

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(IMPACT ASSESSMENT DIVISION)
NON-COAL MINING SECTOR

SUMMARY RECORD OF 21st MEETING OF THE COMMITTEE OF THE EXPERT APPRAISAL COMMITTEE FOR ENVIRONMENTAL APPRAISAL OF NON-COAL MINING PROJECTS CONSTITUTED UNDER THE EIA NOTIFICATION, 2006.

The 22nd EAC meeting of the Expert Appraisal Committee for Environmental Appraisal of Mining Projects (Non-Coal) of the Ministry of Environment, Forest and Climate Change was held during October 26-28, 2020 through video conference. The list of participants is annexed herewith. After login of the Committee Members through video conference link provided by NIC, discussion on each of the Agenda Items was taken up ad-seriatim.

Agenda Item 2.1. Mining of 2.8 LTPA of Sand, Bajri and Boulders in River Yamuna Lot No. 23/1 by M/s Garhwal Mandal Vikas Nigam Ltd. from mining lease area 30.035 Ha located at Village-Dumet, Tehsil-Vikashnagar, Distt-Dehradun, Uttarakhand. [File No. J-11015/125/2013-IA-II(M); Proposal No: IA/UK/MIN/18535/2013; Consultant: Grass Root Research & Creation India (P) Ltd.]-Re-Consideration of EC Regarding.

The proposal of M/s Garhwal Mandal Vikas Nigam Ltd. (GMVN) is for production of 2.8LTPA of Sand, Bajri and Boulders in River Yamuna Lot No. 23/1 from mining lease area 30.035 Ha located at Village-Dumet, Tehsil-Vikashnagar, Distt-Dehradun, Uttarakhand. The Project Proponent submitted that mining lease area is coming under Survey of India Topo-Sheet No 53F11 and falls between Latitude: 30° 30' 42.15" N to 30° 30' 40.55" N & Longitude: 77° 50' 22.59" E to 77° 51' 10.91" E.

2. The project falls under Schedule 1(a) of mining and is a Category-“B1” project as per S.O. 141(E) 15.01.2016. The project also lies within Doon Valley (Eco-Sensitive Area as notified under sub-section (2) of section 3 of the Environment (Protection) Act, 1986) and general condition is applicable for the project as per S.O. 1599(E) dated 25.06.2014 and thus it should be treated as Category ‘A’ Project as per EIA Notification 2006.

3. The Project Proponent applied for ToR on 26.04.2013 and submitted the Form-1 and Pre-Feasibility Report. The proposal was considered & recommended for prescribing Term of Reference in EAC Meeting held on 26th - 28th June, 2013 and ToR was issued on 16.09.2013.

4. The Proponent applied for grant of EC online vide proposal no. **IA/UK/MIN/18535/2013** on 04.04.2015 and submitted the EIA Report after conducting the Public Hearing. The Ministry asked to apply as per provision of S.O. 141(E) 15.01.2016 on 04.03.2016. The PP vide LR No 63/ Mining dated

21.04.2016 submitted that the proposal is a Category 'A' mines as per S.O 141(E) dated 15.01.2016 in cluster situation. Ministry vide letter dated 13.06.2017 asked PP to submit a) District Survey Report (DSR), b) Certificate from State Mines & Geology Department on the leases located within 500 meters of the said lease, c) KML file of the Mine Lease Area. PP replied the same on 21.04.2018. Ministry examined the proposal and on 04.05.2018 informed the PP that from the Cluster Certificate it is not clear that same has been calculated considering S.O 141(E) 15.01.2016 & S.O. 2269 (E) dated 1.07.2016. On the cover page of EIA Report period of study is not mentioned as required as per O.M No. J-20012/11/98-IA.II (M) dated 28.10.2004. EIA Report is not as per generic structure mentioned in Appendix-III of EIA Notification 2006. ToR point no 5 is not complied as mining policy and Environment policy are different. Copy of advertisement published in English Newspaper needs to be submitted. LoI was issued on 23.01.2013 and is valid for 5 years i.e. up to 22.01.2018 please provides the valid LoI. Clear copy of advertisement (Regional and English language) needs to be submitted. List of schedule-1 species duly authenticated by Forest Department needs to be submitted. Conservation Plan for schedule-1 species needs to be submitted. Illegible copies of all the annexures needs to be submitted. Certificate from Forest Department regarding distance of mining. The PP replied on 30.05.2018.

5. The proposal was then considered in EAC Meeting held on 21-22 June, 2018 wherein the EAC deferred the proposal and sought requisite information and the same was informed to PP on 02.07.2018.

6. The PP submitted the information online on 17.10.2019 and the proposal was placed then in EAC meeting held during 27-28 November, 2019 wherein Committee observed that complete information with respect to initial level of mining lease, replenishment study details, impact arising out of cluster scenario etc. is not addressed properly and consultant is not able to present the same during the meeting which is taken seriously by the Committee. The Committee was of the view that PP should re-submit the information after making necessary corrections and in the next EAC meeting the PP should accompany the expert from IIT-Roorkee, who has conducted the baseline survey and replenishment study. In addition to this impact arising due to cluster situation also needs to be accounted for in the study and propose necessary management plan, if any. The Committee therefore deferred the proposals and the same was communicated by Ministry on 20.12.2019.

7. PP submitted the reply vide letter no. 112/Dus/paach-01(2019-2020) dated 28.08.2020 online on 14.09.2020 which are as follows: -

- I) The Proponent should collect the baseline data in respect of initial level of the mining lease. For this permanent bench marks (BM) needs to be established at prominent location preferably close to mining leases in question and should have precisely known relationship to the level datum of the area, typically mean sea level. The entire mining lease should be divided suitably in the grids of 25**

Meter x 25 Meters with the help of sections across the width of river and along the direction of flow of the river. The levels (MSL & RL) of the corner point of each grid need to be recorded. Each Grid should be suitably numbered for identification. PP should identify grids which will be worked out and grids which will come under no mining zone i.e. safety barriers from the river bank, safety barrier at lease boundary, restrictions as per condition of LoI/Mining Lease deed, restriction as Mineral Concession Rule of the Concerned State, restrictions as per sustainable sand mining management guidelines 2016 and restriction as per direction of any Court or NGT. The PP should ascertain the level of the river bed with the help of sections drawn across the width of the rivers and along the direction of flow of the river and based on this define the depth of mining of each grid. The PP should provide a detailed map and table clearly showing the grid wise material availability, dimension of grid, location of grid (latitude & longitude of the corner points), level of grid (AMSL and RL), depth of mining in each grid, grids left under no mining zone etc.

- i. The collection of baseline data in respect of initial level of the mining lease has been done and incorporated in Modified Mining Plan and the same has been submitted.
- ii. The entire mining lease has been divided suitably in the grids of 25 Meter x 25 Meters with the help of sections across the width of river and along the direction of flow of the river. All the above points were considered and accordingly Surface Plan has been prepared submitted.
- iii. The levels (MSL & RL) of the corner point of each grid are recorded with Proper Nomenclature and also segregating the grids which will be worked out and grids which will come under no mining zone i.e. safety barriers from the river bank, safety barrier at lease boundary, restrictions as per condition of LoI/Mining Lease deed, restriction as Mineral Concession Rule of the Concerned State, restrictions as per sustainable sand mining management guidelines 2016 and restriction as per direction of any Court or NGT. All above Points are covered in the Grid Plan.
- iv. Section plans across the river and along the direction of the river has been prepared and based on that the Depth of each grid has been recorded along with the grid wise material availability, dimension of the grid, Location of the grid, Level of the grid, depth of mining in each grid, and grid left over as no mining Zone has been calculated. Detailed grid Plan and its calculations are submitted.

II) PP should suitably name each section line. Section Plan for both sections drawn across the river and along the direction of the river needs to be submitted. Each Section should have level on vertical axis and distance from the bank of river on horizontal axis. For the

section along the direction of the river the levels to be shown on vertical axis and distance from upstream to downstream should be shown on horizontal axis.

PP submitted that the level of River bed has been recorded with the help of Section plan across the river width (X sections) and along the river (L section) for both pre monsoon and Post monsoon. Each section line has level on vertical axis and distance from river bank on horizontal axis the L Section and X Sections is submitted.

III) The PP should prepare the modified Mining Plan based on the above survey. The information sought above needs to be a part of the mining plan. In the mining plan year wise production plan should be prepared in three plates for each year. Plat-1 show the mine working for the pre-monsoon period (1st APR-14th June), Plate-2 should show the status of the mine after the replenishment and no working should be proposed in this period (15th June-1st Oct) as the mining lease area needs to be left for the replenishment of the river bed mineral and plat-3 show the mine working after replenishment of the river bed i.e. post monsoon period (2nd Oct-31st March).

PP has submitted that copy of modified mining plan approved by Deputy Director, Geology and Mining Unit vide no. 753/उखं/मांप्लां dated 19.08.2019. PP submitted that survey has been conducted during Pre-Monsoon, Monsoon and Post Monsoon and based on that quantum of mineral has been assessed. PP has submitted Plate-1 Showing the mine working for Pre monsoon (1st April – 15th June, Plate-2 shows the status of the mine after the replenishment, where No Mining is Proposed in this period (15th June-1st Oct, Plate -3 shows the mine working after replenishment of the river bed i.e. post monsoon period (2nd Oct-31st March).

Observation of EAC: *The committee observed that the Consultant not able to replicate the information in the presentation as per the modified mining plan before the EAC.*

IV) PP should specifically mention the mining plan that in the subsequent scheme of mining/review of mining plan, the year wise data pertaining to replenishment study (all five years) shall be provided which include the level (AMSL & RL) of river bed recorded before and after the monsoon, year wise replenishment quantity, all plan & sections of the replenishment study for the past five years.

PP submitted that the year wise proposed production based on the quantum of replenishment has been assessed and incorporated in Modified Mining Plan. However, GMVN Ltd. will provide year wise data pertaining to replenishment study (all five years), which included the level (AMSL & RL) of river bed recorded before and after the monsoon,

year wise replenishment quantity, all plan & sections of the replenishment study for the past five years.

V) The PP should also submit a kml file wherein the above-mentioned grid plans is superimposed on the satellite imaginary.

PP has submitted the KML file wherein the above-mentioned grid plans is superimposed on the satellite imaginary

Observation of EAC: the KML submitted by PP is not clear and could not explain properly PP may resubmit with clear demarcations of the mine lease area.

VI) PP should also submit an undertaking to the effect that each year after the replenishment study the plan & section shall be submitted to concerned Department of Mining & Geology of the State for verification and official record.

PP has submitted an undertaking vide letter no. 900/दस/ड/ 2019 dated 31.01.2019 wherein it has mentioned that *“each year after the replenishment study, the plan & section shall be submitted to concern Department of Mining & Geology of the State for verification and official record.”*

VII) The methodology for conducting replenishment study needs to be mentioned in the modified mining plan. PP should ensure that plan and section that will be submitted to EAC should be in proper scale.

PP has submitted that as suggested, the mining Plan has been revised based on the replenishment study and detailed methodology has also been enclosed as in the Modified Mining Plan.

VIII) PP should ensure that relevant information as per ToR Conditions needs to be provided in the EIA Report.

PP has submitted that the revised EIA report has been prepared.

Observation of EAC: PP has submitted the Revised EIA/EMP report however the annexures of the EIA report did not submitted by the PP and also noted that there is some deviations w.r.t. water requirement, waste management, method of mining e.t.c thus PP shall rectify the errors and need to submit the revised report.

IX) PP is having number of mining leases and Environment Policy needs to be revised to address various Environmental Issues. The number of manpower to be engaged for Environmental Monitoring Cell in not clear. PP should clearly mention the designation and number of person to be engaged for Environment Monitoring Cell.

The EMC will be set up for this mine only or for all the mining lease of the GMVN in the area.

PP has submitted that the EMC has been setup for all the Riverbed Mining projects of GMVN Ltd. as Higher Management (i.e. GM Mining, Evn. Expert, Mining In charge, DFO and PRO) of the EMC will remain same for all the mining leases of GMVN Ltd. However, Sector In-charge, Administrator and Surveyor will be changed according to the location of Project Site/Lease Area. Lower Management (i.e. Sector In charge, Administrator and Surveyor) will be appointed for the entire Tehsil/Sector and they will be responsible to look after the all the mining leases falls under that Tehsil/Sector. PP has submitted Environmental Policy vide letter no. 362/खनन-(2018-19) Dated 25.06.2018.

X) The PP should clearly bring out the impact on environment due to cluster situation if any. Air Quality modeling needs to be done in AERMOD software both for area and line source.

PP has submitted air quality modeling using AERMOD software for both area and line source has been done and submitted.

Observation of EAC: *The committee is of the view that the PP did not address the impact of transportation in the cluster scenario. The committee noted that the cumulative production capacity of 4,80,600 TPA (Cluster of mines within 500m radius) was not considered for prediction of the impact of air quality. The Member Secretary also pointed out that the PP did not cover the Cumulative Impact assessment of all mines in the study area.*

XI) The transportation route needs to be clearly provided in the EIA Report with other details such as width of road, length of road, type of road, impact due to transportation on the vegetation on the both side of the road, frequency of maintenance of the road, amount proposed for maintenance of the road, compensation to the land owners effected by transportation of mineral etc.

PP has submitted that the sand, *bajri* & boulder excavated from the lease area will be loaded directly into trucks and transported to the concerned market via near village Dumet by an unmetalled road of about 320m and finally meets National Highway 123 by a metalled road having length of 1.55 Km and width of 8m. PP has submitted that No. of trucks deployed per day will be 125 trucks due to which increase in PCU per day will be 375 PCUs and on considering both loaded & empty trucks increase in PCU per hour will be 750 PCUs. PP has submitted that due to additional traffic load on village roads LOS gets modified from A to B while for Highway it will remain same. PP has also submitted that congestion on the road will be increased as the LOS will be increased, air quality will be affected due to dust emission on haul road, increase in percentage of air quality parameters will get affected, chance of accident will increase and

haul road will get damaged. PP has submitted that to avoid the adverse effect on the concerned roads due to additional loads, roads will be repaired regularly every year before start of mining and maintained in good conditions. PP has submitted that an amount of Rs. 2.0 Lacs/annum has been proposed for maintenance of roads and will be done on every six months interval. PP has submitted that a supervisor will be appointed to regulate the traffic movement near the site, speed breakers will be constructed accident prone areas to calm the traffic and its speed, signage will be erected at the sensitive & precarious places to caution or provide information to road users, passways will be made to ensure easy movements of trucks on the narrow roads, water sprinkling on haul road will be done to reduce dust emission from vehicle movement and to reduce the impact on vegetation along both the road side, overloading will not be permitted and trucks will be covered with tarpaulin, a committee has been formed for study of traffic headed by chairman.

Observation of EAC: *The Committee is of the view that the Consultant did not able to explain the no .of the loading points in the ML area, transportation route and truck capacity.*

XII) Detailed occupational plan needs to be submitted with budget allocation. The Committee was of the view that being handling the large number of mines the GMVN should set up a dedicated cell for the occupational health surveillance.

PP has submitted that there is no environmental pollution due to proposed mining as it is proposed to be manual extraction of sand/ Bajri on the banks of river. Hence there will be no major occupational health hazards. PP has proposed budget of total Rs. 4.66 Lakhs for occupational health & safety which includes Rs. 0.60 Lakhs for assistance to set up a temporary health center during the lease tenure, Rs. 0.20 Lakhs to provide free health checkups & medicines to the nearby villagers of the project site, Rs. 0.50 lakhs for awareness campaigns regarding health issues in the nearby villages, Rs. 3.16 Lakhs for health checkups & medicine to workers. PP has submitted that money for occupational health issues will be deposited with mining trust according to Mines and Mineral (Development and Regulation) Act 1957 dated 28th Dec, 1957 and Uttarakhand District Mineral Foundation Trust, 2017 dated 17th November, 2017.

XIII) The budget of EMP needs to be revised as the Environmental Monitoring cost is not included in the EMP Budget.

PP submitted that the budget of EMP has been revised incorporating the Environmental Monitoring cost. PP has submitted that total capital cost of EMP during five years shall be Rs. 64.80 Lakh which will include Rs. 7.5 Lakh as Capital Cost and Rs. 57.30 Lakh (Rs. 11.46 Lakh x 5) as

recurring cost. PP has submitted that Rs. 2.0 Lakh (capital) & Rs. 4.46 Lakh (recurring) shall be used for medical camps and awareness program, Rs. 0.05 Lakh (recurring) for importance of wildlife (awareness), Rs. 0.5 Lakh (capital) & Rs. 0.1 Lakh (recurring) for Sign boards, information boards, Rs. 1.0 Lakh (capital) & Rs. 2.0 Lakh (recurring) for repairing and maintenance of roads, Rs. 1.2 Lakh (recurring) for water sprinkling, Rs. 4.0 Lakh (capital) & Rs. 1.25 Lakh (recurring) for plantation, Rs. 0.5 Lakh (recurring) for maintenance of check dams and retention wall, Rs. 0.3 Lakh (recurring) for restoration of banks, Rs. 0.5 Lakh (recurring) for air pollution monitoring, Rs. 0.5 Lakh (recurring) for water pollution monitoring, Rs. 0.3 Lakh (recurring) for soil pollution monitoring, Rs. 0.3 Lakh (recurring) for noise pollution monitoring.

XIV)PP should submit a plan clearly mention the area that will be covered under plantation.

PP submitted that total 2500 trees shall be planted which will include 1033 plants in area of 0.93 Ha (3m width and 1550m length) will be covered along the road side, 972 plants in area of 2.43 Ha (10m width and 4450m length) along both the sides of river banks and 500 plants of Fruit Plants will be distributed to Villager, Govt. School, College Campus and Panchayat area during 1st year. PP submitted that total Expenditure for Plantation in Five Years will be Rs. 9.0 Lakhs which will include Capital cost of Rs. 5.0 Lakhs (Rs.100/sapling) of 2500 plants during 1st year and recurring cost of Rs. 1.70 Lakhs during 2nd to 5th year. PP also submitted that the money for plantation will be deposited with mining trust according to Uttarakhand District Mineral Foundation Trust, 2017 dated 17th November, 2017 and plantation will be done by the trust and will be decided by the concerning DFO. PP submitted that saplings of Aam, Jamun, Neem, Popular, Sisam, Siris, Gulmohar, Imli, Lichi, Bael, Ber, Amla shall be planted and watering will be regularly done at least thrice a week. Saplings will be regularly monitored and remedial actions will be undertaken as required. During this five years period, casualties will be replaced at the beginning of each monsoon.

XV)Details of the instruction of Hon'ble High Court if any for the mining close to bridge.

PP has submitted that there is a restriction of 1 km safety barrier of upstream and downstream side from the bridge as per the High Court Order. Mining is permitted only after leaving 1 km safety barrier/zone from bridges.

8. The proposal was again considered in 22nd EAC meeting held during 26-28 October, 2020. An expert from IIT-Roorkee, Dr Garg, accompanied the PP during the EAC meeting and detailed about replenishment study. After detailed deliberation the Committee is of the view that PP should re-submit the information after making necessary corrections and in the next EAC meeting the PP should accompany the expert from IIT-Roorkee, who has conducted the

baseline survey and replenishment study. In addition to this impact arising due to cluster situation also needs to be accounted for in the study and propose necessary management plan, if any. The Committee therefore deferred the proposals and also asked the PP to submit the following information along with the information sought in the EAC meeting held on November 28, 2019:

- i. A detailed study on Silt management covering its quantity, separation and deposition/dumping in the river bed or on the banks for plantations. PP also should do assessment of its impact on river ecology.
- ii. The Committee deliberated the sections submitted by PP and noted that it is not clear from the section that till what lateral and depth extents the material will be excavated. Thus, the PP is required to submit the sections clearly marking the lateral and depth extents of present ground profile as well as proposed excavation profile at individual sections.
- iii. The PP needs to submit a database in structured tabulated form clearly mentioning the nomenclature of the section line, latitude and longitude of both the extents of section line, chianages and respective levels (RL, AMSL) of all the points taken on that section line.
- iv. Thus with the help of existing ground profile and proposed extents of excavation considering the stipulations of lateral extents of sustainable sand mining guidelines, as mentioned above, The PP shall estimate the proposed quantum of excavation in tonnages with the help of Specific Gravity verified by the State DMG between every two consecutive sections. Such estimation shall be furnished by the PP in tabular form which includes the nomenclature of section lines, area proposed for excavation, distance between two consecutive section lines, volume, specific gravity, tonnage of the mineral, maximum depth extent from existing ground profile. Respective plans shall also be submitted clearly marking the area to be excavated. In addition to this a composite plan mentioning the above proposed excavation zones for the entire mine lease area also needs to be submitted. Thus PP needs to submit a plan clearly showing the area to be put in under excavation and no excavation zones. Respective KML files of such lateral extents of excavation and no excavation zone within ML shall also be submitted by the PP.
- v. PP needs to submit a plan clearly mentioning the width of river and Bridges, lease boundaries, area left under safety zones as prescribed as per Sustainable Sand Mining Management Guidelines, 2016 and 2020, as per statutory requirements of Hon'ble High Court.
- vi. PP has to submit the systematic design of dumps including dump location and its impact on ecosystem (Silt deposition).
- vii. PP needs to ascertain the impact of transportation and details of transportation route viz. (length of the road, type of road, collection

- point (loading/unloading), no. of trips, capacity of the truck, no. of trucks, passing through the village or habitation) and mitigative measures to be taken for abatement of pollution due to transportation. The impacts study shall consider along with the other mine lease area also.
- viii. PP has to mention the actual width of the green belt development as per the profile of the river.
 - ix. PP has to give justification for selection of ambient air quality monitoring stations and PP needs to submit the air quality modeling based on the mining activity proposed and the cluster of the mines in the study area. The control case and worst case scenario needs to be demonstrated with controlling factor and GLCs values for all the pollutants needs to be mentioned clearly. The input parameters and mathematical equations along with the reference used for the modeling needs to be submitted to the Ministry.
 - x. PP has to submit the details of dedicated cell for the occupational health surveillance as sought by the EAC Committee.
 - xi. PP needs to submit the revised EIA/EMP report along with the Annexures with proper reference and indexing. PP needs to submit the information on the PARIVESH portal to the Ministry.
 - xii. List of Schedule-I species within 10 km radius of mine lease area duly authenticated by the State Forest department along with the Conservation.
 - xiii. District Survey Report as per the Ministry's notification S.O.3611(E) dated 25th July, 2018.

Agenda item 2.2. Mining of 85,000 TPA of Sand, Bajri and Boulders in River Ton Lot No. 3/13 by M/s Garhwal Mandal Vikas Nigam Ltd. from mining lease area 6.0 Ha located at Village-Banshiwala, Tehsil-Vikashnagar, Distt-Dehradun, Uttarakhand. [File No. J-11015/88/2013-IA-II(M); Proposal No: IA/UK/MIN/18419/2013; Consultant: Grass Root Research & Creation India (P) Ltd.] -EC Regarding

The proposal of M/s Garhwal Mandal Vikas Nigam Ltd. (GMVN) is for production of 85,000 TPA of Sand, Bajri and Boulders in River Yamuna Lot No. 3/13 from mining lease area 6.0 Ha located at Village-Banshiwala, Tehsil-Vikashnagar, Distt-Dehradun, Uttarakhand. The Project Proponent submitted that mining lease area is coming under Survey of India Topo-Sheet No 53F14 and falls between Latitude: 30° 20' 29.19" N to 30° 20' 20.58" N & Longitude: 77° 53' 33.35" E to 77° 53' 49.23" E.

2. The project falls under Schedule 1(a) of mining and is a Category-"A" project as per S.O. 141(E) 15.01.2016 as the Cluster Area is 52.931 Ha and should be appraised by SEIAA, Uttarakhand. Further as the SEIAA in Uttarakhand is not functional the project is to be appraised by EAC. The project also lies in Doon Valley (Eco-Sensitive Area as notified under sub-section (2) of section 3 of the Environment (Protection) Act, 1986) and general condition is

applicable for the project as per S.O. 1599(E) dated 25.06.2014 and thus should be treated as Category 'A' Project as per EIA Notification 2006. The Proponent submitted that interstate boundary is also within 8 Km from the project location.

3. The Project Proponent applied for ToR on 12.03.2013 and submitted the Form-1 and Pre-Feasibility Report. The proposal was considered & recommended for prescribing Term of Reference in EAC Meeting held on 15th 17th May, 2013 and ToR was issued on 16.07.2013.

4. The Proponent submitted the EIA Report after conducting the Public Hearing online vide proposal no IA/UK/MIN/18419/2013 on 04.04.2015 and proposal was considered in EAC Meeting held on 25th -27th August,2015 wherein the Committee deferred the proposal due to want of additional information.

5. Ministry vide letter dated 23.09.2015 asked PP to submit the information as sought by Committee. PP submitted the information vide letter dated 21.04.2016 where Ministry noted that Cluster Certificate as per S.O 141(E) 15.01.2016 & S.O. 2269 (E) dated 01.07.2016 needs to be submitted. On the cover page of EIA Report period of study is not mentioned as required as per O.M No. J-20012/11/98-IA.II (M) dated 28.10.2004. EIA Report is not as per generic structure mentioned in Appendix-III of EIA Notification 2006. Copy of advertisement published in English Newspaper needs to be submitted. LoI was issued on 23.01.2013 and is valid for 5 years i.e. up to 22.01.2018 please provides the valid LoI. Clear copy of advertisement (Regional and English language) needs to be submitted. List of schedule-1 species duly authenticated by Forest Department needs to be submitted. Conservation Plan for schedule-1 species needs to be submitted. Certificate from Forest Department regarding distance of mining lease from the protected area needs to be submitted. A letter from State Government to the effect that District Survey Report is prepared as per Appendix-X of S.O 141(E) dated 15.01.2016 and the same was informed to PP on 04.05.2018.

6. PP then replied on 29.05.2018 and the proposal was considered in the EAC meeting held during 21-22 June, 2018 wherein the Committee **recommended** the project for the grant of Environmental Clearance along with additional conditions as specific to the project with the conditions as mentioned in Sustainable Sand Mining Management Guidelines 2016, **subject to submission of information** and Ministry vide letter dated 11.07.2018 asked PP to submit the same.

7. PP submitted the information on 26.10.2019 and the proposal was placed in the EAC meeting held during 22-24 June, 2020 wherein PP did not attend the meeting therefore Committee deferred the proposal. PP vide its letter No. 113/Dus/Paach-01(2019-2020) dated 28.08.2020 submitted the information online on 14.09.2020. The proposal was considered in the EAC in its meeting held on 26-28 October, 2020.

I. Conservation plan for all schedule-1 & II species present in the core and buffer zone.

PP submitted that there is no Schedule I & II species found in the core zone of the proposed project. However, 2 Schedule I and 5 Schedule II species found in the buffer zone. Conservation Plan for Schedule I & II species has been prepared and approved by PCCF (Wildlife)/CWLW, Uttarakhand vide letter 1378/12-1 dated 09.10.2019 and the same is submitted.

II. Baseline Survey of the Initial Level of the mining lease in the following manner: The Proponent should collect the baseline data in respect of initial level of the mining lease. For this permanent bench marks (BM) needs to be established at prominent location preferably close to mining leases in question and should have precisely known relationship to the level datum of the area, typically mean sea level. The entire mining lease should be divided suitably in the grids of 25 Meter x 25 Meters with the help of sections across the width of river and along the direction of flow of the river. The levels (MSL & RL) of the corner point of each grid need to be recorded. Each Grid should be suitably numbered for identification. PP should identify grids which will be worked out and grids which will come under no mining zone i.e. safety barriers from the river bank, safety barrier at lease boundary, restrictions as per condition of LoI/Mining Lease deed, restriction as Mineral Concession Rule of the Concerned State, restrictions as per sustainable sand mining management guidelines 2016 and restriction as per direction of any Court or NGT. The PP should ascertain the level of the river bed with the help of sections drawn across the width of the rivers and along the direction of flow of the river and based on this define the depth of mining of each grid. The PP should provide a detailed map and table clearly showing the grid wise material availability, dimension of grid, location of grid (latitude & longitude of the corner points), level of grid (AMSL and RL), depth of mining in each grid, grids left under no mining zone etc.

- i. The collection of baseline data in respect of initial level of the mining lease has been done and incorporated in Modified Mining Plan and the same has been submitted.
- ii. The entire mining lease has been divided suitably in the grids of 25 Meter x 25 Meters with the help of sections across the width of river and along the direction of flow of the river. All the above points were considered and accordingly Surface Plan has been prepared and submitted.
- iii. The levels (MSL & RL) of the corner point of each grid are recorded with Proper Nomenclature and also segregating the grids which will

be worked out and grids which will come under no mining zone i.e. safety barriers from the river bank, safety barrier at lease boundary, restrictions as per condition of LoI/Mining Lease deed, restriction as Mineral Concession Rule of the Concerned State, restrictions as per sustainable sand mining management guidelines 2016 and restriction as per direction of any Court or NGT. All above Points are covered in the Grid Plan.

- iv. Section plans across the river and along the direction of the river has been prepared and based on that the Depth of each grid has been recorded along with the grid wise material availability, dimension of the grid, Location of the grid, Level of the grid, depth of mining in each grid, and grid left over as no mining Zone has been calculated. Detailed grid Plan and its calculations are submitted.

III. PP should suitably name each section line. Section Plan for both sections drawn across the river and along the direction of the river needs to be submitted. Each Section should have level on vertical axis and distance from the bank of river on horizontal axis. For the section along the direction of the river the levels to be shown on vertical axis and distance from upstream to downstream should be shown on horizontal axis.

PP submitted that the level of River bed has been recorded with the help of Section plan across the river width (X sections) and along the river (L section) for both pre monsoon and Post monsoon. Each section line have level on vertical axis and distance from river bank on horizontal axis. the L Section and X Sections has been submitted.

IV. The PP should prepare the modified Mining Plan based on the above survey. The information sought above needs to be a part of the mining plan. In the mining plan year wise production plan should be prepared in three plates for each year. Plat-1 show the mine working for the pre-monsoon period (1st APR-14th June), Plate-2 should show the status of the mine after the replenishment and no working should be proposed in this period (15th June-1st Oct) as the mining lease area needs to be left for the replenishment of the river bed mineral and plat-3 show the mine working after replenishment of the river bed i.e. post monsoon period (2nd Oct-31st March).

PP has submitted that copy of modified mining plan approved by Deputy Director, Geology and Mining Unit vide no. 754/उखं/मांलां dated 19.08.2019. PP submitted that survey has been conducted during Pre-Monsoon, Monsoon and Post Monsoon and based on that quantum of mineral has been assessed. PP has submitted Plate-1 Showing the mine working for Pre monsoon (1st April – 15th June), Plate-2 shows the status of the mine after the replenishment, where No Mining is Proposed in this period (15th June-1st Oct Plate-3 shows the mine working after

replenishment of the river bed i.e. post monsoon period (2nd Oct-31st March).

- V. PP should specifically mention in the mining plan that in the subsequent scheme of mining/review of mining plan, the year wise data pertaining to replenishment study (all five years) shall be provided which include the level (AMSL & RL) of river bed recorded before and after the monsoon, year wise replenishment quantity, all plan & sections of the replenishment study for the past five years.**

PP submitted that the year wise proposed production based on the quantum of replenishment has been assessed and incorporated in Modified Mining Plan. However, GMVN Ltd. will provide year wise data pertaining to replenishment study (all five years), which included the level (AMSL & RL) of river bed recorded before and after the monsoon, year wise replenishment quantity, all plan & sections of the replenishment study for the past five years.

- VI. The PP should also submit a kml file wherein the above-mentioned grid plans is superimposed on the satellite imaginary.**

PP submitted that the KML file wherein the above-mentioned grid plans is superimposed on the satellite imaginary.

Observation of EAC: the KML submitted by PP is not clear and could not explain properly PP may resubmit with clear demarcations of the mine lease area.

- VII. PP should also submit an undertaking to the effect that each year after the replenishment study the plan & section shall be submitted to concerned Department of Mining & Geology of the State for verification and official record.**

PP has submitted an undertaking vide letter no. 900/दस/३/ 2019 dated 31.01.2019 wherein it has mentioned that *“each year after the replenishment study, the plan & section shall be submitted to concern Department of Mining & Geology of the State for verification and official record.”*

- VIII. The methodology for conducting replenishment study needs to be mentioned in the modified mining plan. PP should ensure that plan and section that will be submitted to EAC should be in proper scale.**

PP submitted that the above point had been complied and Modified Mining Plan has been submitted.

8. The proposal was again considered in 22nd EAC meeting held during 26-28 October, 2020. An expert from IIT-Roorkee, Dr Garg, accompanied the

PP during the EAC meeting and detailed about replenishment study. After detailed deliberation the Committee is of the view that PP should re-submit the information after making necessary corrections and in the next EAC meeting the PP should accompany the expert from IIT-Roorkee, who has conducted the baseline survey and replenishment study. In addition to this impact arising due to cluster situation also needs to be accounted for in the study and propose necessary management plan, if any. The Committee therefore deferred the proposals and also asked the PP to submit the following information along with the information sought in the EAC meeting held on November 28, 2019:

- i. A detailed study on Silt management covering its quantity, separation and deposition/dumping in the river bed or on the banks for plantations. PP also should do assessment of its impact on river ecology.
- ii. The Committee deliberated the sections submitted by PP and noted that it is not clear from the section that till what lateral and depth extents the material will be excavated. Thus, the PP is required to submit the sections clearly marking the lateral and depth extents of present ground profile as well as proposed excavation profile at individual sections.
- iii. The PP needs to submit a database in structured tabulated form clearly mentioning the nomenclature of the section line, latitude and longitude of both the extents of section line, chianages and respective levels (RL, AMSL) of all the points taken on that section line.
- iv. Thus with the help of existing ground profile and proposed extents of excavation considering the stipulations of lateral extents of sustainable sand mining guidelines, as mentioned above, The PP shall estimate the proposed quantum of excavation in tonnages with the help of Specific Gravity verified by the State DMG between every two consecutive sections. Such estimation shall be furnished by the PP in tabular form which includes the nomenclature of section lines, area proposed for excavation, distance between two consecutive section lines, volume, specific gravity, tonnage of the mineral, maximum depth extent from existing ground profile. Respective plans shall also be submitted clearly marking the area to be excavated. In addition to this a composite plan mentioning the above proposed excavation zones for the entire mine lease area also needs to be submitted. Thus PP needs to submit a plan clearly showing the area to be put in under excavation and no excavation zones. Respective KML files of such lateral extents of excavation and no excavation zone within ML shall also be submitted by the PP.
- v. PP needs to submit a plan clearly mentioning the width of river and Bridges, lease boundaries, area left under safety zones as prescribed as per Sustainable Sand Mining Management Guidelines, 2016 and 2020, as per statutory requirements of Hon'ble High Court.

- vi. PP has to submit the systematic design of dumps including dump location and its impact on ecosystem (Silt deposition).
- vii. PP needs to ascertain the impact of transportation and details of transportation route viz. (length of the road, type of road, collection point (loading/unloading), no. of trips, capacity of the truck, no. of trucks, passing through the village or habitation) and mitigative measures to be taken for abatement of pollution due to transportation. The impacts study shall consider along with the other mine lease area also.
- viii. PP has to mention the actual width of the green belt development as per the profile of the river.
- ix. PP has to give justification for selection of ambient air quality monitoring stations and PP needs to submit the air quality modeling based on the mining activity proposed and the cluster of the mines in the study area. The control case and worst case scenario needs to be demonstrated with controlling factor and GLCs values for all the pollutants needs to be mentioned clearly. The input parameters and mathematical equations along with the reference used for the modeling needs to be submitted to the Ministry.
- x. PP has to submit the details of dedicated cell for the occupational health surveillance as sought by the EAC Committee.
- xi. PP needs to submit the revised EIA/EMP report along with the Annexures with proper reference and indexing. PP needs to submit the information on the PARIVESH portal to the Ministry.
- xii. List of Schedule-I species within 10 km radius of mine lease area duly authenticated by the State Forest department along with the Conservation.
- xiii. District Survey Report as per the Ministry's notification S.O.3611(E) dated 25th July, 2018.
- xiv. PP has submitted the Revised EIA/EMP report along with the annexures of the EIA report and also noted that there is some deviations w.r.t. water requirement, waste management, method of mining e.t.c thus PP shall rectify the errors and need to submit the revised report.

Agenda Item 2.3 Mining of 3.3 LTPA of Sand, Bajri and Boulders in River Yamuna Lot No.21/2 by M/s Garhwal Mandal Vikas Nigam Ltd. from mining lease area 34.940 Ha located at Village-Dhakrani, Tehsil-Vikashnagar, Distt-Dehradun, Uttarakhand. [File No. J-11015/137/2013-IA-II(M); Proposal No: IA/UK/MIN/18558/2013; Consultant: Grass Root Research & Creation India (P) Ltd.]-EC Regarding

The proposal of M/s Garhwal Mandal Vikas Nigam Ltd. (GMVN) is for production of 3.3LTPA of Sand, Bajri and Boulders in River Yamuna Lot No. 21/2 from mining lease area 34.940 Ha located at the Village-Dhakrani, Tehsil-Vikashnagar, Distt-Dehradun, Uttarakhand. The Project Proponent submitted that mining lease area is coming under Survey of India Topo-Sheet No 53F11

and falls between Latitude: 30° 28' 3.21" N to 30° 27' 16.24" N & Longitude: 77° 42' 59.22" E to 77° 42' 4.73" E.

2. The project falls under Schedule 1(a) of mining and is a Category-"A" project as per EIA notification 14th September 2006 (amended time to time) as the general condition is applicable for the project as the Aasan Conservation Reserve is at a distance of 2.4 KM from the mining lease area. The project also lies in Doon Valley (Eco-Sensitive Area as notified under sub-section (2) of section 3 of the Environment (Protection) Act, 1986).

3. The Project Proponent applied online on 08.05.2013 vide proposal no. IA/UK/MIN/18558/2013 for prescribing Term of Reference (ToR) and submitted the Form-1 and Pre-Feasibility Report. The proposal was considered & recommended for prescribing Term of Reference in EAC Meeting held on 26th -28th June, 2013 and ToR was issued on 16.09.2013.

4. The Proponent applied for grant of EC online on 02.06.2015 vide proposal no. IA/UK/MIN/18419/2013 and submitted the EIA Report after conducting the Public Hearing. The Ministry then asked to apply as per provision of S.O. 141(E) 15.01.2016 on 04.03.2016. The PP vide LR No 63/ Mining dated 27.04.2016 submitted that the proposal is a Category 'A' mines as per S.O 141(E) dated 15.01.2016 in cluster situation. The proposal was delisted on 25.09.2017 and was relisted on PARIVESH Portal on 09.04.2018 where Ministry examined and on 04.05.2018 informed the PP that Cluster Certificate as per S.O 141(E) 15.01.2016 & S.O. 2269 (E) dated 1.07.2016 needs to be submitted. On the cover page of EIA Report period of study is not mentioned as required as per O.M No. J-20012/11/98-IA.II (M) dated 28.10.2004. EIA Report is not as per generic structure mentioned in Appendix-III of EIA Notification 2006. Copy of advertisement published in English Newspaper needs to be submitted. LoI was issued on 23.01.2013 thus copy of valid LOI to be submitted. Clear copy of advertisement (Regional and English language) needs to be submitted. List of schedule-1 species duly authenticated by Forest Department needs to be submitted. Conservation Plan for schedule-1 species needs to be submitted. Certificate from Forest Department regarding distance of mining lease from the protected area needs to be submitted. A letter from State Government to the effect that District Survey Report is prepared as per Appendix-X of S.O 141(E) dated 15.01.2016 and it is a final DSR needs to be submitted. PP replied on 29.05.2018 and the proposal was placed in EAC Meeting held during 21-22 June, 2018 wherein in Committee deferred the proposal for want of additional information. Ministry Vide letter dated 11.07.2018 asked PP to submit the information. The PP submitted the information online on 17.10.2019 and the proposal was placed in EAC meeting held during 27-28 November, 2019 wherein the Committee observed that complete information with respect to initial level of mining lease, replenishment study details, impact arising out of cluster scenario etc. is not addressed properly and consultant is not able to present the same during the meeting which is taken seriously by the Committee. The Committee was of the view that PP should re-submit the information after making necessary corrections and in

the next EAC meeting the PP should accompany the expert from IIT-Roorkee, who has conducted the baseline survey and replenishment study. In addition to this impact arising due to cluster situation also needs to be accounted for in the study and propose necessary management plan, if any. PP then vide its letter dated 28.08.2020 submitted the point-wise information online 14.09.2020 which is as follows: -

I. The Proponent should collect the baseline data in respect of initial level of the mining lease. For this permanent bench marks (BM) needs to be established at prominent location preferably close to mining leases in question and should have precisely known relationship to the level datum of the area, typically mean sea level. The entire mining lease should be divided suitably in the grids of 25 Meter x 25 Meters with the help of sections across the width of river and along the direction of flow of the river. The levels (MSL & RL) of the corner point of each grid need to be recorded. Each Grid should be suitably numbered for identification. PP should identify grids which will be worked out and grids which will come under no mining zone i.e. safety barriers from the river bank, safety barrier at lease boundary, restrictions as per condition of LoI/Mining Lease deed, restriction as Mineral Concession Rule of the Concerned State, restrictions as per sustainable sand mining management guidelines 2016 and restriction as per direction of any Court or NGT. The PP should ascertain the level of the river bed with the help of sections drawn across the width of the rivers and along the direction of flow of the river and based on this define the depth of mining of each grid. The PP should provide a detailed map and table clearly showing the grid wise material availability, dimension of grid, location of grid (latitude & longitude of the corner points), level of grid (AMSL and RL), depth of mining in each grid, grids left under no mining zone etc.

- i. The collection of baseline data in respect of initial level of the mining lease has been done and incorporated in Modified Mining Plan and the same has been submitted.
- ii. The entire mining lease has been divided suitably in the grids of 25 Meter x 25 Meters with the help of sections across the width of river and along the direction of flow of the river. All the above points were considered and accordingly Surface Plan has been prepared.
- iii. The levels (MSL & RL) of the corner point of each grid are recorded with Proper Nomenclature and also segregating the grids which will be worked out and grids which will come under no mining zone i.e. safety barriers from the river bank, safety barrier at lease boundary, restrictions as per condition of LoI/Mining Lease deed, restriction as Mineral Concession Rule of the Concerned State, restrictions as per sustainable sand mining management

guidelines 2016 and restriction as per direction of any Court or NGT. All above Points are covered in the Grid Plan.

- iv. Section plans across the river and along the direction of the river has been prepared and based on that the Depth of each grid has been recorded along with the grid wise material availability, dimension of the grid , Location of the grid, Level of the grid, depth of mining in each grid, and grid left over as no mining Zone has been calculated. Detailed grid Plan and its calculations has been submitted.

II. PP should suitably name each section line. Section Plan for both sections drawn across the river and along the direction of the river needs to be submitted. Each Section should have level on vertical axis and distance from the bank of river on horizontal axis. For the section along the direction of the river the levels to be shown on vertical axis and distance from upstream to downstream should be shown on horizontal axis.

PP submitted that the level of River bed has been recorded with the help of Section plan across the river width (X sections) and along the river (L section) for both pre monsoon and Post monsoon. Each section line have level on vertical axis and distance from river bank on horizontal axis. PP has submitted the L Section and X Sections.

III. The PP should prepare the modified Mining Plan based on the above survey. The information sought above needs to be a part of the mining plan. In the mining plan year wise production plan should be prepared in three plates for each year. Plat-1 show the mine working for the pre-monsoon period (1st APR-14th June), Plate-2 should show the status of the mine after the replenishment and no working should be proposed in this period (15th June-1st Oct) as the mining lease area needs to be left for the replenishment of the river bed mineral and plat-3 show the mine working after replenishment of the river bed i.e. post monsoon period (2nd Oct-31st March).

PP has submitted that copy of modified mining plan approved by Deputy Director, Geology and Mining Unit vide no. 755/उ०ख०/मा०प्ला० dated 19.08.2019. PP has submitted that Survey has been conducted during Pre-Monsoon, Monsoon and Post Monsoon and based on that quantum of mineral has been assessed. PP has submitted Plate-1 Showing the mine working for Pre monsoon (1st April –15th June), Plate-2 shows the status of the mine after the replenishment, where No Mining is Proposed in this period (15th June-1st Oct), Plat-3 show the mine working after replenishment of the river bed i.e. post monsoon period (2nd Oct-31st March).

IV. PP should specifically mention in the mining plan that in the subsequent scheme of mining/review of mining plan, the year wise data pertaining to replenishment study (all five years) shall be provided which include the level (AMSL & RL) of river bed recorded before and after the monsoon, year wise replenishment quantity, all plan & sections of the replenishment study for the past five years.

PP has submitted that the year wise proposed production based on the quantum of replenishment has been assessed and incorporated in Modified Mining Plan. However, GMVN Ltd. will provide year wise data pertaining to replenishment study (all five years), which included the level (AMSL & RL) of river bed recorded before and after the monsoon, year wise replenishment quantity, all plan & sections of the replenishment study for the past five years.

V. The PP should also submit a kml file wherein the above-mentioned grid plans is superimposed on the satellite imaginary.

PP has submitted that KML file wherein the above-mentioned grid plans is superimposed on the satellite imaginary.

Observation of EAC: the KML submitted by PP is not clear and could not explain properly PP may resubmit with clear demarcations of the mine lease area.

VI. PP should also submit an undertaking to the effect that each year after the replenishment study the plan & section shall be submitted to concerned Department of Mining & Geology of the State for verification and official record.

PP has submitted an undertaking vide letter no. 900/दस/३/ 2019 dated 31.01.2019 wherein it has mentioned that *“each year after the replenishment study, the plan & section shall be submitted to concern Department of Mining & Geology of the State for verification and official record.”*

VII. The methodology for conducting replenishment study needs to be mentioned in the modified mining plan. PP should ensure that plan and section that will be submitted to EAC should be in proper scale.

PP has submitted that as suggested, the mining Plan has been revised based on the replenishment study and detailed

methodology has also been enclosed as in the Modified Mining Plan.

VIII. PP should ensure that relevant information as per ToR Conditions needs to be provided in the EIA Report.

PP has submitted that the revised EIA report has been prepared and submitted.

Observation of EAC: PP has submitted the Revised EIA/EMP report however the annexures of the EIA report did not submitted by the PP and also noted that there is some deviations w.r.t. water requirement, waste management, method of mining e.t.c thus PP shall rectify the errors and need to submit the revised report.

IX. PP should clearly mention the designation and number of person to be engaged for Environmental Monitoring Cell. The EMC will be set up for this mine only or for all the mining lease of the GMVN in the area.

PP has submitted that the EMC has been setup for all the Riverbed Mining projects of GMVN Ltd. as Higher Management (i.e. GM Mining (PCS officer), Evn. Expert (Retd. IFS), Mining Incharge, DFO and PRO) of the EMC will remain same for all the mining leases of GMVN Ltd. However, Sector In-charge, Administrator and Surveyor will be changed according to the location of Project Site/Lease Area. Lower Management (i.e. Sector Incharge, Administrator and Surveyor) will be appointed for the entire Tehsil/Sector and they will be responsible to look after the all the mining leases falls under that Tehsil/Sector.

X. The PP should clearly bring out the impact on environment due to cluster situation if any. Air Quality modeling needs to be done in Aermode software both for area and line source.

PP has submitted air quality modeling using Aermode software for both area and line source has been done and submitted.

XI. The transportation route needs to be clearly provided in the EIA Report with other details such as width of road, length of road, type of road, impact due to transportation on the vegetation on the both side of the road, frequency of maintenance of the road, amount proposed for maintenance of the road, compensation to the land owners effected by transportation of mineral etc.

PP has submitted that the sand, bajri & boulder excavated from the lease area will be loaded directly into trucks and transported to

the concerned market via village Dhakarani by an unmetalled road of about 410m and finally meets national highway 72 by a metalled road having length of 1.68 km and width of 8m. PP has submitted that No. of trucks deployed per day will be 147 trucks due to which increase in PCU per day will be 441 PCUs and on considering both loaded & empty trucks increase in PCU per hour will be 882 PCUs. PP has submitted that due to additional traffic load on village roads LOS gets modified from A to B while for Highway it will remain same. PP has also submitted that congestion on the road will be increased as the LOS will be increased, air quality will be affected due to dust emission on haul road, increase in percentage of air quality parameters will get affected, chance of accident will increase and haul road will get damaged. PP has submitted that to avoid the adverse effect on the concerned roads due to additional loads, roads will be repaired regularly every year before start of mining and maintained in good conditions. PP has submitted that an amount of Rs. 2.0 Lacs/annum has been proposed for maintenance of roads and will be done on every six months interval. PP has submitted that a supervisor will be appointed to regulate the traffic movement near the site, speed breakers will be constructed accident prone areas to calm the traffic and its speed, signage will be erected at the sensitive & precarious places to caution or provide information to road users, passways will be made to ensure easy movements of trucks on the narrow roads, water sprinkling on haul road will be done to reduce dust emission from vehicle movement and to reduce the impact on vegetation along both the road side, overloading will not be permitted and trucks will be covered with tarpaulin, a committee has been formed for study of traffic headed by chairman.

XII. Detailed occupational plan needs to be submitted with budget allocation. The Committee was of the view that being handling the large number of mines the GMVN should set up a dedicated cell for the occupational health surveillance.

PP has submitted that there is no environmental pollution due to proposed mining as it is proposed to be manual extraction of sand/ Bajri on the banks of river. Hence there will be no major occupational health hazards. PP has proposed budget of total Rs. 5.10 Lakhs for occupational health & safety which includes Rs. 0.60 Lakhs for assistance to set up a temporary health center during the lease tenure, Rs. 0.20 Lakhs to provide free health checkups & medicines to the nearby villagers of the project site, Rs. 0.50 lakhs for awareness campaigns regarding health issues in the nearby villages, Rs. 3.80 Lakhs for health checkups & medicine to workers. PP has submitted that The money for occupational health issues will be deposited with mining trust according to Mines and Mineral (Development and Regulation) Act 1957 dated

28th Dec, 1957 and Uttarakhand District Mineral Foundation Trust, 2017 dated 17th November, 2017.

XIII. PP submitted the list of Secdule-1 species for core and buffer zone duly authenticated by Forest Department and same needs to be updated in the EIA Report. PP should provide the conservation plan for all secdule-1 and Schedule-II species present in the core & buffer zone.

PP has submitted the authenticated list of Flora & Fauna issued by Office of Divisional Forest Officer, Kalsi Land Conservator Forest Division, Kalsi vide Lr No. 2465/9-2 dated 20.04.2015. PP has submitted the the same has been incorporated in the EIA report and the Conservation Plan for Schedule I and II species has been approved by Divisional Forest Officer, Kalsi Land Conservator Forest Division, Kalsi vide letter no 1565/12-1 dated 04.02.2019. PP has proposed a total budget of Rs. 27.15 lakhs for various activities under conservation plan.

XIV. Proof of submission of EIA/EMP report within the validity of ToR needs to be submitted as the EIA report uploaded on the website initially is not the correct report.

PP has submitted copy of the vide no. 978/m dated 31.03.2015 from Garhwal Mandal Vikas Nigam Ltd. Wherein it has mentioned that “ *I am herewith submitting the final EIA/EMP report along with public hearing proceedings in hard copy as well as soft copy (in single PDF format) of the above mentioned project...*”

XV. The budget of EMP needs to be revised as the Environmental Monitoring cost is not included in the EMP Budget.

PP submitted that the budget of EMP has been revised incorporating the Environmental Monitoring cost. PP has submitted that total capital cost of EMP during five years shall be Rs. 70.25 Lakh which will include Rs. 9.0 Lakh as Capital Cost and Rs. 61.25 Lakh (Rs. 12.25 Lakh x 5) as recurring cost. PP has submitted that Rs. 2.5 Lakh (capital) & Rs. 5.10 Lakh (recurring) shall be used for medical camps and awareness program, Rs. 5.10 Lakh (recurring) for importance of wildlife (awareness), Rs. 0.5 Lakh (capital) & Rs. 0.1 Lakh (recurring) for Sign boards, information boards, Rs. 1.0 Lakh (capital) & Rs. 2.0 Lakh (recurring) for repairing and maintenance of roads, Rs. 1.2 Lakh (recurring) for water sprinkling, Rs. 5.0 Lakh (capital) & Rs. 1.7 Lakh (recurring) for plantation, Rs. 0.3 Lakh (recurring) for maintenance of check dams and retention wall, Rs. 0.2 Lakh (recurring) for restoration of banks, Rs. 0.5 Lakh (recurring) for air pollution monitoring, Rs. 0.5 Lakh (recurring) for water pollution

monitoring, Rs. 0.3 Lakh (recurring) for soil pollution monitoring, Rs. 0.3 Lakh (recurring) for noise pollution monitoring.

XVI.PP should submit a plan clearly mention the area that will be covered under plantation.

PP submitted that total 3400 trees shall be planted which will include 1120 plants in area of 1.008 Ha (3m width and 1680m length) will be covered along the road side, 1780 plants in area of 4.45 Ha (10m width and 4450m length) along both the sides of river banks and 500 plants of Fruit Plants will be distributed to Villager, Govt. School, College Campus and Panchayat area during 1st year. PP submitted that total Expenditure for Plantation in Five Years will be Rs. 11.80 Lakhs which will include Capital cost of Rs. 5.0 Lakhs (Rs.100/sapling) of 3400 plants and recurring cost of Rs. 1.70 Lakhs during 2nd to 5th year. PP also submitted that the money for plantation will be deposited with mining trust according to Uttarakhand District Mineral Foundation Trust, 2017 dated 17th November, 2017 and plantation will be done by the trust and will be decided by the concerning DFO. PP submitted that saplings of Aam, Jamun, Neem, Popular, Sisam, Siris, Gulmohar, Imli, Lichi, Bael, Ber, Amla shall be planted and watering will be regularly done at least thrice a week. Saplings will be regularly monitored and remedial actions will be undertaken as required. During this five years period, casualties will be replaced at the beginning of each monsoon.

XVII. Proof of submission of application for NBWL Clearance.

PP has submitted the Minutes of the 43rd meeting of Standing Committee of NBWL vide F.No. 6-119/2017 WL dated 26.07.2017 wherein under the heading “obtain NOC for Sand, Bajri & Boulder mining (34.94 ha) on Yamuna River bed at Village Dhakrani, District Dehradun, Uttarakhand” it has mentioned that “*after discussion, the Standing Committee decided to recommend the proposal along with the mitigation measures prescribed by the State Chief Wildlife Warden.*”

XVIII. In the cluster certificate submitted to the ministry the total area of the cluster not mentioned. Thus it is requested to provide the cluster certificate clearly mentioned the area of the cluster as per S.O. 141(E) dated 15.01.2016 and S.O. 2269(E) dated 01.07.2016. it has also observed that letter issued by Geology and Mining Unit, Directorate of Industries, Govt. of Uttarakhand vide Lr No. 74//2018-19 dated 24.05.2018 wherein it has mentioned that the details provided in the cluster certificate is as per S.O. 141(E) dated 15.01.2016 and S.O.2269(E)dated 01.07.2016. But it has found that EC was granted for mining lease having an area of 68.364 Ha. vide Lr No. J-11015/140/2013-IA.II (M) dated

07.09.2016. Further, as per S.O.2269 (E) dated 01.07.2016 the mining lease for which EC was granted on 15.01.2016 should not be counted while calculating the cluster area. As the EC for mining lease area 68.364 was granted after 15.01.2016 and should be consider while calculating the cluster area. Thus area comes up to 103.304 Ha and the proposal become category A project as per S.O. 141(E) dated 15.01.2016. Therefore, it is requested to submit the revised cluster certificate clearly mentioning the area of the cluster.

PP has submitted that here are three other leases falls within 500m radius of the above proposed project calculating the total cluster area of 4 mines is 107.7473 Ha and out of other three, 2 private leases were granted EC on 29.03.2014 having area of 1.854 and 2.5893 ha respectively. However, out of three other leases 1 lease belongs to GMVN Ltd. having area of 68.364 ha and granted EC on 07.09.2016 which is not operating till date. Certificate of 500m is submitted.

PP submitted that Now, as per the EIA Notification dated 1st July, 2016, a cluster shall be formed when the distance between the peripheries of one lease is less than 500meters from the periphery of other lease in a homogeneous mineral area which shall be applicable to the mine leases or quarry licenses granted on and after 9th September, 2013. (Ref: Clause (B) (i), Page No-4 in EIA Notification dated 1stJuly, 2016) or The leases not operative for three years or more and leases which have got environmental clearance as on 15th January, 2016 shall not be counted for calculating the area of cluster but shall be included in the Environment Management Plan and the Regional Environmental Management Plan.” (Ref: Note 5, Page No-5 in EIA Notification dated 1st July, 2016).

PP submitted that in light of above para, the said project does not involve any cluster approach. However, we are in process of getting cluster certificate from the competent authority clearly mentioning that whether the cluster is applicable or not in light of the S.O. 141(E) dated 15.01.2016 and S.O. 22699(E) dated 01.07.2016 and will submit the same during the EC presentation.

XIX. The above mentioned mining lease having area of 68.364 Ha is also belong to GMVN for which Ministry has issued EC vide Lr No. J-11015/140/2013-IA.II (M) dated 07.09.2016. in the special condition of this EC letter, It has mentioned at SL No. 11 that “To submit annual replenishment report certified by an authorized agency. In case the replenishment is than the approved rate of production, then the mining activity/production levels shall be decreased/stopped accordingly till the replenishment is completed”. As the

ministry has already issued an environmental clearance to GMVN for mining lease falling in the cluster for which PP has applied now. Thus, it is requested to submit the replenishment study conducted annually in compliance of the special condition no. 11 of stipulated in the EC already granted to GMVN. This will enable the ministry to ascertain the rate/quantum of replenishment in the river bed and ultimately help in finalizing the production capacity to be granted for this project.

PP has mentioned that the above mentioned mining lease having area of 68.364 Ha belong to GMVN for which Ministry has already issued EC vide Lr No. J-11015/140/2013-IA.II (M) dated 07.09.2016 is still not operational as on date from the grant of EC. However, replenishment study for the proposed project of River Yamuna Lot 21/2 having an area of 34.940 ha has already been conducted and incorporated in the Modified Mining Plan which helps the ministry to ascertain the rate/quantum of replenishment in the river bed and ultimately help in finalizing the production capacity for both the mining leases as they both lies at 500m distance from each other. Modified Mining Plan has been submitted.

5. The proposal was again considered in 22nd EAC meeting held during 26-28 October, 2020. An expert from IIT-Roorkee, Dr Garg, accompanied the PP during the EAC meeting and detailed about replenishment study. After detailed deliberation the Committee is of the view that PP should re-submit the information after making necessary corrections and in the next EAC meeting the PP should accompany the expert from IIT-Roorkee, who has conducted the baseline survey and replenishment study. In addition to this impact arising due to cluster situation also needs to be accounted for in the study and propose necessary management plan, if any. The Committee therefore deferred the proposals and also asked the PP to submit the following information along with the information sought in the EAC meeting held on November 28, 2019:

- i. A detailed study on Silt management covering its quantity, separation and deposition/dumping in the river bed or on the banks for plantations. PP also should do assessment of its impact on river ecology.
- ii. The Committee deliberated the sections submitted by PP and noted that it is not clear from the section that till what lateral and depth extents the material will be excavated. Thus, the PP is required to submit the sections clearly marking the lateral and depth extents of present ground profile as well as proposed excavation profile at individual sections.
- iii. The PP needs to submit a database in structured tabulated form clearly mentioning the nomenclature of the section line, latitude and longitude of both the extents of section line, chianages and

- respective levels (RL, AMSL) of all the points taken on that section line.
- iv. Thus with the help of existing ground profile and proposed extents of excavation considering the stipulations of lateral extents of sustainable sand mining guidelines, as mentioned above, The PP shall estimate the proposed quantum of excavation in tonnages with the help of Specific Gravity verified by the State DMG between every two consecutive sections. Such estimation shall be furnished by the PP in tabular form which includes the nomenclature of section lines, area proposed for excavation, distance between two consecutive section lines, volume, specific gravity, tonnage of the mineral, maximum depth extent from existing ground profile. Respective plans shall also be submitted clearly marking the area to be excavated. In addition to this a composite plan mentioning the above proposed excavation zones for the entire mine lease area also needs to be submitted. Thus PP needs to submit a plan clearly showing the area to be put in under excavation and no excavation zones. Respective KML files of such lateral extents of excavation and no excavation zone within ML shall also be submitted by the PP.
 - v. PP needs to submit a plan clearly mentioning the width of river and Bridges, lease boundaries, area left under safety zones as prescribed as per Sustainable Sand Mining Management Guidelines, 2016 and 2020, as per statutory requirements of Hon'ble High Court.
 - vi. PP has to submit the systematic design of dumps including dump location and its impact on ecosystem (Silt deposition).
 - vii. PP needs to ascertain the impact of transportation and details of transportation route viz. (length of the road, type of road, collection point (loading/unloading), no. of trips, capacity of the truck, no. of trucks, passing through the village or habitation) and mitigative measures to be taken for abatement of pollution due to transportation. The impacts study shall consider along with the other mine lease area also.
 - viii. PP has to mention the actual width of the green belt development as per the profile of the river.
 - ix. PP has to give justification for selection of ambient air quality monitoring stations and PP needs to submit the air quality modeling based on the mining activity proposed and the cluster of the mines in the study area. The control case and worst case scenario needs to be demonstrated with controlling factor and GLCs values for all the pollutants needs to be mentioned clearly. The input parameters and mathematical equations along with the reference used for the modeling needs to be submitted to the Ministry.
 - x. PP has to submit the details of dedicated cell for the occupational health surveillance as sought by the EAC Committee.

- xi. PP needs to submit the revised EIA/EMP report along with the Annexures with proper reference and indexing. PP needs to submit the information on the PARIVESH portal to the Ministry.
- xii. List of Schedule-I species within 10 km radius of mine lease area duly authenticated by the State Forest department along with the Conservation.
- xiii. District Survey Report as per the Ministry's notification S.O.3611(E) dated 25th July, 2018.

Agenda item 2.4. Extension of validity of ToR for Expansion of Suwakheda Flag Stone mine(Minor Mineral) of M/s Indira Patthar Shramik Sahkari Samiti Maryadit from 4500 m3/year(eq.to 11,700TPA) to 1,00,000 m3 /year (eq. to 2.6 lakh TPA) production in mine lease area of 117.532 Ha. The mine lease area is located at Suwakheda, District Neemuch, Madhya Pradesh.-Extension of validity of ToR [Proposal No. IA/MP/MIN/171407/2020; File No. J-11015/348/2008-IA.II(M)]

The proposal of M/s Indira Patthar Shramik Sahkari Samiti Maryadit is for mining of Suwakheda Flag Stone mine (Minor Mineral) from 4500 m3/year (eq. to 11,700 TPA) to 1,00,000 m3 /year (eq. to 2.6 lakh TPA) production in mine lease area of 117.532 Ha. The mine lease area is located at Suwakheda, District Neemuch, Madhya Pradesh. The mine lease area is located on Survey of India topo-sheet number 45L/14 and the location coordinates as below:

Village Name	Latitude	Longitude
Suwakheda	24°33'07.2"N to 24°33'33"N	74°50'03.4"E to 74°50'33.5"E
Kheda Rathore	24°33'36"N to 26°34'22"N	74°50'07.5"E to 74°50'18.5"E
Kundla	24°33'23.3"N to 26°34'23.3"N	74°50'16.2"E to 74°50'33.5"E

2. PP submitted that earlier TOR proposal was applied in the Ministry along with the FORM-I and PFR. Accordingly, the proposal was considered in the EAC meeting held during 24th July, 2017 wherein the committee recommended for grant of ToR for undertaking EIA/EMP study. The Ministry issued the TOR vide Lr. No. J-11015/348/2008-IA.II (M) dated 08.09.2017 for a period of 3 years which is valid till 07.09.2020. Now the project proponent applied online in PARIVESH Portal for Extension of validity of ToR for one year i.e. from 08.09.2020 to 07.09.2021 along with revised Form-1 and PFR vide Proposal no: IA/MP/MIN/171407/2020 on 04.09.2020. The proposal was considered in the EAC in the 22nd EAC meeting held during 26-28 October, 2020.

3. During the EAC, PP submitted that the baseline data was collected during the period March 2018 to May, 2018 and Public Hearing was also conducted on 25.07.2019, However due to covid-19 out break and lockdown could not communicated with the NABET Accreditation Consultant to finalize

the EIA/EMP report, thus PP is requested for extension of validity of TOR for one year i.e. from 08.09.2020 to 07.09.2021 to finalize the EIA/EMP report.

4. Based on the information furnished and presentation made by the Project Proponent, the Committee recommended for extending the TOR validity for a period of one year from the date of expiry i.e 08.09.2020 to 07.09.2021 subject to examine the violations of Hon'ble Supreme Court judgment dated 02.08.2017 in the matter of Common Cause Vs Union of India (W.P.C 114 of 2014) and Ministry's Notification 804(E) dated 14.03.2017 along with the following conditions.

- I. PP shall bring the quantity of Mineral excavation, waste generation; inter burden, over burden total excavation etc in the EIA/EMP report.
- II. PP to properly address the issues raised during Public hearing in the EIA/EMP report.
- III. PP shall submit the statement on the concerns raised by the General Public during public hearing and action plan for implementation of the commitments (activity-wise) made by the project proponent as per the MoEF&CC Office Memorandum No.22-65/2017 dated 30th September, 2020.
- IV. EC Compliance report duly authenticated by the R.O, MoEF&CC, Bhopal.
- V. The other terms & conditions mentioned in ToR letter dated 08.09.2017 shall remain same.
- VI. District Survey Report as per the Ministry's notification S.O.3611(E) dated 25th July, 2018.

Agenda item 2.5. Khatkurbahal (North) Block Limestone Mine of M/s Shiva Cement Ltd with Limestone production capacity of 1.6 MTPA (ROM), Mineral Reject 0.035 million TPA, Top Soil 0.033 MTPA & Waste 3.875 MTPA (Total excavation - 5.543 MTPA) and installation of crusher & screen of 800 TPH in the mine lease area of 156.43 ha, located at Villages Khatkurbahal & Phalsakani, Tehsil Kutra, District Sundargarh, Odisha. - Terms of Reference regarding. Proposal No. IA/OR/MIN/176862/2020; File No. J-11015/47/2020-IA-II (M)], Consultant: J M EnviroNet Pvt. Ltd.

The Proposal of **M/s Shiva Cement Limited** is for Limestone production capacity of 1.6 MTPA(ROM), Mineral Reject 0.035 million TPA, Top Soil 0.033 MTPA & Waste 3.875 MTPA (Total excavation - 5.543 MTPA) and installation of crusher & screen of 800 TPH in the mine lease area of 156.43 ha, located at Villages Khatkurbahal & Phalsakani, Tehsil Kutra, District Sundargarh, Odisha. The mine is located between Latitude 22°16'45.31025" N to 22°17'10.12835"N and Longitude 84°27'36.13496"E to 84° 29'18.22107"E and within survey of India Toposheet No. 73-B/7, 73-B/8, 73-B/11 & 73-B/12. The mining lease area falls under Seismic Zone II.

2. As per EIA Notification dated 14th September, 2006 as amended from time to time, the project falls under Category "A", Project or Activity 1(a) as the

Mining lease area is more than 100 Ha. The PP applied online vide Proposal No: IA/OR/MIN/170489/2020 dated 31 Aug 2020 in Schedule 1(a) for mining of mineral and 2(b) for beneficiation. The proposal was placed in 21st EAC meeting held on 23-25, September, 2020 wherein, the EAC *returned the proposal in present form and suggested the consultant to submit the modified Form I and revised Prefeasibility report as per the LOI*. Hence, the PP applied online vide Proposal no: IA/OR/MIN/176862/2020 dated 30.09.2020 for grant of TOR and submitted revised Form-1 and Pre-feasibility report under Schedule 1(a) for “Mining of Minerals” and 2 (b) for “Mineral Beneficiation” and as per EIA Notification dated 14th Sept, 2006 and its subsequent amendments, the project falls under Category- “A” as the mining lease area is greater than 100 Ha. As the complete details was not provided an EDS was raised by the Ministry on 06.10.2020 for submission of requisite information. PP submitted the reply to EDS on 09.10.2020 and accordingly the proposal was considered in 22nd EAC meeting held during 26-28 October, 2020.

3. PP submitted that Department of Steel & Mines, Government of Odisha granted the Letter of Intent (LOI) through e auction for a period of 50 years vide letter no.940/S&M, Bhubaneswar dated the 18th November, 2019 over an area of 156.43ha in favour of M/s. Shiva Cement Limited through auction.

4. PP submitted that the Mining Plan with Progressive Mine Closure Plan was approved by IBM vide letter no MP/A/02-ORI/BHU/2020-21 dated 03.06.2020 over an area of 156.43ha. PP submitted that as per the approved mine plan the method of mining shall be opencast with the deployment of machines like 115 mm dia DTH drill, 1.8m³ & 2.5m³ capacity excavator, 25 t capacity dumper etc. PP also submitted that total Geological reserve is 49.91 MT and Mineable reserve is 23.61 MT. Only one pit/quarry is proposed to be developed in plan period for limestone. 0.3m thick topsoil on an average will be scraped which will be initially stacked in the lease area and subsequently will be used for spreading over the waste dump, back-filled area and plantation pits for rehabilitation of waste dump and reclamation of mined out area. Opencast mechanized mining by forming systematic benches of 6.0 m height with proper width of 9m. Conventional drilling and blasting will to be adopted for excavation of limestone as well as waste as per requirement and site conditions/ constraints due to proximity of habitations. The excavation & loading of blasted rocks will be done by excavators of 1.8 cum & 2.5 cum capacity as well as loader/frontend loaders of 1.5 cum capacity. PP reported that during plan period 1,453,800m³ OB/sub-soil will be generated which will be dumped over an area of 7.105 hectares in 2 terraces and 329,400m³ IB/rejects will be generated which will be stacked over an area of 2.745 hectares in 2 terraces. Further PP submitted that the Limestone crusher with capacity of 800 TPH will be procured at the mine site to bring down the limestone to less than 80 mm to make it suitable for feeding to the grinding system. Crushing & Screening will be done in view of mineral conservation by way of dry processing. The transport of Limestone will be done by 25 Ton capacity dumpers from mine faces to crusher (average distance b/w quarry &

crushing unit is 1.5 km) and after crushing the limestone will be dispatched to the Cement plant initially by road (19.2 km) and later by OLBC (8.7 km).

5. PP reported that there is no forest land involved in the lease area. PP has reported that the nearest Reserve Forest from the mine site are Banglapahari RF (2.0 km, NNW), Kadopani PF (9.5 km, NNW), Brahmani RF-7.5 km, NNW), Lampti RF (3.5 km NNW), Bhursulia RF (7.5 km, WNW), Jhandapaharh RF (5.5 km, ENE), RF (7.0 km, WSW), Kalijapathar RF (6.0 km WSW), PF (4.5 km, West), RF (3.5 km, WSW), Dahijira RF (3.5 km, SSW), Khatang RF (6.0 km, SSE), Gurhiali RF (9.0 km, SSE), Khatang RF (4.5 km SSE), Luhuraberni RF (9.0 km, SSE) and Jurajam PF (9.0 km, South) are found within 10 km radius of the mine lease. PP also submitted that the following nalas are within the radius of 10 Km of the mine lease, Nakti Jor (6.5 km in SE), Dalki Nala (7.5 km in ESE), Matwali Jor (8.0 km in WSW), Kantijharia Nala (Passing through the lease area), Tambu Nala (4.0 km in North), Chhinda nadi (8.0 km in NNE), Tambo Nala (3.0 km in NE direction), Jharia Nala (3.5 km in ENE) and Sankh River (3.5 km in ENE). PP further submitted that there are no wild life sanctuaries, national parks, elephant/tiger reserves within 10 km of the notified mine lease area. PP also submitted that the project attracts the general conditions in view of Inter-State boundary i.e. Odisha-Jharkhand Interstate boundary is found at a distance of 7.5 Km, NNW from the periphery of the mining lease boundary.

6. PP submitted that the depth of the water table varies between 7m (243mRL) and 10m (240mRL) whereas maximum proposed depth of working is up to the depth of 48m (202mRL). PP has submitted that the total water requirement is 82 KLD of which 15 KLD be sourced from ground water for drinking & domestic purpose and remaining 67 KLD will be sourced from the sump of existing mine and later from this mine sump as and when developed. Waste water (3.5 KLD) generated from workshop will be treated using Oil-Water separator and treated water will be used in dust suppression & Vehicle Washing. 9 KLD of waste water generated from mine office, rest shelters etc. will be treated in STP.

7. PP reported that the total ML Area is 156.43 ha, out of which 42.461 ha is Government land and 113.96 ha is private agriculture land. PP reported that there is no Court Cases pending against the project and/or land in which the project is proposed to be set up.

8. PP submitted an undertaking by way of Affidavit in a Non-Judicial Stamp paper vide no. L 557487 dated 05.10.2020 that they will comply with all statutory requirement in 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 & Ors as applicable.

9. PP has submitted that the estimated total capital cost of the project will be approximately Rs. 124.63 Crore. PP reported that total employment will be 306.

10. Based on the discussion held and document submitted the EAC in its meeting held on 27-28 August, 2019 **recommended** for prescribing the standard TOR along with additional ToR for mining of 1.6 MTPA (ROM), Mineral Reject 0.035 million TPA, Top Soil 0.033 MTPA & Waste 3.875 MTPA (Total excavation - 5.543 MTPA) and installation of crusher & screen of 800 TPH in the mine lease area of 156.43 ha, located at Villages Khatkurbahal & Phalsakani, Tehsil Kutra, District Sundargarh, Odisha by M/s Shiva Cement Ltd.

Additional Terms of references:

1. *The transportation of Mineral has to be carried out through conveyor belt and the installation of conveyor belt shall be complete before commencing the operations.*
2. *PP shall bring out the material balance, mass balance, equipment flow sheet, process of beneficiation plant, plan for diversion of road and noise pollution control measures during night time in the EIA/EMP report along with flow charts.*
3. Detailed Hydrogeology study needs to be carried out by NABET Accredited under Ground Water Consultant Organization (GWCO) including the aspect of intersection of water table and measures taken for protection of nallahs.
4. The PP shall obtain the NoC from the CGWA regarding the intersection of workings with the groundwater table.
5. The PP should submit the detailed plan in tabular format (year-wise for 30 years) for afforestation and green belt development in and around the mining lease. The PP should submit the number of saplings to be planted, area to be covered under afforestation & green belt, target for survival rate and budget earmarked for the afforestation & green belt development. In addition to this PP should show on a surface plan (5 year interval for 30 years) of suitable scale the area to be covered under afforestation & green belt clearly mentioning the latitude and longitude of the area to be covered during each 5 years.
6. R&R Plan/compensation details for the Project Affected People (PAP) should be furnished.
7. PP shall submit the statement on the concerns raised by the General Public during public hearing and action plan for implementation of the commitments (activity-wise) made by the project proponent as per the MoEF&CC Office Memorandum No.22-65/2017 dated 30th September, 2020.
8. Adequate route map need to be provide bring in the EIA/EMP report for the proposed diversion roads.
9. PP need to provide detailed land break up involved in the mine lease area.
10. PP should clearly bring out the safeguards for protecting the river, Nallah, water bodies exist in and around the mine lease are from the operation of the mine.

11. A detailed Disaster Management and mitigation Plan shall be prepared and included in the EIA/EMP Report.
12. The PP should submit the quantity of surface or ground water to be used for this project. The complete water balance cycle need to be submitted. In addition to this PP should submit a detailed plan for rain water harvesting measures to be taken. The PP should submit the year wise target for reduction in consumption of ground water by developing alternative source of water through rain water harvesting measures. The capital and recurring expenditure to be incurred needs to be submitted.

List of member of Expert Appraisal Committee Participated through VC

S. No.	Member Name	Member Address	Designation	27th October, 2020
1	Dr. S. R. Wate	Add. 148/149, Nagar Vikas Society, Narendra Nagar, Nagpur-440 015, Maharashtra	Chairman	Yes
2	Dr. Ajay Deshpande	Building A-26, Flat-403, Happy Valley Homes, Manpada, Ghodbunder Road, Thane (West)-400 610, Maharashtra	Member	Yes
3	Shri Yogendra Pal Singh	2 nd Floor, Vayu Block, Indira Paryawaran Bhawan, MoEF&CC, Jor Bagh, New Delhi-110 003	Member Secretary-I	Yes
4	Shri B Ramesh Kumar	H-No. 6-1-134/6, Balram Compound, Padmarao Nagar, Secundrabad500025, Andhra Pradesh	Member	Yes
5	Prof. S. Ramakrishna Rao	50-120-9/1, Tulasi Mani Regency North Extension, Seethammadhara, Visakhapatnam-530 013, Andhra Pradesh.	Member	Yes
6	Shri Santosh Gupta	Flat No. 405, Block -B, Gaur Green Vista, NyayKhand -1, Indrapuram, Ghaziabad-201 014	Member	Yes
7	Dr. (Ms.) Asha Rajvanshi	Wildlife Institute of Inida, Chandrabani, Dehradun-248 001	Member	Yes
8	Shri G.P. Kundargi	Plot No. 32, MOIL Vatika, Chicholi Road, Fetri, Nagpur 441501, Maharashtra	Member	Yes
9	Dr. A.K. Malhotra	C-6, SubhavnaNiketan, Road No. 41, Pitampura, Delhi-110034	Member	Yes
10	Dr. Gurdeep Singh	Centre of Mining Environment, Department of Environmental Science & Engg. Indian Institute of Technology (Indian School of Mines), Dhanbad-826 004	Member	Yes
11	Dr. Parimal Chandra Bhattacharjee	A/3 Asiyana Housing Complex Maligaon, Guwahati-781 011, Assam	Member	No

12	Prof. Mukesh Khare	Department of Civil Engineering, IIT, Delhi	Member	No
13	Mr. V. K. Soni	Government of India, Ministry of Earth Sciences, India Meteorological Department, MausamBhawan, Lodi Road, New Delhi – 110 003	Member	Yes
14	Sh. Pankaj Kulakshethra	Regional Controller of Mines, IBM Block D, Second Floor, Indira Bhavan, Civil Lines, Nagpur – 440 001	Member	No
15	Sh. Aftab Ahmend	Representative of DGMS, DMS, Room No. 201-203, II Floor, B- Block, CGO-II,, Hapur Rd, Kamla Nehru Nagar, Ghaziabad, Uttar Pradesh 201 002	Member	No
16	Sh. B. S. Sodha	ADM, Jaipur, Representative of State Government of Rajasthan	Special Invitee	Yes
