

Ministry of Environment & Forests  
(IA Division)  
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**SUMMARY RECORD OF THE 28<sup>TH</sup> MEETING OF EXPERT APPRAISAL COMMITTEE FOR ENVIRONMENTAL APPRAISAL OF MINING PROJECTS CONSTITUTED UNDER EIA NOTIFICATION, 2006.**

The 28<sup>th</sup> meeting of the Expert Appraisal Committee for Environmental Appraisal of Mining Projects of the Ministry of Environment and Forests was held on June 20-22, 2012. The list of participants is annexed.

After welcoming the Committee Members, discussion on each of the agenda items was taken up ad-seriatim.

**Item No. 1:**

**1.1 Confirmation of the minutes of the 27<sup>th</sup> Meeting.**

The minutes of the 27<sup>th</sup> meeting were confirmed as circulated.

**2.1 Graphite & Kyanite Mine of M/s Karnataka Mining Industries located at Village Hunaganahalli, Tehsil-Heggadadevanakote, District Mysore, Karnataka**

The proposal was considered by the Committee and the proponent made a presentation on the same. The proposal is for grant of environment clearance for production of 10,000 TPA of kyanite and graphite. It is a violation case as the mine has worked during 2004–2006 after the lease was granted in 2002 without obtaining requisite prior environment clearance. TOR for this project were prescribed on 4.10.2010. Public hearing has been held on 2.11.2011. Mine lease area is 60.7 ha. No forestland is involved. The proposal involves collection of float ore only from the surface and up to a maximum depth of about 1.2 meters. No drilling or blasting or use of heavy machinery is involved. It has been stated that after the collection of float ore, the soil gets upgraded in its fertility and the lands begin to yield better crops. Life of mine is 15 years. The water requirement for the project is estimated as 0.1 kld. No waste will be generated. All the soil and finer material generated during float ore mining will be put back into the site and land leveled for further agriculture use. The transportation of mineral will be by tractor trailer. The baseline AAQ data showed the levels within permissible limit. The issues raised during public hearing were also considered and discussed during the meeting, which inter-alia included permission from the agriculturists, location of sensitive areas around the mines, medical facilities and periodic health checkup etc. It was also observed that there has been lot of opposition to the project during public hearing. It was reported that there is no court case pending against the project.

Based on the presentation made and discussions held, the Committee sought information on the following:-

- (i) Date-wise AAQ data collected should be submitted systematically.

- (ii) A copy of letter of intent / grant of mine lease should be submitted.
- (iii) Location of Bandipur National Park w.r.t. the mine lease should be furnished. A map duly authenticated by Chief Wildlife Warden showing the distance of the Bandipur National Park and any other such location w.r.t. the mine lease should be furnished.
- (iv) A plan for diversion of nallah / channel upstream so as to ensure that there are no gully formation should be furnished.
- (v) Detailed response and action plan on the issues raised during public hearing and to address the same should be furnished.
- (vi) Permission obtained from the land owners for use of their agriculture land for mining and the details of the compensation to be paid to the land owners should be submitted.

It was decided that the proposal may be brought back before the Committee for its further consideration after the requisite information as mentioned above has been submitted.

## **2.2 Graphite & Kyanite Mine of M/s Karnataka Mining Industries located at Village Shantipura, Tehsil H. D. Kote, District Mysore, Karnataka**

The proposal was considered by the Committee and the proponent made a presentation on the same. The proposal is for grant of environment clearance for production of 5,000 TPA of kyanite and graphite. It is a violation case as the mine has worked during 2004 – 2006 after the lease was granted in 2002 without obtaining requisite prior environment clearance. TOR for this project were prescribed on 4.10.2010. Public hearing has been held on 2.11.2011. Mine lease area is 53.0157 ha. No forestland is involved. The proposal involves collection of float ore only from the surface and up to a maximum depth of about 1.2 meters. No drilling or blasting or use of heavy machinery is involved. It has been stated that after the collection of float ore, the soil gets upgraded in its fertility and the lands begin to yield better crops. Life of mine is 20 years. The water requirement for the project is estimated as 0.1 kld. No waste will be generated. All the soil and finer material generated during float ore mining will be put back into the site and land leveled for further agriculture use. The transportation of mineral will be by tractor trailer. The baseline AAQ data showed the levels within permissible limit. The issues raised during public hearing were also considered and discussed during the meeting, which inter-alia included payment of compensation to the farmers, control of dust, availability of water in the area, public health etc. It was also observed that there has been lot of opposition to the project during public hearing. It was reported that there is no court case pending against the project.

Based on the presentation made and discussions held, the Committee sought information on the following:-

- (i) Date-wise AAQ data collected should be submitted systematically.
- (ii) A copy of letter of intent / grant of mine lease should be submitted.

- (iii) Location of Bandipur National Park w.r.t. the mine lease should be furnished. A map duly authenticated by Chief Wildlife Warden showing the distance of the Bandipur National Park and any other such location w.r.t. the mine lease should be furnished.
- (iv) A plan for diversion of nallah / channel upstream so as to ensure that there are no gully formation should be furnished.
- (v) Detailed response and action plan on the issues raised during public hearing and to address the same should be furnished.
- (vi) Permission obtained from the land owners for use of their agriculture land for mining and the details of the compensation to be paid to the land owners should be submitted.

It was decided that the proposal may be brought back before the Committee for its further consideration after the requisite information as mentioned above has been submitted.

### **2.3 Bauxite Mining Project of M/s Orient Abrasives Ltd located at Taluka-Kalyanpur, District Jamnagar, Gujarat (Consultant: Kadam Environmental Consultants)**

The proposal was considered by the Committee and the proponent made a presentation on the same. The proposal is for opening of a new mine for production of 27,000 TPA of bauxite. Mine lease area is 63.4164 ha. No forestland is involved. TOR for this project were prescribed on 26.10.2010. Public hearing has been held on 3.2.2012. Mine working will be opencast manual involving drilling and blasting. Water requirement is estimated as 28 kld, which will be obtained by tankers. It was observed that the complete documents as were required to be submitted by the proponent namely; (i) Filled in Questionnaire for Environmental Appraisal of Mining Projects and (ii) Approved Mine Plan has neither been submitted to the Ministry nor circulated to the Members of EAC. Further, prima-facie it was observed that the baseline AAQ data is not distinctly for one season rather there has been mixing of season for the air quality data so collected. Further, there is no monitoring station in the eastern direction, the pre-dominant downwind direction. The AAQ data is not representative of the entire study area. Although, marine national park is reported at 9 km from the mine lease, however, there was no monitoring station in the marine national park. Authentication by Chief Wildlife Warden regarding the distance of marine national park w.r.t. the mine lease was also not furnished by the proponent.

In the absence of the requisite basic information / documents, consideration of the proposal was deferred. It was decided that the proposal will be considered in detail after the requisite information has been submitted.

**2.4 Dharmapur Beneficiation Plant of M/s Geomin Industries Pvt. Ltd. located at village Dharmapur, District Jabalpur, Madhya Pradesh (Consultant: Metamorphosis<sup>SM</sup>, Bangalore)**

The proposal was earlier considered by the Expert Appraisal Committee during its meeting held on April 16-18, 2012 wherein the Committee had sought additional information/clarifications on various related issues. Based on the additional information/clarifications submitted by the proponent, the proposal was considered further. The proponent presented the additional AAQ data collected during April-May, 2012, which showed the levels within permissible limits. The contour map of the site with various project activities was also shown. The company has entered into long term supply agreement with various local mine owners for getting the raw material. The raw material will be obtained from the mines within 25 km and the mineral transportation up to the plant will be by road. However, within the plant the transportation will be by conveyor belt. The water requirement for the project is estimated as 350 kld. Part of the water requirement will be met through rainwater. The proponent has also submitted a copy of the letter from The Ground Water Authority confirming the water availability. The area is reported to be in safe zone. The solid waste will be used to cater to the demand of cement and brick making industry. Other issues raised by the Committee were also clarified and discussed.

Based on the presentation made and discussion held, the Committee recommended the project for environmental clearance.

**2.5 Renewal of Mining Lease of Diamond Patharia Limestone Mines of M/s Heidelberg Cement India Ltd., Village Satpara, Jagthar, Bothrai & Neguwan, Tehsil-Patharia, District Damoh, M.P. (Consultant: J.M. Environet Pvt. Ltd., Gurgaon)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

The proposal is for renewal of mine lease which will fall due in November, 2012 for production of 4.5 million TPA of limestone. The mine working will be opencast mechanized involving drilling and blasting. Mine lease area is 1247.267 ha, which includes 1043.661 ha of agriculture land and 138.792 ha of grazing land. No forestland is involved. No National Park / Sanctuary is reported within 10 km of the mine lease. Life of the mine is 32 years. Ultimate working depth will be 346.5 m AMSL. Groundwater table varies between 335 m AMSL – 340 m AMSL. Mine working will not intersect groundwater table. Backfilling is proposed. The earlier EC was granted in June, 2009. Compliance to the earlier EC conditions was also seen and discussed. The request of the proponent for exemption of public hearing which was earlier held in June, 2008 was not agreed to by the Committee.

Based on the information furnished and presentation made, the Committee prescribed the following TORs for undertaking detailed EIA study:-

- 1) Status of compliance of the earlier EC conditions along with supporting documents and photographs should be submitted.
- 2) Year-wise production details since 1994 onwards should be given clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification, 1994 coming into force w.r.t. the highest production achieved prior to 1994.
- 3) A copy of the document in support of the fact that the proponent is the rightful lessee of the mine should be given.
- 4) All documents including approved mine plan, EIA and public hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management and mining technology and should be in the name of the lessee.
- 5) All corner coordinates of the mine lease area superimposed on High Resolution Imagery/toposheet should be provided.
- 6) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
- 7) Does the Environment Policy prescribe for standard operating process/ procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
- 8) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
- 9) Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
- 10) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc should be for the life of the mine / lease period.
- 11) Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary and national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated.
- 12) Land use plan of the mine lease area should be prepared to encompass pre-operational, operational and post operational phases and submitted.
- 13) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves (existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, if any, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above should be obtained from the State Wildlife Department/ Chief Wildlife Warden under the Wildlife (Protection) Act, 1972 and copy furnished.
- 14) A detailed biological study for the study area [core zone and buffer zone (10 km

- radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, duly authenticated, separately for core and buffer zone should be furnished based on primary field survey clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
- 15) Impact, if any, of change of land use should be given.
  - 16) R&R plan / compensation details for the project affected people should be furnished. While preparing the R&R plan, the National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs / STs and other weaker sections, need based sample survey, family-wise, should be undertaken to assess their requirement and action programmes prepared accordingly integrating the sectoral programme of line departments of the State Government.
  - 17) One season (non-monsoon) primary baseline data on ambient air quality (PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM<sub>10</sub> particularly for free silica should be given.
  - 18) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
  - 19) The water requirement for the project, its availability and source to be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should be indicated.
  - 20) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
  - 21) Details of water conservation measures proposed to be adopted in the project should be given.
  - 22) Impact of the project on the water quality both surface and groundwater should be assessed and necessary safeguard measures, if any required should be provided.
  - 23) Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed hydro geological study should be undertaken and report furnished. Necessary

- permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.
- 24) Details of any stream, seasonal or otherwise, passing through lease area and modification / diversion proposed, if any and the impact of the same on the hydrology should be brought out.
  - 25) Details of rainwater harvesting proposed, if any, in the project should be provided.
  - 26) Information on site elevation, working depth, groundwater table etc. should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
  - 27) Quantity of solid waste generation to be estimated and details for its disposal and management should be provided. The quantity, volumes and methodology planned for removal and utilisation (preferably concurrently) of top soil should be indicated. Details of backfilling proposed, if any, should also be given. It may be clearly indicated that out of the total waste generated during the mine life, how much quantity would be backfilled and how much quantity would be disposed off in the form of external dump (number of dumps, their height, terraces etc. to be brought out).
  - 28) The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
  - 29) Impact on local transport infrastructure due to the project should be indicated. Projected increase in truck traffic as a result of the project in the present road network (including those outside the project area) should be worked out, indicating whether it is capable of handling the increased load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered.
  - 30) Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
  - 31) Conceptual post mining land use and Reclamation and Rehabilitation of mined out area (with plans and with adequate number of sections) should be given in the EIA report.
  - 32) Phase-wise plan of greenbelt development, plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given.
  - 33) Occupational health impact of project should be anticipated and preventive measures initiated. Details in this regard should be provided. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP.
  - 34) Public health implication of the project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocation.
  - 35) Measures of socio economic significance and influence to the local community proposed to be provided by project proponent should be indicated. As far as

- possible, quantitative dimensions may be given with time frame for implementation.
- 36) Detailed environmental management plan to mitigate the environmental impacts which, should inter-alia also include the impact due to change of land use, due to loss of agricultural land and grazing land, if any, occupational health impacts besides other impacts of the projects.
  - 37) Public hearing points raised and commitment of the project proponent on the same along with time bound action plan to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
  - 38) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
  - 39) The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.

Besides the above, the below mentioned general points should also be followed:-

- a) A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
- b) All documents may be properly referenced with index and continuous page numbering.
- c) Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
- d) Where the documents provided are in a language other than English, an English translation should be provided.
- e) The Questionnaire for environmental appraisal of mining projects as prescribed by the Ministry shall also be filled and submitted.
- f) Approved mine plan along with copy of the approval letter for the proposed capacity should also be submitted.
- g) While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4<sup>th</sup> August, 2009, which are available on the website of this Ministry should also be followed.
- h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the F.R for securing the TOR) should be brought to the attention of MoEF with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.

The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

After preparing the draft EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above mentioned issues, the proponent will get the public hearing conducted and take further necessary action for obtaining

environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.

## **2.6 Proposed Limestone Mining of M/s Chettinad Cement Corp. Ltd., Village Peddagarlapadu & Kesanupalli, District Guntur, A.P. (539.053 ha) (TOR)**

As the proponent is yet to get the letter of intent issued in their name, the proposal was found to be pre-mature. It was decided that the proposal may be returned and file closed.

## **2.7 Jajang Iron and Manganese Ore Mine of M/s Rungta Mines Ltd., Village Jajang, Palsa and Bandhuabada, District Keonjhar, Orissa (Consultant: Ecomin Laboratories Pvt. Ltd., Lucknow)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

The proposal is for enhancement of production of iron ore from 5.5 million TPA to 16.5 million TPA (12.8 million TPA (ROM) by fresh excavation + 3.7 million TPA by collection from old dumps). In addition, there will be a screening and crushing plant for producing 1.0 million TPA from low grade dump, installation of wet beneficiation plant with a capacity of 6.0 million TPA throughput and installation of pelletisation plant of 2.4 million TPA (2x1.2 million TPA). Mine lease area is 666.15 ha, which include 485.585 ha of forestland. Earlier environment clearance for 5.5 million TPA was granted in June, 2005. Compliance of the earlier EC conditions was also presented and considered. Mine working will be opencast mechanized involving drilling and blasting. Life of mine is 10 years. It is estimated that 1,34,79,728 m<sup>3</sup> of waste will be generated up to the end of the mine life. Out of this, 33,00,000 m<sup>3</sup> of waste will be accommodated in the dumps and the area of the dump will increase from existing 42.667 ha to 62.439 ha. Part of the waste will be used for backfilling in the exhausted quarry. The total water requirement is estimated as 10,158 kld. The additional water will be obtained from Baitarni river.

Based on the information furnished and presentation made, the Committee prescribed the following TORs for undertaking detailed EIA study:-

- 1) Status of compliance of the earlier EC conditions along with supporting documents and photographs should be submitted.
- 2) Year-wise production details since 1994 onwards should be given clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification, 1994 coming into force w.r.t. the highest production achieved prior to 1994.
- 3) A copy of the document in support of the fact that the proponent is the rightful

- lessee of the mine should be given.
- 4) All documents including approved mine plan, EIA and public hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management and mining technology and should be in the name of the lessee.
  - 5) All corner coordinates of the mine lease area superimposed on High Resolution Imagery/toposheet should be provided.
  - 6) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - 7) Does the Environment Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
  - 8) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
  - 9) Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
  - 10) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc should be for the life of the mine / lease period.
  - 11) Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary and national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated.
  - 12) Land use plan of the mine lease area should be prepared to encompass pre-operational, operational and post operational phases and submitted.
  - 13) Location of the proposed plant w.r.t. the source of raw material and mode of transportations of the ore from mines to the beneficiation plant, and outbound movement of the products should be provided.
  - 14) Details of the technology and process involved in the project may be furnished.
  - 15) Proposed treatment of run off from the fines/waste dump should be provided.
  - 16) Estimation of the fines going into the washings and its management should be given.
  - 17) Details of the equipment, settling pond etc. should be provided.
  - 18) Detailed material balance should be provided.
  - 19) Source of raw material and its transportation should be given. Steps proposed to be taken to protect the ore from getting air borne should be given.
  - 20) Management and disposal of tailings and closure plan of the tailing pond, if any, after the project is over, should be provided.
  - 21) Size distribution of the iron ore with percentage weight shall also be done to assess the source of fugitive dust emission of the ore feed to the plant.
  - 22) Measures to manage the under size / over-size waste from the feed ore shall be provided.
  - 23) Details of the solid waste to be generated and its management should be outlined. Adequacy of the tailing pond for the life of the beneficiation plant

- should be provided with supporting data and documentation. Design and capacity of tailing pond should be such as to guard against overflow from the tailing pond during heavy rainfall. The provision of lining, nature of lining with supporting permeability studies should also be provided.
- 24) Details of the land for OB dump outside the mine lease such as extent of land area, distance from mine lease, its land use, R&R issues, if any should be given.
  - 25) High Resolution Satellite Imagery of the proposed area clearly showing the land use and other ecological features of the study area (core and buffer zone) should be provided.
  - 26) A Certificate from the Competent Authority in the State Forest Department confirming the involvement of forest land, if any in the project area, or otherwise, based on land use classification (revenue record) as also in terms of the definition of forest as pronounced in the judgement of the Hon'ble Supreme Court of India in the matter of T.N. Godavarman Vs. Union of India should be secured and copy furnished. In the event of any claim by the project proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
  - 27) Status of forestry clearance for the broken up area and virgin forestland involved in the project including deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.
  - 28) Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
  - 29) Impact of the project on the wildlife in the surrounding and any other protected area and accordingly detailed mitigative measures required should be worked out with cost implications and submitted.
  - 30) The vegetation in the RF / PF area should be given. Details in this regard should be given.
  - 31) A study shall be got done to ascertain the impact of the mining project on wildlife of the area including on the elephant population and details furnished.
  - 32) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves (existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated supported by a location map duly authenticated by Chief Wildlife Warden Necessary clearance, if any, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above should be obtained from the State Wildlife Department/ Chief Wildlife Warden under the Wildlife (Protection) Act, 1972 and copy furnished.
  - 33) A detailed biological study for the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, duly authenticated, separately for core and buffer zone should be furnished based on primary field survey clearly indicating the Schedule of the

- fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
- 34) Impact of change of land use should be given.
  - 35) R&R plan / compensation details for the project affected people should be furnished. While preparing the R&R plan, the National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs / STs and other weaker sections, need based sample survey, family-wise, should be undertaken to assess their requirement and action programmes prepared accordingly integrating the sectoral programme of line departments of the State Government.
  - 36) One season (non-monsoon) primary baseline data on ambient air quality (PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM<sub>10</sub> particularly for free silica should be given.
  - 37) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
  - 38) The water requirement for the project, its availability and source to be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should be indicated.
  - 39) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
  - 40) Details of water conservation measures proposed to be adopted in the project should be given.
  - 41) Impact of the project on the water quality both surface and groundwater should be assessed and necessary safeguard measures, if any required should be provided.
  - 42) Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed hydro geological study should be undertaken and report furnished. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.

- 43) Details of first order stream, if any passing through lease area and modification/diversion proposed, if any and the impact of the same on the hydrology should be brought out.
- 44) Details of rainwater harvesting proposed, if any, in the project should be provided.
- 45) Information on site elevation, working depth, groundwater table etc. should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
- 46) Quantity of solid waste generation to be estimated and details for its disposal and management should be provided. The quantity, volumes and methodology planned for removal and utilisation (preferably concurrently) of top soil should be indicated. Details of backfilling proposed, if any, should also be given. It may be clearly indicated that out of the total waste generated during the mine life, how much quantity would be backfilled and how much quantity would be disposed off in the form of external dump (number of dumps, their height, terraces etc. to be brought out).
- 47) The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
- 48) Impact on local transport infrastructure due to the project should be indicated. Projected increase in truck traffic as a result of the project in the present road network (including those outside the project area) should be worked out, indicating whether it is capable of handling the increased load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered.
- 49) Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
- 50) Conceptual post mining land use and Reclamation and Rehabilitation of mined out area (with plans and with adequate number of sections) should be given in the EIA report.
- 51) Phase-wise plan of greenbelt development, plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given.
- 52) Occupational health impact of project should be anticipated and preventive measures initiated. Details in this regard should be provided. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP.
- 53) Public health implication of the project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocation.
- 54) Measures of socio economic significance and influence to the local community proposed to be provided by project proponent should be indicated. As far as possible, quantitative dimensions may be given with time frame for implementation.
- 55) Detailed environmental management plan to mitigate the environmental

impacts which, should inter-alia also include the impact due to change of land use, due to loss of agricultural land and grazing land, if any, occupational health impacts besides other impacts of the projects.

- 56) Public hearing points raised and commitment of the project proponent on the same along with time bound action plan to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
- 57) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
- 58) The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.

Besides the above, the below mentioned general points should also be followed:-

- a) A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
- b) All documents may be properly referenced with index and continuous page numbering.
- c) Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
- d) Where the documents provided are in a language other than English, an English translation should be provided.
- e) The Questionnaire for environmental appraisal of mining projects as prescribed by the Ministry shall also be filled and submitted.
- f) Approved mine plan along with copy of the approval letter for the proposed capacity should also be submitted.
- g) While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4<sup>th</sup> August, 2009, which are available on the website of this Ministry should also be followed.
- h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the F.R for securing the TOR) should be brought to the attention of MoEF with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.

The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

After preparing the draft EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above mentioned issues, the proponent will get the public hearing conducted and take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.

**2.8 Mahughara Granite Mines of M/s Samar Dass Granite Mines, Village Mahughara Hill, Tehsil Berhampur, District Ganjam, Orissa (13.901 ha) (TOR)**

The consideration of the proposal was deferred as the project proponent did not attend the meeting.

**2.9 Decorative Stone Mines of M/s New Laxmi Granites, Village Kurulubhata, District Balangir, Orissa (10.615 ha) (TOR) (Consultant: )**

The consideration of the proposal was deferred as the project proponent did not attend the meeting.

**2.10 Decorative Stone Mines of M/s New Laxmi Granites, Village Parsurampur, District Gajapati, Orissa (49.922 ha) (TOR) (Consultant: ) (Consultant: )**

The consideration of the proposal was deferred as the project proponent did not attend the meeting.

**2.11 Mining of Stone, Sand & Bajri of M/s Jai Shree Hari Gram Udyog Stone Crusher, Village & P.O Bain Attarian, Tehsil Indora, District Kangra, H.P. (12.3494 ha)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

The proposal is for mining of 42,400 TPA of stone, sand and bajri put together from the Chhaunchh Khad. Mine lease area is 12.3494 ha. The project has been considered as category 'A' because of its location is within 10 km of the interstate boundary with Punjab. No forestland is involved. Mine working will be opencast manual and will be restricted up to one meter. Mineral transportation will be by road.

Based on the information furnished and presentation made, the Committee prescribed the following TORs for undertaking detailed EIA study:-

- 1) Year-wise production details since 2006 after the EIA Notification, 2006 coming into force.
- 2) A copy of the document in support of the fact that the proponent is the rightful lessee of the mine should be given.
- 3) All documents including approved mine plan (eco friendly mine plan), EIA report and public hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management and mining technology.

- 4) The terms and conditions imposed, if any, by the Competent Authority in the State Government while granting mining lease / permit / contract should be built into the mine plan (eco friendly mine plan) as well as the EIA report. It may inter-alia include; area of working (length and breadth of the river stretch), mode of working, working shift, transportation of mineral, restriction, if any imposed for working etc.
- 5) All corner coordinates of the mine lease area superimposed on High Resolution Imagery/toposheet should be provided.
- 6) Involvement of forestland, if any, in the project and status of forestry clearance should be given.
- 7) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc should be for the life of the mine / lease period.
- 8) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
- 9) Does the Environment Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
- 10) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
- 11) Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
- 12) A study should also be carried out to decide on the quantum of mineral which can be removed on sustainable basis taking into account the replenishment potential of the area and details furnished.
- 13) Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary and national park, migratory routes of fauna, water bodies, human settlements and other ecological features.
- 14) Land use plan of the mine lease area should be prepared to encompass pre-operational, operational and post operational phases.
- 15) Impact of the project on the wildlife in the surrounding and any other protected area and accordingly detailed mitigation measures required should be worked out with cost implications.

- 16) The vegetation in the RF / PF in the study area, if any, should be indicated.
- 17) A study shall be got done to ascertain the impact of the mining project on wildlife of the area including aquatic life.
- 18) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves (existing as well as proposed) within 10 km of the mine lease should be clearly indicated supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance from the Chief Wildlife Warden for operating the mine within 10 km of the National Park/Sanctuary, if any, should also be obtained and furnished.
- 19) A detailed biological study for the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] including the aquatic fauna in the riverine system shall be carried out. Details of flora and fauna, duly authenticated, separately for core and buffer zone should be furnished based on primary field survey clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
- 20) Impact of the project on land use including change of river course, if any should be given.
- 21) Impact on topography, drainage, agricultural fields, cattle fields, wildlife, water logging leading to water borne diseases, if any. It may also be shown whether it will lead to change of watercourse of the river. Modelling exercise should also be carried out through an expert agency to show the change in river flow dynamics, if any.
- 22) Collection of one season (non-monsoon) primary baseline data on ambient air quality (PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna, site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. Date wise collected baseline AAQ data should form part of EIA and EMP report. The mineralogical composition of PM<sub>10</sub> particularly for free silica should be given. There should be at least one AAQ monitoring station within 500 m of the mine lease in the pre-dominant downwind direction.
- 23) Air quality modelling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modelling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.

The impact of other mines in the impact zone as also the stone crusher and other industries, if any, nearby should also be taken into account.

- 24) The water requirement for the project, its availability and source to be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should be indicated.
- 25) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
- 26) Impact of the project on the water quality should be assessed and necessary safeguard measures, if any required should be provided.
- 27) Information on site elevation, working depth, groundwater table should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
- 28) Quantity of solid waste generation, if any, should be estimated and details for its disposal and management should be provided.
- 29) Impact on local transport infrastructure due to the project should be evaluated. Projected increase in truck traffic as a result of the project in the present road network (including those outside the project area) and whether it is capable of handling the increased load should be estimated. Arrangement for improving the infrastructure, if contemplated including action to be taken by other agencies such as State Government, if any, should be covered.
- 30) Details of the infrastructure facilities to be provided for the mine workers should be furnished.
- 31) Phase-wise plan of greenbelt development, plantation and compensatory afforestation clearly indicating the area to be covered under plantation and the species to be planted should be provided.
- 32) Occupational health impacts of the project activity should be anticipated and reported and proposed preventive measures indicated. These along with details of pre-placement medical examination and periodical medical examination schedules and medical facilities proposed to be provided should be incorporated in the EMP.
- 33) Measures of socio economic influence to the local community, proposed to be provided by project proponent should be spelt out. As far as possible, quantitative dimensions should be given.
- 34) Detailed environmental management plan to mitigate the environmental impacts. Specific safeguard measures to control PM<sub>10</sub> as well as pollution due to transportation should be given. It should also address the impact due to stone crusher nearby.

- 35) Public hearing points raised and commitment of the project proponent on the same along with time bound action plan to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
- 36) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
- 37) The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.

Besides the above, the below mentioned general points will also to be followed:-

- a) A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
- b) All documents may be properly referenced with index, page numbers and continuous page numbering.
- c) Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
- d) Where the documents provided are in a language other than English, an English translation should be provided.
- e) The Questionnaire for environmental appraisal of mining projects as prescribed by the Ministry shall also be filled and submitted.
- f) Approved mine plan along with copy of the approval letter for the proposed capacity should also be submitted.
- g) While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry should also be followed.
- h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the F.R for securing the TOR) should be brought to the attention of MoEF with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.

The EIA report should also include surface plan of the area indicating contours of main topographic features, drainage and mining area.

After preparing the draft EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above mentioned issues, the proponent will get the public hearing conducted and take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.

**2.12 Malangtoli Iron Ore Mine (802.6678 ha) of M/s Mesco Steel Ltd., village Luhakala, Kadakala & Sundara, Tehsil Telkoi, District Keonjhar, Orissa (Consultant: S.S. Environics (I) Pvt. Ltd., Bhubaneswar)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

The proposal was earlier considered by the EAC during its meeting held on August 25-26, 2009, wherein the consideration of the proposal was deferred till the issue regarding the extent of mine lease is clarified and resolved by the State Government in conformity with orders of the Hon'ble High Court. Now the project proponent have got the matter clarified and submitted a letter from the Directorate of Mines, Govt. of Orissa dated 28.5.2012 stating the extent of mine lease as 802.6678 ha. A copy of the order of the Hon'ble Supreme Court dated 13.5.2010 in SLP (C) C.C. 9865 of 2009 in the matter of State of Orissa and others Vs MESCO Steel Ltd. was also submitted. It was noted that although the interim stay of the directions of the High Court to execute the lease deed in favour of respondent till further order was granted, the court has stated that the respondent is entitled to pursue all applications for pre-lease clearances in accordance with law. Accordingly, the application for TOR was considered by the EAC.

The proposal is for opening of a new mine for production of 3.5 million TPA (ROM) of iron ore along with crushing and screening plant with a capacity of 2000 TPH. Mine lease area is 802.6678 ha, which includes 615.2813 ha of forestland. Mine working will be opencast mechanized. Life of mine is 13 years. Ultimate working depth will be 50 m bgl. Water requirement is 200 kld, which will be obtained from Baitarni river / Malda nadi.

Prima-facie, the site is located in the forest area surrounded by hilly terrain and water bodies, rich in biodiversity. There is also a major water fall in proximity of the mine lease area. It was, therefore, decided that a site visit should also be made to get the first hand information on the site specific features, which have significant ecological role. Accordingly, the Committee while prescribing the TORs also decided that in the meantime, immediately after the monsoon season when the site becomes approachable, a site visit may also be made and based on the site visit any additional studies as may be required to be conducted shall also be prescribed, which will be undertaken by the proponent and included in the draft EIA report to be placed before the public for public hearing.

Based on the information furnished and presentation made, the Committee prescribed the following TORs for undertaking detailed EIA study:-

- 1) A copy of the document in support of the fact that the proponent is the rightful lessee of the mine should be given.
- 2) All documents including approved mine plan, EIA and public hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management and mining technology and should be in the name of the lessee.

- 3) All corner coordinates of the mine lease area superimposed on High Resolution Imagery/toposheet should be provided.
- 4) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
- 5) Does the Environment Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
- 6) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
- 7) Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
- 8) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc should be for the life of the mine / lease period.
- 9) Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary and national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated.
- 10) Land use plan of the mine lease area should be prepared to encompass pre-operational, operational and post operational phases and submitted.
- 11) Details of the land for OB dump outside the mine lease such as extent of land area, distance from mine lease, its land use, R&R issues, if any should be given.
- 12) High Resolution Satellite Imagery of the proposed area clearly showing the land use and other ecological features of the study area (core and buffer zone) should be furnished.
- 13) A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any in the project area, or otherwise, based on land use classification (revenue record) as also in terms of the definition of forest as pronounced in the judgement of the Hon'ble Supreme Court of India in the matter of T.N. Godavarman Vs. Union of India. In the event of any claim by the project proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
- 14) Status of forestry clearance for the broken up area and virgin forestland involved in the project including deposition of net present value (NPV) and compensatory afforestation (CA). A copy of the forestry clearance should also be furnished.
- 15) Implementation of status of recognition of forest rights under the Scheduled

- Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
- 16) Impact of the project on the wildlife in the surrounding and any other protected area and accordingly detailed mitigative measures required should be worked out with cost implications and submitted.
  - 17) The vegetation in the RF / PF area with necessary details should be given.
  - 18) A study shall be got done to ascertain the impact of the mining project on wildlife of the area including on the elephant population and details furnished.
  - 19) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves (existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, if any, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above should be obtained from the State Wildlife Department/ Chief Wildlife Warden under the Wildlife (Protection) Act, 1972 and copy furnished.
  - 20) A detailed biological study for the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, duly authenticated, separately for core and buffer zone should be furnished based on primary field survey clearly indicating the Schedule of the fauna present, endangered / endemic flora found, if any. In case of any scheduled-I fauna found in the study area, the necessary plan for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
  - 21) Impact, if any, of change of land use should be given.
  - 22) R&R plan / compensation details for the project affected people should be furnished. While preparing the R&R plan, the National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs / STs and other weaker sections, need based sample survey, family-wise, should be undertaken to assess their requirement and action programmes prepared accordingly integrating the sectoral programme of line departments of the State Government.
  - 23) One season (non-monsoon) primary baseline data on ambient air quality (PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM<sub>10</sub> particularly for free silica should be given.
  - 24) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the

impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.

- 25) The water requirement for the project, its availability and source to be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should be indicated.
- 26) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
- 27) Details of water conservation measures proposed to be adopted in the project should be given.
- 28) Impact of the project on the water quality both surface and groundwater should be assessed and necessary safeguard measures, if any required should be provided.
- 29) A detailed hydro-geological study showing the impact of the project on the hydrology including surface water and groundwater regime should be provided. In case the working will intersect groundwater table, a detailed hydro geological study should be undertaken and report furnished. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.
- 30) Details of any stream, seasonal or otherwise, passing through lease area and modification / diversion proposed, if any and the impact of the same on the hydrology should be brought out. Impact of the mine on the water fall, if any, should also be clearly brought out including the necessary mitigation measures proposed.
- 31) Details of rainwater harvesting proposed, if any, in the project should be provided.
- 32) Information on site elevation, working depth, groundwater table etc. should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
- 33) Quantity of solid waste generation to be estimated and details for its disposal and management should be provided. The quantity, volumes and methodology planned for removal and utilisation (preferably concurrently) of top soil should be indicated. Details of backfilling proposed, if any, should also be given. It may be clearly indicated that out of the total waste generated during the mine life, how much quantity would be backfilled and how much quantity would be disposed off in the form of external dump (number of dumps, their height, terraces etc. to be brought out).
- 34) The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
- 35) Impact on local transport infrastructure due to the project should be indicated. Projected increase in truck traffic as a result of the project in the

present road network (including those outside the project area) should be worked out, indicating whether it is capable of handling the increased load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered.

- 36) Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
- 37) Conceptual post mining land use and Reclamation and Rehabilitation of mined out area (with plans and with adequate number of sections) should be given in the EIA report.
- 38) Phase-wise plan of greenbelt development, plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted.
- 39) Occupational health impact of project should be anticipated and preventive measures initiated. Details in this regard should be provided. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP.
- 40) Public health implication of the project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocation.
- 41) Measures of socio economic significance and influence to the local community proposed to be provided by project proponent should be indicated. As far as possible, quantitative dimensions may be given with time frame for implementation.
- 42) Detailed environmental management plan to mitigate the environmental impacts which, should inter-alia also include the impact due to change of land use, due to loss of agricultural land and grazing land, if any, occupational health impacts besides other impacts of the projects.
- 43) Public hearing points raised and commitment of the project proponent on the same along with time bound action plan to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
- 44) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
- 45) The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.

Besides the above, the below mentioned general points should also be followed:-

- a) A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
- b) All documents may be properly referenced with index and continuous page numbering.
- c) Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
- d) Where the documents provided are in a language other than English, an

English translation should be provided.

- e) The Questionnaire for environmental appraisal of mining projects as prescribed by the Ministry shall also be filled and submitted.
- f) Approved mine plan along with copy of the approval letter for the proposed capacity should also be submitted.
- g) While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4<sup>th</sup> August, 2009, which are available on the website of this Ministry should also be followed.
- h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the F.R for securing the TOR) should be brought to the attention of MoEF with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.

The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

After preparing the draft EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above mentioned issues, the proponent will get the public hearing conducted and take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.

### **2.13 Malangtoli Iron Ore Mine (697.8122 ha) of M/s Mesco Steel Ltd., Village Kadakala, Sundara, Pirkokhari & Kaijoda, Tehsil Telkoi, District Keonjhar, Orissa (Consultant: S.S. Environics (I) Pvt. Ltd., Bhubaneswar)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

The proposal was earlier considered by the EAC during its meeting held on August 25-26, 2009, wherein the consideration of the proposal was deferred till the issue regarding the extent of mine lease is clarified and resolved by the State Government in conformity with orders of the Hon'ble High Court. Now the project proponent have got the matter clarified and submitted a letter from the Directorate of Mines, Govt. of Orissa dated 28.5.2012 stating the extent of mine lease as 802.6678 ha. A copy of the order of the Hon'ble Supreme Court dated 13.5.2010 in SLP (C) C.C. 9865 of 2009 in the matter of State of Orissa and others Vs MESCO Steel Ltd. was also submitted. It was noted that although the interim stay of the directions of the High Court to execute the lease deed in favour of respondent till further order was granted, the court has stated that the

respondent is entitled to pursue all applications for pre-lease clearances in accordance with law. Accordingly, the application for TOR was considered by the EAC.

The proposal is for opening of a new mine for production of 1.8 million TPA (ROM) of iron ore. Mine lease area is 697.8122 ha, which includes 505.8648 ha of forestland. Mine working will be opencast mechanized. Life of mine is 11 years. Ultimate working depth will be 50 m bgl. Water requirement is 150 kld, which will be obtained from Baitarni river.

Prima-facie, the site is located in the forest area surrounded by hilly terrain and water bodies, rich in biodiversity. There is also a major water fall in proximity of the mine lease area. It was, therefore, decided that a site visit should also be made to get the first hand information on the site specific features, which have significant ecological role. Accordingly, the Committee while prescribing the TORs also decided that in the meantime, immediately after the monsoon season when the site becomes approachable, a site visit may also be made and based on the site visit any additional studies as may be required to be conducted shall also be prescribed, which will be undertaken by the proponent and included in the draft EIA report to be placed before the public for public hearing.

Based on the information furnished and presentation made, the Committee prescribed the following TORs for undertaking detailed EIA study:-

- 1) A copy of the document in support of the fact that the proponent is the rightful lessee of the mine should be given.
- 2) All documents including approved mine plan, EIA and public hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management and mining technology and should be in the name of the lessee.
- 3) All corner coordinates of the mine lease area superimposed on High Resolution Imagery/toposheet should be provided.
- 4) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
- 5) Does the Environment Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
- 6) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
- 7) Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
- 8) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc should be for the life of the mine / lease period.
- 9) Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary and national park, migratory routes of fauna, water

- bodies, human settlements and other ecological features should be indicated.
- 10) Land use plan of the mine lease area should be prepared to encompass pre-operational, operational and post operational phases and submitted.
  - 11) Details of the land for OB dump outside the mine lease such as extent of land area, distance from mine lease, its land use, R&R issues, if any should be given.
  - 12) High Resolution Satellite Imagery of the proposed area clearly showing the land use and other ecological features of the study area (core and buffer zone) should be furnished.
  - 13) A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any in the project area, or otherwise, based on land use classification (revenue record) as also in terms of the definition of forest as pronounced in the judgement of the Hon'ble Supreme Court of India in the matter of T.N. Godavarman Vs. Union of India. In the event of any claim by the project proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
  - 14) Status of forestry clearance for the broken up area and virgin forestland involved in the project including deposition of net present value (NPV) and compensatory afforestation (CA). A copy of the forestry clearance should also be furnished.
  - 15) Implementation of status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
  - 16) Impact of the project on the wildlife in the surrounding and any other protected area and accordingly detailed mitigative measures required should be worked out with cost implications and submitted.
  - 17) The vegetation in the RF / PF area with necessary details should be given.
  - 18) A study shall be got done to ascertain the impact of the mining project on wildlife of the area including on the elephant population and details furnished.
  - 19) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves (existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, if any, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above should be obtained from the State Wildlife Department/ Chief Wildlife Warden under the Wildlife (Protection) Act, 1972 and copy furnished.
  - 20) A detailed biological study for the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of

flora and fauna, duly authenticated, separately for core and buffer zone should be furnished based on primary field survey clearly indicating the Schedule of the fauna present, endangered / endemic flora found, if any. In case of any scheduled-I fauna found in the study area, the necessary plan for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.

- 21) Impact, if any, of change of land use should be given.
- 22) R&R plan / compensation details for the project affected people should be furnished. While preparing the R&R plan, the National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs / STs and other weaker sections, need based sample survey, family-wise, should be undertaken to assess their requirement and action programmes prepared accordingly integrating the sectoral programme of line departments of the State Government.
- 23) One season (non-monsoon) primary baseline data on ambient air quality (PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10 particularly for free silica should be given.
- 24) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
- 25) The water requirement for the project, its availability and source to be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should be indicated.
- 26) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
- 27) Details of water conservation measures proposed to be adopted in the project should be given.
- 28) Impact of the project on the water quality both surface and groundwater should be assessed and necessary safeguard measures, if any required should be provided.
- 29) A detailed hydro-geological study showing the impact of the project on the hydrology including surface water and groundwater regime should be provided. In case the working will intersect groundwater table, a detailed

hydro geological study should be undertaken and report furnished. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.

- 30) Details of any stream, seasonal or otherwise, passing through lease area and modification / diversion proposed, if any and the impact of the same on the hydrology should be brought out. Impact of the mine on the water fall, if any, should also be clearly brought out including the necessary mitigation measures proposed.
- 31) Details of rainwater harvesting proposed, if any, in the project should be provided.
- 32) Information on site elevation, working depth, groundwater table etc. should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
- 33) Quantity of solid waste generation to be estimated and details for its disposal and management should be provided. The quantity, volumes and methodology planned for removal and utilisation (preferably concurrently) of top soil should be indicated. Details of backfilling proposed, if any, should also be given. It may be clearly indicated that out of the total waste generated during the mine life, how much quantity would be backfilled and how much quantity would be disposed off in the form of external dump (number of dumps, their height, terraces etc. to be brought out).
- 34) The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
- 35) Impact on local transport infrastructure due to the project should be indicated. Projected increase in truck traffic as a result of the project in the present road network (including those outside the project area) should be worked out, indicating whether it is capable of handling the increased load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered.
- 36) Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
- 37) Conceptual post mining land use and Reclamation and Rehabilitation of mined out area (with plans and with adequate number of sections) should be given in the EIA report.
- 38) Phase-wise plan of greenbelt development, plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted.
- 39) Occupational health impact of project should be anticipated and preventive measures initiated. Details in this regard should be provided. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP.
- 40) Public health implication of the project and related activities for the population in the impact zone should be systematically evaluated and the

proposed remedial measures should be detailed along with budgetary allocation.

- 41) Measures of socio economic significance and influence to the local community proposed to be provided by project proponent should be indicated. As far as possible, quantitative dimensions may be given with time frame for implementation.
- 42) Detailed environmental management plan to mitigate the environmental impacts which, should inter-alia also include the impact due to change of land use, due to loss of agricultural land and grazing land, if any, occupational health impacts besides other impacts of the projects.
- 43) Public hearing points raised and commitment of the project proponent on the same along with time bound action plan to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
- 44) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
- 45) The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.

Besides the above, the below mentioned general points should also be followed:-

- a) A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
- b) All documents may be properly referenced with index and continuous page numbering.
- c) Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
- d) Where the documents provided are in a language other than English, an English translation should be provided.
- e) The Questionnaire for environmental appraisal of mining projects as prescribed by the Ministry shall also be filled and submitted.
- f) Approved mine plan along with copy of the approval letter for the proposed capacity should also be submitted.
- g) While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4<sup>th</sup> August, 2009, which are available on the website of this Ministry should also be followed.
- h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the F.R for securing the TOR) should be brought to the attention of MoEF with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.

The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections

and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

After preparing the draft EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above mentioned issues, the proponent will get the public hearing conducted and take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.

#### **2.14 Borunda Limestone (Minor Mineral) Mine of M/s Radhey Chemicals located at Village Borunda, Tehsil-Bilara, District Jodhpur, Rajasthan**

The proposal was considered by the Committee and the proponent made a presentation on the same. The proposal is for renewal of mine lease which fell due on 13.4.2011 and enhancement of production of limestone from 33,255 TPA to 1,00,000 TPA. TOR for this project were prescribed on 9<sup>th</sup> July, 2009. Public hearing has been held on 4.5.2010. Mine lease area is 100 ha. No forestland is involved. No National Park / Sanctuary / Wildlife Corridors are reported within 10 km of the mine lease. It is a violation case as the mine continued to work after it fell due for renewal. Mine working will be opencast semi-mechanised. Life of the mine is 123 years. Water requirement is 10 kld, which will be obtained from nearby villages by tankers. The baseline AAQ data in the study area except the mine site was shown to be within permissible limit. At the end of the mine life an area of 33.35 ha will be covered under plantation and an area of 65.65 ha will be converted into water reservoir. The groundwater table varies between 250 m AMSL – 265 m AMSL. It is estimated that 4,05,000 m<sup>3</sup> of waste will be generated at the conceptual stage. Backfilling is proposed, which will start at the end of the 5<sup>th</sup> year. An area of 8.72 ha is proposed to be backfilled, which will be reclaimed by plantation. There will be no external OB dump at the end of the mine life. The issues raised during public hearing were also considered and discussed during the meeting, which inter-alia included dust pollution due to blasting, noise and vibration, improvement of road, provision of medical facilities, plantation etc. It was reported that there is no court case pending against the project.

Based on the presentation made and discussion held, the Committee recommended the project for environmental clearance.

#### **2.15 Renewal of mine lease and expansion of Iron Ore Beneficiation Plant of M/s Tata Steel Ltd. located at P.O. Noamundi, District West Singhbhum, Jharkhand (Consultant: Ecoman Laboratories Pvt. Ltd., Lucknow)**

The proposal was considered by the Committee and the proponent made a presentation on the same. The proposal is for renewal of mine lease, which fell due on 1<sup>st</sup> January, 2012 for production of 10.0 million TPA (ROM) of iron ore and expansion of beneficiation plant from 10.0 million TPA to 18 million TPA throughput capacity. TOR for this project were prescribed on 29.7.2011. Public hearing has been held on 12.3.2012. The earlier environment clearance for 10.0 million TPA (ROM) and 10.0 million TPA

capacity beneficiation plant was obtained on 26.8.2008. The mine lease area is 1060.06 ha. In addition, an area of 70.36 ha, outside the mine lease also forms part of the project. Thus, the total project area is 1230.42 ha. Out of this, 762.43 ha is forestland. Temporary working permission over an area of 370.92 ha for a period of one year with effect from 26.3.2012 has been granted. The mine is reported to be working under the order of the Hon'ble High Court of Jharkhand. As the mine lease area is located within West Singhbhum District, an identified severely polluted area, the comments of Jharkhand State Pollution Control Board were also obtained as per the procedure prescribed. The comments submitted vide their letter PC/JSR/NOC/26/12/G.1330 dated 20.6.2012 were also considered and taken on record. It was noted that the ambient air quality levels are within permissible limit. The unit has installed bag filters in crushing section. Transfer points are covered. Slime pond and check dams have been constructed at different levels and overburden has been kept in defined area. Mine working will be opencast mechanized involving drilling and blasting. The beneficiation plant will be both on dry processing and wet processing. In the wet process, it is proposed to add another circuit for beneficiation of low grade ROM mineral rejects and slime making two separate circuits for high and low grade feed material. The washed rejects will be accumulated in a thickener and the rejects after settling will be pumped to zero discharge slime dams. Water recovered from thickener slime dam will be reused. ROM will be transported through dumpers to beneficiation plant and the processed ore will be carried to railway siding by conveyor. No external transportation by road is envisaged. Life of mine is 18 years. The baseline AAQ data showed that within the study area at certain locations, the PM<sub>10</sub> values are high and at barajamda, it exceeded the prescribed limits. The water requirement is estimated as 29,000 kld, which will be obtained from river Baitarni. Rainwater harvesting is proposed, which will partly be used for recharge of groundwater. The tailing pond will be lined with clay.

It was, however, observed that the biological study was not based on primary survey and therefore, the conservation plan also required modification thereafter. The assessment of impact of the project on the biological component was also found to be missing. Schedule of fauna as reported also required to be rechecked and corrected. The issues raised during public hearing were also considered and discussed during the meeting, which inter-alia included provision of drinking water, bathing facilities, provision of electricity / solar lights in the villages, education and training facilities, health care in the surrounding area and plantation etc. The compliance of the earlier EC condition was also presented and discussed during the meeting.

Based on the presentation made and discussions held, the Committee sought information on the following:-

- (i) A detailed note along with copy of the court order and other supporting documents based on which the mine is continuing to operate after it fell due for renewal without requisite prior environmental clearance.
- (ii) Study area to be selected as specified in the TOR. Specific reference in this regard may be made to TOR no. 9 and the baseline data should be collected and furnished accordingly.
- (iii) Biological study should be furnished based on primary survey.

- (iv) Schedule of fauna observed in the study area should be rechecked and corrected information furnished.
- (v) Assessment of impact of the project on the biological component should be carried out and based on the same, necessary mitigation measures as also the plan for conservation of flora and fauna observed in the study area, based on primary survey should be prepared and submitted.
- (vi) Adequacy of the tailing pond for the life of the plant should be justified along with supporting documents.
- (vii) Water balance should be reconciled and details furnished.
- (viii) A copy of the permission from the Competent Authority for drawl of requisite quantity of water for the project should be submitted.
- (ix) As the study area has dominance of SC and ST population, specific plan for their development should be prepared and submitted.

It was decided that the proposal may be brought back before the Committee for its further consideration after the requisite information as mentioned above has been submitted.

**2.16 Proposed 68,360.52 MT Crude China Clay and 14,200.23 MT finished (washed) China Clay of M/s Cossimbazar China Clay Mines, Village Katepara, Kahuldiha, Karanjia, Bhonda and Dumuria, Tehsil-Hagamaria, District West Singhbhum, Jharkhand (156.877 ha) (TOR)**

The consideration of the proposal was deferred as the project proponent did not attend the meeting.

**2.17 Proposed 5218.24 TPA Crude China Clay and 1565.047 TPA finished (washed) China Clay of M/s Cossimbazar China Clay Mines, Village Katepara, Kahuldiha, Karanjia, Bhonda and Dumuria, Tehsil-Hagamaria, District West Singhbhum, Jharkhand (67.20 ha) (TOR)**

The consideration of the proposal was deferred as the project proponent did not attend the meeting.

**2.18 Kolihan Copper Mine of M/s Hindustan Copper Ltd., Village Kolihan, Tehsil Khetri, District Jhunjhunu, Rajasthan (Consultant: MECON Ltd., Ranchi)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

The proposal is for enhancement of copper ore from 1.0 million TPA to 1.5 million TPA. The earlier environment clearance was granted in March, 2009. Mine lease area is 163.23 ha, which include 161.83 ha of forestland. Forestry clearance has been obtained. No National Park / Sanctuary is reported within 10 km of the mine lease. Mine working will be underground mechanized. Life of mine is 15 years. The compliance of earlier EC conditions was also presented. Water requirement is estimated as 1150 kld. Groundwater table varies between 35 m bgl – 38 m bgl.

Based on the information furnished and presentation made, the Committee prescribed the following TORs for undertaking detailed EIA study:-

- 1) Status of compliance of the earlier EC conditions along with supporting documents and photographs should be submitted.
- 2) Year-wise production details since 1994 onwards should be given clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification, 1994 coming into force w.r.t. the highest production achieved prior to 1994.
- 3) A copy of the document in support of the fact that the proponent is the rightful lessee of the mine should be given.
- 4) All documents including approved mine plan, EIA and public hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management and mining technology and should be in the name of the lessee.
- 5) All corner coordinates of the mine lease area superimposed on High Resolution Imagery/toposheet should be provided.
- 6) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
- 7) Does the Environment Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
- 8) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
- 9) Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
- 10) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc should be for the life of the mine / lease period.
- 11) Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary and national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated.
- 12) Land use plan of the mine lease area should be prepared to encompass pre-operational, operational and post operational phases and submitted.

- 13) Details of the land for OB dump outside the mine lease such as extent of land area, distance from mine lease, its land use, R&R issues, if any should be given.
- 14) High Resolution Satellite Imagery of the proposed area clearly showing the land use and other ecological features of the study area (core and buffer zone) should be furnished.
- 15) A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any in the project area, or otherwise, based on land use classification (revenue record) as also in terms of the definition of forest as pronounced in the judgement of the Hon'ble Supreme Court of India in the matter of T.N. Godavarman Vs. Union of India. In the event of any claim by the project proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
- 16) Status of forestry clearance for the broken up area and virgin forestland involved in the project including deposition of net present value (NPV) and compensatory afforestation (CA). A copy of the forestry clearance should also be furnished.
- 17) Implementation of status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
- 18) Impact of the project on the wildlife in the surrounding and any other protected area and accordingly detailed mitigative measures required should be worked out with cost implications and submitted.
- 19) The vegetation in the RF / PF area with necessary details should be given.
- 20) A study shall be got done to ascertain the impact of the mining project on wildlife of the area including on the elephant population and details furnished.
- 21) A confirmation may be adduced, duly authenticated by the competent authority in the State Government to the effect whether the project falls in Aravalli and whether it is covered by the order of the Hon'ble Supreme Court dated 8.4.2005 in the contempt petition (c) 412/2004 in writ petition 202 of 1995 in the matter of Godavarman vs Union of India.
- 22) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves (existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, if any, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above should be obtained from the State Wildlife Department/ Chief Wildlife Warden under the Wildlife (Protection) Act, 1972 and copy furnished.
- 23) A detailed biological study for the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, duly authenticated, separately for core and buffer zone should be furnished based on primary field survey clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan for their conservation should be prepared in consultation with

- State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
- 24) Impact, if any, of change of land use should be given.
  - 25) Issues relating to mine safety based on subsidence study should be detailed. The proposed safeguard measure in this regard should also be provided.
  - 26) R&R plan / compensation details for the project affected people should be furnished. While preparing the R&R plan, the National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs / STs and other weaker sections, need based sample survey, family-wise, should be undertaken to assess their requirement and action programmes prepared accordingly integrating the sectoral programme of line departments of the State Government.
  - 27) One season (non-monsoon) primary baseline data on ambient air quality (PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction.
  - 28) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
  - 29) The water requirement for the project, its availability and source to be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should be indicated.
  - 30) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
  - 31) Details of water conservation measures proposed to be adopted in the project should be given.
  - 32) Impact of the project on the water quality both surface and groundwater should be assessed and necessary safeguard measures, if any required should be provided.
  - 33) Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed hydro geological study should be undertaken and report furnished. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.
  - 34) Details of any stream, seasonal or otherwise, passing through lease area and modification / diversion proposed, if any and the impact of the same on the hydrology should be brought out.

- 35) Details of rainwater harvesting proposed, if any, in the project should be provided.
- 36) Information on site elevation, working depth, groundwater table etc. should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
- 37) Quantity of solid waste generation to be estimated and details for its disposal and management should be provided. The quantity, volumes and methodology planned for removal and utilisation (preferably concurrently) of top soil should be indicated. Details of backfilling proposed, if any, should also be given. It may be clearly indicated that out of the total waste generated during the mine life, how much quantity would be backfilled and how much quantity would be disposed off in the form of external dump (number of dumps, their height, terraces etc. to be brought out).
- 38) The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
- 39) Impact on local transport infrastructure due to the project should be indicated. Projected increase in truck traffic as a result of the project in the present road network (including those outside the project area) should be worked out, indicating whether it is capable of handling the increased load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered.
- 40) Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
- 41) Conceptual post mining land use and Reclamation and Rehabilitation of mined out area (with plans and with adequate number of sections) should be given in the EIA report.
- 42) Phase-wise plan of greenbelt development, plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given.
- 43) Occupational health impact of project should be anticipated and preventive measures initiated. Details in this regard should be provided. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP.
- 44) Public health implication of the project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocation.
- 45) Measures of socio economic significance and influence to the local community proposed to be provided by project proponent should be indicated. As far as possible, quantitative dimensions may be given with time frame for implementation.
- 46) Detailed environmental management plan to mitigate the environmental impacts which, should inter-alia also include the impact due to change of land use, due to loss of agricultural land and grazing land, if any, occupational health impacts besides other impacts of the projects.

- 47) Public hearing points raised and commitment of the project proponent on the same along with time bound action plan to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
- 48) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
- 49) The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.

Besides the above, the below mentioned general points should also be followed:-

- a) A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
- b) All documents may be properly referenced with index and continuous page numbering.
- c) Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
- d) Where the documents provided are in a language other than English, an English translation should be provided.
- e) The Questionnaire for environmental appraisal of mining projects as prescribed by the Ministry shall also be filled and submitted.
- f) Approved mine plan along with copy of the approval letter for the proposed capacity should also be submitted.
- g) While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4<sup>th</sup> August, 2009, which are available on the website of this Ministry should also be followed.
- h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the F.R for securing the TOR) should be brought to the attention of MoEF with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.

The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

After preparing the draft EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above mentioned issues, the proponent will get the public hearing conducted and take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.

## **2.19 Discussion regarding categorization of projects into 'B1' and 'B2'.**

The discussion on the subject was continued from the last meeting. In addition, the Committee was apprised of the order of the Hon'ble Supreme Court dated 27.2.2012 in the matter of Deepak Kumar Vs State of Haryana relating to minor mineral wherein the Hon'ble Supreme Court has directed that EC will also be obtained for leases of minor mineral with lease area of less than 5 ha. The communications received from various State Governments on the subject were also circulated to the members. The Committee was requested to take cognizance of the said order while formulating guidelines for B1 and B2. The Committee deliberated in detail on these issues. Based on the discussions, it was agreed that the draft guidelines will be prepared by the Member Secretary which will be finalized by the Committee in the next meeting to be held in July, 2012.

### **2.20 Enhancement of Production of Joda East Iron Ore Mine and Beneficiation plant of M/s TATA Steel Ltd. located at District Keonjhar, Odisha (Consultant: Tata Consulting Engineers Ltd., Mumbai)**

The proposal was last considered by the Expert Appraisal Committee during its meeting held on November 28-30, 2011 wherein the Committee had sought additional information/clarifications on various related issues. Based on the additional information/clarifications submitted by the proponent, the proposal was considered further. The baseline AAQ data for the winter season of 2011-12 was presented which showed the levels within permissible limit. It was stated that various steps have been taken for control of RSPM in the project area, which inter-alia included mobile water sprinklers, fixed water sprinklers along haul roads (about 1 km in length), use of dust suppression, making dry fog system more effective, use of chemicals for quick settling of slime etc. Various initiatives taken for water conservation were presented. The details of pipeline from Kundra Nallah to the project site were also presented. It was shown that the pipelines are laid along with hill slope and delivers water at the vertical head of 106 meters. The fluoride concentration in groundwater was reported as 0.3 mg/l. The action plan for implementation of commitments made during public hearing was also presented and discussed which inter-alia included waste water management, supply of drinking water, education and health care facilities etc. The other issues raised by the Committee were also discussed and presented.

Based on the presentation made and discussion held, the Committee recommended the project for environmental clearance.

### **2.21 Bhadrasahi Iron & Manganese Ore Mines of M/s Orissa Minerals Development Co. Ltd. located at District Keonjhar, Odisha (Consultant: Geomin Consultants Pvt. Ltd., Bhubaneswar)**

The proposal was earlier considered by the Expert Appraisal Committee during its meeting held on December 22-23, 2011 wherein the Committee had sought additional information/clarifications on various related issues. Based on the additional information/clarifications submitted by the proponent, the proposal was considered further. At the outset, it was observed that it is a violation case as the iron ore production from the mine was enhanced after EIA Notification, 1994 coming into force without the requisite prior environment clearance. The details of the evacuation route were presented.

It was stated that the existing road, which is used for evacuation of iron and manganese ore from the Bhadrasahi mines is not negotiating any village, however, various safeguards will be taken during transportation to minimize the adverse impact due to fugitive emissions. The proponent have proposed to provide sequential barriers / check dams across the dry nallah to arrest the silt which is likely to flow in Suna nadi. Besides, the deposition of silt will be removed periodically. A safe distance of 50 m along both sides of the seasonal nallah flowing through the mine lease area will be left. Stone masonry wall will be erected. Check dam will be constructed at the toe of the dump. Water sample analysis was also presented. It was clarified that the waste dump, which was earlier proposed on the south eastern part of the mine lease (close to the water body) will not be implemented. Necessary modification in the mining scheme will be made and approval obtained at the time of next mining scheme. Rainwater harvesting has been proposed and details were presented. Peak water requirement for the project is estimated as 500 kld, which will partly be met from harvested rainwater, groundwater and Suna nadi. Baseline AAQ data and its comparison with the data collected in 2009 was also presented. The levels were seen to be within permissible limit. Wildlife management plan was also presented, which inter-alia included habitat improvement and protection of natural habitat. The other issues raised by the Committee were also presented and clarified.

Based on the presentation made and discussion held, the Committee recommended the project for environmental clearance.

## **2.22 Proposal of Mining of Soap Stone of M/s Bipin Singh Rana, Village Gona, District Chamoli, Uttarakhand (10.407 ha) (TOR) (Consultant: Grass Roots Research and Creation India Pvt. Ltd., Noida)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

The proposal falls in category 'B' as the mine lease area is 10.407 ha. It was considered in MoEF as the SEIAA for Uttarakhand is not in place. It was, however, observed that the LOI for the said mine has already expired. In view of the same, consideration of the proposal was deferred till the project proponent submits a valid LOI granting mine lease in their name. In the meantime, the proposal may be returned.

## **2.23 Proposed Purnadih-Sehra Graphite Mine & Beneficiation Unit of M/s Singhania Commercial Co., Village Punadih & Sehra, P.S. Daltonganj, District Palamu, Jharkhand (47.059 ha) (TOR) (Consultant: Consultant: Grass Roots Research and Creation India Pvt. Ltd., Noida)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006.

For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

The proposal falls in category 'B' as the mine lease area is 47.059 ha and the capacity of beneficiation plant is 2360 TPA. It was considered in MoEF as the SEIAA for Jharkhand is not in place. It was observed that the title of the lease is not clear. The Committee, therefore, deferred consideration of the proposal till the lease title is got clear and submitted. In the meantime, the proposal may be returned.

**2.24 Proposal of Barui Orche, White Clay, Laterite & Bauxite Mine of M/s Kunjilal Ishwari Prasad Agrawal, Village Barui, Tehsil Birsinghpur, District Satna, M.P. (8.094 ha) (TOR) (Consultant: )**

The consideration of the proposal was deferred as no authorized representative was present during the meeting.

**2.25 Baderakala Ochre & Laterite Mine of M/s Hiralal Sundarlal Agrawal, Village Baderakala, Tehsil Birsinghpur, District Satna, M.P. (14.57 ha) (TOR) (Consultant: )**

The consideration of the proposal was deferred at the request of the project proponent.

**2.26 Expansion of Surda Copper Mine of M/s Hindustan Copper Ltd., District East Singhbhum, Ghatsila, Jharkhand (Consultant: MECON, Ranchi)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

The proposal is for renewal of mine lease which fell due in 2004 and enhancement of production of copper ore from 0.39 million TPA to 0.9 million TPA. Mine lease area is 388.68 ha, which include 149.03 ha of forestland. It is a violation case as the mine continues to operate after it fell due for renewal without requisite prior environment clearance. Mine working will be underground mechanized. Life of the mine is 30 years. It is estimated that 50,000 tonnes of waste will be generated due to shaft sinking, which will be partly used for stowing and rest will be used for road construction. The water requirement is estimated as 2,800 kld.

Based on the information furnished and presentation made, the Committee prescribed the following TORs for undertaking detailed EIA study:-

- 1) Status of compliance of the earlier EC conditions along with supporting documents and photographs should be submitted.
- 2) Year-wise production details since 1994 onwards should be given clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after

the EIA Notification, 1994 coming into force w.r.t. the highest production achieved prior to 1994.

- 3) A copy of the document in support of the fact that the proponent is the rightful lessee of the mine should be given.
- 4) All documents including approved mine plan, EIA and public hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management and mining technology and should be in the name of the lessee.
- 5) All corner coordinates of the mine lease area superimposed on High Resolution Imagery/toposheet should be provided.
- 6) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
- 7) Does the Environment Policy prescribe for standard operating process/ procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
- 8) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
- 9) Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
- 10) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc should be for the life of the mine / lease period.
- 11) Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary and national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated.
- 12) Land use plan of the mine lease area should be prepared to encompass pre-operational, operational and post operational phases and submitted.
- 13) Details of the land for OB dump outside the mine lease such as extent of land area, distance from mine lease, its land use, R&R issues, if any should be given.
- 14) High Resolution Satellite Imagery of the proposed area clearly showing the land use and other ecological features of the study area (core and buffer zone) should be furnished.
- 15) A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any in the project area, or otherwise, based on land use classification (revenue record) as also in terms of the definition of forest as pronounced in the judgement of the Hon'ble Supreme Court of India in the matter of T.N. Godavarman Vs. Union of India. In the event of any claim by the project proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.

- 16) Status of forestry clearance for the broken up area and virgin forestland involved in the project including deposition of net present value (NPV) and compensatory afforestation (CA). A copy of the forestry clearance should also be furnished.
- 17) Implementation of status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
- 18) Impact of the project on the wildlife in the surrounding and any other protected area and accordingly detailed mitigative measures required should be worked out with cost implications and submitted.
- 19) The vegetation in the RF / PF area with necessary details should be given.
- 20) A study shall be got done to ascertain the impact of the mining project on wildlife of the area including on the elephant population and details furnished.
- 21) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves (existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, if any, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above should be obtained from the State Wildlife Department/ Chief Wildlife Warden under the Wildlife (Protection) Act, 1972 and copy furnished.
- 22) A detailed biological study for the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, duly authenticated, separately for core and buffer zone should be furnished based on primary field survey clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
- 23) Impact, if any, of change of land use should be given.
- 24) R&R plan / compensation details for the project affected people should be furnished. While preparing the R&R plan, the National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs / STs and other weaker sections, need based sample survey, family-wise, should be undertaken to assess their requirement and action programmes prepared accordingly integrating the sectoral programme of line departments of the State Government.
- 25) One season (non-monsoon) primary baseline data on ambient air quality ( $PM_{10}$ ,  $SO_2$  and  $NO_x$ ), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of  $PM_{10}$  particularly for free silica should be given.
- 26) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used

and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.

- 27) The water requirement for the project, its availability and source to be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should be indicated.
- 28) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
- 29) Details of water conservation measures proposed to be adopted in the project should be given.
- 30) Impact of the project on the water quality both surface and groundwater should be assessed and necessary safeguard measures, if any required should be provided.
- 31) Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed hydro geological study should be undertaken and report furnished. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.
- 32) Details of any stream, seasonal or otherwise, passing through lease area and modification / diversion proposed, if any and the impact of the same on the hydrology should be brought out.
- 33) Details of rainwater harvesting proposed, if any, in the project should be provided.
- 34) Information on site elevation, working depth, groundwater table etc. should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
- 35) Quantity of solid waste generation to be estimated and details for its disposal and management should be provided. The quantity, volumes and methodology planned for removal and utilisation (preferably concurrently) of top soil should be indicated. Details of backfilling proposed, if any, should also be given. It may be clearly indicated that out of the total waste generated during the mine life, how much quantity would be backfilled and how much quantity would be disposed off in the form of external dump (number of dumps, their height, terraces etc. to be brought out).
- 36) The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
- 37) Impact on local transport infrastructure due to the project should be indicated. Projected increase in truck traffic as a result of the project in the present road network (including those outside the project area) should be worked out, indicating whether it is capable of handling the increased load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered.
- 38) Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.

- 39) Conceptual post mining land use and Reclamation and Rehabilitation of mined out area (with plans and with adequate number of sections) should be given in the EIA report.
- 40) Phase-wise plan of greenbelt development, plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given.
- 41) Occupational health impact of project should be anticipated and preventive measures initiated. Details in this regard should be provided. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP.
- 42) Public health implication of the project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocation.
- 43) Measures of socio economic significance and influence to the local community proposed to be provided by project proponent should be indicated. As far as possible, quantitative dimensions may be given with time frame for implementation.
- 44) Detailed environmental management plan to mitigate the environmental impacts which, should inter-alia also include the impact due to change of land use, due to loss of agricultural land and grazing land, if any, occupational health impacts besides other impacts of the projects.
- 45) Public hearing points raised and commitment of the project proponent on the same along with time bound action plan to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
- 46) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
- 47) The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.

Besides the above, the below mentioned general points should also be followed:-

- a) A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
- b) All documents may be properly referenced with index and continuous page numbering.
- c) Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
- d) Where the documents provided are in a language other than English, an English translation should be provided.
- e) The Questionnaire for environmental appraisal of mining projects as prescribed by the Ministry shall also be filled and submitted.
- f) Approved mine plan along with copy of the approval letter for the proposed capacity should also be submitted.
- g) While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-

11013/41/2006-IA.II(I) dated 4<sup>th</sup> August, 2009, which are available on the website of this Ministry should also be followed.

- h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the F.R for securing the TOR) should be brought to the attention of MoEF with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.

The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

After preparing the draft EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above mentioned issues, the proponent will get the public hearing conducted and take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.

### **2.27 Proposed Sand, Stone and Bajri Quarry of M/s Shivalik Stone Crusher, Village Kungrat, Tehsil Haroli, District Una, H.P. (8.14 ha) (TOR)**

The consideration of the proposal was deferred at the request of the project proponent.

### **2.28 Proposed Expansion in Bauxite Ore Production of Maliparbat Bauxite Mines of M/s Hindalco Industries Ltd., Village Aligaon, Kakadamb, Sorishpadar, Tehsil Semiliguda, District Koraput, Orissa (Consultant: S.S. Environics (India) Pvt. Ltd., Bhubaneswar)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

The proposal is for enhancement of production of bauxite from 0.6 million TPA to 0.9 million TPA. The mine lease area is 268.11 ha. No forestland is involved. The earlier environment clearance was granted on 7<sup>th</sup> September, 2006. Mine working will be opencast mechanized involving drilling and blasting. Life of the mine is 13 years. Ultimate working depth will be 22 meters. The water requirement is 61 kld, which will be met from Kundli nallah. Compliance of the earlier EC conditions was also presented and discussed.

Based on the information furnished and presentation made, the Committee prescribed the following TORs for undertaking detailed EIA study:-

- 1) Status of compliance of the earlier EC conditions along with supporting documents and photographs should be submitted.
- 2) Year-wise production details since 1994 onwards should be given clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification, 1994 coming into force w.r.t. the highest production achieved prior to 1994.
- 3) A copy of the document in support of the fact that the proponent is the rightful lessee of the mine should be given.
- 4) All documents including approved mine plan, EIA and public hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management and mining technology and should be in the name of the lessee.
- 5) All corner coordinates of the mine lease area superimposed on High Resolution Imagery/toposheet should be provided.
- 6) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
- 7) Does the Environment Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
- 8) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
- 9) Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
- 10) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc should be for the life of the mine / lease period.
- 11) Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary and national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated.
- 12) Land use plan of the mine lease area should be prepared to encompass pre-operational, operational and post operational phases and submitted.
- 13) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves (existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, if any, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above should be obtained from the State Wildlife Department/ Chief Wildlife Warden under the Wildlife (Protection) Act, 1972 and copy furnished.
- 14) A detailed biological study for the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, duly authenticated, separately for core and buffer zone should be furnished based on primary field survey clearly indicating the Schedule of the

- fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
- 15) Impact, if any, of change of land use should be given.
  - 16) R&R plan / compensation details for the project affected people should be furnished. While preparing the R&R plan, the National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs / STs and other weaker sections, need based sample survey, family-wise, should be undertaken to assess their requirement and action programmes prepared accordingly integrating the sectoral programme of line departments of the State Government.
  - 17) One season (non-monsoon) primary baseline data on ambient air quality (PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM<sub>10</sub> particularly for free silica should be given.
  - 18) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
  - 19) The water requirement for the project, its availability and source to be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should be indicated.
  - 20) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
  - 21) Details of water conservation measures proposed to be adopted in the project should be given.
  - 22) Impact of the project on the water quality both surface and groundwater should be assessed and necessary safeguard measures, if any required should be provided.
  - 23) Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed hydro geological study should be undertaken and report furnished. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.
  - 24) Details of any stream, seasonal or otherwise, passing through lease area and modification / diversion proposed, if any and the impact of the same on the

- hydrology should be brought out.
- 25) Details of rainwater harvesting proposed, if any, in the project should be provided.
  - 26) Information on site elevation, working depth, groundwater table etc. should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
  - 27) Quantity of solid waste generation to be estimated and details for its disposal and management should be provided. The quantity, volumes and methodology planned for removal and utilisation (preferably concurrently) of top soil should be indicated. Details of backfilling proposed, if any, should also be given. It may be clearly indicated that out of the total waste generated during the mine life, how much quantity would be backfilled and how much quantity would be disposed off in the form of external dump (number of dumps, their height, terraces etc. to be brought out).
  - 28) The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
  - 29) Impact on local transport infrastructure due to the project should be indicated. Projected increase in truck traffic as a result of the project in the present road network (including those outside the project area) should be worked out, indicating whether it is capable of handling the increased load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered.
  - 30) Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
  - 31) Conceptual post mining land use and Reclamation and Rehabilitation of mined out area (with plans and with adequate number of sections) should be given in the EIA report.
  - 32) Phase-wise plan of greenbelt development, plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given.
  - 33) Occupational health impact of project should be anticipated and preventive measures initiated. Details in this regard should be provided. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP.
  - 34) Public health implication of the project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocation.
  - 35) Measures of socio economic significance and influence to the local community proposed to be provided by project proponent should be indicated. As far as possible, quantitative dimensions may be given with time frame for implementation.
  - 36) Detailed environmental management plan to mitigate the environmental impacts which, should inter-alia also include the impact due to change of land use, due to loss of agricultural land and grazing land, if any, occupational health impacts

- besides other impacts of the projects.
- 37) Public hearing points raised and commitment of the project proponent on the same along with time bound action plan to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
  - 38) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
  - 39) The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.

Besides the above, the below mentioned general points should also be followed:-

- a) A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
- b) All documents may be properly referenced with index and continuous page numbering.
- c) Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
- d) Where the documents provided are in a language other than English, an English translation should be provided.
- e) The Questionnaire for environmental appraisal of mining projects as prescribed by the Ministry shall also be filled and submitted.
- f) Approved mine plan along with copy of the approval letter for the proposed capacity should also be submitted.
- g) While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4<sup>th</sup> August, 2009, which are available on the website of this Ministry should also be followed.
- h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the F.R for securing the TOR) should be brought to the attention of MoEF with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.

The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

After preparing the draft EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above mentioned issues, the proponent will get the public hearing conducted and take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.

## **2.29 Iron and Manganese Ore Mine of M/s Dalpahar Iron & Manganese Ore Mine located at Baitarani, District Keonjhar, Odisha**

The proposal was considered by the Committee and the proponent made a presentation on the same. The proposal is for renewal of mine lease which fell due in 2006 for production of 0.31 million TPA of iron ore and 0.094 million TPA of manganese ore. The mine is reported to be closed since December, 1995. TOR for this project were prescribed on 23.9.2008. Public hearing has been held on 26.8.2011. The mine lease area is 101.171 ha, which is forestland. Forestry clearance for 16.464 ha was earlier obtained in 2005, however, the proponent have now applied for forestry clearance over an area of 96.071 ha. Mine working will be opencast involving drilling and blasting. Life of mine is 7 years for iron ore and 32 years for manganese ore. Ultimate working depth will be 527.87 m AMSL. Groundwater table is at 490 m AMSL. Mine working will not intersect groundwater table. No National Park / Sanctuary is reported within 10 km of the mine lease. An area of 13.12 ha has been earmarked for dumping of over burden. It was, however, stated that at the conceptual stage there will be no dump. The baseline AAQ data showed the levels within permissible limit. It was, however, observed that the groundwater quality showed higher levels of iron content. The water requirement is estimated as 66 kld, which will be obtained from groundwater. The issues raised during public hearing were also considered and discussed during the meeting, which inter-alia included plantation to be undertaken, peripheral development including provision of drinking water, health care, education and road improvement. It was reported that there is no court case pending against the project.

Based on the presentation made and discussion held, the Committee recommended the project for environmental clearance subject to following conditions:-

- (i) The company shall provide potable water to the inhabitants living up to 5 km from the mine lease, where municipal supply is not available.
- (ii) As part of post project monitoring, analysis of water samples (surface and groundwater) shall be carried out on regular basis and records maintained.
- (iii) Plantations shall be carried out in the earmarked areas including safety zone by selecting local species in consultation with the State Forest Department. At least 1,000 trees per year shall be planted.
- (iv) A plan for conservation of fauna reported in the study area shall be prepared and implemented in consultation with the State Forest and Wildlife Departments.

### **2.30 Bolani Iron Ore Mine of M/s SAIL located at village Bolani, Tehsil Barbil, District Keonjhar, Odisha – (5.1 Sq. mile) (Consultant: MECON Ltd., Ranchi)**

The proposal was earlier considered by the Expert Appraisal Committee during its meeting held on January 23-25, 2012 wherein the Committee had sought additional information/clarifications on various related issues. Based on the additional information/clarifications submitted by the proponent, the proposal was considered further. It was stated by the proponent that the high levels of RSPM in the area are due to bad road conditions in and around the mine lease. The proponent have undertaken repair of various identified stretches as also sprinkling of water on the public roads. The

baseline AAQ data collected during March - April, 2012 compared with the data collected during winter season of 2008-09, although showed improvement in terms of RSPM levels, however, these were still on higher side. The peak water requirement is estimated as 13,400 kld, which will be obtained from surface water, decanted water from the tailing pond and the recycled water from township etc. The plan for diversion of two nallahs was also presented. The information of flora fauna was presented, which reported observation of leopard, sloth bear, elephant, barking deer etc. Action plan to address the issues raised during public hearing was also submitted and discussed which inter-alia included provision of drinking water to the nearby villages, construction and improvement of village road, health care, provision of electricity, education facility, employment etc. The other issues raised by the Committee were also clarified and discussed.

Based on the presentation made and discussion held, the Committee recommended the project for environmental clearance subject to following conditions:-

- (i) Mitigation measures to control RSPM levels shall continue to be implemented and air quality data will also be collected during operation of the mines. The data so collected shall be analysed to see the effectiveness of the mitigation measures implemented. Based on the same, additional safeguard measures, as may be required shall be implemented in the project.
- (ii) The biological survey shall be repeated during October – December and mid May months to see the existence of wildlife corridors, if any. Based on the same, necessary Wildlife Conservation Plan as may be required shall be prepared and implemented in consultation with the State Forest and Wildlife Department.
- (iii) The biological survey shall also be undertaken to identify the trees with orchids, if any. Such trees, so identified shall be protected and if need be, these trees may be relocated.

### **2.31 Bolani Iron Ore Mine of M/s SAIL located at village Bolani, Tehsil Barbil, District Keonjhar, Odisha – (6.9 Sq. mile) (Consultant: MECON Ltd., Ranchi)**

The proposal was earlier considered by the Expert Appraisal Committee during its meeting held on January 23-25, 2012 wherein the Committee had sought additional information/clarifications on various related issues. Based on the additional information/clarifications submitted by the proponent, the proposal was considered further. It was stated by the proponent that the high levels of RSPM in the area are due to bed road conditions in and around the mine lease. The proponent have undertaken repair of various identified stretches as also sprinkling of water on the public roads. The baseline AAQ data collected during March - April, 2012 compared with the data collected during winter season of 2008-09, although showed improvement in terms of RSPM levels, however, these were still on higher side. The information of flora fauna was presented, which reported observation of leopard, sloth bear, elephant, barking deer etc. Action plan to address the issues raised during public hearing was also submitted and discussed which inter-alia included provision of drinking water to the nearby villages, construction and improvement of village road, health care, provision of electricity, education facility,

employment etc. The other issues raised by the Committee were also clarified and discussed.

Based on the presentation made and discussion held, the Committee recommended the project for environmental clearance subject to following conditions:-

- (i) Mitigation measures to control RSPM levels shall continue to be implemented and air quality data will also be collected during operation of the mines. The data so collected shall be analysed to see the effectiveness of the mitigation measures implemented. Based on the same, additional safeguard measures, as may be required shall be implemented in the project.
- (ii) The biological survey shall be repeated during October – December and mid May month to see the existence of wildlife corridors, if any. Based on the same, necessary Wildlife Conservation Plan as may be required shall be prepared and implemented in consultation with the State Forest and Wildlife Department.
- (iii) The biological survey shall also be undertaken to identify the trees with orchids, if any. Such trees, so identified shall be protected and if need be, these trees may be relocated.

### **2.32 Jhillingburu-I Iron & Manganese Ore Mining Project of Gua Ore Mines of M/s Steel Authority of India Ltd, District Singhbhum West, Jharkhand (Consultant: MECON Ltd., Ranchi)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

The proposal was last considered by the EAC during its meeting held in January, 2012, wherein the comments of SPCB were considered as the project is located in identified severely polluted area. The Committee had deferred prescribing of TORs till appropriate control measures are implemented to improve the air quality. The proponent have reported that road conditions have been improved and water sprinkling en-route the minerals transportation has been undertaken and as a result the RSPM levels have come down as revealed by the data for the period of March – April, 2012. Accordingly, the proposal was considered by the EAC. The proposal is for renewal of mine lease which fell due in May, 2010 for production of 61,362 TPA of manganese ore. It was stated that the mine was opened in 1961 but closed in 1971. The mine was taken over by SAIL in 2006. It was reopened in 2008 but closed presently. It may, thus be seen that the mining operation have remained closed from 1971 to 2008 and thereafter the mine has operated from 2008 till 2011. It is thus, a violation case as the mine have operated during 2008 – 2011 without requisite prior environment clearance. Mine lease area is 210.526 ha, which is a forestland. Mine working will be opencast. Life of mine is 16 years. Water requirement is 100 kld, which will be obtained from Karo river. Mine working will not intersect groundwater table.

Based on the information furnished and presentation made, the Committee prescribed the following TORs for undertaking detailed EIA study:-

- 1) Status of compliance of the earlier EC conditions along with supporting documents and photographs should be submitted.
- 2) Year-wise production details since 1994 onwards should be given clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification, 1994 coming into force w.r.t. the highest production achieved prior to 1994.
- 3) A copy of the document in support of the fact that the proponent is the rightful lessee of the mine should be given.
- 4) All documents including approved mine plan, EIA and public hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management and mining technology and should be in the name of the lessee.
- 5) All corner coordinates of the mine lease area superimposed on High Resolution Imagery/toposheet should be provided.
- 6) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
- 7) Does the Environment Policy prescribe for standard operating process/ procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
- 8) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
- 9) Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
- 10) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc should be for the life of the mine / lease period.
- 11) Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary and national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated.
- 12) Land use plan of the mine lease area should be prepared to encompass pre-operational, operational and post operational phases and submitted.
- 13) Details of the land for OB dump outside the mine lease such as extent of land area, distance from mine lease, its land use, R&R issues, if any should be given.
- 14) High Resolution Satellite Imagery of the proposed area clearly showing the land use and other ecological features of the study area (core and buffer zone) should be furnished.
- 15) A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any in the project area, or otherwise, based on land use classification (revenue record) as also in terms of

the definition of forest as pronounced in the judgement of the Hon'ble Supreme Court of India in the matter of T.N. Godavarman Vs. Union of India. In the event of any claim by the project proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.

- 16) Status of forestry clearance for the broken up area and virgin forestland involved in the project including deposition of net present value (NPV) and compensatory afforestation (CA). A copy of the forestry clearance should also be furnished.
- 17) Implementation of status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
- 18) Impact of the project on the wildlife in the surrounding and any other protected area and accordingly detailed mitigative measures required should be worked out with cost implications and submitted.
- 19) The vegetation in the RF / PF area with necessary details should be given.
- 20) A study shall be got done to ascertain the impact of the mining project on wildlife of the area including on the elephant population and details furnished.
- 21) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves (existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, if any, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above should be obtained from the State Wildlife Department/ Chief Wildlife Warden under the Wildlife (Protection) Act, 1972 and copy furnished.
- 22) A detailed biological study for the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, duly authenticated, separately for core and buffer zone should be furnished based on primary field survey clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
- 23) R&R plan / compensation details for the project affected people should be furnished. While preparing the R&R plan, the National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs / STs and other weaker sections, need based sample survey, family-wise, should be undertaken to assess their requirement and action programmes prepared accordingly integrating the sectoral programme of line departments of the State Government.
- 24) One season (non-monsoon) primary baseline data on ambient air quality (PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area

and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM<sub>10</sub> should be given.

- 25) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
- 26) The water requirement for the project, its availability and source to be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should be indicated.
- 27) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
- 28) Details of water conservation measures proposed to be adopted in the project should be given.
- 29) Impact of the project on the water quality both surface and groundwater should be assessed and necessary safeguard measures, if any required should be provided.
- 30) Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed hydro geological study should be undertaken and report furnished. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.
- 31) Details of any stream, seasonal or otherwise, passing through lease area and modification / diversion proposed, if any and the impact of the same on the hydrology should be brought out.
- 32) Details of rainwater harvesting proposed, if any, in the project should be provided.
- 33) Information on site elevation, working depth, groundwater table etc. should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
- 34) Quantity of solid waste generation to be estimated and details for its disposal and management should be provided. The quantity, volumes and methodology planned for removal and utilisation (preferably concurrently) of top soil should be indicated. Details of backfilling proposed, if any, should also be given. It may be clearly indicated that out of the total waste generated during the mine life, how much quantity would be backfilled and how much quantity would be disposed off in the form of external dump (number of dumps, their height, terraces etc. to be brought out).
- 35) The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
- 36) Impact on local transport infrastructure due to the project should be indicated.

Projected increase in truck traffic as a result of the project in the present road network (including those outside the project area) should be worked out, indicating whether it is capable of handling the increased load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered.

- 37) Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
- 38) Conceptual post mining land use and Reclamation and Rehabilitation of mined out area (with plans and with adequate number of sections) should be given in the EIA report.
- 39) Phase-wise plan of greenbelt development, plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given.
- 40) Occupational health impact of project should be anticipated and preventive measures initiated. Details in this regard should be provided. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP.
- 41) Public health implication of the project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocation.
- 42) Measures of socio economic significance and influence to the local community proposed to be provided by project proponent should be indicated. As far as possible, quantitative dimensions may be given with time frame for implementation.
- 43) Detailed environmental management plan to mitigate the environmental impacts which, should inter-alia also include the impact due to change of land use, due to loss of agricultural land and grazing land, if any, occupational health impacts besides other impacts of the projects.
- 44) Public hearing points raised and commitment of the project proponent on the same along with time bound action plan to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
- 45) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
- 46) The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.

Besides the above, the below mentioned general points should also be followed:-

- a) A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
- b) All documents may be properly referenced with index and continuous page numbering.
- c) Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
- d) Where the documents provided are in a language other than English, an

English translation should be provided.

- e) The Questionnaire for environmental appraisal of mining projects as prescribed by the Ministry shall also be filled and submitted.
- f) Approved mine plan along with copy of the approval letter for the proposed capacity should also be submitted.
- g) While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4<sup>th</sup> August, 2009, which are available on the website of this Ministry should also be followed.
- h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the F.R for securing the TOR) should be brought to the attention of MoEF with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.

The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

After preparing the draft EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above mentioned issues, the proponent will get the public hearing conducted and take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.

### **2.33 Jhillingburu-II Iron & Manganese Ore Mining Project of Gua Ore Mines of M/s Steel Authority of India Ltd, District Singhbhum West, Jharkhand (Consultant: MECON Ltd., Ranchi)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

The proposal was last considered by the EAC during its meeting held in January, 2012, wherein the comments of SPCB were considered as the project is located in identified severely polluted area. The Committee had deferred prescribing of TORs till appropriate control measures are implemented to improve the air quality. The proponent have reported that road conditions have been improved and water sprinkling en-route the minerals transportation has been undertaken and as a result the RSPM levels have come down as revealed by the data for the period of March – April, 2012. Accordingly, the proposal was considered by the EAC. The proposal is for renewal of mine lease which fell due in May, 2010 for production of 20,820 TPA of manganese ore. It was stated that the mine was opened in 1961 but closed in 1971. Since, then the mine is closed. The mine

was taken over by SAIL in 2006. Mine lease area is 30.430 ha, which is a forestland. It is a category 'B' project and has been considered in MoEF as SEIAA for Jharkhand is not in place. Mine working will be opencast involving drilling and blasting. Life of mine is 25 years. Water requirement is 47 kld, which will be obtained from Karo river. Mine working will not intersect groundwater table.

Based on the information furnished and presentation made, the Committee prescribed the following TORs for undertaking detailed EIA study:-

- 1) Status of compliance of the earlier EC conditions along with supporting documents and photographs should be submitted.
- 2) Year-wise production details since 1994 onwards should be given clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification, 1994 coming into force w.r.t. the highest production achieved prior to 1994.
- 3) A copy of the document in support of the fact that the proponent is the rightful lessee of the mine should be given.
- 4) All documents including approved mine plan, EIA and public hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management and mining technology and should be in the name of the lessee.
- 5) All corner coordinates of the mine lease area superimposed on High Resolution Imagery/toposheet should be provided.
- 6) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
- 7) Does the Environment Policy prescribe for standard operating process/ procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
- 8) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
- 9) Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
- 10) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc should be for the life of the mine / lease period.
- 11) Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary and national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated.
- 12) Land use plan of the mine lease area should be prepared to encompass pre-operational, operational and post operational phases and submitted.
- 13) Details of the land for OB dump outside the mine lease such as extent of land area, distance from mine lease, its land use, R&R issues, if any should be given.

- 14) High Resolution Satellite Imagery of the proposed area clearly showing the land use and other ecological features of the study area (core and buffer zone) should be furnished.
- 15) A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any in the project area, or otherwise, based on land use classification (revenue record) as also in terms of the definition of forest as pronounced in the judgement of the Hon'ble Supreme Court of India in the matter of T.N. Godavarman Vs. Union of India. In the event of any claim by the project proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
- 16) Status of forestry clearance for the broken up area and virgin forestland involved in the project including deposition of net present value (NPV) and compensatory afforestation (CA). A copy of the forestry clearance should also be furnished.
- 17) Implementation of status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
- 18) Impact of the project on the wildlife in the surrounding and any other protected area and accordingly detailed mitigative measures required should be worked out with cost implications and submitted.
- 19) The vegetation in the RF / PF area with necessary details should be given.
- 20) A study shall be got done to ascertain the impact of the mining project on wildlife of the area including on the elephant population and details furnished.
- 21) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves (existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, if any, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above should be obtained from the State Wildlife Department/ Chief Wildlife Warden under the Wildlife (Protection) Act, 1972 and copy furnished.
- 22) A detailed biological study for the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, duly authenticated, separately for core and buffer zone should be furnished based on primary field survey clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
- 23) R&R plan / compensation details for the project affected people should be furnished. While preparing the R&R plan, the National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs / STs and other weaker sections, need based sample survey, family-wise, should be undertaken to assess their requirement and action programmes prepared accordingly integrating

the sectoral programme of line departments of the State Government.

- 24) One season (non-monsoon) primary baseline data on ambient air quality (PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM<sub>10</sub> should be given.
- 25) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
- 26) The water requirement for the project, its availability and source to be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should be indicated.
- 27) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
- 28) Details of water conservation measures proposed to be adopted in the project should be given.
- 29) Impact of the project on the water quality both surface and groundwater should be assessed and necessary safeguard measures, if any required should be provided.
- 30) Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed hydro geological study should be undertaken and report furnished. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.
- 31) Details of any stream, seasonal or otherwise, passing through lease area and modification / diversion proposed, if any and the impact of the same on the hydrology should be brought out.
- 32) Details of rainwater harvesting proposed, if any, in the project should be provided.
- 33) Information on site elevation, working depth, groundwater table etc. should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
- 34) Quantity of solid waste generation to be estimated and details for its disposal and management should be provided. The quantity, volumes and methodology planned for removal and utilisation (preferably concurrently) of top soil should be indicated. Details of backfilling proposed, if any, should also be given. It may be clearly indicated that out of the total waste generated during the mine life, how

- much quantity would be backfilled and how much quantity would be disposed off in the form of external dump (number of dumps, their height, terraces etc. to be brought out).
- 35) The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
  - 36) Impact on local transport infrastructure due to the project should be indicated. Projected increase in truck traffic as a result of the project in the present road network (including those outside the project area) should be worked out, indicating whether it is capable of handling the increased load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered.
  - 37) Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
  - 38) Conceptual post mining land use and Reclamation and Rehabilitation of mined out area (with plans and with adequate number of sections) should be given in the EIA report.
  - 39) Phase-wise plan of greenbelt development, plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given.
  - 40) Occupational health impact of project should be anticipated and preventive measures initiated. Details in this regard should be provided. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP.
  - 41) Public health implication of the project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocation.
  - 42) Measures of socio economic significance and influence to the local community proposed to be provided by project proponent should be indicated. As far as possible, quantitative dimensions may be given with time frame for implementation.
  - 43) Detailed environmental management plan to mitigate the environmental impacts which, should inter-alia also include the impact due to change of land use, due to loss of agricultural land and grazing land, if any, occupational health impacts besides other impacts of the projects.
  - 44) Public hearing points raised and commitment of the project proponent on the same along with time bound action plan to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
  - 45) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
  - 46) The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.

Besides the above, the below mentioned general points should also be followed:-

- a) A note confirming compliance of the TOR, with cross referencing of the

- relevant sections / pages of the EIA report should be provided.
- b) All documents may be properly referenced with index and continuous page numbering.
  - c) Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
  - d) Where the documents provided are in a language other than English, an English translation should be provided.
  - e) The Questionnaire for environmental appraisal of mining projects as prescribed by the Ministry shall also be filled and submitted.
  - f) Approved mine plan along with copy of the approval letter for the proposed capacity should also be submitted.
  - g) While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4<sup>th</sup> August, 2009, which are available on the website of this Ministry should also be followed.
  - h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the F.R for securing the TOR) should be brought to the attention of MoEF with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.

The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

After preparing the draft EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above mentioned issues, the proponent will get the public hearing conducted and take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.

### **2.34 Topailore Iron Ore Mining Project of Gua Ore Mines of M/s Steel Authority of India Ltd, District Singhbhum West, Jharkhand (Consultant: MECON Ltd., Ranchi)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

The proposal was last considered by the EAC during its meeting held in January, 2012, wherein the comments of SPCB were considered as the project is located in identified severely polluted area. The Committee had deferred prescribing of TORs till appropriate control measures are implemented to improve the air quality. The proponent

have reported that road conditions have been improved and water sprinkling en-route the minerals transportation has been undertaken and as a result the RSPM levels have come down as revealed by the data for the period of March – April, 2012. Accordingly, the proposal was considered by the EAC. The proposal is for renewal of mine lease which fell due in March, 2000 for production of 0.6 million TPA of iron ore. It was stated that the mine was opened in 1971 but closed in 1999. Since, then the mine is closed. The mine was taken over by SAIL in 2006. Mine lease area is 14.160 ha, which is a forestland. It is a Category 'B' project and has been considered in MoEF as SEIAA for Jharkhand is not in place. Mine working will be opencast involving drilling and blasting. Life of mine is 15 years. Water requirement is 63 kld, which will be obtained from Karo river.

Based on the information furnished and presentation made, the Committee prescribed the following TORs for undertaking detailed EIA study:-

- 1) Status of compliance of the earlier EC conditions along with supporting documents and photographs should be submitted.
- 2) Year-wise production details since 1994 onwards should be given clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification, 1994 coming into force w.r.t. the highest production achieved prior to 1994.
- 3) A copy of the document in support of the fact that the proponent is the rightful lessee of the mine should be given.
- 4) All documents including approved mine plan, EIA and public hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management and mining technology and should be in the name of the lessee.
- 5) All corner coordinates of the mine lease area superimposed on High Resolution Imagery/toposheet should be provided.
- 6) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
- 7) Does the Environment Policy prescribe for standard operating process/ procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
- 8) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
- 9) Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
- 10) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc should be for the life of the mine / lease period.
- 11) Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary and national park, migratory routes of fauna, water bodies,

- human settlements and other ecological features should be indicated.
- 12) Land use plan of the mine lease area should be prepared to encompass pre-operational, operational and post operational phases and submitted.
  - 13) Details of the land for OB dump outside the mine lease such as extent of land area, distance from mine lease, its land use, R&R issues, if any should be given.
  - 14) High Resolution Satellite Imagery of the proposed area clearly showing the land use and other ecological features of the study area (core and buffer zone) should be furnished.
  - 15) A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any in the project area, or otherwise, based on land use classification (revenue record) as also in terms of the definition of forest as pronounced in the judgement of the Hon'ble Supreme Court of India in the matter of T.N. Godavarman Vs. Union of India. In the event of any claim by the project proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
  - 16) Status of forestry clearance for the broken up area and virgin forestland involved in the project including deposition of net present value (NPV) and compensatory afforestation (CA). A copy of the forestry clearance should also be furnished.
  - 17) Implementation of status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
  - 18) Impact of the project on the wildlife in the surrounding and any other protected area and accordingly detailed mitigative measures required should be worked out with cost implications and submitted.
  - 19) The vegetation in the RF / PF area with necessary details should be given.
  - 20) A study shall be got done to ascertain the impact of the mining project on wildlife of the area including on the elephant population and details furnished.
  - 21) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves (existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, if any, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above should be obtained from the State Wildlife Department/ Chief Wildlife Warden under the Wildlife (Protection) Act, 1972 and copy furnished.
  - 22) A detailed biological study for the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, duly authenticated, separately for core and buffer zone should be furnished based on primary field survey clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.

- 23) R&R plan / compensation details for the project affected people should be furnished. While preparing the R&R plan, the National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs / STs and other weaker sections, need based sample survey, family-wise, should be undertaken to assess their requirement and action programmes prepared accordingly integrating the sectoral programme of line departments of the State Government.
- 24) One season (non-monsoon) primary baseline data on ambient air quality (PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM<sub>10</sub> should be given.
- 25) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
- 26) The water requirement for the project, its availability and source to be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should be indicated.
- 27) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
- 28) Details of water conservation measures proposed to be adopted in the project should be given.
- 29) Impact of the project on the water quality both surface and groundwater should be assessed and necessary safeguard measures, if any required should be provided.
- 30) Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed hydro geological study should be undertaken and report furnished. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.
- 31) Details of any stream, seasonal or otherwise, passing through lease area and modification / diversion proposed, if any and the impact of the same on the hydrology should be brought out.
- 32) Details of rainwater harvesting proposed, if any, in the project should be provided.
- 33) Information on site elevation, working depth, groundwater table etc. should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.

- 34) Quantity of solid waste generation to be estimated and details for its disposal and management should be provided. The quantity, volumes and methodology planned for removal and utilisation (preferably concurrently) of top soil should be indicated. Details of backfilling proposed, if any, should also be given. It may be clearly indicated that out of the total waste generated during the mine life, how much quantity would be backfilled and how much quantity would be disposed off in the form of external dump (number of dumps, their height, terraces etc. to be brought out).
- 35) The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
- 36) Impact on local transport infrastructure due to the project should be indicated. Projected increase in truck traffic as a result of the project in the present road network (including those outside the project area) should be worked out, indicating whether it is capable of handling the increased load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered.
- 37) Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
- 38) Conceptual post mining land use and Reclamation and Rehabilitation of mined out area (with plans and with adequate number of sections) should be given in the EIA report.
- 39) Phase-wise plan of greenbelt development, plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given.
- 40) Occupational health impact of project should be anticipated and preventive measures initiated. Details in this regard should be provided. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP.
- 41) Public health implication of the project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocation.
- 42) Measures of socio economic significance and influence to the local community proposed to be provided by project proponent should be indicated. As far as possible, quantitative dimensions may be given with time frame for implementation.
- 43) Detailed environmental management plan to mitigate the environmental impacts which, should inter-alia also include the impact due to change of land use, due to loss of agricultural land and grazing land, if any, occupational health impacts besides other impacts of the projects.
- 44) Public hearing points raised and commitment of the project proponent on the same along with time bound action plan to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
- 45) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
- 46) The cost of the project (capital cost and recurring cost) as well as the cost

towards implementation of EMP should clearly be spelt out.

Besides the above, the below mentioned general points should also be followed:-

- a) A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
- b) All documents may be properly referenced with index and continuous page numbering.
- c) Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
- d) Where the documents provided are in a language other than English, an English translation should be provided.
- e) The Questionnaire for environmental appraisal of mining projects as prescribed by the Ministry shall also be filled and submitted.
- f) Approved mine plan along with copy of the approval letter for the proposed capacity should also be submitted.
- g) While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4<sup>th</sup> August, 2009, which are available on the website of this Ministry should also be followed.
- h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the F.R for securing the TOR) should be brought to the attention of MoEF with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.

The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

After preparing the draft EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above mentioned issues, the proponent will get the public hearing conducted and take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.

### **2.35 Iron Ore Beneficiation Plant of M/s Brahmani River Pellets Limited (BRPL), located in Village(s) Tonto and Nalda, Tehsil Barbil, District Keonjhar, Orissa (Modification in EC condition)**

The above mentioned project was accorded environmental clearance in February, 2009 subject to various conditions and environmental safeguards, which inter-alia included that the tailing dam shall be lined on all the sides as well as in the bottom with HDP lining. The proponent have requested for modification of the said condition stating that HDP lining may not be necessary, rather, lime treatment of iron ore tailings may be

adequate to safeguard against leaching, if any. A report based on the study carried out by IMMT-CSIR, Bhubaneswar in this regard has been submitted. Based on the same, the proposal was placed before the Committee and considered. It was stated that the water table in the area varies from 6.2 - 8.1 m bgl. The natural permeability is  $4.21 \times 10^{-6}$  cm/sec. Topsoil is of gray coloured gray soil up to 1.5 m from top. The transmissivity of shale (top surface layer) is  $2.51 \text{ m}^2/\text{day}$ . As per the mineralogical properties of tailings the percentage of kaolinite increases in the tailings to constitute 19% of the tailing material. As per the study, the high amount of kaolinite directly helps to reduce the permeability of tailings after settling in the tailing pond and hence it does not allow water to percolate in the downward direction. Addition of lime helps to increase the pH, reduce the trace element in water phase and improve the fertility of solid waste. As such, iron or tailings discharge to the tailing pond will not cause any heavy metal pollution in groundwater. As per the study, there is no need of HDP lining in the tailing pond. It was further stated that clay lining due to compaction will act as a monolithic non permeable layer. The groundwater table conditions are below 2.5 m from the surface kept by shale layer. Further, the pond is reinforced by the mountains on three sides with BHJ/BHQ-Shale formation which is hard rock in nature with very low permeability. Accordingly, it is proposed that clay liners (two layers) of 100 mm thickness each with overall permeability of  $1.38 - 1.42 \times 10^{-7}$  cm/sec will be provided.

The EAC considered the whole matter in the light of the study report and recommended for modification of the said condition as under, in lieu of HDP lining:

- (i) The tailings will be subjected to lime dosing before discharge into the tailing pond. The tailing pond will be lined by two layers of clay lining with 100 mm thickness each.

### **2.36 Bimarla Bauxite Mine of M/s Minerals & Minerals Ltd., village Bimarla, Ghaghra, Korle & Barang, Thana Ghaghra, District Gumla, Jharkhand (Reconsideration Case)**

The proposal was last considered by the Expert Appraisal Committee during its meeting held on April 16-18, 2012 wherein the Committee had sought additional information/clarifications on various related issues. Based on the additional information/clarifications submitted by the proponent, the proposal was considered further. The proponent submits a copy of the permission dated 11.5.2012 from State Forest Department which was taken on record. The road condition was reported to be capable of bearing incremental traffic load. It was reconfirmed that the mine lease area does not contain any forestland. The action plan to address the issues raised during public hearing was presented and discussed, which inter-alia included compensation for land, peripheral development including drinking water facility, education, maintenance of village road, medical facility, provision of transport and ambulance, protection of agriculture field from the impact of mining etc. The Committee also took note of the letter from Dy. Commissioner, Gumla confirming that the public hearing was chaired at the level of Additional District Magistrate as prescribed in the EIA Notification, 2006. The other issues raised by the Committee were also presented and discussed.

Based on the presentation made and discussion held, the Committee recommended the project for environmental clearance.

**2.37 Sandstone and Khanda Mine of Shri Gopal Ram Kashyap, Village Bhidyani and Sajjanwas, Tehsil Rupbas, District Bharatpur, Rajasthan (32.10 ha) (Consultant: Enkay Enviro Services, Jaipur)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

The proposal is for renewal of mine lease, which fell due in March, 2001 and enhancement of capacity of sand stone and khanda from 1550 TPA to 1,18,000 TPA (ROM). The mine lease area is 32.10 ha. It has been considered as category 'A' because of its location within 10 km of the inter-state boundary with U.P. No forestland is involved. Life of mine is 38 years. Mine working will be opencast manual. Water requirement is 23 kld, which will be obtained from nearby villages.

Based on the information furnished and presentation made, the Committee prescribed the following TORs for undertaking detailed EIA study:-

- 1) Status of compliance of the earlier EC conditions along with supporting documents and photographs should be submitted.
- 2) Year-wise production details since 1994 onwards should be given clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification, 1994 coming into force w.r.t. the highest production achieved prior to 1994.
- 3) A copy of the document in support of the fact that the proponent is the rightful lessee of the mine should be given.
- 4) All documents including approved mine plan, EIA and public hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management and mining technology and should be in the name of the lessee.
- 5) All corner coordinates of the mine lease area superimposed on High Resolution Imagery/toposheet should be provided.
- 6) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
- 7) Does the Environment Policy prescribe for standard operating process/ procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
- 8) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
- 9) Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or

shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.

- 10) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc should be for the life of the mine / lease period.
- 11) Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary and national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated.
- 12) Land use plan of the mine lease area should be prepared to encompass pre-operational, operational and post operational phases and submitted.
- 13) A confirmation may be adduced, duly authenticated by the competent authority in the State Government to the effect whether the project falls in Aravalli and whether it is covered by the order of the Hon'ble Supreme Court dated 8.4.2005 in the contempt petition (c) 412/2004 in writ petition 202 of 1995 in the matter of Godavarman vs Union of India.
- 14) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves (existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, if any, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above should be obtained from the State Wildlife Department/ Chief Wildlife Warden under the Wildlife (Protection) Act, 1972 and copy furnished.
- 15) A detailed biological study for the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, duly authenticated, separately for core and buffer zone should be furnished based on primary field survey clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
- 16) Impact, if any, of change of land use should be given.
- 17) R&R plan / compensation details for the project affected people should be furnished. While preparing the R&R plan, the National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs / STs and other weaker sections, need based sample survey, family-wise, should be undertaken to assess their requirement and action programmes prepared accordingly integrating the sectoral programme of line departments of the State Government.
- 18) One season (non-monsoon) primary baseline data on ambient air quality (PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM<sub>10</sub> particularly for free silica should be given.

- 19) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
- 20) The water requirement for the project, its availability and source to be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should be indicated.
- 21) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
- 22) Details of water conservation measures proposed to be adopted in the project should be given.
- 23) Impact of the project on the water quality both surface and groundwater should be assessed and necessary safeguard measures, if any required should be provided.
- 24) Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed hydro geological study should be undertaken and report furnished. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.
- 25) Details of any stream, seasonal or otherwise, passing through lease area and modification / diversion proposed, if any and the impact of the same on the hydrology should be brought out.
- 26) Details of rainwater harvesting proposed, if any, in the project should be provided.
- 27) Information on site elevation, working depth, groundwater table etc. should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
- 28) Quantity of solid waste generation to be estimated and details for its disposal and management should be provided. The quantity, volumes and methodology planned for removal and utilisation (preferably concurrently) of top soil should be indicated. Details of backfilling proposed, if any, should also be given. It may be clearly indicated that out of the total waste generated during the mine life, how much quantity would be backfilled and how much quantity would be disposed off in the form of external dump (number of dumps, their height, terraces etc. to be brought out).
- 29) The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
- 30) Impact on local transport infrastructure due to the project should be indicated. Projected increase in truck traffic as a result of the project in the present road network (including those outside the project area) should be worked out, indicating whether it is capable of handling the increased load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by

- other agencies such as State Government) should be covered.
- 31) Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
  - 32) Conceptual post mining land use and Reclamation and Rehabilitation of mined out area (with plans and with adequate number of sections) should be given in the EIA report.
  - 33) Phase-wise plan of greenbelt development, plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given.
  - 34) Occupational health impact of project should be anticipated and preventive measures initiated. Details in this regard should be provided. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP.
  - 35) Public health implication of the project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocation.
  - 36) Measures of socio economic significance and influence to the local community proposed to be provided by project proponent should be indicated. As far as possible, quantitative dimensions may be given with time frame for implementation.
  - 37) Detailed environmental management plan to mitigate the environmental impacts which, should inter-alia also include the impact due to change of land use, due to loss of agricultural land and grazing land, if any, occupational health impacts besides other impacts of the projects.
  - 38) Public hearing points raised and commitment of the project proponent on the same along with time bound action plan to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
  - 39) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
  - 40) The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.

Besides the above, the below mentioned general points should also be followed:-

- a) A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
- b) All documents may be properly referenced with index and continuous page numbering.
- c) Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
- d) Where the documents provided are in a language other than English, an English translation should be provided.
- e) The Questionnaire for environmental appraisal of mining projects as prescribed by the Ministry shall also be filled and submitted.
- f) Approved mine plan along with copy of the approval letter for the proposed

capacity should also be submitted.

- g) While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4<sup>th</sup> August, 2009, which are available on the website of this Ministry should also be followed.
- h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the F.R for securing the TOR) should be brought to the attention of MoEF with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.

The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

After preparing the draft EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above mentioned issues, the proponent will get the public hearing conducted and take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.

### **2.38 Jaypee Gujarat Cement Plant of M/s Jaiprakash Associates Ltd., Village Vayor, Abdasa, District Kutchh, Gujarat (659.0 ha) (TOR)**

The consideration of the proposal was deferred for want of status of compliance of the earlier EC conditions.

### **Item No. 2.39 to 2.53: Projects of Garhwal Mandal Vikas Nigam Ltd., Uttarakhand.**

#### **2.39 Proposed River Bed Minor Mining Activity for River Amlava of M/s Garhwal Mandal Vikas Nigam Ltd., District Dehradun, Uttarakhand (6.104 ha) (Consultant: KICONS Ltd., Pune)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

It was observed that the information contained in the documents submitted by the proponent was seen to be erroneous and lacked requisite details. The proponent stated that they would revise the documents and submit the proposals afresh. The proponent requested for withdrawal of the project in its present form. The Committee agreed to the

request made by the proponent and accordingly the proposal stands withdrawn. As and when the revised proposal is submitted it will be placed before the EAC for its consideration.

**2.40 Proposed River Bed Minor Mining Activity for River Aasan of M/s Garhwal Mandal Vikas Nigam Ltd., District Dehradun, Uttarakhand (150.464 ha) (Consultant: KICONS Ltd., Pune)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

It was observed that the information contained in the documents submitted by the proponent was seen to be erroneous and lacked requisite details. The proponent stated that they would revise the documents and submit the proposals afresh. The proponent requested for withdrawal of the project in its present form. The Committee agreed to the request made by the proponent and accordingly the proposal stands withdrawn. As and when the revised proposal is submitted it will be placed before the EAC for its consideration.

**2.41 Proposed River Bed Minor Mining Activity for River Noon of M/s Garhwal Mandal Vikas Nigam Ltd., Tehsil & District Dehradun, Uttarakhand (20.804 ha) (Consultant: KICONS Ltd., Pune)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

It was observed that the information contained in the documents submitted by the proponent was seen to be erroneous and lacked requisite details. The proponent stated that they would revise the documents and submit the proposals afresh. The proponent requested for withdrawal of the project in its present form. The Committee agreed to the request made by the proponent and accordingly the proposal stands withdrawn. As and when the revised proposal is submitted it will be placed before the EAC for its consideration.

**2.42 Proposed River Bed Minor Mining Activity for River Jakhan of M/s Garhwal Mandal Vikas Nigam Ltd., Tehsil & District Dehradun, Uttarakhand (89.05 ha) (Consultant: KICONS Ltd., Pune)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining

environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

It was observed that the information contained in the documents submitted by the proponent was seen to be erroneous and lacked requisite details. The proponent stated that they would revise the documents and submit the proposals afresh. The proponent requested for withdrawal of the project in its present form. The Committee agreed to the request made by the proponent and accordingly the proposal stands withdrawn. As and when the revised proposal is submitted it will be placed before the EAC for its consideration.

#### **2.43 Proposed River Bed Minor Mining Activity for River Kalirao of M/s Garhwal Mandal Vikas Nigam Ltd., Tehsil & District Dehradun, Uttarakhand (9.37 ha) (Consultant: KICONS Ltd., Pune)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

It was observed that the information contained in the documents submitted by the proponent was seen to be erroneous and lacked requisite details. The proponent stated that they would revise the documents and submit the proposals afresh. The proponent requested for withdrawal of the project in its present form. The Committee agreed to the request made by the proponent and accordingly the proposal stands withdrawn. As and when the revised proposal is submitted it will be placed before the EAC for its consideration.

#### **2.44 Proposed River Bed Minor Mining Activity for River Nagalrao of M/s Garhwal Mandal Vikas Nigam Ltd., Tehsil & District Dehradun, Uttarakhand (5.847 ha) (Consultant: KICONS Ltd., Pune)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

It was observed that the information contained in the documents submitted by the proponent was seen to be erroneous and lacked requisite details. The proponent stated that they would revise the documents and submit the proposals afresh. The proponent requested for withdrawal of the project in its present form. The Committee agreed to the request made by the proponent and accordingly the proposal stands withdrawn. As and

when the revised proposal is submitted it will be placed before the EAC for its consideration.

**2.45 Proposed River Bed Minor Mining Activity for River Saarna of M/s Garhwal Mandal Vikas Nigam Ltd., Tehsil & District Dehradun, Uttarakhand (37.979 ha) (Consultant: KICONS Ltd., Pune)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

It was observed that the information contained in the documents submitted by the proponent was seen to be erroneous and lacked requisite details. The proponent stated that they would revise the documents and submit the proposals afresh. The proponent requested for withdrawal of the project in its present form. The Committee agreed to the request made by the proponent and accordingly the proposal stands withdrawn. As and when the revised proposal is submitted it will be placed before the EAC for its consideration.

**2.46 Proposed River Bed Minor Mining Activity for River Sonali of M/s Garhwal Mandal Vikas Nigam Ltd., Tehsil Rudki, District Haridwar, Uttarakhand (25.55 ha) (Consultant: KICONS Ltd., Pune)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

It was observed that the information contained in the documents submitted by the proponent was seen to be erroneous and lacked requisite details. The proponent stated that they would revise the documents and submit the proposals afresh. The proponent requested for withdrawal of the project in its present form. The Committee agreed to the request made by the proponent and accordingly the proposal stands withdrawn. As and when the revised proposal is submitted it will be placed before the EAC for its consideration.

**2.47 Proposed River Bed Minor Mining Activity for River Ganga of M/s Garhwal Mandal Vikas Nigam Ltd., Tehsil & District Haridwar, Uttarakhand (335.38 ha) (Consultant: KICONS Ltd., Pune)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

It was observed that the information contained in the documents submitted by the proponent was seen to be erroneous and lacked requisite details. The proponent stated that they would revise the documents and submit the proposals afresh. The proponent requested for withdrawal of the project in its present form. The Committee agreed to the request made by the proponent and accordingly the proposal stands withdrawn. As and when the revised proposal is submitted it will be placed before the EAC for its consideration.

**2.48 Proposed River Bed Minor Mining Activity for River Mohanrao of M/s Garhwal Mandal Vikas Nigam Ltd., Tehsil Roorkee, District Haridwar, Uttarakhand (78.105 ha) (Consultant: KICONS Ltd., Pune)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

It was observed that the information contained in the documents submitted by the proponent was seen to be erroneous and lacked requisite details. The proponent stated that they would revise the documents and submit the proposals afresh. The proponent requested for withdrawal of the project in its present form. The Committee agreed to the request made by the proponent and accordingly the proposal stands withdrawn. As and when the revised proposal is submitted it will be placed before the EAC for its consideration.

**2.49 Proposed River Bed Minor Mining Activity for River Sukhrao of M/s Garhwal Mandal Vikas Nigam Ltd., Tehsil Rudki, District Haridwar, Uttarakhand (104.504 ha) (Consultant: KICONS Ltd., Pune)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

It was observed that the information contained in the documents submitted by the proponent was seen to be erroneous and lacked requisite details. The proponent stated that they would revise the documents and submit the proposals afresh. The proponent requested for withdrawal of the project in its present form. The Committee agreed to the request made by the proponent and accordingly the proposal stands withdrawn. As and when the revised proposal is submitted it will be placed before the EAC for its consideration.

**2.50 Proposed River Bed Minor Mining Activity for River Ganga of M/s Garhwal Mandal Vikas Nigam Ltd., Tehsil Pauri, District Pauri, Uttarakhand (12.29 ha) (Consultant: KICONS Ltd., Pune)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

It was observed that the information contained in the documents submitted by the proponent was seen to be erroneous and lacked requisite details. The proponent stated that they would revise the documents and submit the proposals afresh. The proponent requested for withdrawal of the project in its present form. The Committee agreed to the request made by the proponent and accordingly the proposal stands withdrawn. As and when the revised proposal is submitted it will be placed before the EAC for its consideration.

**2.51 Proposed River Bed Minor Mining Activity for River Khoh of M/s Garhwal Mandal Vikas Nigam Ltd., Tehsil Pauri, District Pauri, Uttarakhand (38.002 ha) (Consultant: KICONS Ltd., Pune)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

It was observed that the information contained in the documents submitted by the proponent was seen to be erroneous and lacked requisite details. The proponent stated that they would revise the documents and submit the proposals afresh. The proponent requested for withdrawal of the project in its present form. The Committee agreed to the request made by the proponent and accordingly the proposal stands withdrawn. As and when the revised proposal is submitted it will be placed before the EAC for its consideration.

**2.52 Proposed River Bed Minor Mining Activity for River Sukhrao of M/s Garhwal Mandal Vikas Nigam Ltd., Tehsil Pauri, District Pauri, Uttarakhand (8.16 ha) (Consultant: KICONS Ltd., Pune)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

It was observed that the information contained in the documents submitted by the proponent was seen to be erroneous and lacked requisite details. The proponent stated that they would revise the documents and submit the proposals afresh. The proponent requested for withdrawal of the project in its present form. The Committee agreed to the request made by the proponent and accordingly the proposal stands withdrawn. As and

when the revised proposal is submitted it will be placed before the EAC for its consideration.

**2.53 Proposed River Bed Minor Mining Activity for River Nayar of M/s Garhwal Mandal Vikas Nigam Ltd., Tehsil Pauri, District Pauri, Uttarakhand (6.86 ha) (Consultant: KICONS Ltd., Pune)**

The proposal was considered by the Committee to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted information in the prescribed format (Form-1) along with pre-feasibility report.

It was observed that the information contained in the documents submitted by the proponent was seen to be erroneous and lacked requisite details. The proponent stated that they would revise the documents and submit the proposals afresh. The proponent requested for withdrawal of the project in its present form. The Committee agreed to the request made by the proponent and accordingly the proposal stands withdrawn. As and when the revised proposal is submitted it will be placed before the EAC for its consideration.

**3.0 Any other item:**

**3.1 Expansion of Bailadila Iron Ore Deposit No. 11-A (ML area 233.509 ha) of M/s NMDC Ltd., Bachelli, Dantewara District, Chhattisgarh (Amendment of EC Conditions)**

The above mentioned project was granted environmental clearance in October, 2011 subject to various conditions and environmental safeguards, which inter-alia included that transport of mineral from mine to the crushing plant shall be through covered conveyor belt and from there by railway only. The proponent have sought a modification of the said conditions stating that the blasted iron ore from different mine benches is being transported through dumpers up to crushing plant. This type of arrangement is in practice at NMDC mines which is approved by IBM in the Mine Plan and also mentioned in EIA report. The matter was placed before the EAC for their consideration. The EAC took note of the same and observed that transportation within the mine lease up to the crushing plant by dumpers is a usual practice and its transportation by covered conveyor is not a feasible option. The Committee, therefore, agreed to recommend the amendment in the EC condition as requested by the proponent.

**Next Meeting:**

It was decided that the next meeting will be held on July 25-27, 2012.

The meeting ended with a vote of thanks to the Chair.

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**Annexure****List of Participants**


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1.	Shri M.S. Nagar	-	Chairman
2.	Dr. S. Subramaniam	-	Vice Chairman
3.	Prof. C.K. Varshney	-	Member
4.	Shri K.S. Anandan	-	Member
5.	Dr. T.K. Joshi	-	Member
6.	Shri Mihir Moitra	-	Member
7.	Dr. L. Ajay Kumar	-	Member
8.	Dr. S.K. Peshin	-	Member
9.	Shri Vinay Mahajan	-	Member
10.	Shri Rajesh Srivastava	-	Member
11.	Dr. B.K. Mishra	-	Member
12.	Shri Ranjan Sahai	-	Member
13.	Dr. S.K. Aggarwal, Director	-	Member Secretary
14.	Shri Om Prakash, Dy. Director		
15.	Shir Neeraj Khatri, Dy. Director		
16.	Representative of M/s Karnataka Mining Industries		
17.	Representative of M/s Orient Abrasives Ltd		
18.	Representative of M/s Geomin Industries Pvt. Ltd.		
19.	Representative of M/s Heidelberg Cement India Ltd.		
20.	Representative of M/s Rungta Mines Ltd.		
21.	Representative of M/s Jai Shree Hari Gram Udyog Stone Crusher		
22.	Representative of M/s Mesco Steel Ltd.		
23.	Representative of M/s Radhey Chemicals		
24.	Representative of M/s Tata Steel Ltd.		

25. Representative of M/s Hindustan Copper Ltd.
26. Representative of M/s Orissa Minerals Development Co. Ltd.
27. Representative of M/s Bipin Singh Rana
28. Representative of M/s Singhanian Commercial Co.
29. Representative of M/s Hindalco Industries Ltd.
30. Representative of M/s Dalpahar Iron & Manganese Ore Mine
31. Representative of M/s Steel Authority of India Ltd
32. Representative of M/s Brahmani River Pellets Limited
33. Representative of M/s Minerals & Minerals Ltd.
34. Representative of M/s Shri Gopal Ram Kashyap
35. Representative of M/s Jaiprakash Associates Ltd.
36. Representative of M/s Garhwal Mandal Vikas Nigam Ltd.

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