



STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY::

MEGHALAYA ::

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No. SEIAA/(Project-25/30/2016)/Vol.II/43/2019/33 /1013

Dated, Shillong, the 13th Mar., 2020.

From : The Member Secretary,
State Environment Impact Assessment Authority
Meghalaya .

To, The General Manager (Commercial)
M/s Green Valliey Industries Ltd., (GVIL)
Chiehruphi Village, Tehsil-Narpuh,
Khliehriat, East Jaintia Hills, Meghalaya - 793 200.

Subject : Environmental Clearance for limestone mining for an area of
4.89 ha., at Madangpyrda (Block - I), Nongsning Village,
Chiehruphi Khliehriat, East Jaintia Hills by M/s- Green Valliey
Industries Ltd.(GVIL)

Sir,

This has a reference to your online application No. SIA/ML/MIN/40647/2016 dated 19/10/2019 for grant of prior EC for the above mining project after grant of TOR by the SEIAA, Meghalaya, vide letter No. SEIAA/P-25/30/2016/43/972 dtd.04/01/2018. The proposal was appraised by the State Expert Appraisal Committee in its meeting dtd.11/12/2019 as per prescribed procedures in light of the provisions under the Environmental Impact Assessment Notification, 2006, as amended from time to time, and after receipt of additional information & presentation from the Company.

The proposed project falls under Schedule 1(a) of Category B1 of EIA Notification 2006 being a captive limestone mine of a Cement factory. The mine lease area is 4.89 ha.(deemed Forest Area) and located at Nongsning village, P.O.- Chiehruphi, Narpuh Elaka, District-East Jaintia Hills, Meghalaya. In the buffer-zone - the water body is Thangskai river to the north about 0.90 km. and the Narpuh Reserve Forest/Eco sensitive zone about 7.95 km SE. The baseline study was conducted from

3rd December, 2017 to 27 February, 2018. The Boundary pillars of the project as per the approved mining plan, and noted by the SEAC are:

Point ID	CO-ORDINATES	
	Latitude	Longitude
GCP1	25°12'43.67818"N	92°22'59.43782"E
GCP2	25°12'40.90242"N	92°23'11.47048"E
GCP3	25°12'39.86386"N	92°23'10.50107"E
GCP3A	25°12'38.88564"N	92°23'08.83825"E
GCP4	25°12'39.43999"N	92°22'56.59165"E
GCP5	25°12'36.08296"N	92°23'12.94252"E
GCP5A	25°12'32.91145"N	92°23'08.23919"E
GCP6	25°12'29.47923"N	92°23'05.85583"E
GCP6A	25°12'31.13450"N	92°22'58.85208"E
GCP7	25°12'34.59542"N	92°22'54.14998"E

The PP, applied for transfer of the above land in the name of the Company, vide letter No. GVIL/MINES/CRUPL/LT/01 dtd.16/01/2017 to the Deputy Commissioner, East Jaintia Hills, Khliehriat,

The State Govt., Meghalaya under State Mining & Geology Department issued order for grant of mining lease vide letter No.MG.6/2011/187dtd.04/01/2018 to the project.

This project site is a private land and a 'deemed forest' area. PP applied for Forest Land Clearance vide (copy of) application proposal No. FP/ML/ MIN/ 8842/2014.

The Ministry of Forests, Environment & Climate Change, Govt. of India, New Delhi, vide MoEF& CC letter No.L.No.3-MG B 027/2018-SHI/2596-97 dtd.14/10/2019 had agreed to the proposal of the Govt. of Meghalaya for 'In principle approval' for diversion of 6.55 hectares of deemed private forest land to this project.

The PP submitted a copy of application proposal No. FP/ML/ MIN/8842/2014, the 'Form for seeking recommendation of the Standing Committee of NBWL/SBWL'.

The cost of the mining Project is Rs. 1.16crore. The PP has earmarked capital of Rs.8.00 Lakhs with annual recurring cost of 16.31 Lakhs towards Environmental protection measures.

Conservation plan for preservation of Schedule- I species of Rs.10Lakhs is proposed to be allotted for the project, which will be implemented within 5 years from the date of grant of EC.

The budget provision for CER, is - Capital cost Rs.5.5 lakhs and Recurring Cost and Rs.4.5 lakhs.

The Public Hearing was conducted by Meghalaya State Pollution Control Board, Shillong on 13th March, 2019 for this project. The Report was forwarded by MSPCB vide letter No.MSPCB/TB-360-GVL-2018/2019-2020/15dtd.16.05.2019 to the SEIAA. Para-wise comments/views was given in the EIA Report by the PP on the action to be taken with regard to the suggestions both by the general public who attended the public hearing and the written suggestions by NGOs in the Public Hearing.

As per the approved mining plan, the total mineable reserve of limestone is of the order of 1.339 Million Tons and the targeted maximum production of limestone is 0.204 Million Tons per annum. The average gradient is 45°. It is a Captive Limestone Mine which will be utilized by the M/s Green Valliey Industries Pvt. Ltd. in its own Cement plant. The life of mine is about 8(eight) years.

Mining will be fully mechanized open-cast method involving Machineries/vehicle like crawler drill, air compressor, hydraulic excavators, dumpers and blasting. The safety zone is about 0.447 ha. Green belt is proposed to be developed in safety zone and plantation will be carried out; the density of tree plantation will be 1125 trees per ha. and in other areas 0.294 trees per ha.. The final void area will be 4.149 ha., and the depth is 45.5 meter. The void area at the depth of 0 meter will be converted into a water body.

About 19 persons will get direct employment and many will avail indirect employment. Dust suppression will be carried out in the working area and haul roads by sprinkling of water with water tanker. Wet drilling will be practiced to



reduce noise generation and Personal Protective Equipment (PPE) will be provided to the mine workers.

The total water consumption is 1KLD for drinking and 1 KLD for others to be supplied by water Tankers.6 KLD for sprinkling purposes and 2 KLD for greenbelt to be met from water collected in pits.

Undertaking by the PP:(M/s Green Valliey Industries Pvt. Ltd.) that the information provided in the EIA/EMP Report and all other submission made to the SEIAA/SEAC, Meghalaya in respect of this project are factually correct and the PP is fully accountable for the same. Shri Pawan Kumar Joshi, Assistant Vice President of the Company signed the document.

Undertaking by the Consultant :(M/s Perfact Enviro Solutions Pvt. Ltd.,5th Floor, NM Mall,Sector-3,Rohini New Delhi- 110085,holding a NABET extension certificate No. QCI/NABET/EIA/ACO/19/1158 dtd.09/12/2019 with valid date upto 08/03/2020), that the information provided in the EIA/EMP Report and all other submission made to the SEIAA/SEAC, Meghalaya in respect of this project are factually correct and the Consultant is fully accountable for the same. Shri Udai Shanker Pandey, Director of the Firm signed the undertaking on behalf of the Firm.

As per the uploaded minutes, the SEAC after the additional clarifications was furnished by the Project Proponent, the field inspection carried out by SEAC, the EIA & EMP Reports, the Public Hearing reports and the presentation given by the Project Proponent, had *in its meeting held on 11th December, 2019* unanimously recommended for grant of Environmental Clearance to the project,

The State Environment Impact Assessment Authority, Meghalaya, resolved to accept the recommendations of the SEAC to granting EC to the project, in its meeting dated 28.01.2020. Accordingly, Environmental Clearance is hereby accorded for the above project on the recommendation of the SEAC and as per the EIA Notification- 2006 and its subsequent amendments, subject to strict compliance of the terms and conditions as follows:



A. Specific conditions

- (1) Both PP & Consultant should note that they had given an Undertaking - that the information provided in the EIA/EMP Report and all other submission made to the SEIAA and the SEAC, Meghalaya in respect of this project are factually correct and they are fully accountable for the same.
- (2) The plant species to be planted in the proposed green belt shall be indigenous plant species and to consult the State Forest and Environment Department for the species to be used for afforestation in the green belt development. PP to submit a copy of approved development plan as stated above to the SEIAA and SEAC Meghalaya.
- (3) The PP shall submit the Conservation Plan along with budgetary allocation activity year wise duly approved by the Competent Authority under the Forest and Environment Department, Meghalaya to the MoEF&CC, Regional Office, Shillong with copies of the same to SEIAA and SEAC Meghalaya.
- (4) The PP shall construct proper drainage to prevent accumulation of water during summer and winter along with proper sewage treatment Plan/Effluent Treatment Plan as necessary.
- (5) The PP shall comply with all the direction as given in the in principle approval of Forest Clearance under the provision of Forest Conservation Act 1980.

B. STANDARD EC CONDITIONS :

I. Statutory Compliance

- 1) 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.
- 2) The Project proponent shall comply 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.
- 3) 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.

- 4) 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, and copy of the same shall be forwarded to the Regional Office, MoEF& CC, Shillong and the SEIAA.
- 5) This Environmental Clearance shall become operational only after receiving formal Forest Clearance (FC) under the provision of Forest Conservation Act, 1980, and copy of the same shall be forwarded to the Regional Office, MoEF& CC, Shillong and the SEIAA.
- 6) 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 Meghalaya State Pollution Control Board.
- 7) 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.
- 8) The Project Proponent shall obtain consents from all the concerned land owners, before start 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.
- 9) 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".
- 10) The Project Proponent shall obtain necessary prior permission of the Competent Authorities for drawal of requisite quantity of surface water and from CGWA for withdrawal of ground water for project.
- 11) 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.



- 12) State Pollution Control Board shall be responsible for display of this EC letter at its office and its Regional offices; the concerned District Industries Officer, the Deputy Commissioner and the Sub Divisional Officer (Civil) shall display the same in their office notice board for 30 days.
- 13) The project Authorities should widely advertise shall be responsible for display 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 SEIAA's Office/State Pollution Control Board and web site of the Ministry of Environment, Forest and Climate Change (www.parivesh.nic.in). A copy of the advertisement shall be forwarded to the SEIAA and MoEFCC Regional Office, Shillong for record.
- 14) 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 then mining operations 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.
- 15) PP shall strictly implement all the environmental mitigations as committed/given in the EIA and EMP. The same shall be reflected in the every six monthly report.
- 16) The mining lease holders shall after ceasing mining operations, undertake re-grassing the mining areas 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.

II. Air quality monitoring and preservation.

- 1) 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 climate-logical data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operation. Of air pollution viz. PM10, PM2.5, 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 main site.

- 2) Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metaled 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 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

- 1) 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 MoEFCC 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.
- 2) 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 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.



- 3) 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 Development. 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 Ground Water Department.
- 4) 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 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-à-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 MoEFCC. 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.
- 5) Quality of polluted water generated from mining operations 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.

- 6) 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 SEIAA and the Regional Office MoEFCC annually.
- 7) 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.
- 8) 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

- 1) The Peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.
- 2) 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 operation. 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.
- 3) 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 labourers 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/labourers are working without personal protective equipment.

As per the EIA, PP committed to allot for environmental monitoring Rs.2.81lakhs as recurring budget and for pollution control capital cost is Rs.2.00 lakhs and recurring is Rs.2.00lakhs. PP to do the needful as above and the same shall be reported yearly to the Regional office, MoEF& CC, Shillong and the State Pollution Control Board. It should also be reflected in every six monthly report.

V. Mining plan

- 1) The project Proponent shall adhere to the working parameters of mining plan which submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of minerals, 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.
- 2) 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.



- 3) 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-à-vis backfilling in the mine lease area and corresponding afforestation to the 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 MoEFCC, Regional Office.

VI. Land reclamation

- 1) The Overburden (O.B.) generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not 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 land reclamation and plantation.
- 2) 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 stability to maintain stability of waste dumps.
- 3) The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.
- 4) 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 regulated local climatic parameters and help in the 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/levelling of dump mass. In critical

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areas, use of geo textiles/ geo-membranes / clay liners/Bentonite, etc. shall be undertaken for stabilization of the dump.

- 5) The Project Proponent shall carry 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 , Shillong.
- 6) Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and Top Soil/OB/Waste dumps to prevent run off of water and flow of sediments directly into the water bodies (Nallah/ Rivers/ 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 the monsoon season, and maintained properly.
- 7) 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.
- 8) 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 heights, 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 purposes.

As per the EIA Report, the budget provision of Rs. 2.00 Lakhs as annual recurring cost for reclamation. The estimated cost for wire fencing around plants- Capital Cost of Rs.1.00 lakh and recurring cost of Rs.1.50lakhs. For maintenance of parapet wall- Capital cost of Rs.0.50 lakh and recurring cost of Rs.0.50 lakh. PP to do the needful as above.



VII. Transportation

- 1) No transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, PP shall construct a 'by-pass' 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. 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.
- 2) 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 equipment 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.

As per the EIA Report, the budget provision for the Haul road is Rs.1.00 lakh as capital cost and Rs.1.00 lakh as annual recurring. PP to do the needful as above and it should also be reflected in every six monthly report.



VIII. Green Belts

- 1) The Project Proponent shall develop a 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 approved plan of the State Forest & Environment Department, irrespective of the stipulation made in approved mine plan.
- 2) The Project Proponent shall carry out plantation / afforestation in back-filled and reclaimed areas 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 such that only those species selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered to. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.
- 3) 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 protected.
- 4) 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.
- 5) And implemented in consultation with the State Forest and Wild Life Department. A copy of Wild Life Conservation plan and its



implementation status (annual) shall be submitted to the SEIAA and the Regional Office of the Ministry.

The budget proposal as per the EIA Report relating to greenbelt is - capital cost of Rs.1.00lakh and recurring cost of Rs.1.00 lakh.

As per EIA Report, the PP budgeted separately, Rs.10 (ten) lakhs to undertake precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I species during mining operation. PP to do the needful as above and it should also be reflected in every six monthly report.

IX. Public hearing and human health issues

- 1) 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 the SEIAA, MoEFCC Regional Office and DGMS on half-yearly basis.
- 2) 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 neighbourhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anaemia, and 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 there-after every five years.



- 3) The Proponent 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 (Mn) Estimation in Blood; For Inorganic Chromium-Fortnightly skin inspection of hands and forearms by a responsible 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 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.).
- 4) The Proponent shall maintain 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 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 (FEC1), 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 suffered loss of any body part. The record of the same should be submitted to the Regional Office, MoEFCC, Shillong, annually along with the details of the relief and compensation paid to workers having above indications.
- 5) 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.
- 6) Project Proponent shall make provision for the housing for workers/labours or shall construct labour camps within/outside (company owned lands) with necessary basic infrastructure/ facilities



like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche 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.

- 7) 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 Regional Office, MoEF&CC, Shillong and Deputy Commissioner, East Jaintia Hills District, Khliehriat, Meghalaya with a copy of the same to the SEIAA.

As per the EIA Report, the budget estimated for occupational health of workers is Rs.2.50 Lakhs as Capital cost and Rs.2.50 Lakhs as annual recurring cost. Other (miscellaneous) provisions of Rs.3.00 lakhs as recurring budget. PP to do the needful as above and the same shall be reported yearly to the Regional office, MoEF& CC, Shillong. It should also be reflected in every six monthly report.

X. Corporate Environment Responsibility (CER)

- 1) The activities and budget earmarked for Corporate Environment Responsibility (CER) as per Ministry's O.M No. 22-65/2017-IA. II (M) dated 01.05.2018, 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 the Regional Office MoEF&CC, Shillong and the Deputy Commissioner concerned annually along with audited statement and also copy of the same be furnished to the SEIAA.
- 2) Project proponent shall keep the funds earmarked for environment 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-Regional office, Shillong and the concerned Deputy Commissioner with copy of the same to the SEIAA.



As per the EIA, separate budget provision for CER- Capital cost Rs.5.5 lakhs and recurring cost of Rs.4.5 lakhs. PP to do the needful as above and the same shall also be reflected in every six monthly report.


XI. Miscellaneous

- 1) 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 the SEIAA and the Regional Office of the MoEFCC, Shillong.
- 2) 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. Copy of the same shall be forwarded to the SEIAA.
- 3) The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MoEFCC, Regional Office, Shillong, the Regional office Central Pollution Control Board, Shillong and Meghalaya State Pollution Control Board with intimation to the SEIAA.
- 4) A separate 'Environment 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, Shillong. Also PP to furnish details of changes of officials in the Cell if any, from time to time.
- 5) PP after obtaining the Mining Lease shall forward a copy of the same to SEIAA and Regional Office, MoEF& CC, Shillong. A copy of land transfer documents shall be forwarded to the SEIAA.
- 6) The concerned Regional Office of the MoEFCC shall randomly monitor compliance of the stipulated conditions and forward a copy of the Monitoring Report to the SEIAA. The project authorities should extend full cooperation to the MoEFCC Officer(s)



- 7) The Environmental Clearance does not absolve the applicant/proponent of his obligation/requirement to obtain other statutory and administrative clearances from other statutory and administrative authorities. Conditions stipulated by these Statutory/Government authorities shall be complied.
- 8) The SEIAA may alter/modify the above conditions or stipulate new conditions in the interest of environment protection or alter/modify/add conditions on direction/ruling by the Hon'ble Courts /NGT.
- 9) Concealing the factual data or failure to comply to any of the above condition by PP and if it is found or if it come to the knowledge of the MoEF & CC/SEIAA that the project proponent has deliberately concealed and/or submitted false or misleading information or inadequate data for obtaining the Environmental Clearance, may result in withdrawal of this clearance and the SEIAA may take action under the provisions of Environment (Protection) Act, 1986.
- 10) Any appeal against this Environmental Clearance shall lie with the Hon'ble National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

This Environmental Clearance is valid for a period of 5(five) years, from the date of issue.



 Member Secretary,
 SEIAA, Meghalaya.

Memo. SEIAA/(Project-25/30/2016)/Vol.II/43/2019/33-A
 Copy to :-

Dated, Shillong, the Mar., 2020.

- 1) The Secretary, Ministry of Mines, Govt. of India, Shastri Bhawan, New Delhi, - 110 003, for information.

- 2) The Principle Chief Conservator of Forests and HoFF ,Meghalaya, Shillong, for information.
- 3) The Principal Secretary to the Govt. Meghalaya, Forests & Environment Department, Shillong, for information.
- 4) The Principal Chief Conservator of Forests, Territorial, Meghalaya, Shillong for information.
- 5) The Chief Wildlife Warden, Meghalaya, Forests & Environment Department, Sylvan House, Lower Lachumiere, Shillongfor information and necessary action.
- 6) The Deputy Director General of Forests (C), Regional Office,N.E.Z, Ministry of Environment, Forests & Climate Change (MoEF&CC), Law-u-sib, Lumbatngen, Sawlad, Near M.T.C. workshop, Shillong- 793 021, for information and necessary action.
- 7) The Jt. Secretary, IA Division MoEF & CC, Paryavaran Bhavan, CGO Complex, Lodhi Road, New Delhi - 110 003, for information.
- 8) The Secretary to the Govt. of Meghalaya, Mining and Geology Department, Shillong, for information.
- 9) The Deputy Commissioner, East Jaintia Hills, Khliehriat, for information and necessary action. A copy of O.M. No.22-65/2017-IA. II (M) dated 01.05.2018 is enclosed herewith.
- 10) The Divisional Forest Officer, Jaintia Hills Territorial Division, Jowai for information and necessary action.
- 11) The Member Secretary, State Expert Appraisal Committee, Meghalaya for information.
- 12) The Regional Director, Central Pollution Control Board, Shillong, Meghalaya for information.
- 13) The Member Secretary, Meghalaya Pollution Control Board, 'Arden', Lumpyngngad, Shillong - 793 014 for information and necessary action.
- 14) The Secretary, Jaintia Hills Autonomous District Council, Jowai for information.
- 15) Guard File.


 Member Secretary,
 SEIAA, Meghalaya.

