revised plant layout showing dump area, storage area, ETP and pond area wise along with production of different grades, low grades, tailing with coverage of dump area year wise in a tabular form	The lay out plan showing dumping area, storage area and pond are enclosed as Annexure - 11 .	Specific condition to be stipulated in EC
(xiii)	Quantity of tailings generated for the existing mines/to be generated for the proposed expansion including the management of the same	There is no proposal of Tailings generation during life of the mine as there is no beneficiation plant has been proposed. The waste i.e. - 45% Fe material will be generated as intercalated waste as well as side burden. The waste encountered during the mining operation is as follows: 1. Overburden waste/Side burden: Containing laterites, & shale, BHJ/BHQ etc. 2. Intercalated waste: Found in between the ore zone having no or negligible content less than the threshold value of iron ore (i.e. below 45% Fe). Intercalated waste which will be predominantly laterite, Limonite and shale, BHJ will be excavated along with iron ore and also separately as side burden. Year wise details had been submitted.	Specific condition to be stipulated in EC
(xiv)	Detailed usage of solar energy to be implemented	Existing Connected load : 100 KW Existing Demand load : 73 KW/91KVA Proposed connected load : 240KW /300 KVA Proposed Demand load : 204KW /255KVA. For Emergency power supply of existing load DG requirement is 125 KVA. 1 No of 82.5 KVa and 1No of 62.5 KVa DG are being used for the existing load. For proposed load 300 KVA, 320 KVa DG is planned to install. Solar requirement: As per star rating format of mines total requirement of solar power will be minimum 5%. Hence, 15KVA power will be used from solar energy. It has been planned to establish a solar power plant	Specific condition to be stipulated in EC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC
		with 30KVA capacity within the lease area.	
(xv)	Details of Traffic Management within the mining lease area including buffer zone and on public roadways and the results of traffic study undertaken vis-à-vis the norms with V/C ratio and measures for decongestion	<p>To conduct the study the detailed information is collected. The existing road network in Sundargarh district includes 168 kms length of National Highway, 218 kms of State Highways and 297kms of major district roads, 516 kms of other district roads and 688 km of forest roads. All blocks of Sundargarh district except Gurundia and Koira blocks are well connected by roads. About 2.99 MTPA of ROM will be produced from the mine after expansion. Major part of the material will be transported by Barsuan Railway sidings located at a distance of 22km from the project. This siding are having surplus capacity to take care of the expansion needs. The siding is connected from the mines by Koira-Barsuan Road which has been developed as RCC. Part of the material i.e. about 20% can be transported through NH- 215. connecting Panikolli and Rajamunda which is the main ore transporting link connecting Paradeep port, Dhamra port and other iron ore consuming industries in the region namely Kalinganagar, Rourkela, Jharsugura, etc., The NH 215 is being converted in to 4 lane road and the work has already been commenced and most part of the road has been completed. Widening will reduce the traffic congestion and will also increase the carrying capacity of the NH-215 road. Hence, the existing connectivity facilities i.e. Koira- Barsuan road and NH-215 will be adequate enough to take care of expansion needs.</p> <p>Based on that detailed analysis is conducted as enclosed in the report. Based on that V/Chas been calculated Koira intersection (.040), Koira-Raikela Mines (.50) and Tensa-Barsuan (.50). The detail traffic study report is attached as Annexure-12</p>	Specific condition to be stipulated in EC
(xvi)	Details on usage of ETP in the mine	The waste water from the vehicle washing for maintenance of the vehicles at the work shop will be containing Oil & grease, suspended solids & colloidal particles. The same will be collected in a Oil & Grease T rap. After separation of the Oil & Grease the water will be passing to the equalisation tank where it will be air agitated to mix properly. From there it will	Specific condition to be stipulated in EC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC
		<p>be transferred to the flash mixture where Polyelectrolyte of required doses will be added for coagulation with help of Diffusers.</p> <p>The precipitated / coagulated treated effluent will be pumped to the Sludge Bed for filtration. The filtered water will be collected in a sump for reuse in the vehicle washing for maintenance.</p>	
(xvii)	Detailed method for computation of V/C along with the value of V/C be mentioned explicitly and category of congestion	Details have been submitted in compliance report.	-----
(xviii)	Mitigation measures to be taken in air and water pollution due to expansion	Details have been submitted in compliance report.	Specific condition to be stipulated in EC
(xix)	Year wise generation of low grade ore with Fe content, storage facility and its utilisation plan	1414102 MT low grade Iron generated during 2019-21 and stored 1131282.6MT and sold as per market demand. During conceptual period 8253470MT low grade Iron will be generated and sold as per market demand.	Specific condition to be stipulated in EC
(xx)	Copy of permission for drawal of ground water for existing mining activity from CGWA/WR Department Government of Odisha for the mining operations since 2019-20 as it appears that the ground water has been used unauthorisely without valid permission, Please explain the violation	<p>The ground clearance for 64.5cum/day was valid up to 17.12.2013. Copy of the letter is attached as Annexure- 13(A) The project proponent made application for the renewal of same on 26.12.2013. However, the file was under consideration by CGWA. Again the project proponent made on line application on dated 12.07.2017, for renewal of ground water clearance which is pending at competent authority. In the meantime the project proponent decided to enhance the production capacity from 0.864MTPA to 2.99MTPA for which final presentation has been completed. For the enhanced production capacity the requirement of water is 180cum/day. In this regard application to CGWA has been made on 29.02.2020. Copy of the all the correspondence with CGWA is attached as Annexure-13(B).</p> <p>As per the notification of CGWA, Govt of India Dated 15.10.2019 all the users drawing ground water without a valid NOC from CGWA are directed to submit their application for NOC on line through NOCAP Portal of CGWA by or before the said date.(copy of the notification is attached as Annexure-13C). Since the project proponent has made application during 2013, 2017 and 2020 (for</p>	Specific condition to be stipulated in EC Including permission from Water Resource Department, Govt. of Odisha for the quantity to be drawn from underground.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC
		180cum/day) no, violation is not attracted. As per the letter of CGWA vide letter no 5-22/SER/CGWA/18-19/786 dated 09.09.2020 there is no violation (Annexure 13D).	
(xxi)	Copy of Wildlife Management Plan	Attached As Annexure—14	Specific condition to be stipulated in EC
(xxii)	Supportive documents for lease validity period	Attached As Annexure—15	----
xxiii)	SOP for dust suppression and maintenance of the haulage Road perennially and perpetually be submitted, the copy of which will be forwarded by SEIAA to appropriate Government authority to ensure compliance of the same.	Attached as Annexure - 16	Specific condition to be stipulated in EC in form of a legal affidavit by the proponent.
xxiv)	Time bound and perennial action plan as necessary be submitted for augmentation of infrastructure on drinking water, health care and education in nearby villages	Details have been submitted in compliance report.	Specific condition to be stipulated in EC
(xxv)	Please explain why permission for temporary storage but regularly required of blasting explosives material is not required for controller of explosives Govt. of India for this magnitude of mining activity	The project proponent has obtained the permission from DGMS under 106(2b) to carry out blasting operation within the lease area. Copy of the permission letter is Attached as Annexure-17 . Further, the PP is using Explosive as and when required by out sourcing the explosive for which an agreement is done with the agency. (Copy of the agreement is enclosed as Annexure-17(A))	Specific condition to be stipulated in EC
xxvi)	The details of STP and ETP including waste water/treated waste water be submitted	The details of STP & ETP is given as Annexure-18 .	Specific condition to be stipulated in EC
xxvii)	Provision of parking plaza for the heavy vehicles with layout be submitted	As per the approved Mining Plan, there is provision of Parking plaza within the lease area. In compliance of NEERI recommendation, a parking plaza has been proposed within the lease area. The parking plaza has been envisaged within the co-ordinate N-2419170 to 2419300 and E-311953 to 312132.The Lay out of the parking plaza along with facilities is attached as Annexure -19	Specific condition to be stipulated in EC
xxviii)	Study of vehicular emission for the existing	Attached as Annexure - 20	Specific condition to be stipulated in EC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC
	Mining activity and simulated emission for the proposed expansion vis-a-vis the standard be submitted along with the mitigation measures in case of deviation from standards. Reasons of enhanced GLC concentration using line mode to the western side simulated by the air quality model be indicated. If the enhancement is due to joint contribution by the local / other mixing / industrial activity, mitigation measures to be taken up jointly be indicated in EMP		

Considering the information furnished and the presentation made by the consultant **M/s Global Tech Enviro Experts Pvt. Ltd. Bhubaneswar** along with the project proponent, the SEAC recommended for grant of Environmental Clearance with stipulated conditions as per **Annexure – C**.

(V) PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR INSTALLATION 1 NO. OF ADDITIONAL TANKAGE OF 2604 KL CAPACITY FOR SKO, 2NOS. OF ADDITIONAL TANKAGE OF 2612 KL CAPACITY FOR HSD AND 2 NOS. OF TLF BAYS OVER AN AREA 41.34 ACRES AT BALASORE OIL DEPOT WITHIN SOMANATHPUR INDUSTRIAL ESTATE, IN THE DISTRICT OF BALASORE OF INDIAN OIL CORPORATION LIMITED – AMENDMENT IN EC CONDITION.

1. Environmental Clearance was granted along with a set of various specific and General Conditions, for compliance to M/s Indian Oil Corporation Limited (IOCL) by the SEIAA, Odisha vide letter no: 7559/SEIAA, dated 28.10.2013 for installation of 1 No. of additional Tankage of 2604 KL capacity for SKO, 2 Nos of additional Tankage of 3612 KL capacity each for HSD and 02 Nos of TLF Bays (FO & HSD) at Balasore Depot within Somnathpur Industrial Estate, in the district of Balasore.
2. One specific condition (Condition No A-3 of EC Ref No: 7559/SEIAA dated 28.10.2013), was regarding the implementation of Vapour Recovery System (VRS) to prevent vapour leakage from tanks / vessels / processing and filling areas to ensure no hydrocarbon vapour is released unchecked in to the atmosphere.
3. The proponent has made an appeal for exemption of stipulated condition No. A-3 of EC Ref No: 7559/ SEIAA, dated 28.10.2013 (i.e Vapour Recovery System shall be installed to prevent leakage of vapour from tank/ vessels/ processing and filling area to ensure no hydrocarbon vapour is related unchecked)

4. The project proponent has also clarified that Vapour Recovery System (VRS) is required for volatile class product, where the above said Environmental Clearance was granted for augmentation of class B & C product.
5. As the EC Ref No: 7559/SEIAA dated 28.10.2013, is not applicable for MS, hence the specific condition No. A-3 stipulated in the EC with regards to the VRS is also not applicable for MS Storage and handling at Balasore Depot.
6. For Class B products (SKO & HSD) , volatility of the products are mild and hence the vapour generated and released are also very minimal which is further reduced to nil , due to vapour sealing mechanism in Tanks and TLF Loading Area.
7. IOCL Tanks (IFR) are designed with the vapour sealing mechanism to restrict the vapour being released. Loading System is also provided with overfill protection system , Loading Arm Position Interlocking System and Vapour Eliminator Unit etc. to prevent the accidental spillage and subsequent vapour escape in to atmosphere, hence an additional VRS is not required for TLF and Tanks.
8. The SEAC in its meeting held on 18.12.2019, decided to take decision on the proposal after the proponent submits certain information/ documents. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
(i)	Letter from Oil Industry Safety Directorate (OISD) Authority that Vapour Recovery System (VRS) is not applicable for IOCL, Balasore Depot as stated by the proponent above.	<ul style="list-style-type: none"> ✓ Environmental Clearance Ref No: 7559/SEIAA Dt: 28.10.2013 (Annex-3) , was granted to us for installation of 1 No. of additional Tankage of 2604 KL capacity for SKO , 2 Nos of additional Tankage of 3612 KL capacity for HSD and 02 Nos of TLF Bays (FO & HSD] at Balasore Depot within Somnathpur Industrial Estate , in the district of Balasore of Indian Oil Corporation Ltd along with a set of various specific and General Conditions, for compliance. ✓ Except one all other stipulated conditions pertaining to above EC Ref No: 7559/SEIAA Dt: 28.10.2013, were complied and compliance status was submitted to your Office. With regard to one particular specific condition No 03 for provision of VRS , we had contended that the same condition is not applicable to IOCL Balasore Depot and requested for rescission of the earlier directive as per EC stipulated condition. ✓ During the last SEAC meeting on date 18.12.2019, the subject matter for revocation of this specific condition for VRS , was discussed , wherein it was decided that final decision for revocation shall be taken upon receipt of confirmation from OISD that VRS as per the EC specific condition is not applicable to Balasore Depot. (SEAC Recommendation Letter attached as Annex- 21 * ‘ ✓ As per the EC Ref No: 7559/SEIAA Dt:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		<p>28.10.2013 , vapour recovery system is required to be provided in Depot to prevent vapour leakage from storage tanks and Tank Lorry filling areas to ensure that no hydrocarbon vapour is released unchecked.</p> <ul style="list-style-type: none"> ✓ Whereas, vapour provision of recovery system implementation was given to us for compliance in the EC granted to us, CPCB directions under section 5 of environment (Protection) Act, 1986 ref: B-33014/30/2013/PCI-II Dt: 12.05.2016 (Annex-1) regarding-installation of stage I and stage II vapor recovery systems in petrol refueling stations located in the cities with population more than a million, exempts us from this compliance. ✓ As per the directives, VRS is only required to be installed in those terminals/ installation / distribution centre catering to petrol pumps in the select 46 cities with million plus population. As Balasore in the state of Odisha does not fall under this select cities, hence should be exempted from implementing VRS at the loading point / Tank Lorry Filling shed. ✓ We have three Nos of IFRT & EFRT (With Aluminium Dome) Tanks for storage of class A product. IFRT & EFRT (With Aluminium Dome) Tanks at Balasore Depot are provided with double seal with minimum vapour recovery of 96%. As per the clause 7.3 of OISD-STD-244 , primary seal provided in the Tanks are vapour mounted and maximum seal gap width is 40 cm along with the maximum seal gap area of 200 cm²/m of Tank diameter. In addition to the above secondary seal provided in the tank is rim mounted. Maximum seal gap width is 1.3 cm and maximum gap area is 20 cm²/m of Tank diameter. The vapours generated along the edges of the Roofs in such Tanks are arrested completely through liquid mounted Foam Seals. Hence additional Vapour Recovery System is not required in the existing IFRT and EFRT (With Aluminium Dome) MS Tanks of Balasore Depot.

9. The SEAC in its meeting held on 18-08-2020 decided to consider the request of the proponent to omit the special condition no. 3 for provision of Vapour Recovery System (VRS) after they submit a letter from the Oil Industry Safety Directorate (OISD) Authority that VRS is not applicable for IOCL Project at Balasore as committed by IOCL officials during their presentation.

10. Now the project proponent has requested to the committee vide Ref No: BLS/Admin/113 dated 07.09.2020 as follows.

1. EC Ref No: 7559/SEIAA Dt: 28.10.2013, was granted to us for our tankage expansion project wherein VRS provision was advised for implementation . However at our Depot all the class- A (MS) storage tanks are IFRT(Internal floating roof tank) equipped with vapour seal provision and is selfsufficient to eliminate the release of vapours to atmosphere and hence additional VRS provision was not applicable. However the said EC recommendation has become our internal audit para urging us to settle the same and consequently we had requested SEIAA for exemption of VRS provision vide online EC amendment application ref: SIA/OR/IND/45634/2013. Thereafter it was accepted for discussion by SEAC and we were called for to represent our case.
2. Accordingly in the meeting held on 18.12.2019 our presentation on the design aspects of IFR / EFR tanks and the mechanisim of containing/eleminating petroleum vapours inside the tank was explained & non applicability of additional provision of VRS was made understood to SEAC. However though SEAC authorities were convinced but they had asked for the supplementary documents of any IOCL manual or manual/letter from OISD, mentioning the same. Since the same was not readily available with us at that time we told them to produce the same prior to the next meeting.
3. In this regard when we approached OISD, we were told to refer OISD manual Clause No 7.3, page no 26 of OISD-244, which clearly states that IFR / EFR tanks arrest the release of vapour through the primary and secondary vapour seals with minimum vapour recovery of 96% (**Annex-1**).OISD further directed that separate letter confirmation need not be required as it is already there in the manual of OISD-244.
4. Consequently we had submitted our representation for exemption of VRS vide letter ref : 06(5)/SEAC-(Misc)-28 Date: 03.01.2020 along with the CPCB directions / guidelines under section 5 of environment (Protection) Act, 1986 ref: B-33014/30/2013/PCI-II Dt: 12.05.2016 d) which exempts us from the provision of VRS . (**Annex-2**).
5. During the hearing on 18.08.2020 since we could not physically represent our case due to covid-19 pandemic hence in the internal discussion by SEAC ,despite providing the requisite manual / guideline from OISD , the committee remained inconclusive for the grant of our exemption request in lieu of a letter from OISD , which doesn't seem to be reasonable.
6. Moreover in this context we would further like to mention that as per the recent guidelines EC provision is no longer required for any expansion plan with isolated storage and handling of hazardous chemicals. Hence in this circumstances our case also comes in perview of exemption from EC provision as per the attached gazette notification. (**Annex-3**).
7. Further it is learnt that, in the recent past, another nearby OMC i.e. BPCL, Balasore Depot was also exempted from VRS provision by SEIAA which was recommended to them during their expansion project (**Annex-4**).

After detailed discussion, the SEAC recommended to consider the request of the proponent to omit the special condition no. 3 for provision of Vapour Recovery System (VRS) subject to an undertaking in form of legal affidavit that IOCL (the proponent) shall

install the VRS as required on a later date if required by MoEF&CC/CPCB/OISD through the revised guideline / manual.

(VI) PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR PROPOSED “ ANANYA PALM BEACH” RESIDENTIAL APARTMENT CUM GUEST HOUSE PROJECT IN PLOT NO - 268 (PART) AT MOUZA –SIPASURUBULI, TEHSIL – PURI SADAR, DISTRICT –PURI, OF M/S. PRABHUKRUPA REALITIES PRIVATE LIMITED WITH TOTAL BUILT UP AREA -32,859.52 SQM. (EC)

1. The proposal was considered for Environmental Clearance for proposed “ Ananya Palm Beach” Residential Apartment cum Guest House Project in Plot No - 268 (part) at Mouza –Sipasurubuli, Tehsil – Puri Sadar, District –Puri, of M/s. Prabhukrupa Realities Private Limited with total built up area -32,859.52 sqm.
2. The proposed development is a Residential Apartment cum Guest House building. Location on Plot No - 268 (P) & Khata No- 2 Area- Ac- 2.29 Dec. Mouza - Sipasurubuli, Thana -Puri Sadar, Puri. Plot area of project is estimated to be 9267. 30 m² or 2.29 Acres.
3. The project comes under Building and Construction projects under schedule 8 (a) of the EIA Notification dated 14th September 2006.
4. The total project (Approved + Expansion) will be developed on the land measuring 9267.30 m² or 2.29 Acres situated over Plot No.- 268 (P) & Khata No.- 2, corresponding to Consolidation Khata Nos.-17/1, 17/2, 17/3 and 17/6, Plot Nos. - 581/1446 (P), 581/1447 (P), 581/1448 (P), 581/1451(P). The coordinates of the project site are Latitude- 19°47'24.65"N and Longitude-85°47'3.20"E.
5. Connectivity - The nearest airport is Biju Pattnaik Airport, which is 50.40 km away from the project site and Puri railway station is 6.13 km away from the project site. Nearest Town is Puri Town – 3.26 Km and District Headquarters is Puri at – 5.6 Km from the project site.
6. Presently, the Proponent has permission for construction of 18596.33 m² area at Mouza Sipasurubuli, Puri vide PKDA letter no. 231 dated 29.03.2016 & are planning to increase built-up area to 3,53,699.98 sft or 32,859.52 sqm (including services area, stilt and basement areas) and FAR Area is 25461.56 m² (excluding services area, stilt and basement areas) as per PKDA letter no. 63 dated 07.02.2019.
7. The total plot area is 9267.3 sqm or 2.29 Acres. The total built-up area = 32,859.52 sqm (Including Basement & Stilt). Maximum height of building= 23.9 mt. Total no. of Dwelling Units= 470 Dwelling Units + 60 (Guest room) = 530 Units.
8. The total water requirement of project will be 248 KLD which includes the fresh water requirement of 169 KLD on daily basis and treated recycled water of 79 KLD reused for flushing. Daily basis water requirement 169 KLD which will be met through Supply water/Bore well.
9. Power Requirement: Maximum demand load is 2500 KVA and Connected load is 3980 KW Source of power supply is CESU & Solar lighting. Power Back Up is by DG sets of 1500 KVA (2 Nos. of 250 KVA & 2 Nos. of 500 KVA) silent DG Set.
10. The waste water in operation phase will be generated is 215 KLD & treated in a STP having capacity of 240 KLD . Treated waste water recovered is 194 KLD which will be reutilized in horticulture (9 KLD), general washing(10 KLD) and Flushing(79 KLD) etc. 96

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KLD excess treated water in Dry season and 115 KLD in rainy season will be discharged to Public Sewer.

11. The solid waste generated from project will be mainly domestic in nature and the quantity of the waste will be 0.91 Ton/day. Solid wastes generated will be segregated into biodegradable (waste vegetables and foods etc.) and recyclable (papers, cartons, thermo-cool, plastics, glass etc.) components and collected in separate bins. The biodegradable organic wastes (303.8 Kg/day) will be treated inside the premises. Recyclable and non-recyclable wastes (607.7 kg/day) will be disposed through Govt. approved agency as per Municipal Solid Wastes (Management and Handling) Rules, 2016 .
12. Total 6009.04 m² area will be provided for parking.
13. The green area will be developed approx. 20.11 % of the plot area (1863.39 m²).
14. Rain water Harvesting: Total Rain water harvested collected at project site will be 8671.46 m³ annually, taking average rainfall per hour is 40 cum. 7 Nos. Rain Water Harvesting structures are being proposed for artificial rain water recharge within the project premises.
15. The total cost of project is ` 54 Crores.
16. The proponent along with the consultant **M/s Visiontek Consultancy Services Pvt. Ltd., Patia, Bhubaneswar, Odisha** made a detailed presentation before the SEAC.

Considering the information / documents furnished by the proponent and presentation made by the consultant on behalf of the project proponent, the SEAC decided to take decision on the proposal after the proponent submits the following information/ documents followed by visit to the site by Sub-Committee of the SEAC.

- (i) Clearance certificate from CRZ authority that the project doesn't fall in the CRZ area.
- (ii) Letter from the Collector, Puri that the project area doesn't fall under the sweet water zone.
- (iii) Details of Solar energy to be used in the project with necessary calculation.
- (iv) Possibility of usage of wind energy other than solar energy for the project.
- (v) Location of the DG set needs to be changed and accordingly revised layout map to be submitted.
- (vi) ECS needs to be recalculated and submitted.
- (vii) Copy of PKDA approval letter for phase-I project (18596.33 m²) issued vide letter no. 231 dated 29.03.2016 along with copy of application submitted to PKDA for approval of the phase-I project.
- (viii) Copy of PKDA approval letter for expansion project along with copy of application submitted to PKDA for approval of the expansion project
- (ix) Detail Water Balance diagram with calculation and Waste Water Management details to be submitted.
- (x) Status of permission for drawal of ground water from Water Resources Department, Govt. of Odisha and NoC from CGWA.

- (xi) Detailed justification that the expansion project will not be treated as a violation case.
 - (xii) Undertaking that the natural sand dune shall not be disturbed due to project activity.
 - (xiii) Land schedule and kism of land.
 - (xiv) Present status of construction undertaken and the period of construction with details of approval obtained for the same from PKDA.
17. The Sub-Committee of SEAC conducted site visit on 11.12.2019. The Sub-Committee has observed the following:
- a) Environmental Clearance was required to be sought by the project proponent in view of increase of original built up area from 18596.33 m² to 32,859.52 m².
 - b) The core structure (G+7) on the original proposed area is almost complete. But, the proponent stated that the construction is limited to PKDA approval area i.e. less than 20,000 m² built-up area.
 - c) But construction of drains, rain water harvesting and recharging pit, STP, housing for DG sets has not started. The proponent showed the location in the premises identified for the purpose.
 - d) The proponent stated that they would keep 6 ft. width space throughout the boundary for greenbelt development that would meet 20% norm and 20 ft. road width adjacent to it for free movement of fire tender.
 - e) The proponent stated that they will have two bore wells to meet their water requirement i.e. source of water is ground water. They also stated that they have alternative source i.e. Puri Municipality water. They will make necessary water treatment of the raw water to be supplied by the Municipality or Bore Wells for the domestic consumption. In the event of supply of water by Municipality, they will not use ground water.
 - f) The premises of the housing complex is a low lying area due to construction of Naba Kalebara National Highway alongside the plot and there is a possibility of water logging during monsoon. The proponent stated that they will discharge both surplus treated waste water and runoff water during monsoon to the drain to be built up alongside the nearest NH under construction. In case, the construction of drain of NH is not done / completed by the time their complex is ready for possession, they will discharge the same to OPWD drain located at about 700-800 (as stated) meters away from the project site.
18. The Sub-Committee recommended that the following information / documents are required to be submitted by the proponent before consideration of Environmental Clearance.
- a) Proposed plan approval copy of PKDA for additional built-up area for increase to 32,859.52 m². The project proponent need to submit an undertaking in form of a legal affidavit that they have not constructed built-up area \geq 20,000 m².
 - b) Certificate from appropriate authority that the project site does not fall within Sweet Water Zone of Puri.
 - c) NoC from CGWA and corresponding permission from Water Resources Department, Govt. of Odisha for use of required ground water in-case they draw water from

ground and alternatively, explore the possibility of use of water of Puri Municipality raw water after necessary scientific treatment with such facilities at the project site. The project proponent is also required to submit the test report of water quality of Municipality raw water and the water quality after due treatment including the description of the process of such treatment.

- d) Permission and time frame of the 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, excess beyond recharging from NH Authority. The construction of drains must synchronize with the completion of the construction of the Housing Project.

Alternatively, permission from PWD, Odisha that existing drainage system about 700-800 meters (as stated) away from the project site to take the additional load of treated waste water and runoff water as the case may be as mentioned above. Besides, ownership of the land between project site and the existing drainage of PWD need to be in favour of the project proponent either through purchase or lease or "Right to Use" for the owner of the said land to lay the requisite pipelines / infrastructure as required.

- e) 'NoC' from OCZMA that it does not fall within CRZ limit or as necessary under the said law.

19. SEAC in its meeting held on 04.01.2020 decided to take decision on the proposal after receipt of the information / documents / clarification on the observation / recommendations made by the sub-Committee of SEAC during the site visit on 11.12.2019 in addition to information / documents / compliances sought by SEAC vide letter no. 352/SEAC- (Misc)-28, dated 05.11.2019.

20. The project proponent has furnished compliances as desired by the committee vide letter no: PRPL/065/2019-20 dated 10.01.2020 and same has been verified as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC
(i)	Clearance certificate from CRZ authority that the project doesn't fall in the CRZ area.	Copy of application dated 02.08.2019 is annexed herewith as Annexure – 1.	Clearance certificate from CRZ authority that the project doesn't fall in the CRZ area has to be given.
(ii)	Letter from the Collector, Puri that the project area doesn't fall under the sweet water zone.	Copy of application dated 10.12.2019 is annexed herewith as Annexure -2.	Letter from the Collector, Puri that the project area doesn't fall under the sweet water zone has to be given.
(iii)	Details of Solar energy to be used in the project with necessary calculation.	The breakup sheet of total electrical consumption and solar energy calculation is attached herewith as Annexure -3.	-----
(iv)	Possibility of usage of wind energy other than solar energy for the project.	Since the roof top of the building is used for parking, installation of wind mills is not possible.	-----
(v)	Location of the DG set needs to be changed and	Revised layout with location of DG set is attached herewith as	-----

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC
	accordingly revised layout map to be submitted.	Annexure -4.	
(vi)	ECS needs to be recalculated and submitted.	The Off Street Parking Space has been provided as per Puri Konark Development Authority (Planning and Building Standards) Regulations, 2017. An area of 64,680,90 sqft of parking space has been provided as mentioned in PKDA letter dated 07.02.2019.	-----
(vii)	Copy of PKDA approval letter for phase-I project (18596.33 m ²) issued vide letter no. 231 dated 29.03.2016 along with copy of application submitted to PKDA for approval of the phase-I project.	Permission letter no. 231/PKDA dated 29.03.2016 has been superseded by letter no.63/PKDA dated 07.02.2019. A copy of application submitted to PKDA for approval of the project is annexed herewith as Annexure - 5.	Copy of PKDA approval letter for phase-I project (18596.33 m ²) issued vide letter no. 231 dated 29.03.2016 has to be furnished.
(viii)	Copy of PKDA approval letter for expansion project along with copy of application submitted to PKDA for approval of the expansion project	Copies of application submitted to PKDA for revision of building plans of the project and permission letter issued by PKDA vide No. 63 dated 07.02.2019 are annexed herewith as Annexure - 6 & 7 respectively.	-----
(ix)	Detail Water Balance diagram with calculation and Waste Water Management details to be submitted.	Detail water Balance diagram with calculation and Waste Water Management details is annexed herewith as Annexure – 8. A copy of application for permission to discharge excess treated water to public sewer is annexed herewith as Annexure -9.	-----
(x)	Status of permission for drawal of ground water from Water Resources Department, Govt. of Odisha and NoC from CGWA.	Copy of application dated 10.12.2019 is annexed herewith as Annexure-10.	-----
(xi)	Detailed justification that the expansion project will not be treated as a violation case.	As apparent from PKDA letter dated 07.02.2019, the total area including “Existing “and “Approved but not constructed” is 1,77,527.35 sqft or 16,492.69 sqm. Since the total approved built-up area prior to expansion is less than 20,000 sqm, it did not require an Environment clearance. It may please be noted that the total constructed area as on date is 1,08,676.96	-----

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC
		sqft or 10,096.33 sqm which is mentioned as "Existing" in the PKDA permission letter dated 07.02.2019.	
(xii)	Undertaking that the natural sand dune shall not be disturbed due to project activity.	Copy of undertaking is annexed herewith as Annexure -11.	-----
(xiii)	Land schedule and kisam of land.	The Project comprises of 2.29 acres of land in respect of Khata No.2, Plot No. 268 (Part) in Sipasurubuli village, Puri. Conversion fees of Rs.6,87,000/-, equivalent to conversion fees required under section 8A of the OLR Act, has been deposited with PKDA u/s 119(3) of The Odisha Development Authorities (Amendment) Act, 2015. Please see page 4 of the permission letter dated 07.02.2019.	-----
(xiv)	Present status of construction undertaken and the period of construction with details of approval obtained for the same from PKDA.	As on date, an area of 1,08,676.96 sqft (or 10096.33 sqm) has been constructed which is mentioned as "Existing" in PKDA letter dated 07.02.2019.	-----

21. The proposed site was visited by the Sub-Committee of SEAC on 11.12.2019. The project proponent has furnished compliances of site visit as desired by the committee vide letter no: PRPL/068/2019-20 dated 21.01.2020 and same has been verified as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC
(i)	Proposed plan approval copy of PKDA for additional built-up area for increase to 32,859.52 m2. The project proponent need to submit an undertaking in form of a legal affidavit that they have not constructed built-up area \geq 20,000 m2.	Copy of plan approval issued by PKDA vide No. 63 dated 07.02.2019 is annexed herewith as Annexure – 1. An undertaking in form of a legal affidavit that they have not constructed built-up area \geq 20,000 m2 is enclosed as Annexure – 2.	-----
(ii)	Certificate from appropriate authority that the project site does not fall within Sweet Water Zone of Puri.	Copy of the application dated 10.12.2019 is annexed herewith as Annexure – 3.	Certificate from appropriate authority that the project site does not fall within Sweet Water Zone of Puri has to be submitted.
(iii)	NoC from CGWA and corresponding permission from	Copies of NoC from CGWA and application dated	-----

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC
	<p>Water Resources Department, Govt. of Odisha for use of required ground water in-case they draw water from ground and alternatively, explore the possibility of use of water of Puri Municipality raw water after necessary scientific treatment with such facilities at the project site. The project proponent is also required to submit the test report of water quality of Municipality raw water and the water quality after due treatment including the description of the process of such treatment</p>	<p>10.12.2019 for corresponding permission from Water Resources Department, Govt. of Odisha, are annexed herewith as Annexure – 4 & 5 respectively.</p> <p>We have obtained consent from PH Division to supply raw water to the project and a copy of the NOC dated 18.05.2018 is enclosed herewith as Annexure – 6. The raw water, when available, will be treated at our cost before use and necessary scientific treatment processes will be adopted.</p>	
(iv)	<p>Permission and time frame of the 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, excess beyond recharging from NH Authority. The construction of drains must synchronize with the completion of the construction of the Housing Project.</p> <p>Alternatively, permission from PWD, Odisha that existing drainage system about 700-800 meters (as stated) away from the project site to take the additional load of treated waste water and runoff water as the case may be as mentioned above. Besides, ownership of the land between project site and the existing drainage of PWD need to be in favour of the project proponent either through purchase or lease or “Right to Use” for the owner of the said land to lay the requisite pipelines / infrastructure as required.</p>	<p>A copy of application for permission to discharge excess treated water to public sewer is annexed herewith as Annexure – 7.</p>	<p>This specific condition as sought by SEAC is required to be submitted before operation of the project (A legal affidavit for this; need to be submitted).</p>
(v)	<p>‘NoC’ from OCZMA that it does not fall within CRZ limit or as necessary under the said law</p>	<p>Copy of application dated 02.08.2019 is annexed herewith as Annexure – 8.</p>	<p>‘NoC’ from OCZMA that it does not fall within CRZ limit or as necessary under the said law to be obtained.</p>

22. The SEAC in its meeting held on Dt:07-02-2020 decided to take decision on the proposal after the proponent submits the certain information / documents.
23. The project proponent has furnished compliances as desired by the committee vide letter no: PRPL/174/2020-21 dated 17.09.2020 and same has been verified as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC
(i)	Clearance certificate from CRZ authority that the project doesn't fall in the CRZ area has to be given.	Copy of the letter issued by ORSAC vide No. 2750 dated 16.09.2020 is annexed herewith as Annexure - 1.	The letter has been written by ORSAC to Member Secretary, Odisha Coastal Zone Management Authority (OCZMA). However, OCZMA has not clarified any. Letter from OCZMA to be submitted.
(ii)	Letter from the Collector, Puri that the project area doesn't fall under the sweet water zone has to be given.	Copy of the letter issued by District Office, Puri vide No. 799 dated 23.03.2020 is annexed herewith as Annexure - 2.	-----
(iii)	Copy of PKDA approval letter for phase-I project (18596.33 m ²) issued vide letter no. 231 dated 29.03.2016 has to be furnished.	Approval letter no. 231/PKDA dated 29.03.2016 has been superseded by letter no. 63/PKDA dated 07.02.2019. A copy of the letter dated 07.02.2019 is annexed herewith as Annexure - 3.	Copy of PKDA approval letter no. 231 dated 29.03.2016 has to be furnished.
(iv)	A legal affidavit to be submitted that the permission from PWD, Odisha shall be obtained from concerned department to discharge of excess treated water to public sewer before operation of the project.	An undertaking in form of a legal affidavit is enclosed herewith as Annexure - 4.	Special condition to be stipulated in EC as a legal affidavit has to be submitted by the proponent with effect as sought by SEAC.

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

- (a) Copy of PKDA approval letter for phase-I project (18596.33 m²) issued vide letter no. 231 dated 29.03.2016 has to be furnished.
- (b) Regarding applicability of CRZ clearance for the project, the letter has been written by ORSAC to Member Secretary, Odisha Coastal Zone Management Authority (OCZMA). However, OCZMA has not clarified any. Letter from OCZMA to be submitted.

(VII) PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR CONSTRUCTION OF (LB+UB+S+10) HOTEL-CUM-MULTIPLEX BUILDING PROJECT AT MOUZA – CHANDRASEKHARPUR, BHUBANESWAR OF M/S RISK SOFTWARE SOLUTION PVT. LTD. WITH TOTAL BUILT UP AREA 35,191.96 M²(EC). 26-06-2020

1. M/s Risk Software Solution Pvt. Ltd. has applied for environmental clearance for construction of (LB+UB+S+10) Hotel-Cum-Multiplex building project at Mouza – Chandrasekharapur, Bhubaneswar of M/s Risk Software Solution Pvt. Ltd. with total built up area 35,191.96 m².
2. The project falls in item 8(a) of Building and construction project as per the EIA Notification, 2006 and 2009 and subsequent amendments theretof of MoEF & CC.
3. The Hotel Multiplex Building Project site is located at Village Mouza Chandrasekharapur, Bhubaneswar, District - Khorda. The Geographical co-ordinate of the project site is: Latitude - 20° 20' 34" N & Longitude - 85° 48' 51.9" E. The site is around 5 km from Centre of Bhubaneswar city. The site is well connected with road. The nearest railway station is Bhubaneswar on SE Railway which is around 9 km. from the site and the nearest airport is Biju Patnaik Airport which is at distance of 10 Km. There is no stream passes through the project site.
4. The proposed project envisages construction of a multi-storied building with LB+UB+G+10 floors over IDCO Plot No.-7, Rev Plot No.65(P), 66(P), 67(P), Khata No. 612 at Mouza - Chandrasekharapur of Bhubaneswar, Dist – Khorda, Odisha. The maximum temperature is about 36.0° C and the minimum temperature is 16.0° C felt in the area. The average annual rainfall in the area is 1447.5 mm.
5. In this proposed multi storied project 'Hotel Cum Multiplex' consisting of 87 shops and 95 suites/rooms, multiplex in LB+UB+G+10 floors of the proposed commercial/residential multiplex along with party lawn, party hall, lobby, food court, games area, ATM, Swimming pool, Spa, Salon, Gym, Restaurants, club and other common facilities.
6. The total plot area of project is estimated 8096.26 Sq.mt (2.0 acres) and built up area of 35942.14 Sq.mt. Maximum height of the building = 26m.

The detailed area statement is provided below in Table 1

(Table 1)

Sl. No.	Particulars	Area sq.mt
(i)	Possession Plot Area	8096.26
(ii)	1 st Basement Area	6897.36
(iii)	Service Area	1988.05
(iv)	Parking Area	4909.31
(v)	2 nd Basement Area	6906.45
(vi)	Service Area	1863.57
(vii)	Parking Area	5042.88
(viii)	Ground Floor Area	4262.99
(ix)	1 st Floor Area	3576.16
(x)	2 nd Floor Area	3215.89
(xi)	3 rd Floor Area	4221.56
(xii)	4 th Floor Area	1989.66

Sl. No.	Particulars	Area sq.mt
(xiii)	5 th Floor Area	419.56
(xiv)	6 th Floor Area	1519.75
(xv)	Typical Hotel Floor Area (5 nos) – 586.55 sqmt	2932.76
(xvi)	Total Floor Area	22138.33
(xvii)	Total Built up Area	35942.19
(xviii)	Total Parking Area	9952.19
(xix)	Total FAR Area	22138.33
(xx)	FAR....2.73	
(xxi)	20% Plantation Area	1619.253
(xxii)	Maximum No. of Floor	5
(xxiii)	Power/Electricity Requirement & Sources	Grid supply at 33KV
(xxiv)	No. of DG sets	2 nos. of 820 kVA (1 X 500 + 1 X 320 kVA)
(xxv)	Water requirement & Sources	321 KLD
(xxvi)	Sewage Treatment & Disposal	STP Capacity - 200 KLD
(xxvii)	Estimated Population-Residential, Floating/visitors	2432

REQUIREMENT FOR THE PROJECT:

7. Power requirement: Power requirement for the project is approx. 1000 KW. 2 nos. transformers of 750 KVA each will be provided at the site. Source of power will be OSEB. 2nos. D.G. sets of total capacity 820 kVA (1 X 500 + 1 X 320 kVA) will be provided for power back up. Stacks will be provided with DG sets so as emissions can be discharged at app. 5 m.
8. Water Requirement: Fresh make up of 321 KLD will be required for the project which will be sourced from Ground water. NOC from CGWA has been obtained. Waste water of 181 KLD will be treated in a STP of 200 KLD capacity.
9. Rain water will be harvested annually approx. 7164 m³ of rainwater that will recharged to ground water system through 2 nos. of recharging structures.
10. Fire fighting Installations will be installed as per recommendation of the Fire fighting Officer, Odisha and as per the guideline of NBC (part-4). Fire NOC had been obtained.
11. Green Belt Development: Green belt will be developed over an area of 1619.253 sqm which is 20 % of the plot area; by using the local species like Radhachuda, Nageswar, Akash Neem, Ashok, Polanga, Karang, Bela, Pijilu, Kaniara, Tagar, Hena, etc.
12. Solid waste Management: Total solid waste generation is 491 kg/day. The solid waste will be segregated at source & collected. Adequate number of colored bins (green, blue & dark grey) separate for bio-degradable and non-biodegradable are proposed to be provided at the strategic location within site. An agency shall be appointed to collect and dispose the Organic and inorganic waste which shall be commencing the works at the time of operations. STP sludge is proposed to be used for horticultural purposes as a manure. Horticultural Waste is composted and used for gardening purposes. Recyclable wastes will be disposed to vendors.

13. The project cost is ` 35.00 crores. Environment management cost is ` 1.04 lakhs.
14. The project proponent along with the environment consultant **M/s Cognizance Research India Pvt. Ltd, Noida** made a detailed presentation before the SEAC.
15. The SEAC in its meeting held on 20.07.2019 decided to take decision on the proposal after the proponent submits the following information/ documents followed by site visit by the sub-Committee of SEAC.
 - a) Detailed layout map (master plan) in A1 size indicating width of the green belt, solid waste storage area and other activities.
 - b) Land schedule and kism of land.
 - c) BDA plan approval letter with map.
 - d) Percentage of area for parking should be revised according to BDA Parking norms and breakup area of parking for hotel and multiplex should be mentioned separately.
 - e) Status of permission from Water Resources Department, Govt. of Odisha for drawal of Ground Water.
 - f) Water Balance diagram in detail.
 - g) Layout showing Drainage plan both in non-monsoon and monsoon season.
 - h) Details of Rain Harvesting methods, recharging pits, with detail calculation.
 - i) Detail water balance diagram of water requirement along with compensating water from Rain water Harvesting system.
 - j) Stack height of DG set should be mentioned.
 - k) Certificate from the concerned DFO about the distance of the project site from the Eco-Sensitive Zone of Chandaka-Dampada Wildlife Sanctuary and Nandan Kanan Sanctuary.
 - l) Status of Wildlife Clearance along with copy of the application submitted for Wildlife Clearance (if any) as the project is located within 10 km (default) from the boundary of Nandan Kanan Sanctuary.
 - m) Details of Renewable energy to be used in project.
 - n) Detailed proposal for usage of solar pumps to increase the usage of Solar energy in the project.
 - o) Exploring the possibility of treatment of waste water in a pond / reservoir by treatment with algae including maintaining its water quality for different purposes to reduce the burden on ground water use if allowed by Water Resource Department, Govt. of Odisha.
 - p) Traffic density study by Operation Research (OR) Expert and copy of the same shall be submitted.
16. The proponent was requested vide letter no. 211 (3)/SEAC-Misc.-28, dated 21.08.2019 to submit the above information / documents through online system. They have not yet submitted the information / documents in the online system.
17. The Sub-Committee of SEAC visited the proposed site on 18.03.2020. The Sub-Committee has recommended to submit the following information / documents for consideration of Environmental Clearance.

Proceedings of SEAC meeting held on 12.10.2020

Nodal Officer, SEAC

- (i) Origin of the existing drain and its discharge point be indicated through a schematic diagram with site as one of the important co-ordinates.
 - (ii) Estimate of the excess discharge (pre & post monsoon) after treatment and submit the report including the estimate of the storm /run-off water if any proposed to be discharged to the some drain and submit the report. It may be noted that no treated effluent / water should be disposed / discharged into such drain as per the standard MoEF&CC, Govt. of India guidelines as an Environmental clearance condition.
 - (iii) To obtain permission from the concerned Authorities to discharge the liquid waste as estimated above through the existing drain to the final location of discharge i.e. the Competent Authority of the drain & the final discharge point as well.
 - (iv) Permission from the Concerned Authority for use of ground water provided IDCO disagrees to supply domestic water.
 - (v) But once IDCO water supply is made available to the project / that area, the bore wells (except one number) should be abandoned and intimated to Water Resources Authority and one number bore well may remain operational as standby domestic water source.
 - (vi) A detailed traffic management plan and traffic Congestion plan with traffic density study by a reputed Govt. organization of national repute must be done and plan must be done to ensure that the current level of service of the Infosys road joining the main road (Jaydevvihar – Trishulia Road) is maintained and improved upon after the implementation of the project. The study and the plan should be based on cumulative impact of the traffic due to development and increased habitation for atleast next 10 years. The plan should be accepted by the Govt. CA.
 - (vii) A detailed solid waste management plan be submitted.
 - (viii) Distance from the nearest ESZ be indicated and a letter to this effect be submitted from the Concerned Authority.
18. The SEAC in its meeting held on Dt: 26.06.2020 decided to take decision on the proposal after receipt of compliance to the recommendations of Sub-Committee of SEAC during site visit on 18.03.2020 in addition to the information / documents as sought vide letter no. 211 (3)/SEAC-Misc.-28, dated 21.08.2019 through online portal and hard copy.
19. The project proponent has furnished compliances as desired by the committee vide letter no: dated 30.07.2020 and same has been verified as follows:
- a) Compliance to the information / documents as sought vide letter no. 211 (3)/SEAC-Misc.-28, dated 21.08.2019.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC
(I)	Detailed layout map (master plan) in A1 size indicating width of the green belt, solid waste storage area and other activities.	Detailed layout map furnished.	----
(II)	Land schedule and kismam of land.	Land schedule and kismam of land furnished.	----

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC
(III)	BDA plan approval letter with map.	BDA plan not furnished.	BDA plan approval letter with map to be furnished.
(IV)	Percentage of area for parking should be revised according to BDA Parking norms and breakup area of parking for hotel and multiplex should be mentioned separately.	Details not furnished.	Percentage of area for parking should be revised according to BDA Parking norms and breakup area of parking for hotel and multiplex should be mentioned separately to be furnished.
(V)	Status of permission from Water Resources Department, Govt. of Odisha for drawal of Ground Water.	Status of permission from Water Resources Department not furnished. However, copy of ground water permission has been furnished.	Status of permission from Water Resources Department, Govt. of Odisha for drawal of Ground Water to be furnished.
(VI)	Water Balance diagram in detail.	Water Balance diagram furnished.	----
(VII)	Layout showing Drainage plan both in non-monsoon and monsoon season.	Layout showing Drainage plan not furnished.	Layout showing Drainage plan both in non-monsoon and monsoon season to be furnished.
(VIII)	Details of Rain Harvesting methods, recharging pits, with detail calculation.	Details of Rain Harvesting methods furnished.	-----
(IX)	Detail water balance diagram of water requirement along with compensating water from Rain water Harvesting system.	Furnished	-----
(X)	Stack height of DG set should be mentioned.	Not furnished	Stack height of DG set should be mentioned.
(XI)	Certificate from the concerned DFO about the distance of the project site from the Eco-Sensitive Zone of Chandaka-Dampada Wildlife Sanctuary and Nandan Kanan Sanctuary.	Certificate w.r.t Chandaka-Dampada Wildlife Sanctuary furnished. But not furnished about Eco-Sensitive Zone (Default) Nandan Kanan Sanctuary.	Certificate from the concerned DFO about the distance of the project site from the Nandan Kanan Sanctuary
(XII)	Status of Wildlife Clearance along with copy of the application submitted for Wildlife Clearance (if any) as the project is located within 10 km (default) from the boundary of Nandan Kanan Sanctuary.	Certificate w.r.t Chandaka-Dampada Wildlife Sanctuary furnished. But not furnished about Eco-Sensitive Zone (Default) Nandan Kanan Sanctuary.	Status of Wildlife Clearance along with copy of the application submitted for Wildlife Clearance (if any) as the project is located within 10 km (default) from the boundary of Nandan Kanan Sanctuary.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC
(XIII)	Details of Renewable energy to be used in project.	Not furnished	Details of Renewable energy to be used in project to be furnished.
(XIV)	Detailed proposal for usage of solar pumps to increase the usage of Solar energy in the project.	Not furnished	Detailed proposal for usage of solar pumps to increase the usage of Solar energy in the project to be furnished.
(XV)	Exploring the possibility of treatment of waste water in a pond / reservoir by treatment with algae including maintaining its water quality for different purposes to reduce the burden on ground water use if allowed by Water Resource Department, Govt. of Odisha.	Not furnished	Exploring the possibility of treatment of waste water in a pond / reservoir by treatment with algae including maintaining its water quality for different purposes to reduce the burden on ground water use if allowed by Water Resource Department, Govt. of Odisha to be furnished.
(XVI)	Traffic density study by Operation Research (OR) Expert and copy of the same shall be submitted.	Not furnished	To be submitted as sought by SEAC.

b) Compliance to the recommendations of Sub-Committee of SEAC during site visit on 18.03.2020.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC
(i)	Origin of the existing drain and its discharge point be indicated through a schematic diagram with site as one of the important co-ordinates.	The same is attached as Annexure 1	The Annexure enclosed does not reveal Origin of the existing drain and its discharge point and its co-ordinates. Hence, to be submitted as sought.
(ii)	Estimate of the excess discharge (pre & post monsoon) after treatment and submit the report including the estimate of the storm /run-off water if any proposed to be discharged to the some drain and submit the report. It may be noted that no treated effluent / water should be disposed / discharged into such drain as per the standard MoEF&CC, Govt. of India guidelines as an Environmental clearance condition.	The same is attached as Annexure 2.	The Annexure enclosed does not comply to the queries of the sub-committee of SEAC. Hence, to be submitted as sought

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC
(iii)	To obtain permission from the concerned Authorities to discharge the liquid waste as estimated above through the existing drain to the final location of discharge i.e. the Competent Authority of the drain & the final discharge point as well.	STP with dual plumbing technique is used all the waste water which is treated is reused for flushing and gardening purposes no waste water is discharge in the drain if in future required then proper permission will be taken details of STP and waste water is attached in annexure	Special conditions to be stipulated in EC and an undertaking in form of a legal affidavit to be submitted as complied by the proponent.
(iv)	Permission from the Concerned Authority for use of ground water provided IDCO disagrees to supply domestic water.	CGWA Clearance is taken for withdrawal of ground water	(i) Special conditions to be stipulated in EC. (ii) Letter from IDCO is to be submitted that they cannot supply domestic water.
(iii)	But once IDCO water supply is made available to the project / that area, the bore wells (except one number) should be abandoned and intimated to Water Resources Authority and one number bore well may remain operational as standby domestic water source.	we will comply the statement and agreed to follow	Special conditions to be stipulated in EC.
(iv)	A detailed traffic management plan and traffic Congestion plan with traffic density study by a reputed Govt. organization of national repute must be done and plan must be done to ensure that the current level of service of the Infosys road joining the main road (Jaydevvihar – Trishulia Road) is maintained and improved upon after the implementation of the project. The study and the plan should be based on cumulative impact of the traffic due to development and increased habitation for atleast next 10 years. The plan should be accepted by the Govt. CA.	The same is attached as Annexure 4	Special conditions to be stipulated in EC.
(v)	A detailed solid waste management plan be submitted.	The same is attached as Annexure 5	Special conditions to be stipulated in EC.
(vi)	Distance from the nearest ESZ be indicated and a letter to this effect be submitted from the Concerned Authority.	The same is attached as Annexure 6(DFO Letter)	Distance from Wild life sanctuary of Nandankanan to be submitted.

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

- a) BDA plan approval letter with map.
- b) Percentage of area for parking should be revised according to BDA Parking norms and breakup area of parking for hotel and multiplex should be mentioned separately.
- c) Status of permission from Water Resources Department, Govt. of Odisha for drawal of Ground Water.
- d) Layout showing Drainage plan both in non-monsoon and monsoon season.
- e) Stack height of DG set should be mentioned.
- f) Certificate from the concerned DFO about the distance of the project site from the Nandan Kanan Sanctuary.
- g) Status of Wildlife Clearance along with copy of the application submitted for Wildlife Clearance (if any) as the project is located within 10 km (default) from the boundary of Nandan Kanan Sanctuary.
- h) Details of Renewable energy to be used in project.
- i) Detailed proposal for usage of solar pumps to increase the usage of Solar energy in the project.
- j) Exploring the possibility of treatment of waste water in a pond / reservoir by treatment with algae including maintaining its water quality for different purposes to reduce the burden on ground water use if allowed by Water Resource Department, Govt. of Odisha.
- k) Origin of the existing drain and its discharge point be indicated through a schematic diagram with site as one of the important co-ordinates.
- l) Estimate of the excess discharge (pre & post monsoon) after treatment and submit the report including the estimate of the storm /run-off water if any proposed to be discharged to the some drain and submit the report. It may be noted that no treated effluent / water should be disposed / discharged into such drain as per the standard MoEF&CC, Govt. of India guidelines as an Environmental clearance condition.
- m) Other points as mentioned in the column "views of SEAC".

(VIII) PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR PRODUCTION OF 90043 TPA OF IRON ORE FROM NANGALSILA IRON ORE MINES OVER AN AREA OF 45.333 HA LOCATED IN VILLAGE NANGALSILA & MURUMDIHI, UNDER RAIRANGPUR TAHASIL DIST- MAYURBHANJ OF GOURI SHANKAR CHOUBEY (TOR) 14-02-2020

1. The proposal was considered by the Committee to determine the "Terms of Reference (ToR)" for undertaking detailed EIA study for the purpose of obtaining Environmental Clearance in accordance with the provisions of the EIA Notification, 2006 and amendment thereafter.
2. The Nangalsila Iron Ore mining lease of Sri Gouri Shankar Choubey over an area of 45.333 ha located in Village- Nangalsila & Murumdihi under Rairangpur Tehsil, in the district of Mayurbhanj of Odisha State.
3. The Nangalsila & Murumdihi Iron Ore mining lease over 45.931 ha was first granted on 19.04.1985 in favor of Sri Gouri Shankar Choubey and executed on 19.04.1985 for the period of 20 years.

4. 1st Renewal of Mining Lease Application for the same area been filed to the Steel & Mines Department in accordance with the provision of over 45.931 has Rule, 24A(1) of MCR, 1960 for a further period of 20 years. As per section 8A(3) of Mines and Minerals (Development and Regulation) Amendment Act , 2015 the lease period supposed to extended upto 18.04.2035 subjected to execution of Supplementary lease deed.
5. Part of the non working lease area over 0.598 Ha inclusive of 0.174 Ha of village forest land and 0.424 Ha of non forest land was proposed to be surrendered to State Govt. on 03.03.2011 to keep the project technically and commercially viable. So, Final Mine Closure Plan for the part surrendered lease area over 0.598 ha. has been approved by IBM on 28.10.2011 vide IBM's letter No. FMCP/MAN/04-ORI/BHU/2011-12.
6. Surface right has been acquired over an area of 32.780 hectares (80.75 Ac., 6.95 Ac.Govt. & 73.80 AC. Pvt Land) from the Collector, Dist: Mayurbhanj, Odisha.
7. The mining operation was stopped by the Mining Officer, Baripada since 19.11.2009 due to want of environmental clearance and other statutory clearance.
8. Since, the mining operation was closed more than two years, the lease was declared as lapse by Govt. of Odisha, vide letter No. 5711/S & M dated 25.06.2015.
9. Lessee has filed the revision application which was consider by the Revisional Authority and the Lapse Order was set aside by order dated 11.05.2016 and remanded back to the State Govt. for suitable reconsideration.
10. Now the hearing is going on for consideration of application.
11. Accordingly Mining Officer, Baripada demanded an amount of Rs.2, 91, 58, 813 /- towards extraction in violation of EP Act and ` 54, 82, 233.45/- towards failure to deliver the undeposited stock.
12. However, after depositing ` 4,57,71,500/- including applicable interest the demand for common cause/compensation, State Govt. has communicated the status of lease to IBM vide letter no. 6746/DM dated 29.08.2019.
13. On receipt of the status report IBM has approved the modification of mining plan for period 2015-16 to 2019-20 vide letter No. MRMP/A/32-ORI/Bhu/2019-20/1781 dated 03.12.2019.
14. Mining Officer, Baripada demanded an amount of Rs.2, 91, 58, 813 /- towards extraction in violation of EP Act and ` 54, 82, 233.45/- towards failure to deliver the undeposited stock. Further for MP/CTO violation demand notice was raised for an amount of Rs. 4,65,279/-
15. Payment confirmation for Rs. 4,57,71,500/- has given by Director of Mines, Odisha Vide its letter No. MX-III (d) -77/2016 5629/DM dt. 23.07.2019.
16. Last Scheme of Mining of this Nangalsila Iron Ore Mine was approved by the Indian Bureau of Mines, Bhubaneswar vide letter No. SM/OTFM/27-ORI/BHU /2011-12 dated 28.10.2011 for a period of 5 years from 2010-11 to 2014-15. Final Mine Closure Plan of the part surrendered area over 0.598 hectare prepared under Rule 23C of MCDR, 1988 was approved by the Indian Bureau of Mines, Bhubaneswar vide letter No. FMCP/MAN/04-ORI/BHU/2011-12 dated 28.10.2011 and reclamation and rehabilitation work completion certificate of FMCP approved area (0.598 ha) was obtained from IBM vide his Certificate No.T/FMCP/C/I/BHU-2011 dated 08.02.2012.

Since the extent of M.L area has been reduced from 45.931 hectares to 45.333 hectares after surrender of 0.598 hectare, this Modification of Mining Plan has been prepared under Rule 17(3) of MCR, 2016 along with Progressive Mine Closure Plan under Rule 23 of MCDR, 2017 in respect of the M.L area applied for retaining over 45.333 hectares for a period of five (5) years from FY 2015-16 to 2019-20 and submitted for approval.

17. A total of 2.104 Million Tonne iron ore reserve has been estimated in the M.L area applied for retaining which has formed the basis for preparation of this Modification of Mining Plan. The mine will be operated as a Category-A (OTFM) Mine to produce iron ore 90, 043 T / annum.
18. The lease area covers a part of Survey of India Toposheet bearing No.73J/4 and bounded by the latitudes from 22009'16.568" to 22009'40.185"N and longitudes from 86012'53.685" to 86013'28.742"E. Nearest State Highway is SH –Bisoi-Rairangpur : 11.00 km (NE). Nearest National Highway is NH 49 9 .5Kms & Rairangpur-Dhenkikot NH 220 is 14 km. Nearest Railway Station is Kuldiha Railway station at 5 km. Nearest river is Khadkhai River at 0.5 Kms and Khadkhai Reservoir is 2 km. National Park/Wild Life Sanctuary/Eco Sensitive areas is Similipal Biosphere Reserve 14 Kms.
19. Nangalsila Iron Mine is situated at the foot hill region of Sulaipat hill. M.L area displays a flat topography. Highest and lowest altitudes are noted at 300.5m and 291.5m above mean sea level. The maximum altitude difference is (300.5 – 291.5=) 9m. M.L area consists of mainly waste land as well as agricultural field and bisected by Khadakai Canal. Drainage system is dendrite type. There is neither seasonal nor perennial nala in the M.L area. The drainage system of the area is mostly influenced by Khadakai canal which passes through the lease area SE to NW and controls the drainage system in the region. The land use of the lease area is 45.931 Ha i.e Nangalsila (Govt. land – 13.585 Ha.and Private land – 27.511 Ha) & Murumdihi (Govt. land – 1.460 Ha.and Private land – 3.375 Ha).
20. The maximum production will be 90043 Tons/annum. The total geological reserve is about 98808 t, out of which 95868 t have been considered as mineable reserves. Open cast semi-mechanized mining method will be adopted with the deployment of machines like Jack hammer drill, Compressor, Hydraulic excavators & Tippers etc. Only one bench of 2-3m height will be developed and the bench slope will be kept nearly vertical (80°) with horizontal.
21. ROM ore will be up-graded in the ML area in respect of size and grade by way of dry crushing and screening for value addition. About 30 % of runoff ore will be marketed to the consumer after manual breaking, sorting sizing and blending. Remaining 70 % of the production will be screened by the existing 60 TPH capacity Screening Plant. The average grade of ore produced from this mine is not less than 45 % of Fe.
22. Two existing quarries namely Quarry-1 and Quarry-5 will be developed simultaneously laterally to produce iron ore @0.90 Mt / annum. During life of the mine 75,572 Cum. of waste to be generated and stored in 1.182 ha. of area earmarked for waste dumping. At the end of the mining dump material will be re-handled for back filling mined out area and no area remains as dump. Top soil to be generated shall be stacked separately and use for reclaimed area rehabilitation purpose.
23. Water table will not be intercepted, as ultimate depth of Mining will 3 m. whereas water table in the area is minimum 15 m below the surface. As such there is no possibility for

encountering any underground water source. Any rain water, accumulated in the pit during monsoon, will be naturally drained within 2 or 3 days.

24. 15 KLD will be required, out of which 3 KLD for drinking purpose, 2 KLD for plantation and 10 KLD for dust suppression purpose. It is proposed to tap this quantity of water as per suitability.
25. The total manpower in this project is 111 persons.
26. The total project cost is ` 1.65 Crores and Environment Management Cost is ` 0.30 Crores.
27. The consultant **M/s Srushti Seva Pvt.Ltd., Nagpur** along with the proponent has made a detailed presentation before the SEAC on 14-02-2020. The SEAC decided to take decision on the proposal of the proponent after the proponent submits certain information / documents.
28. 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)	Details of violation under Environment Clearance to be submitted	<ul style="list-style-type: none"> • Mining Lease of Nangalsila Iron Ore Mines over 45.931 Ha was granted to lessee Sri Gouri Shankar Choubey by the Collector, Mayurbhanj on 19.04.1985 for 20 years and registered on 18.07.1985 with the Sub-Register, Baripada. • Surface right permission has been granted by the Collector & District Magistrate, Mayurbhanj over an area of 32.780 Ha on 17.08.1985. • The lease was under operation with a very small scale of production capacity by adopting manually method of mining by engaging local workers from the period 1985-86 to 2008-2009. • In the Meanwhile, the Mining Officer, Baripada vide letter No.4837/Mines dated 19.11.2009 has directed us to suspend all mining operation/activities until getting all statutory clearances including environmental clearance. • On 08.12.2009 the mine was jointly verified by the Mining, Forest and Revenue Departments of Govt, of Odisha but no violation was noticed under EP Act or any other relevant Act. Copy enclosed as Annexure 1. • In compliance to the direction of the Mining Officer, Baripada on 23.06.2010, EC was applied in MoEF. Copy enclosed as Annexure 2. • In the said report the CEC under Para 34 has been calculated the national value of the total quantities of iron and manganese produced without EC/beyond EC by all the lessees in the State of Odisha during the period 2000-01 to 2010-11 including this Nangalsila Iron Ore 	-----

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of the SEAC																																	
		<p>Mines.</p> <ul style="list-style-type: none"> • Accordingly, demand notice was issued by the Mining Officer, Baripada amounting to Rs.3,46,41,047.00 towards compensation for production of minerals without / in excess for the environmental clearance under section 21(5) of the MMDR Act, 1957 in compliance to the judgment dated 02.08.2017 of Hon'ble Supreme Court in the matter of Common Cause vrs Union of India in W.P. (C) No.114/2014 and also directed to deposit the same on or before 31.12.2017. • The entire amount along with applicable interest and the said has been confirmed by the Department of Steel & Mines vide their letter No.5629/DM dated 23.07.2019.Copy enclosed as Annexure 3. • The mining operation was continued till 2008-09 before suspended by the Mining Officer, Baripada in the capacity of the amendment provisions of Rule, 24A(6) of MCR, 1960 as "deemed extension" and no violation/objection was issued from any authority. Despatched of minerals also been done during the such period after obtaining prior ore removal permission/transit permit from the concerned authority by paying advance royalty and completion of physical verification by the Senior Inspector of the Mines, Baripada Circle. 																																		
(ii)	Year of commencement of mining operation along with year wise past production details	<p>The lease was under operation with a very small scale of production capacity by adopting manually method of mining by engaging local tribal workers from the period 1985-86 to 2008-2009 in accordance with the terms and conditions laid down in the lease deed duly signed on 19.04.1985 and as per Mining Plan/Scheme of Mining duly approved by the Indian Bureau of Mines time to time. Production made during the years 1985-86 to 2008-09 as tabulated below.</p> <table border="1" data-bbox="603 1563 1262 1977"> <thead> <tr> <th>SL.NO.</th> <th>YEAR</th> <th>PRODUCTION IN MT.</th> </tr> </thead> <tbody> <tr><td>1</td><td>1985</td><td>1162</td></tr> <tr><td>2</td><td>1986</td><td>873</td></tr> <tr><td>3</td><td>1987</td><td>1266</td></tr> <tr><td>4</td><td>1988</td><td>255</td></tr> <tr><td>5</td><td>1989</td><td>0</td></tr> <tr><td>6</td><td>1990</td><td>35</td></tr> <tr><td>7</td><td>1991</td><td>0</td></tr> <tr><td>8</td><td>1992</td><td>4225</td></tr> <tr><td>9</td><td>1993-94</td><td>123</td></tr> <tr><td>10</td><td>1994-95</td><td>365</td></tr> </tbody> </table>	SL.NO.	YEAR	PRODUCTION IN MT.	1	1985	1162	2	1986	873	3	1987	1266	4	1988	255	5	1989	0	6	1990	35	7	1991	0	8	1992	4225	9	1993-94	123	10	1994-95	365	-----
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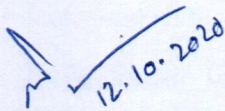
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(iii)	Aerial distance of Kuldiha Sanctuary from mining lease area certified by concerned DFO	The project Nangalsila Iron Ore Mines is located at a distance of about 81 km from the Kuldiha Sanctuary. The location map duly certified by the concerned DFO cum Wildlife Warden is enclosed as Annexure -5 .	-----																																										
(iv)	Justification as to why the proposal will not be considered as a violation case	The project proponent already deposited the entire amount along with applicable interest towards compensation for production of minerals without / in excess for the environmental clearance under section 21(5) of the MMDR Act, 1957 and complied with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors. Mining operation in the state will get legalized and it will fetch income to the state exchequer by way of royalty, Contribution to DMF, GST, Income tax, etc. Project proponent did not undertake any production/operation since 2009 after suspension of the mining activity. Further, the State Government of Odisha, through Collector & District Magistrate, Mayurbhanj has taken action under the provisions of section 19 of the Environment (Protection) Act, 1986 and registered a case against me before the Hon'ble SDJM Court, Rairangpur. Since there is no more violation pending with the lease/lessee.	-----																																										

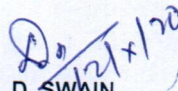
29. The SEAC observed that this is a violation case and operated the mines without EC after 1994-95 till 2008-09. They have also not applied for EC in the violation portal during the stipulated time. Moreover, the proponent has requested not to consider the proposal as a violation case as they have already paid the compensation raised by the State Govt. and also a case has already been registered against them by the SDJM Court, Rairangpur under the provisions of Section-19 of the E(P) Act, 1986.

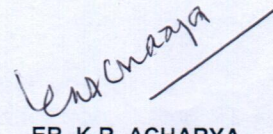
30. The SEAC is not aware about non considering the case as a violation case as per above request of the proponent as MoEF & CC, Govt. of India has not issued any guidelines for the same.

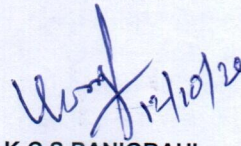
After detail discussion, the SEAC recommended the following:

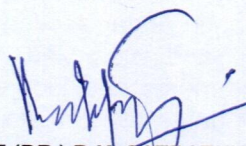
- a) The proponent shall be requested to give example of similar type of proposal if consider by MoEF & CC, Govt of India.
- b) The SEIAA, Odisha to be requested to write a letter to MoEF & CC, Govt of India to clarify about the claim of the proponent not to consider the case as violation case as above.

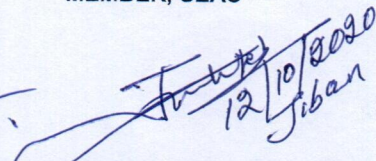

12.10.2020
SRI B.P. SINGH
CHAIRMAN, SEAC

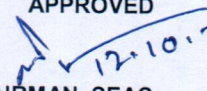

12/10/20
DR. D. SWAIN
MEMBER, SEAC


ER. K.R. ACHARYA
MEMBER, SEAC


12/10/20
DR. K.C.S PANIGRAHI
MEMBER, SEAC


PROF.(DR.) B.K. SATPATHY
MEMBER, SEAC


12/10/2020
Jiban
SRI. J. K. MOHAPATRA
MEMBER, SEAC

APPROVED

12.10.2020
CHAIRMAN, SEAC

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR JINDAL CHROMITE MINES FOR ENHANCEMENT IN THE PRODUCTION CAPACITY OF CHROME ORE FROM 1.0 LTPA TO 2.15 LTPA OVER MINING LEASE AREA OF 89 HA. AT VILLAGE KALIAPANI, SUKINDA TEHSIL, JAJPUR DISTRICT OF M/S. JINDAL STAINLESS LTD – REGARDING SUBMISSION UNDER VIOLATION CASE (EC).

A. SPECIFIC CONDITIONS:

- 1) Waste should be dumped on the earmarked sites within the mining lease area and no waste should be dumped outside the lease area.
- 2) The Project Proponent shall start the plantation and cover at least 50% of the proposed area under plantation in the next 5 years. The density of the plantation should not be less than 2500 saplings/Ha. The species to be selected for the plantation should be in consultation with local forest department or any other expert agency engaged for the same. The Project Proponent shall keep the record of saplings planted, survival rate, area covered under plantation, location etc. In addition to this gap filling needs to be done to as and when require for maintaining the density of plantation. The PP shall submit the drone images of area before and after the plantation. PP shall carry out pilot study for phytoremediation of hexavalent chromium through IMMT, CSIR, Bhubaneswar. The budget earmarked for the plantation shall be kept in separate bank account and audited annually. PP shall submit the detail such as photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation and outcome of the pilot study etc. to the Regional Office of MoEF&CC, Bhubaneswar and SEIAA, Odisha before 1st July of every year for the activities carried out during previous year.
- 3) Approval/permission of CGWA/SGWA shall be obtained before drawing ground water for the project activities. State Pollution Control Board (SPCB) concerned shall not issue Consent to Operate (CTO) till the project proponent obtains such permission.
- 4) The Project Proponent shall fulfill the Commitment made during PH held on 31.08.2010.
- 5) The amount proposed under **Corporate Environment Responsibility (CER)** head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and details of implementation of CER activities along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, photographs & Geo-location of the infrastructures/facilities developed, etc. to the Regional Office of MoEF&CC, Bhubaneswar and SEIAA, Odisha before 1st July of every year for the activities carried out during previous year.
- 6) The amount (except occupational health) proposed under Environmental Management Plan (EMP) head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and detailed environment monitoring report along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, sampling reports, photographs & Geo-location of the infrastructures/facilities developed, details of

- persons engaged in Environment Management Cell etc. to the Regional Office of MoEF&CC, Bhubaneswar and SEIAA, Odisha before 1st July of every year for the activities carried out during previous year.
- 7) The amount proposed under Occupational Health plan head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and detailed environment monitoring report along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, sampling reports, photographs & Geo-location of the infrastructures/facilities developed, details of persons engaged in Environment Management Cell etc. to the Regional Office of MoEF&CC, Bhubaneswar and SEIAA, Odisha before 1st July of every year for the activities carried out during previous year.
 - 8) The Project Proponent shall set up an Environmental Management Cell comprises of persons having qualification and experience in the field of environment along with supporting staff. The details of the same needs to be submitted to the SEIAA, Odisha within 3 months of the grant of EC.
 - 9) The project proponent shall give an undertaking by way of affidavit to comply with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors. before grant of ToR/ EC. The undertaking inter-alia include commitment of the PP not to repeat any such violation in future.
 - 10) In case of violation of above undertaking, the ToR/Environmental Clearance shall be liable to be terminated forthwith.
 - 11) The Environmental Clearance will not be operational till such time the Project Proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
 - 12) State Government concerned shall ensure that mining operation shall not commence till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
 - 13) The Project Proponent shall implement the short term and long term measures proposed to be taken in order to get rid from the adversity of Cr (VI) contamination, needs to be implemented and status report of the same along with benefit occurred needs to be submitted to Regional Office of MoEF&CC, Bhubaneswar and SEIAA, Odisha annually.
 - 14) The Project Proponent shall keep a record of each blasting viz. location, number of holes, delay assigned of each hole, explosive quantity of each hole, blasting pattern etc.
 - 15) The following two more relevant studies in context of sensitive site with reference to Hexavalent chromium Contamination shall be conducted and report to be submitted to SEIAA, Odisha within 6 months of the re-opening of the mine.

- (i) Core drilling permeability test through MECL, Nagpur or any other competent bodies.
 - (ii) Selection of Core sample study for porosity / permeability test to ascertain ground water flow & direction through competent organization.
- 16) During 2002 -03 to 2007-08 (6years) the production figure has exceeded 0.1 MTPA for which Deputy Directorate of Mines, Govt. of Odisha has raised a demand note of ₹ 77,52,97,589 /- vide office letter no. 568/Mines dated 11.04.2018. as per judgment of Hon'ble Supreme Court of India. The lessee filed a revision application in the revision authority Ministry of Mines, New Delhi vide. Case no. 22/(43)/2018/RC-I. The revision authority considered the case and passed an order "The Impugned order" be stayed till the next hearing vide order on 10.05.2018. This Environmental Clearance is to be issued without prejudice to the case filed before Revisional Authority (RA), Ministry of Mines, New Delhi.

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

Statutory compliance

- 17) 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.
- 18) 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.
- 19) 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.
- 20) 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.
- 21) 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.
- 22) Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish / Consent to Operate from the concerned State Pollution Control Board/Committee.
- 23) The Project Proponent shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Development & Regulation), Act, 2015 and rules & regulations made there under. PP shall adhere to various circulars issued by Directorate General Mines Safety

(DGMS) and Indian Bureau of Mines from time to time.

- 24) The Project Proponent shall obtain consents from all the concerned land owners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made there under in respect of lands which are not owned by it.
- 25) The Project Proponent shall follow the mitigation measures provided in MoEF&CC's Office Memorandum No. Z-11013/57/2014-1A. II (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".
- 26) 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.
- 27) 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.
- 28) State Pollution Control Board/Committee shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector's office/ Tehsildar's Office for 30 days.
- 29) 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
- 30) State Pollution Control Board/Committee and web site of the Ministry of Environment, Forest and Climate Change (www.parivesh.nic.in). A copy of the advertisement may be forwarded to the concerned MoEF&CC Regional Office for compliance and record.
- 31) The Project Proponent shall inform the MoEF&CC for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.

Air quality monitoring and preservation

- 32) The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM 10, PM2.5, N02, CO and S02 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/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.
- 33) Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc.) shall be

carried out in areas prone to air pollution wherein high levels of PM10 and PM2.5 are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipments/ machineries and preventive maintenance. Use of suitable water-soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEFCC/ Central Pollution Control Board.

Water quality monitoring and preservation

- 34) 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.
- 35) 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.
- 36) The Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.
- 37) The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby/ adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-a-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEF&CC. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environment, Forest and

Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.

- 38) 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.
- 39) 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.
- 40) Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.
- 41) The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board/Committee.

Noise and vibration monitoring and prevention

- 42) The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.
- 43) 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.
- 44) The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The workers engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers/ personals/ laborers are working without personal protective equipment.

Mining plan

- 45) 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.

- 46) 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.
- 47) The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-a-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEF&CC and its concerned Regional Office.

Land reclamation

- 48) 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.
- 49) 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.
- 50) The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.
- 51) 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.

- 52) 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.
- 53) Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and Top Soil/OBA/Waste dumps to prevent run off of water and flow of sediments directly into the water bodies (Nallah/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be desilted regularly, particularly after monsoon season, and maintained properly.
- 54) Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at the corners of the garland drains.
- 55) 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.
- 56) 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.
- 57) Slope study by an expert of repute of water dumps to be done and submitted within six months from the date of issue of EC to SEAC / SEIAA

Transportation

- 58) No Transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, PP shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load.
- 59) 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.

- 60) The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt- conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.
- 61) Haulage road shall be developed and maintained perennially and perpetually by the proponent in construction with the concerned authority of the Govt. and to this effect, the proponent shall submit an undertaking in form of a legal affidavit
- 62) Traffic density study if not done by domain expert, then the expert to be ratified / authenticated by domain expert and submitted within a month time.

Green Belt

- 63) 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.
- 64) 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.
- 65) 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.
- 66) The Project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-1 species during mining operation. A Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State Govt.
- 67) 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.

Public hearing and human health issues

- 68) 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.
- 69) 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.
- 70) The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise Audiometric; for Lead Exposure Blood Lead, For Welders Full Ophthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist, and Manganese (Mn) Estimation in Blood; For Inorganic Chromium- Fortnightly skin inspection of hands and forearms by a responsible person. Except routine tests all tests would be carried out in a Lab accredited by NABH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos, Hard Rock Mining, Silica, Gold, Kaolin, Aluminium, Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-Ray. Only conventional X-Ray will be accepted for record purposes and not the digital one). X-Ray must meet ILO criteria (17 x14 inches and of good quality).
- 71) 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, MoEFCC annually along with details of the relief and compensation paid to workers having above indications.
- 72) 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.
- 73) 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.
- 74) 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.
- 75) The proponent shall implement the mitigative measures as suggested in the Study Report on effect of chromite mines to nearest human habitation.
- 76) Occupational health check-up shall be done by occupational health expert periodically for employees as well as nearby villagers.
- 77) 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.

Corporate Environment Responsibility (CER)

- 78) The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 or as proposed by EAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual report of implementation of the same along with documentary proof viz. photographs, purchase documents, latitude & longitude of infrastructure developed & road constructed needs to be submitted to Regional Office MoEF&CC annually along with audited statement.
- 79) Project Proponent shall keep the funds earmarked for environmental protection measures in a separate account and refrain from diverting the same for other purposes. The Year wise expenditure of such funds should be reported to the MoEF&CC and its concerned Regional Office.

Miscellaneous

- 80) The Project Proponent shall prepare digital map (land use & land cover) of the entire

- lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC, Bhubaneswar and SEIAA, Odisha.
- 81) 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.
 - 82) The project proponent shall install solar panel inside the mine to generate 5KW of power required for Administrative Building as proposed.
 - 83) The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MOEF&CC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.
 - 84) A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEF&CC, Bhubaneswar and SEIAA, Odisha.
 - 85) The proponent shall revalidate the explosive license beyond 31.03.2020 without which explosives shall not be stored / used
 - 86) 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.
 - 87) In pursuant to Ministry's O.M No 22-34/2018-IA.III dated 16.01.2020 to comply with the direction made by Hon'ble Supreme Court on 8.01.2020 in W.P. (Civil) No 114/2014 in the matter Common Cause vs Union of India, the mining lease holder shall after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to other mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.
 - 88) The SEIAA, Odisha or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.
 - 89) Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
 - 90) 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.
 - 91) The site will be visited by the sub-Committee of SEAC after six months to review the progress of recommendations of SEAC on specific conditions.
 - 92) 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.

ANNEXURE- B

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR MAHAPARBAT (UNCHABALI) IRON ORE MINES FOR ENHANCEMENT OF IRON ORE PRODUCTION FROM 0.07 MTPA TO 1.0 MTPA OF OVER AN AREA 68.00 HA AT VILLAGE UNCHABALI & BALDA, JODA BLOCK, TAHASIL-BADBIL, SUB-DIVISION-CHAMPUA, DISTRICT-KEONJHAR OF OMC LTD. (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-11013/57/2014-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 MoEFCC 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 MoEFCC/ 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) 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.
- (vii) Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.
- (viii) 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 of 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.
- (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. Analysis of top soil for biological activity shall be done. The topsoil shall be used for land reclamation and plantation purpose.
- (ix) The slop study shall be done for waste. An undertaking in form of legal affidavit shall be submitted by the authorized signatory of OMC to this effect.
- (x) 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 Density Study.

(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.
- (vi) The Project Proponent shall develop a nursery within lease area towards plantation activity.

(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) 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.

- (iii) 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).
- (iv) 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.
- (v) 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.
- (vi) 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.

- (vii) 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.
- (viii) Occupational Health Hazards shall be identified for employees and surrounding villages. Centralized dedicated health check-up camps shall be set up with doctor having specialization in occupational health. An undertaking in form of a legal affidavit shall be submitted by the authorized signatory of OMC to develop a permanent occupational health centre within 2 years from opening of mine as stated in their compliance.
- (ix) Issues raised and recorded in proceedings of public hearing w.r.t. environment / pollution / CER shall be complied by the OMC 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.
- (iii) Project Proponent shall list CSR activities to be covered under this project. This shall not be overlapped with the activities carried out by the District Administration.

(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 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.
- (iv) 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.

- (v) 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.
- (vi) 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) 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.
- (viii) 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 GEETARANI MOHANTY FOR RAIKELA IRON ORE MINES FOR ENHANCEMENT OF IRON ORE PRODUCTION CAPACITY FROM 0.864 MTPA TO 2.99 MTPA ALONG WITH CRUSHING AND SCREENING FACILITY OVER AN MINING LEASE AREA OF 67.586 HA. AT VILLAGE – RAIKELA, TAHASIL - KOIRA, DISTRICT- SUNDARGARH – 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.