

**MINUTES OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL  
COMMITTEE, ORISSA HELD ON 22<sup>nd</sup> MARCH, 2010**

The meeting of State Level Expert Appraisal Committee, Orissa was held on 22<sup>nd</sup>, March, 2010 in the Conference Hall of Orissa State Pollution Control Board, Bhubaneswar at 11.00 AM. Dr. Gagan Bihari Nityananda Chainy, Chairman, SEAC Orissa chaired the meeting. The following members were present in the meeting.

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| 1. | Prof. Gagan Bihari Nityananda Chainy, Ph.D. | - | Chairman |
| 2. | Prof. Swoyam Prakash Rout, Ph.D.            | - | Member   |
| 3. | Dr. Moheshwar Patra, Ph.D.                  | - | Member   |
| 4. | Prof. R. C. Mohanty, Ph.D.                  | - | Member   |
| 5. | Sri Sasanka Sekhar Patnaik, IFS             | - | Member   |
| 6. | Prof. Kumar Das, Ph.D.                      | - | Member   |

The following issues were discussed and decided

1. The minutes of previous meeting was confirmed by the Committee members.
2. The Committee decided to go for a field visit to some of the mines project sites for which clarifications are sought /being sought and Paradeep port. The field visit will be made preferably in the month of May, 2010.
3. **CONSIDERATION OF PREVIOUS PROPOSALS :**

**ITEM NO : 1**

**PROPOSAL OF GROUP HOUSING OF “M/S. VIPUL LIMITED” VIPUL GARDENS AT  
MOUZA SHANKARPUR, BHUBANESWAR**

The proposed development is a Building Project having multiple floors. There will be 10 towers and each tower with B+G + 14 floors shall amount to a total of 578 apartments. Total Plot Area is 9.775 Acre. Total built up area is 39557.98 sq.m. Green belt Landscaping and open space area is 42% of the total project area. The building is completely residential in nature. Bhubaneswar Development Authority has approved the building plan. The proposal was placed in the SEAC meeting held during 12<sup>th</sup> & 13<sup>th</sup> October, 2009 . SEAC decided to consider grant of environmental clearance after receipt of certain clarification and approved building plan from the

proponent . The SEAC verified the approved building plan and BDA approval letter. It was further decided to call the proponent with technical personnel for discussion on 22.3.10 to clarify the compliance furnished by the proponent to the observation of SEAC.

The proponent informed during discussion on 22.3.10 that there will be provision of all standby electromechanical equipment of the STP. Their STP vendor is Trillenium Enerflow Ltd. The SEAC verified the approved building plan and BDA approval letter and recommended for grant of environmental clearance in favour of the project with validity till 19.3.2012 during which construction should be completed with the following stipulated conditions :

**I. GENERAL.**

- i). The applicant (Project proponents) will take necessary measures for prevention, control and mitigation of Air Pollution, Water Pollution, Noise Pollution and Land Pollution including solid waste management as mentioned by them in Form-1, Form-1A, and Environment Management Plan (EMP) in compliance with the prescribed statutory norms and standards.
- ii) The applicant will take statutory clearance/approval/permissions from the concerned authorities in respect of his project as and when required.
- iii) The applicants will submit half-yearly compliance report for post-environmental clearance monitoring in respect of the stipulated terms and conditions in the Environmental Clearance to the State Environmental Impact Assessment Authority (SEIAA), Orissa, on 1<sup>st</sup> June and 1<sup>st</sup> December of each calendar year.
- iv) The applicants will adopt the prescribed norms, and standards provided in the National Building Code of India, 2005, specially relating to :
  - a) Fire protection and life safety of occupants of the buildings.
  - b) Safety of personnel during construction, operation and demolition of buildings.
  - c) Lighting and natural ventilation of buildings.
  - d) Safety from electrical fire, shock and lightening of the buildings.
  - e) Air-conditions, heating and mechanical ventilation of the buildings
  - f) Acoustics and noise control of the buildings.
  - g) Maintenance and functioning with emissions from generators supplying power to common space / residential in case of power failure along with fuel handling /storage.
  - h) Installation of lifts and escalators in the buildings.
  - i) Water supply, drainage and sanitation including solid waste management.
  - j) Landscaping of surrounding areas of the buildings.

## **II. CONSTRUCTION PHASE.**

- (i) Provision shall be made for the housing of construction labourers within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- (ii) A First-Aid Room will be provided in the project site both during construction and operation of the project.
- (iii) All the top soil excavated during construction activities should be stored separately for use in land filling, horticulture/landscape development within the project site.
- (iv) Disposal of muck during construction phase should not create any adverse effect on the neighbouring communities and will be disposed off taking the necessary precautions for general safety and health aspects of people only in approved sites with the approval of competent authority.
- (v) Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.
- (vi) Construction spoils, including bituminous material and other hazardous materials should not be allowed to contaminate watercourses, ground water and dump sites by following safe dumping / disposal practice as per statutory rules and norms with necessary approval of the Orissa Pollution Control Board.
- (vii) The diesel generator sets to be used during construction phase shall be low sulphur diesel type and should conform to Environment (Protection) Rules 1986 prescribed for air and noise emission standards.
- (viii) The diesel required for operating DG sets shall be stored in underground tanks and, if required, clearance from the Chief Controller of Explosives shall be taken.
- (ix) Vehicles used for bringing construction materials to the site should be in good condition and should have a pollution check certificate and conform to statutory air and noise emission standards and should be operated only during non-peak hours of the day.
- (x) Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase. Adequate measures should be taken to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/OPCB.

- (xi) Fly ash bricks should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and as amended on 27<sup>th</sup> August, 2003. The above condition is applicable as the project site is located within the 100 Km of Thermal Power Stations.
- (xii) Ready mixed concrete would be used in building construction.
- (xiii) Storm water control and its re-use should be as per CGWB and BIS standards for these applications.
- (xiv) Water demand during construction should be optimized by adopting best practices without compromising quality.
- (xv) Permission to draw minimal quantity of ground water shall be obtained from the competent Authority prior to construction/operation of the project.
- (xvi) Separation of grey and black water supplies and collection from residential units should be done by the use of dual plumbing line. Grey and black water should be treated separately before recycling/ reuse.
- (xvii) Fixtures for showers, toilet flushing and drinking water should be of low flow type and restricted to requirements by use of aerators, avoiding wastage pressure reducing devices or sensor based controls.
- (xviii) Use of glass may be maximum upto 40% of total outer wall area to reduce the energy consumption and load on air-conditioning. If necessary, high quality double glass with special reflective coating may be used in the windows.
- (xix) Roof should meet the prescribed requirement as per Energy Conservation Building Code by using appropriate thermal insulation material.
- (xx) Opaque wall should meet prescriptive requirements as per Energy Conservation Building Code.
- (xxi) The approval of the competent authority shall be obtained for structural safety of the buildings due to earthquake, adequacy of fire fighting equipments etc. as per National Building Code of India, 2005 including protection measures from lightening etc.
- (xxii) Regular supervision of the above and other measures for monitoring should be in place all through the construction phase to avoid disturbances and pollution to the surroundings.

### **III. OPERATION PHASE.**

- i) The installation of the Sewage Treatment Plant (STP) should be certified by a competent agency and a report in this regard should be submitted to the SEIAA, Orissa before the project is commissioned for operation. Treated effluent from STP shall be recycled/reused to the maximum extent

possible. Treatment of 100% grey water by decentralized treatment should be done. Discharge of unused treated effluent shall conform to the norms and standards of the Orissa State Pollution Control Board. Necessary measures should be taken to mitigate the odour problem from STP.

- ii) The STP sludge should not be dried nor incinerated within the project site and should be disposed off as per the norms of SPCB, Orissa.
- iii) The project proponent will ensure that under no circumstances, the environment is polluted due to non-functioning / under performance of sewerage disposal system of the project. To achieve this, a stand-by STP with similar capacity should be installed to be put into service during the maintenance /over hauling of the original STP,
- iv) The solid waste generated should be properly collected and segregated. Wet garbage should be composted and dry / inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material. Necessary approval / permission may be obtained from the concerned authorities
- v) Diesel power generating sets proposed as source of back-up power for lifts elevators and common area illumination during operation phase should be of enclosed type and conform to Environment Protection (EP) rules 1986. The height of the stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets put together. Low sulphur diesel should be used. The location of the DG sets may be decided in consultation with Orissa State Pollution Control Board. Care may be taken to avoid disposal of smoke /pollutants from DG sets in the residential area.
- vi) Noise should be controlled to ensure that it does not exceed the prescribed standards. During night time, the noise levels measured at the boundary of the sites shall be restricted to the permissible levels to comply with the prevalent regulations.
- vii) Plantation of trees shall be done as per approved layout plan.
- viii) Rain water harvesting for roof run- off and surface run- off, as plan submitted should be implemented. Before recharging the run off, pre-treatment must be done to remove suspended matter, oil, grease and other soluble components as per norms. The bore-well for rainwater recharging should be kept at least 5 mts. above the highest ground water table. The technology may preferably be adopted from a commercial firm with performance guarantee.
- ix) Weep holes in the compound walls shall be provided to ensure natural drainage of excessive rain water in the project area during the monsoon period after the harvesting operations.
- x) The ground water level and its quality should be monitored regularly in consultation with Central / State Ground Water Authority.

- xi) Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking of vehicles by both residents and visitors should be fully internalized and no public space should be utilized for this purpose.
- xii) A Report on the energy conservation measures conforming to energy conservation norms finalized by the Bureau of Energy Efficiency should be prepared incorporating details about building materials & technology, R & U Factors etc and submitted to the SEIAA, Orissa in three months time before operation/ habitation.
- xiii) Provisions of solar hot water storage / supplies at the roof top may be made as per statutory norms of CPCB/MoEF/SPCB, Orissa.
- xiv) Energy conservation measures like installation of CFLs/TFLs for lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid toxic contamination. Use of solar panels may be adopted to the maximum extent possible, especially for street lights.
- xv) The building blocks should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation including plantation/ horticulture.
- xvi) The proponent shall furnish detailed information on disposal of E-wastes which includes obsolete personal computers and associated components and dispose the e-wastes as per CPCB / MoEF guidelines. A detailed proposal to this effect shall be submitted to the authority (SEIAA).
- xvii) The funds earmarked for the environment protection measures shall be judiciously utilized. Under no circumstances this funds shall be diverted for other purposes like Annual allocation and maintenance / monitoring etc. and expenditure for this fund should be reported to the SEIAA, Orissa.
- xviii) The above mentioned stipulated conditions shall be complied in time-bound manner. Failure to comply with any of the conditions mentioned above may result in cancellation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

## **ITEM NO – 2**

### **PROPOSAL OF MURGABEDA IRON ORE MINES OF M/S. D. R. PATNAIK TO INCREASE IRON ORE PRODUCTION FROM 0.12 MTPA TO 2.0 MTPA AT – MURGABEDA, DEOJHAR, DIST – KEONJHAR**

The proposal is for production of iron ore from 0.12 MTPA to 2.0 MTPA. The TOR for this project were prescribed on dtd. 25.11.08 by the Expert Appraisal Committee of MoEF, Govt. of India. The lease area is 15.378 ha which includes 10.481 ha. reserve forest, 0.02 ha village forest and 4.877 ha. non forest revenue land. The Murgabeda iron ore mine over 15.378 ha. was granted in favour of Sri N. Pattnaik & later it was transferred to the present lessee Sri D. R. Pattnaik. The lease deed for this mine was first executed for a period of 30 years with effect from 3.7.1976. The tenure of the lease expired on 2.7.06. Again the renewal application has been submitted on 24.5.05 for a period of 20 years.. The mine has applied for forest clearance. The mine obtained temporary work permission which is valid til 17.4.10. Mining plan is approved for the production quantity applied for environmental clearance. The public hearing was conducted on 29.6.09. No National Park/Sanctuary is located within 10 km of the mine lease area. Mine working will be opencast and mechanized involving drilling and blasting. Water requirement for the project is estimated to be 75 m<sup>3</sup>/day. The source is ground water. The mine working will not intersect groundwater table. Waste generation will be 1.1 lakh m<sup>3</sup> during plan period. The mine has earmarked 1.3 ha as OB dump area (Plan period). The mine has proposed garland drain, check dams and retaining wall to prevent wash out of loose material from dump area.

The proposal was placed in the SEAC meeting held during 12<sup>th</sup> & 13<sup>th</sup> October, 2009 . The SEAC decided to consider grant of environmental clearance after receipt of certain clarification /document from the proponent. The compliance of the proponent to the observation of SEAC was scrutinized by the SEAC and it was decided to call the proponent with technical personnel for discussion on 22.3.10 to clarify certain issues like validity of temporary working permission, status of forest clearance etc..

Based on the information, documents and clarifications provided, the SEAC recommends for grant of environmental *clearance* in favour of the project for a period of five years subject to the following stipulated conditions:

- i) The applicant (Project proponent) will take necessary measures for prevention, control and mitigation of Air Pollution, Water Pollution, Noise Pollution and Land Pollution including solid waste management as mentioned by him in Form-1, Final EIA reports and Environment Management Plan (EMP) in compliance with the prescribed statutory norms and standards.
- ii) The applicant will take necessary steps for socio-economic development of the people of the area on need based assessment for providing employment, education, health care, drinking water and sanitation, road and communication facilities etc.
- iii) The applicant will comply to the points, concerns and issues raised by the people during public hearing on 29.6.09 in accordance with the commitments made by him thereon.
- iv) The applicant will take statutory clearance/approval/permissions from the concerned authorities in respect of his project as and when required.
- v) For post environmental clearance monitoring, the applicant will submit half-yearly compliance report in respect of the stipulated terms and conditions of Environmental Clearance to the State Environmental Impact Assessment Authority (SEIAA), Orissa on 1<sup>st</sup> June and 1<sup>st</sup> December of each calendar year.
- vi) The core zone should be monitored intensively with no. of stations as prescribed by CPCB, Delhi and unit of pollutant level should be expressed as NAAQ of CPCB, Delhi. The detail methodology adopted for analysis of samples shall be clearly indicated.
- vii) The proponent shall submit ground tooting baseline data on flora & fauna and CSR activities already carried out within three months to the SEIA
- viii) Adequate buffer zone shall be maintained between two consecutive mineral bearing deposits.
- ix) Zero waste mining concept shall be implemented either by putting up pelletisation plant or dispose of low grade ores/fines to prospective buyers.



- x) The following shall be implemented viz. (a) dump run-off should be diverted into settling ponds (b) adequate rain water harvesting and ground water recharging facilities should be developed in the core zone; (c) attempt should be made to achieve zero water balance.
- xi) Maintenance of roads through which transportation of ores are undertaken shall be carried out by the project proponent regularly at its own cost.
- xii) Fugitive dust generation shall be controlled. Fugitive dust emission shall be regularly monitored at locations of nearest human habitation (including schools and other public amenities located nearest to sources of dust generation as applicable) and records shall be submitted to the SEIAA, Orissa.
- xiii) Transportation of ore shall be done by covering the trucks with tarpaulin or other suitable mechanism so that no spillage of ore / dust takes place.
- xiv) Rain water harvesting shall be undertaken to recharge the ground water source.
- xv) Monitoring of ground and surface water quality shall be regularly conducted and records should be maintained and data shall be submitted regularly to the SEIAA, Orissa.
- xvi) The proponent shall ensure that no silt originating due to mining activity is transported in the surface water course. Measures for prevention and control of soil erosion and management of silt shall be undertaken. Protection of dumps against erosion shall be carried out with geo textile matting or other suitable material, and thick plantations of native trees and shrubs shall be carried out at the dump slopes. Dumps shall be protected by retaining walls.
- xvii) Trenches / garland drains shall be constructed at foot of dumps to arrest silt from being carried to water bodies. Adequate number of Check Dams shall be constructed across seasonal/perennial nallahs (if any) flowing through the ML area and silts be arrested. De-silting at regular intervals shall be carried out.
- xviii) Provision shall be made for the housing of the labourers within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- xix) Occupational health and safety measures for the workers including identification of work related health hazards, training on malaria eradication, HIV, and health effects on exposure to mineral dust etc. shall be carried out. The Proponent shall engage a full time qualified doctor who is trained in occupational health. Periodic monitoring for exposure to respirable mineral dust on the workers shall be conducted and records maintained including health records of the workers. Awareness programme for workers on impact of mining on their health and precautionary measures like use of personal equipments etc. shall be carried out periodically. Review of impact of various health measures undertaken (at interval of five years or less) shall be conducted followed by follow up action wherever required. Occupational Health Centre shall be established near the mine site itself.
- xx) Shelter belt i.e Wind Break of 15 m width and consisting of at least 5 tiers around lease facing the human habitation, school / agricultural fields etc. (if any in the vicinity), in the safety zone/ back-filled & reclaimed areas, around voids & roads

shall be raised. Green belt development and selection of plant species shall be as per CPCB guidelines. Density of the trees has to be around 2500 plants per hectare. Herbs and shrubs shall also form a part of afforestation programme besides tree plantation. Help & guidance of local DFO may be sought in the matter. Details of year wise afforestation programme including rehabilitation of mined out area shall be submitted to the SEIAA, Orissa within six months.

- xxi) This Environmental clearance is subject to Forest clearance under the Forest (Conservation) Act, 1980.
- xxii) The mining operations shall be restricted to above ground water table and it should not intersect the groundwater table.
- xxiii) The top soil shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long ( not more than 3 years). The topsoil shall be used for land reclamation and plantation.
- xxiv) The over burden (OB) generated during the mining operation shall be stacked at earmarked dump site(s) only and it should not be kept active for a long period of time and its phase-wise stabilization shall be carried out. Proper terracing of OB dump shall be carried out so that the overall slope shall not exceed 28<sup>o</sup>. Backfilling shall be done as per approved mining plan. Back-filling to start from 3<sup>rd</sup> year onwards of the mining operation & the entire quantity of waste generated shall be backfilled & liquidated within five years. There shall be no external over-burden dumps after the 6<sup>th</sup> year of the mining operation. The backfilled area shall be afforested. Back-filling has to be done in a manner that it is restored to the normal ground level. Monitoring & management of rehabilitated areas should continue till the vegetation is established & becomes self-generating. Compliance status to be reported to the appropriate authorities.
- xxv) The funds earmarked for the environment protection measures shall be judiciously utilized. Under no circumstances this funds shall be diverted for other purposes. Year-wise expenditure for this fund should be reported to the SEIAA, Orissa.
- xxvi) The critical parameters such as SPM, RSPM, NOX in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored [(TDS, DO, PH and Total Suspended Solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain. The circular No. J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry [www.envfor.nic.in](http://www.envfor.nic.in) shall also be referred in this regard for its compliance.
- xxvi) A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the SEIAA 5 years in advance of final mine closure for approval.
- xxvii) The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water (surface water and ground water) required for the project.

xxviii) The above mentioned stipulated conditions shall be complied in time bound manner. Failure to comply with any of the conditions mentioned above may result in withdrawal of this environmental clearance and attract action under the provisions of Environment Protection (EP) Act, 1986.

### **ITEM NO : 3**

#### **PROPOSAL OF GONUA IRON AND MANGANESE ORE MINES AT/PO – GONUA, BONAI, DIST SUNDARGARH OF SHRI K. C. PRADHAN FOR IRON ORE PRODUCTION OF 50,000 TON/ANNUM.**

The proposal is for enhancement of production of iron ore from 15,000 TPA to 50000 TPA. The TOR for this project were specified on 15<sup>th</sup> October, 07 by the Expert Appraisal Committee of MoEF, Govt. of India. The mine lease area is 12.56 hectare. The Mining lease was granted in favour of Sri K.C. Pradhan over an area of 12.56 Ha and the Lease deed was executed for a period of 20 years with effect from 13.03.1991. The lease area of Gonua Iron Ore mine over 12.56 hectares falls in the village Gonua of district – Sundargarh. Out of the total MI area of 12.56 ha., 12.455 ha. Is considered as forest land as per DLC in 1996. The area was categorized as non-forest waste land prior to 1996. The state forest Dept. considered the area as forest land under DLC in 1996 which was challenged at the Honourable court and the case was admitted and mining operation was allowed to continue till the case is finalized. Mining plan is approved for the production of 50,000 TPA. The public hearing was conducted on 17.6.08. No National Park/Sanctuary is located within 10 km of the mine lease. Mine working will be opencast and semi-mechanized involving drilling and blasting. Water requirement for the project is estimated at 25 m<sup>3</sup>/day. Source of water is Kakarapani nalla. The mine has not obtained permission for drawing ground water from concerned authority. The mine working will not intersect groundwater table. Waste generation will be 351220m<sup>3</sup>. The mine has earmarked 1.45 ha as OB dump area (conceptual period).

The proposal was placed in the SEAC meeting held during 17<sup>th</sup> & 18<sup>th</sup> August 2009 . The SEAC decided to defer the proposal till satisfactory compliance to certain observation of SEAC by the project proponent. The proponent furnished compliance report to the observations of SEAC. The compliance of the proponent was scrutinized by the SEAC and it was decided to call the proponent with technical personnel for

presentation on 22.3.10. The proponent made presentation on the proposal for consideration.

Based on the informations, documents and clarifications provided, the SEAC recommends for grant of environmental clearance in favour of the project till the M.L. is valid i.e. 12.3.2011 subject to the following stipulated conditions.

- i) The applicant (Project proponent) will take necessary measures for prevention, control and mitigation of Air Pollution, Water Pollution, Noise Pollution and Land Pollution including solid waste management as mentioned by him in Form-1, Final EIA reports and Environment Management Plan (EMP) in compliance with the prescribed statutory norms and standards.
- ii) The applicant will take necessary steps for socio-economic development of the people of the area on need based assessment for providing employment, education, health care, drinking water and sanitation, road and communication facilities etc.
- iii) The applicant will comply to the points, concerns and issues raised by the people during public hearing on 17.6.08 in accordance with the commitments made by him thereon.
- iv) The applicant will take statutory clearance/approval/permissions from the concerned authorities in respect of his project as and when required.
- v) For post environmental clearance monitoring, the applicant will submit half-yearly compliance report in respect of the stipulated terms and conditions of this Environmental Clearance to the State Environmental Impact Assessment Authority (SEIAA), Orissa on 1<sup>st</sup> June and 1<sup>st</sup> December of each calendar year.
- vi) The core zone should be monitored intensively with no. of stations as prescribed by CPCB, Delhi and unit of pollutant level should be expressed as NAAQ of CPCB, Delhi. The detail methodology adopted for analysis of samples shall be clearly indicated.
- vii) The proponent shall submit ground tooting baseline data on flora & fauna and CSR activities already carried out within three months to the SEIAA, Orissa
- viii) No two pits shall be simultaneously worked. After exhausting the first mine pit and before starting mining operations in the next pit, reclamation and plantation works in the exhausted pit shall be completed so as to ensure that reclamation, forest cover and vegetation should be visible during the first year of mining operations in the next pit. This process will follow till the last pit is exhausted. Adequate rehabilitation of mined pit shall be completed before any new ore body is worked.
- ix) Adequate buffer zone shall be maintained between two consecutive mineral bearing deposits.
- x) Zero waste mining concept shall be implemented either by putting up pelletisation plant or disposal of low grade ores/fines to prospective buyers.

- xi) The following shall be implemented viz. (a) dump run-off should be diverted into settling ponds until it is clear (b) adequate rain water harvesting and ground water recharging facilities should be developed in the core zone; (c) attempt should be made to achieve zero water balance.
- xii) Maintenance of roads through which transportation of ores are undertaken shall be carried out by the project proponent regularly at its own cost.
- xiii) Fugitive dust generation shall be controlled. Fugitive dust emission shall be regularly monitored at locations of nearest human habitation (including schools and other public amenities located nearest to sources of dust generation as applicable) and records shall be submitted to the SEIAA, Orissa.
- xiv) Transportation of ore shall be done by covering the trucks with tarpaulin or other suitable mechanism so that no spillage of ore / dust takes place.
- xv) Rain water harvesting shall be undertaken to recharge the ground water source.
- xvi) Monitoring of ground and surface water quality shall be regularly conducted and records should be maintained and data shall be submitted regularly to the SEIAA, Orissa.
- xvii) The proponent shall ensure that no silt originating due to mining activity is transported in the surface water course. Measures for prevention and control of soil erosion and management of silt shall be undertaken. Protection of dumps against erosion shall be carried out with geo-textile matting or other suitable material, and thick plantations of native trees and shrubs shall be carried out at the dump slopes. Dumps shall be protected by retaining walls.
- xviii) Trenches / garland drains shall be constructed at foot of dumps to arrest silt from being carried to water bodies. Adequate number of Check Dams shall be constructed across seasonal/perennial nallahs (if any) flowing through the ML area and silts be arrested. De-silting at regular intervals shall be carried out.
- xix) Provision shall be made for the housing the labourers within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- xx) Occupational health and safety measures for the workers including identification of work related health hazards, training on malaria eradication, HIV, and health effects on exposure to mineral dust etc. shall be carried out. The Proponent shall engage a full time qualified doctor who is trained in occupational health. Periodic monitoring for exposure to respirable mineral dust on the workers shall be conducted and records maintained including health records of the workers. Awareness programme for workers on impact of mining on their health and precautionary measures like use of personal equipments etc. shall be carried out periodically. Review of impact of various health measures undertaken (at interval of five years or less) shall be conducted followed by follow up action wherever required. Occupational Health Centre shall be established near the mine site itself

- xxi) Shelter belt i.e Wind Break of 15 m width and consisting of at least 5 tiers around the lease facing the human habitation, school / agricultural fields etc. (if any in the vicinity), in the safety zone/ back-filled & reclaimed areas, around voids & roads shall be raised. Green belt development and selection of plant species shall be as per CPCB guidelines. Density of the trees has to be around 2500 plants per hectare. Herbs and shrubs shall also form a part of afforestation programme besides tree plantation. Help & guidance of local DFO may be sought in the matter. Details of year wise afforestation programme including rehabilitation of mined out area shall be submitted to the SEIAA, Orissa within six months.
- xxii) This Environmental clearance is subject to Forest clearance under the Forest (Conservation) Act, 1980.
- xxiii) The mining operations shall be restricted to above ground water table and it should not intersect the groundwater table.
- xxiv) The top soil shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long (not more than 3 years). The topsoil shall be used for land reclamation and plantation
- xxv) The over burden (OB) generated during the mining operation shall be stacked at earmarked dump site(s) only and it should not be kept active for a long period of time and its phase-wise stabilization shall be carried out. Proper terracing of OB dump shall be carried out so that the overall slope shall not exceed 28<sup>o</sup> Backfilling shall be done as per approved mining plan. Back-filling to start from 3<sup>rd</sup> year onwards of the mining operation & the entire quantity of waste generated shall be backfilled & liquidated within five years. There shall be no external over-burden dumps after the 6<sup>th</sup> year of the mining operation. The backfilled area shall be afforested. Back-filling has to be done in a manner that it is restored to the normal ground level. Monitoring & management of rehabilitated areas should continue till the vegetation is established & becomes self-generating. Compliance status to be reported to the appropriate authorities.
- xxvi) The funds earmarked for the environment protection measures shall be judiciously utilized. Under no circumstances this funds shall be diverted for other purposes. Year-wise expenditure for this fund should be reported to the SEIAA, Orissa..
- xxvii) The critical parameters such as SPM, RSPM, NOX in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored [(TDS, DO, PH and Total Suspended Solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain. The circular No. J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry [www.envfor.nic.in](http://www.envfor.nic.in) shall also be referred in this regard for its compliance.
- xxviii) A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the SEIAA 5 years in advance of final mine closure for approval.

- xxix) The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water (surface water and ground water) required for the project.
- xxx) The above mentioned stipulated conditions shall be complied in time bound manner. Failure to comply with any of the conditions mentioned above may result in withdrawal of this environmental clearance and attract action under the provisions of Environment Protection (EP) Act, 1986.

**ITEM NO – 4**

**EXTENSION OF VALIDITY PERIOD OF ENVIRONMENTAL CLEARANCE ISSUED TO M/S. PATABEDA IRON ORE MINE OF M/S. MGM MINERALS LTD, FOR INCREASE IN IRON ORE PRODUCTION FROM 0.16 MTPA TO 0.8 MTPA AT – PATABEDA, DIST SUNDARGARH.**

The SEAC recommended for grant of environmental clearance to PATABEDA IRON ORE MINE OF M/S. MGM MINERALS for 5 years. The proponent made an appeal to SEIAA to consider EC validity till 2026. The SEIAA forwarded the appeal of the proponent to consider the same. During discussion, the SEAC observed the followings :

- The mining scheme submitted by the project proponent is valid for a period of five years.
- The proponent has also not furnished any environmental management plan beyond 5 years.
- Environmental Scenario of these area is continuously changing and in this scenario without assessing the actual impact, extension of validity of environmental clearance beyond five years can't be considered at this stage.

**ITEM NO -5**

**EXTENSION OF VALIDITY PERIOD OF ENVIRONMENTAL CLEARANCE ISSUED TO M/S. UNCHABALI IRON & MANGANESE MINES OF SHRI PRABODH MOHANTY FOR INCREASE IN IRON ORE PRODUCTION FROM 10057 TPA TO 44,590 TPA AND MANGANESE ORE PRODUCTION FROM 1050 TPA TO 16,224 TPA AT UNCHABALI, PO – NAYAGARH, DIST – KEONJHAR**

The SEAC recommended for grant of environmental clearance to UNCHABALI IRON & MANGANESE MINES OF SHRI PRABODH MOHANTY for 5 years. The proponent made an appeal to SEIAA to consider EC validity till 2027. The SEIAA forwarded the

appeal of the proponent to consider the same. During discussion, the SEAC observed the followings:

- The mining scheme submitted by the project proponent is valid for a period of five years.
- The proponent has also not furnished any environmental management plan beyond 5 years.
- Environmental Scenario of these area is continuously changing and in this scenario without assessing the actual impact extension of validity of environmental clearance beyond five years can't be considered at this stage.

**(PROF. GAGAN BIHARI NITYANANDA CHAINY )  
CHAIRMAN, SEAC**

**(PROF. SWOYAM PRAKASH ROUT)  
MEMBER, SEAC**

**( PROF. KUMAR DAS )  
MEMBER, SEAC**

**( DR. MOHESHWAR PATRA)  
MEMBER, SEAC**

**(SRI SASANKA SEKHAR PATNAIK)  
MEMBER, SEAC**

**(PROF. R. C. MOHANTY)  
MEMBER, SEAC**

**( SRI S. DAS )  
SECRETARY, SEAC**



