

**PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL
COMMITTEE, ODISHA HELD ON 8TH OCTOBER, 2012 AT 11.00 AM**

The SEAC met on 8th October, 2012 at 11.00 AM in the Conference Hall of Odisha State Pollution Control Board, Bhubaneswar under the chairmanship of Dr. G. K. Roy. The following members were present in the meeting.

1.	Dr. G. K. Roy	-	Chairman(working)
2.	Dr. D. K. Rout	-	Member
3.	Shri Sridhar Behera	-	Member
4.	Dr. Maheswar Patra	-	Member
5.	Dr. C. R. Mohanty	-	Member
6.	Dr.(Ms.) Padmaja Mishra	-	Member

The following old pending proposals were appraised and decision taken.

1. PROPOSAL FOR PRODUCTION OF 60,000 TPA OF IRON ORE & 6000 TPA OF MANGANESE ORE OVER AN AREA 8.38 HA OF M/S. TEHERAI IRON & MN. MINES OF SRI S. K. PAUL AT VILLAGE TEHERAI IN THE DISTRICT OF SUNDARGARH

This is a proposal for production of 60,000 TPA iron ore and 6000 TPA manganese ore over mining lease area of 8.38 ha by M/s. Teherai Iron & Manganese Mines of Sri S. K. Paul at village Teherai in the district of Sundargarh. Mining lease was granted on 23.11.2000 by Govt. of Odisha. Mining plan was approved by IBM vide letter No. BBS/SG/Fe & Mn/MP-227 dated 6.5.2005. Out of total lease area of 8.38 ha, 4.85 ha is DLC forest land. Forest diversion proposal is under consideration of Forest Department (MoEF). The life of the mine is 25 years. TOR was issued by the MoEF, Govt. of India on 16.10.2007 for EIA study. The public hearing was conducted on 12.1.2011. The mining method will be open cast semi-mechanised. The total water requirement is 25 m³/day and source of water is nearby water body. They have applied for permission for drawl of water to Water Resources Department, Govt. of Odisha on 25.6.2011. Mine working will not intercept ground water table.

The proponent made a detailed presentation alongwith consultant **M/s. Geomin Consultants Pvt. Ltd, Bhubaneswar** before the SEAC on **13th & 14th October, 2011**. Considering the information / documents furnished, presentation made by **the consultant** and clarifications furnished in response to queries and documents submitted, the committee decided to consider environmental clearance for the proposal after getting certain information / document from the project proponent. The proponent furnished the information / documents and the committee verified the same.

Based on the information/document furnished by the proponent, the SEAC recommended for grant of environmental clearance in favour of the project proponent with following conditions **subject to submission of copy of stage-I forest clearance by the proponent as stipulated in office memorandum No. No. J-11013/41/2006-IA.II(I) dt. 9.09.11. of MoEF, Govt. of India.**

- 1) 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.
- 2) 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.
- 3) The applicant will comply to the points, concerns and issues raised by the people during public hearing on 12.1.2011 in accordance with the commitments made by him thereon.
- 4) The applicant will take statutory clearance/approval/permissions from the concerned authorities in respect of his project as and when required.
- 5) 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 1st June and 1st December of each calendar year.
- 6) 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 detailed methodology adopted for analysis of samples shall be clearly indicated.

- 7) The proponent shall submit baseline data on flora & fauna and CSR activities already carried out within three months to the SEIAA.
- 8) Adequate buffer zone shall be maintained between two consecutive mineral bearing deposits.
- 9) Zero waste mining concept shall be implemented either by putting up pelletisation plant or dispose of low grade ores/fines to prospective buyers.
- 10) 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.
- 11) Maintenance of roads through which transportation of ores are undertaken shall be carried out by the project proponent regularly at its own cost.
- 12) 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.
- 13) Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
- 14) Efforts may be made to use surface water instead of ground water for mining and allied activities. Detail proposal of rain water harvesting and surface runoffs managements shall be furnished. These should be collected and used in dust suppression and plantation.
- 15) 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.
- 16) Rain water harvesting shall be undertaken to recharge the ground water source.
- 17) 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.
- 18) 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.
- 19) 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.

- 20) 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.
- 21) 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.
- 22) 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.
- 23) This Environmental Clearance is subject to Forest Clearance under the Forest (Conservation) Act, 1980.
- 24) 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.
- 25) 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° Backfilling shall be done as per approved mining plan. Back-filling to start from 3rd year onwards of the mining operation & the entire quantity of waste generated shall be backfilled & liquidated within five years. There shall be no external overburden dumps after the 6th 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.

- 26) 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.
- 27) The critical parameters 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 shall also be referred in this regard for its compliance.
- 28) 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.
- 29) The project proponent shall obtain necessary prior permission of the competent authorities for drawal of requisite quantity of water (surface water and ground water) required for the project.
- 30) The project proponent shall prepare wild life conservation plan in consultation with DFO and adequate safety and mitigation measures should be incorporated to protect the wild life, flora, fauna to mitigate adverse impact.
- 31) 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.

2. PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR PRODUCTION OF GRAPHITE ORE UPTO 1198 TPA OVER AN AREA OF 31.808 HA AT KIRIKITA IN THE DISTRICT OF NUAPADA OF M/S. KIRIKITA GRAPHITE MINES OF DILLIP KUMAR AGRAWAL

The proposal is for graphite ore mine for production of 1198 TPA graphite ore over mining lease area of 31.808 ha. by Kirikita Graphite Mines of Dillip Kumar Agrawal at village Kirikita in the district of Nuapada. The lease area of 31.808 ha consist of 4.779 ha Gramya Jungle Jogya, 1.024 ha Gharabadi, Pathar Chattan, 0.380 ha Gochar, 1.845 ha Rasta and 23.780 ha Atta, Bahal, Berna etc land. The mining lease was granted for prospecting vide letter No. 11(M) SM-62/95-10305/SM dt. 29.10.1996. Opening notice and prospecting scheme were

submitted on 27.07.1998. During the prospecting period 5 bore holes, 4 trenches and 2 pits have been put to ascertain the existence of ore zone. The mining lease was granted in favour of Sri D. K. Agrawal vide letter No. II (M) SM-60/99 – 10545/SM, Bhubaneswar dated 21.11.2002 and executed from 14.02.2005. The mining plan for the period of 2004-05 to 2008-09 was prepared and approved by IBM vide letter No. BBS/Nua/Gr/MP-169 on 21.01.2004. The mining operation in the ML area was commenced on 22.06.2006. As such mining plan remain valid for 2006-07 to 2010-11. The mining scheme has been prepared for the period of 2011 – 12 to 2015 – 16 and approved by IBM on 29.07.2011. There is no perennial nala within the ML area. The method of mine is open cast semi-mechanised. The total water requirement is 3.5 m³/day and source of water is ground water. The mining will intercept ground water table. There is no National Parks/Sanctuaries, Biosphere Reserves, Wildlife Corridors (Tiger/Elephant) present within 10 km radius of the project area. TOR was issued by the SEAC on 7.7.2009 for EIA study. Public hearing was conducted on 28.04.2011.

The proponent made a detailed presentation alongwith consultant **M/s. Kalyani Laboratories (P) Ltd, Bhubaneswar before the SEAC** on 18th & 19th October, 2011. Considering the information / documents furnished, presentation made by **the consultant** and clarifications furnished in response to queries and documents submitted, the committee decided to consider environmental clearance for the proposal after getting certain information / document from the project proponent. The proponent furnished the information/documents and supportive documents with respect to no involvement of forest land in the mining lease area. The committee verified the same.

Based on the information/document furnished by the proponent, the SEAC recommended for grant of environmental clearance in favour of the project proponent with following conditions.

- 1) 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.
- 2) 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.
 - 3) The applicant will comply to the points, concerns and issues raised by the people during public hearing on 28.4.2011 in accordance with the commitments made by him thereon.
 - 4) The applicant will take statutory clearance/approval/permissions from the concerned authorities in respect of his project as and when required.
 - 5) 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 1st June and 1st December of each calendar year.
 - 6) 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 detailed methodology adopted for analysis of samples shall be clearly indicated.
 - 7) The proponent shall submit baseline data on flora & fauna and CSR activities already carried out within three months to the SEIAA.
 - 8) Adequate buffer zone shall be maintained between two consecutive mineral bearing deposits.
 - 9) Zero waste mining concept shall be implemented either by putting up pelletisation plant or dispose of low grade ores/fines to prospective buyers.
 - 10) 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.
 - 11) Maintenance of roads through which transportation of ores are undertaken shall be carried out by the project proponent regularly at its own cost.
 - 12) 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.
 - 13) Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer

- points should also have efficient dust control arrangements. These should be properly maintained and operated.
- 14) Efforts may be made to use surface water instead of ground water for mining and allied activities. Detail proposal of rain water harvesting and surface runoffs managements shall be furnished. These should be collected and used in dust suppression and plantation.
 - 15) 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.
 - 16) Rain water harvesting shall be undertaken to recharge the ground water source.
 - 17) 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.
 - 18) 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.
 - 19) 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.
 - 20) 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.
 - 21) 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.
 - 22) 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.
- 23) 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.
 - 24) 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^o. Backfilling shall be done as per approved mining plan. Back-filling to start from 3rd year onwards of the mining operation & the entire quantity of waste generated shall be backfilled & liquidated within five years. There shall be no external overburden dumps after the 6th 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.
 - 25) 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.
 - 26) The critical parameters 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 shall also be referred in this regard for its compliance.
 - 27) 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.
 - 28) The project proponent shall obtain necessary prior permission of the competent authorities for drawal of requisite quantity of water (surface water and ground water) required for the project.

29) 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.

3. PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR PRODUCTION OF GRAPHITE ORE UPTO 14250 TPA OVER AN AREA 35.409 HA AT GANDABAHALI IN THE DISTRICT OF NUAPADA OF M/S. GANDABAHALI GRAPHITE MINES OF SRI PRAMOD KUMAR AGRAWAL

This is a proposal for production of graphite ore upto 14250 TPA over mining lease area of 35.409 ha. by Gandabahali Graphite Ore Mines of Sri Pramod Kumar Agrawal at village Gandabahali in the district of Nuapada. Out of total lease area of 35.209 ha, 3.116 ha Gramya Jungle Jogya waste land. The mining lease was granted for prospecting vide letter No. 11(M) SM-10/94-11082/SM dt. 5.12.1997. The execution started for a period of 2 years with effect from 28th March, 1998. Opening notice and prospecting scheme were submitted on 1.5.1998. During the prospecting period 3 trenches and 1 pit have been put to ascertain the existing of ore zone and subsequently before the preparation of mining plan the proponent put nine bore holes and 4 trenches and one additional trial pits has been drilled. The mining lease was granted in favour of Sri P. K. Agrawal on 7.5.04 and executed since 22.6.2006. The mining scheme is valid from 2010-11 to 2015-16. The mining operation in the mining lease area was commenced on 22.6.2006. Project proponent has applied for consent to operate to SPCB, Odisha for the proposed production of 14,250 MT of crude graphite. Mining has nearby waterbody. They have applied for permission for drawl of water to Water Resources Department, Govt. of Odisha on 25.6.2011. Mining work will not intercept ground water table.

The proponent made a detailed presentation alongwith consultant **M/s. Kalyani Laboratories (P) Ltd, Bhubaneswar** before the SEAC on **18th & 19th October, 2011**. Considering the information / documents furnished, presentation made by **the consultant** and clarifications furnished in response to queries and documents submitted, the committee decided to consider environmental clearance for the proposal after getting certain information / document from the project proponent. The proponent furnished the information/documents and supportive documents with respect to no involvement of forest land in the mining lease area. The committee verified the same.

Based on the information/document furnished by the proponent, the SEAC recommended for grant of environmental clearance in favour of the project proponent with following conditions.

- 1) 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.
- 2) 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.
- 3) The applicant will comply to the points, concerns and issues raised by the people during public hearing on in accordance with the commitments made by him thereon.
- 4) The applicant will take statutory clearance/approval/permissions from the concerned authorities in respect of his project as and when required.
- 5) 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 1st June and 1st December of each calendar year.
- 6) 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 detailed methodology adopted for analysis of samples shall be clearly indicated.

- 7) The proponent shall submit baseline data on flora & fauna and CSR activities already carried out within three months to the SEIAA.
- 8) Adequate buffer zone shall be maintained between two consecutive mineral bearing deposits.
- 9) Zero waste mining concept shall be implemented either by putting up pelletisation plant or dispose of low grade ores/fines to prospective buyers.
- 10) 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.
- 11) Maintenance of roads through which transportation of ores are undertaken shall be carried out by the project proponent regularly at its own cost.
- 12) 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.
- 13) Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
- 14) Efforts may be made to use surface water instead of ground water for mining and allied activities. Detail proposal of rain water harvesting and surface runoffs managements shall be furnished. These should be collected and used in dust suppression and plantation.
- 15) 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.
- 16) Rain water harvesting shall be undertaken to recharge the ground water source.
- 17) 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.
- 18) 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.
- 19) 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.

- 20) 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.
- 21) 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.
- 22) 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.
- 23) 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.
- 24) 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° . Backfilling shall be done as per approved mining plan. Back-filling to start from 3rd 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 6th 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.
- 25) 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.
- 26) The critical parameters 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 shall also be referred in this regard for its compliance.
 - 27) 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.
 - 28) The project proponent shall obtain necessary prior permission of the competent authorities for drawal of requisite quantity of water (surface water and ground water) required for the project.
 - 29) 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.

4. PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR PRODUCTION OF GRAPHITE ORE UPTO 4750 TPA OVER AN AREA 28.615 HA AT GANDABHALI IN THE DISTRICT OF NUAPADA OF M/S. GANDABHALI GRAPHITE MINES OF SRI PRABHASH CHANDRA AGRAWAL

The proposal is for graphite ore mine for production of 4750 TPA graphite ore over mining lease area of 28.615 ha. by Gandabahali Graphite Ore Mines of Sri P. C. Agrawal at village Gandabahali in the district of Nuapada. The lease area of 28.615 ha. consist of non forest agricultural waste land category. The category of land are Atta, Bahal, Berna, Mala etc. The mining lease was granted for prospecting vide letter No. 11(M) SM-51/96-4899/SM dt. 6.6.1997. The execution started for a period of 2 years with effect from 28th March 1998. Opening notice and prospecting scheme were submitted on 29.4.1998. During the prospecting

period 10 bore holes, 6 trenches and 2 pits have been put to ascertain the existence of ore zone. Subsequently before the preparation of mining plan, the proponent has put nine bore holes and 4 trenches and one additional trial pit has been drilled. The mining lease was granted in favour of Sri P. C. Agrawal vide letter No. 11(M)SM-59/99-10550/SM, Bhubaneswar dated 21.11.2002 and executed from 16.7.2005. The mining plan for a period of 2004-05 to 2008-09 was prepared and approved by IBM vide letter No. BBS/Nua/Gr/MP-169 on 24.2.2004. The mining operation in the ML area has been commenced since 16.7.2005. The mining operation is closed due to non availability of environmental clearance. There is no perennial nala within the ML area. The method of mining is opencast semi-mechanised. The total water requirement is 3.5 m³/day and source of water is ground water. There is no National Parks/Sanctuaries, Biosphere Reserves, Wildlife Corridors (Tiger/Elephant) present within 10 km radius of the project area. TOR was issued by SEAC on 7.7.2009 for EIA study. Public hearing was conducted on 27.4.2011.

The proponent made a detailed presentation alongwith consultant **M/s. Kalyani Laboratories (P) Ltd, Bhubaneswar before the SEAC** on 18th & 19th October, 2011. Considering the information / documents furnished, presentation made by **the consultant** and clarifications furnished in response to queries and documents submitted, the committee decided to consider environmental clearance for the proposal after getting certain information / document from the project proponent. The proponent furnished the information/documents and supportive documents with respect to no involvement of forest land in the mining lease area. The committee verified the same.

Based on the information/documents furnished by the proponent, the SEAC recommended for the grant of environmental clearance in favour of the project proponent with following conditions.

- 1) 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.
- 2) 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.
- 3) The applicant will comply to the points, concerns and issues raised by the people during public hearing on 27.4.2011 in accordance with the commitments made by him thereon.
- 4) The applicant will take statutory clearance/approval/permissions from the concerned authorities in respect of his project as and when required.
- 5) 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 1st June and 1st December of each calendar year.
- 6) 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 detailed methodology adopted for analysis of samples shall be clearly indicated.
- 7) The proponent shall submit baseline data on flora & fauna and CSR activities already carried out within three months to the SEIAA.
- 8) Adequate buffer zone shall be maintained between two consecutive mineral bearing deposits.
- 9) Zero waste mining concept shall be implemented either by putting up pelletisation plant or dispose of low grade ores/fines to prospective buyers.
- 10) 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.
- 11) Maintenance of roads through which transportation of ores are undertaken shall be carried out by the project proponent regularly at its own cost.

- 12) 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.
- 13) Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
- 14) Efforts may be made to use surface water instead of ground water for mining and allied activities. Detail proposal of rain water harvesting and surface runoffs managements shall be furnished. These should be collected and used in dust suppression and plantation.
- 15) 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.
- 16) Rain water harvesting shall be undertaken to recharge the ground water source.
- 17) 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.
- 18) 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.
- 19) 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.
- 20) 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.
- 21) 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.

- 22) 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.
- 23) 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.
- 24) 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^o. Backfilling shall be done as per approved mining plan. Back-filling to start from 3rd 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 6th 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.
- 25) 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.
- 26) The critical parameters 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 shall also be referred in this regard for its compliance.

- 27) 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.
- 28) The project proponent shall obtain necessary prior permission of the competent authorities for drawal of requisite quantity of water (surface water and ground water) required for the project.
- 29) 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.

5. PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR CONSTRUCTION OF RESIDENTIAL HOUSING COMPLEX AT BEGUNIA BARAHI JATNI IN THE DISTRICT OF KHURDA OF M/S. ANNAPURNA REALCON (P) LTD

The proposal is a residential housing complex of M/s. Annapurna Realcon (P) Ltd at Begunia Barahi, Jatni in the district of Khurda. Total Plot Area is 12140.48 Sq.M . Total built up area is 20639.62 sq.m. The building plan is approved by BDA. The proposed development is S+4 storied and total number of units are 223. The total makeup water requirement is 115 KLD. Around. 136 KLD of waste water will be generated which will be treated in a Sewage Treatment Plant (STP). Treated water will be re-used for dual flushing, green belt and landscaping. Total solid waste generation will be 448 kg/day.

Considering the information / documents furnished, presentation made by **the consultant M/S. CEMC Pvt. Ltd. Bhubaneswar** and clarifications furnished in response to queries and documents submitted, the committee decided in its meeting held on 17th & 18th, June, 2011 to consider environmental clearance for the proposal after getting certain information / documents from the project proponent. The proponent furnished the information / documents and the committee verified the same.

After detailed discussion, the committee decided to take decision on the proposal after a detail presentation by the proponent on modified building plan of the project.

6. **PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR CONSTRUCTION OF MULTI STORIED BUILDING NEAR RASULGARH CHOWK, CUTACK-PURI ROAD, BHUBANESWAR BY M/S. SAFARI RETREATS (P) LTD**

The committee took note of the information / documents furnished by the proponent and decided to take decision on the proposal after a site visit of the sub-committee of SEAC with following members.

- i) Sri Sridhar Behera
- ii) Dr. M. Patra
- iii) Dr. D. K. Rout

(DR. G. K. ROY)
CHAIRMAN, (WORKING), SEAC

(DR. D. K. ROUT)
MEMBER, SEAC

(SRI SRIDHAR BEHERA)
MEMBER, SEAC

(DR. C.R.MOHANTY)
EMBER, SEAC

(DR. MAHESHWAR PATRA)
MEMBER, SEAC

(DR. (MS.) PADMAJA MISHRA)
MEMBER, SEAC

(SRI. S. DAS)
SECRETARY, SEAC

APPROVED

CHAIRMAN, SEAC