

Ministry of Environment & Forests
(IA Division)

SUMMARY RECORD OF THE 27TH MEETING OF EXPERT APPRAISAL COMMITTEE FOR ENVIRONMENTAL APPRAISAL OF MINING PROJECTS CONSTITUTED UNDER EIA NOTIFICATION, 2006.

The 27th meeting of the Expert Appraisal Committee for Environmental Appraisal of Mining Projects of the Ministry of Environment and Forests was held on May 23-25, 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 26th Meeting.

The minutes of the 26th meeting were confirmed as circulated.

2.1 Turamdih Uranium Mine of M/s Uranium Corporation of India Ltd. located at District East Singhbhum, Jharkhand (Consultant: Central Institute of Mining and Fuel Research, Dhanbad)

The proposal was considered by the Committee and the proponent made a presentation on the same. The proposal is for enhancement of production of uranium ore to 1500 TPD (4,50,000 TPA) and ore processing plant capacity from 3,000 TPD to 4,500 TPD (13,50,000 TPA) and enhancement of lease area from 225.487 to 238.344 ha. The additional area of 12.857 ha proposed to be added in the mine lease is forestland. TOR for this project were prescribed on 4.9.2008. Public hearing has been held on 23rd September, 2011. The earlier environment clearance was obtained on 22nd September, 1987 for the Turamdih mine and for ore processing on 30th April, 1987. The mine lease area after expansion will be 238.344 ha which will include 48.272 ha of forestland. In addition, an area of 135.27 ha outside the mine lease also forms part of the project which include 74.45 ha of forestland. No National Park / Sanctuary is reported within 10 km of the mine lease. Mine working will be semi-mechanized underground by cut and fill method. The water requirement is estimated as 13,087 kld, out of which 8,500 kld will be fresh water from Kharkai river and 1,637 kld will be recycled water. Effluent from the ore processing plant will be treated in ETP having a capacity of 460 m³/hr. The mine discharge water is treated in mine water treatment plant for removal of silt and reused. Sewage is treated in septic tank and reuse for greenbelt irrigation. The baseline AAQ data showed that the RSPM levels are high. It was also observed that there was no AAQ monitoring station in west to east direction. The groundwater quality also showed higher content of iron and aluminum.

The compliance of the earlier EC conditions was also presented and discussed. It was observed that the fuel oil is being used in the boiler houses instead of LSHS as stipulated. The compliance status did not give data / figures relating to various parameters. The Committee desired that the proponent should present the compliance duly supported by data. Wherever there are variations from the stipulated conditions such as used of FO in place of LSHS, necessary permission from the Ministry may be obtained in this regard. It was also observed that as part of the earlier project, the proponent had proposed for installation of Sulphuric Acid Plant. However, the proponent is obtaining sulphuric acid from outside and thus there is a change in scope of the project for which EC was obtained. The issues raised during public hearing were also considered and discussed during the meeting. 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) Year-wise production details should be furnished.
- (ii) A copy of the lease document should be furnished.
- (iii) Status of forestry clearance for the forestland involved in the project with supporting documents.
- (iv) A note clearly bringing out the changes made in the project profile with respect to the scope of project for which EC was obtained. Necessary modification in the EC conditions as may be required should be got done. Details in this regard should be submitted.
- (v) The stack height should be justified based on sulphur content.
- (vi) Details regarding handling and storage of sulphuric acid should be provided along with risk assessment for worst case scenario.
- (vii) Details of chemical safety in the mine and plant should be provided along with risk contours superimposed on the surface plan showing location of various activities.
- (viii) The noise levels should be rechecked and reconfirmed.
- (ix) In view of the observed high levels of RSPM, the proposed control measures should be given.
- (x) It was observed that there was no AAQ monitoring station from west to east, the pre-dominant downwind directions. The baseline AAQ data should be supplemented by collecting additional one month data representative of study area and taking into account the pre-dominant downwind direction and other sensitive receptors.
- (xi) Conservation plan for nesting sites of Monitor Lizard and Python should be prepared and submitted.
- (xii) Diesel exhaust values in underground mine should be given.
- (xiii) Impact of diesel on health should be discussed particularly keeping in view that besides diesel there is presence of silica and radon in the area.

- (xiv) Selection of species for plantation should be justified.
- (xv) Details of R&R should be furnished.
- (xvi) Action plan to address the issues raised during public hearing should be provided.

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

2.2 Diamond China Clay Mines of M/s The Singhbhum Mineral Co., Village Karanjiya, District West Singhbhum, Jharkhand (Consultant: Envomin Consultant (Pvt.) Ltd., Bhubaneswar)

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 since 1.6.2009 and enhancement in production of china clay to 0.038 million TPA along with washing plant of 0.038 million TPA capacity. It is a violation case as mine continued to work after it fell due for renewal. Mine lease area is 68.615 ha. No forestland is involved. No National Park / Sanctuary is reported within 10 km of the mine lease. However, the mine lease is located within core zone of Singhbhum Elephant Reserve. TOR for this project were prescribed on 24.3.2009. Public hearing has been held on 16.1.2010. As the project is located in West Singhbhum, the comments of SPCB were also received vide their letter dated 20.3.2012, which were also considered and taken on record as per the prescribed procedure. It was reported by the SPCB that air pollution will be generated due to mining of china clay and during its beneficiation water will be reused after beneficiation. As per the report, ambient air quality, noise level and water analysis, all parameters were within permissible limits. It is estimated that at the conceptual stage 3,27,835 m³ of OB, 2,88,192 m³ of intercalated waste and 20,00,536 m³ of tailing waste will be generated. All the waste would be accommodated / backfilled in an area of 13.118 ha. Water requirement is estimated as 260 kld, which include 240 kld for washing plant which will be obtained from abandoned quarries. Mine working will be opencast manual. Life of mine is 75 years. The ultimate working depth will be 432 m AMSL. The groundwater table is reported at 440 m AMSL. Mine working will intersect groundwater table. The proponent have carried out a hydro-geological study. As per the hydro-geological study, the stage of groundwater development is 9.26%, which may increase to 9.32%. The radius of influence has been shown to be 67.7 m from the centre of the mining at the working depth. During conceptual period an area of 19.872 ha will be covered under plantation. The baseline AAQ data showed that the levels are within permissible limit. The issues raised during public hearing were also considered and discussed during the meeting which inter-alia, included pollution of water due to run off, control of air pollution, water sprinkling on road, maintenance of vehicles to be used for transportation of mineral, job opportunities, medical health care, improvement in educational facilities etc. 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) Land use of the mine lease area during the lease period should be given.

- (ii) As the project would intersect groundwater table which would involve pumping of groundwater, necessary permission for CGWA for pumping of groundwater should be obtained and furnished.
- (iii) Details of waste generation and its management for the lease period should be provided.
- (iv) The baseline data on flora and fauna was found to be unreliable. This aspect need to be rechecked and data furnished.
- (v) Site specific conservation plan should be prepared and furnished.
- (vi) Compliance of consent conditions should be furnished.
- (vii) Status of environment quality in the study area should be furnished.
- (viii) Filled in Questionnaire giving correct and complete information should be furnished.

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 Thakurani Iron Ore Mine of M/s Padam Kumar Jain, located at District West Singhbhum, Jharkhand (Consultant: Ecomen Laboratories Pvt. Ltd., Lucknow)

The proposal was earlier considered by the Expert Appraisal Committee during its meeting held on February 21-23, 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 clarified that the blasting operation will be carried out under agreement between the lessee and the explosive dealer companies having Form 22 license. It was also clarified that the proposal is for 3 million TPA. The usage of mine lease area for different activities was also given. The lease was transferred to the present lessee with effect from 2.3.1997. The biological data for flora and fauna along with authenticated list was furnished. The various steps proposed for control of RSPM levels inter-alia included water sprinkling, plantation over old dumps, adoption of wet drilling system, mobile screening plants with water sprinkling, transportation through covered trucks etc. The AAQ data collected during the month of March was also presented, which showed higher levels of PM₁₀ in the study area. Action plan to address the issues were also presented and discussed, which inter-alia included control of air and water pollution, construction of check dams and settling ponds, providing support to schools, employment for the local people etc. Status of the compliance of the earlier clearance conditions (clearance given in 2008) was also presented and discussed. In view of the observed high levels of RSPM levels, the Committee desired that the proponent should effectively implement the safeguard measures and show their effectiveness by actual monitored data and come back thereafter. The Committee deferred its recommendations on the project till such time.

2.4 Makranda Stone Mines Project of M/s Naaraayani Sons Pvt. Ltd. situated in District Singhbhum West, Jharkhand (Consultant: Kalyani Laboratories Pvt. Ltd., Bhubaneswar)

The proposal was earlier considered by the Expert Appraisal Committee during its meeting held on July 20-22, 2011 wherein the consideration of the proposal was deferred for want of NBWL clearance as the project is located in core zone of Singhbhum Elephant Reserve, however, in view of the amendment made in the guidelines issued by Wildlife Division vide dated 23.2.2012, the proposal was considered by the Committee. The TOR for this project were prescribed on 12.5.2009. Public hearing has been held on 20.3.2010. The proposal is for opening of a new mine for production of 5,40,000 TPA of aggregate stone. A screening and crushing plant forms part of the project. There will be two crushers of capacity 2x100 TPH. Mine working will be opencast semi-mechanised. Mine lease area is 25.79 ha. No forestland is involved, however, mine is located within core zone of Singhbhum Elephant Reserve. No National Park / Sanctuary is located within 10 km of the mine lease area. The Committee also took note of the comments received from Jharkhand State Pollution Control Board vide their letter dated 20.7.2011 showing that the pollution levels are within permissible limit. The Committee also took note of the letter dated 17.5.2012 from Department of Mines and Geology, Directorate of Mines, Govt. of Jharkhand stating that as per Jharkhand Minor Minerals Rule, 2004, there is no requirement of mine plan approval for minor minerals. In view of the same, mine plan approval was not insisted upon by the Committee. Water requirement for the project is 20 kld. Life of mine is 27 years. Ultimate working depth will be 224 mRL. Ground water table is reported at 198 mRL. Mine working will not intersect groundwater table. It is estimated that 2,28,315 m³ of waste will be generated during the conceptual period. There will be no dump at the end of the mine life. The waste generated will be backfilled and used for road development. An area of 1.83 ha will be covered under greenbelt. The baseline AAQ data presented during the meeting showed the levels within permissible limits. The issues raised during public hearing were also considered and discussed, which inter-alia included employment opportunity for local people, dust suppression, training and skill development, plantation, peripheral development, provision of drinking water and medical facility. 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.

2.5 Expansion of Slate (School Slate & Slate Stone) Mining Project of M/s Ashok Somany located at village Manethi, Majra and Padla, District Rewari, Haryana (Reconsideration Case)

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 noted that the public hearing for the project has been got redone on 21st March, 2012 as the earlier public hearing was chaired by an officer of rank lower than that prescribed in the EIA Notification, 2006. The Committee also took note of the letter dated

27.1.2012 from Director, Mines and Geology, Govt. of Haryana stating that the said mine lease is not covered by any of the prohibitory orders / directions of the Hon'ble Supreme Court judgment in M.C. Mehta matter and T.N. Godavarman matter. It has been further stated in the said letter that only such areas as are notified under section 4 and or 5(Special) of the PLPA, 1900 are treated as forest in terms of the orders dated 18.3.2004 of Hon'ble Supreme Court. Any general notification under section 4 of PLPA is not reckoned as forest. No part of this lease area is covered under a Notification (Special) under section 4 and or 5 of PLPA. It was reported that the silica content is 1.38% of RSPM of the sample. The consumption of water for the mining operations will be 31 kld. An NOC from CGWA has been obtained for the same. It was also committed that mine working will be restricted up to 255 mRL and will not intersect the groundwater table and there will be no pumping of groundwater from the mine lease area. The baseline data collected during February, 2011 was also presented, which showed the levels within permissible limit. There will be no displacement due to the project, however, in lieu of the agriculture land to be acquired, compensation will be paid as per the policy of the State Government. The issues raised during public hearing were also considered and discussed which inter-alia included employment to the local people, construction of concrete road, provision of drinking water, plantation and formation of Monitoring Committee for implementation of environment protection measures. 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) Provisions of Metalliferrous Mining Regulations (MMR), 1961 shall be strictly complied with respect to working near railway line and public road.
- (ii) Plan for conservation of peacock and other fauna found in the study area shall be prepared and implemented.

2.6 MA No. 1 OF 2011 IN Appeal No. 3 of 2011 Sarpanch Gram Panchayat, Tiroda & Ors V/s Ministry of Environment and Forests & Ors before National Green Tribunal (NGT for short), New Delhi in respect of Tiroda Iron Ore mine of M/s Gogte Minerals in Maharashtra - Hon'ble NGT Order dt. 12.8.2011 and dt. 19.4.2012 in M.A. No. 55/2012 in Appeal No. 3 - Consideration of Project in compliance of these orders.

The aforesaid orders of Hon'ble NGT directed as hereunder:-

- (i). The EC dated 31.12.2008 granted in favour of the fifth respondent shall be kept in abeyance with immediate effect, till a fresh decision is taken by the Respondent No. 1 either way. However, the fifth Respondent may be allowed to lift and transport the iron ore already mined and stacked on the site, as per law.
- (ii). The Respondent no. 1 shall place the matter before the new EAC (Mining) to which Majumdar is not a party and seek a fresh consideration of the matter taking all the material as available as on date as to compliances. If the EAC

considers it necessary to impose additional conditions, it may direct the proponent to comply with the same, including fresh EIA based on prescribed ToR before taking a decision for revival of the EC. However, we make it clear that the EAC is at liberty to reject or accept the proposal for recommending revival of EC in favour of the project proponent.

- (iii). The EAC, however, shall call for fresh report in so far as causing air, noise and water pollution keeping in view the proximity of the school as observed in this judgment and may recommend for relocating the school by constructing a new building at a safe location within Tiroda revenue village with similar accommodation and suitable playground around, along with all modern basic amenities as required by the local Education Department.
- (iv). The EAC also shall call for a fresh report as to existence of number of iron ore mines in Sawantwadi Taluk and their cumulative effect on the environment and ecology of the area particularly the Tiroda village.
- (v). This entire process shall be completed within a period of 6 months from the date of receipt of this judgment.

2. It was noted by the EAC that in compliance to (i) above, MOEF has already kept the EC granted to the said project in abeyance vide letter No.J-11015/1026/2007-IA.II(M) dt.25.10.2011. Additionally, the permission was also granted to the 5th Respondent to lift and transport the iron ore already mined and stacked at site. It is further noted that MOEF vide letter No.L-11011/32/2011-IA.II(M) dt.11.5.2012 has directed Maharashtra State Pollution Control Board to ensure that all safety measures mentioned in the order of Hon'ble NGT Dt. 19.4.2012 in M.A. No. 64/2012 in appeal No.3/2011 are implemented and that no further mining operations are undertaken in the said mine.

3. The matter now was placed before the EAC (Mining) chaired by Shri M.S. Nagar on 23rd May, 2012 for their consideration in compliance of the directions under (ii) above. The proposal was accordingly considered with particular reference to all the issues raised in the said order of Hon'ble NGT. The Project Proponent (PP for short or Respondents 5 and or 6) made submissions and also presented their responses on the issues. The EAC examined, prima facie, the claims of stage-wise implementation of TOR /EC Conditions, Adequacy/ deficiencies of EIA/EMP vis-a-vis PH and the then final recommendations for grant of the impugned EC in compliance to later part of (ii). As for the present, the EAC considered how best and fast the fresh reports as directed under (iii) and (iv) of para 1 above or otherwise can be obtained from the PP. The details thereof are covered in subsequent paragraphs.

4. While examining the matter [refer (ii) above], an important issue, which has a bearing on the matter, cropped up, which the EAC wishes the MoEF to draw Hon'ble NGT's attention to. i.e. a perusal of the documents now submitted by the PP revealed that the Mining Lease (ML for short) in respect of said Tiroda Mine had become due for

renewal on 04.04.2010 itself. As per the provisions of the EIA Notification, 2006 as amended on 4.4.2011, prior Environment Clearance is required to be obtained at the stage of renewal of mining lease as per the procedure prescribed there under. This would mean that even if the present EC were not to be kept in abeyance, the Project Proponent would have had to secure a prior EC, afresh, for operating the mine beyond the date of expiry of the present ML.

5. A related question is about the applicability of the ongoing Moratorium on grant of prior ECs in the districts of Ratnagiri and Sindhudurg of Maharashtra. The Hon'ble NGT in their order dt. 19.4.2012 has observed-

"The only reason furnished for seeking extension of time for implementation of the other directions is that there is moratorium imposed on the consideration of proposals seeking TOR and /or EC under EIA Notification , 2006 in Ratnagiri and Sindhudurg district of Maharashtra by the MOEF.

In the order dated 12.4.2011, we have already taken a view that prima facie stand taken by the MOEF for seeking extension on the basis of moratorium , is not correct."

The EAC also noted that MOEF has imposed moratorium on consideration of projects for environment clearance in the districts of Ratnagiri and Sindhudurg in Maharashtra, which may also be kept in view while considering proposals for such cases of mining whose mine lease has already fallen due for renewal as has been brought out in para 4 above.

6. Nonetheless, the EAC suggests the following courses of actions on each of the specific issues under (iii) to (v) above and a couple of consequential matters relating to CRZ applicability and Public Consultation.

7. Coming to fresh Baseline Data on Ambient Air quality, Noise and Water quality in the Study Area with specific reference to the School and the Tiroda Village [ref.(iii) above], the EAC carefully examined the data on record and the PP's and School Administration views. Fresh Air quality measurements with rest of the mines in the study area under operation, duly modelled for Tiroda Mine operations with the prescribed green cover, were desired to be obtained from the PP. The baseline Air quality data need to be superimposed with the projected level of pollution due to the said mining project and the resultant net level has to be seen in terms of their likely potential impact on the School (tender age children) and the inhabitants of the Tiroda village which, besides others, should include sensitive populations (children, elderly and those with pre-existing cardio respiratory disorders). The same applies to Noise level measurements. In addition, the interpretation of the collected data in the Hydro-geological Study, the radius of influence, storage co-efficient and transmissivity need to be recomputed and results submitted.

8. As regards the 'Cumulative impacts' of all the four mines in Sawantwadi Taluk giving no. and size of individual mine operating in the area on the ecology of the area and also on Tiroda village (iv above), the EAC took note of the data on air, noise and water presented by the PP which brought out the incremental pollution loads in the area. It was, however, observed that at the time of going for PH for Tiroda, some of these new mines

were not operational. To get a clearer picture, a latest topographic map of the study area plotting all the four Mines, with base line data from observation points, representative of ground reality as it prevails now (down wind directions, surface run-off and spread of sound waves etc), are required to be generated to depict the cumulative impacts on the affected area.

9. Though the Hon'ble NGT has dealt with the claims and counter claims about the Tiroda Mine falling under the CRZ and Forest land, during the Meeting, the PP could not adduce conclusive data on the demarcation of CRZ, based on river water salinity. Data on local flora and bio-diversity and the green cover factors of the study area could have been more authentic in view of the persistent complaints and expectation that the onus of proving their contentions beyond doubt is on the PP. In short, it was felt desirable that a CRZ map of the area demarcating the HTL, LTL, the CRZ boundary etc. is got prepared by one of the authorised agencies, superimposing thereon the location of the mine lease, coastal features such as mangroves, sand dunes, saltpans and any other such sensitive feature so as to conclusively decide about the applicability of CRZ notification to this Project. While preparing the CRZ map, the location of the Nanos river and the tidal influence therein, if any, based on the salinity levels inward on the land side should also be taken into account with respect to the mine location.

10. The last point at the present stage of review is the status of the original EIA/EMP Report on being augmented with the reports to be obtained from the PP and other Agencies as detailed above. While the additional information would enable the EAC to formulate their recommendations regarding revival or rejection of the EC, presently kept under abeyance, the related question is about whether the earlier Public Consultation would still hold. The Hon'ble NGT has opined (ref para 19 at page 30 of 43 of the NGT Order) that on account of the defective nature of EIA Report (arising out of data collection pre-dating issue of TOR and TOR being partially completed at the time of EIA preparation), the purpose of PH has got defeated though the PH parse cannot be said to be vitiated or invalid (on account of substantial compliance of the TOR). The complaint about shorter notice period of 23 days instead of 30 for the postponed PH meeting was seen to be without any motive, nor was any motive alleged. Similar complaint about the rank of presiding officer being lower than required was also set aside on the strength of the Affidavit furnished by the District Collector himself that the rank of the post held by the deputed Deputy Collector was equivalent to that of an Additional District Magistrate. Earlier, the objection raised about Taluk name being wrongly mentioned was condoned as mere typographical mistake and the allegation of TOR not finding a mention in the EIA, was found to be factually incorrect. Therefore, the sole infirmity about PH that remains is on account of the inadequacies of the draft EIA at the time of PH. But it was noted from the submissions / presentation made by the proponent during the meeting that the TORs prescribed by the then EAC (M) for preparing the EIA report have been addressed during different stages of Environment Clearance (EC for short) process including post EC stage (Implementation and Monitoring Stage). Under the circumstances, the EAC felt that after receiving and analysing the additional data as above, a call would be taken as to how material the earlier shortcomings have been and to what extent they impaired the Public's ability to formulate their impact assessment.

11. In view of the above observations, the EAC is of the view that the proponent should prepare succinct reports addressing the above issues for consideration of the EAC as per the procedure prescribed. Time frame wise, the field data generation by the PP would at the earliest take the post monsoon season. On receipt of the said Reports, the EAC will consider the matter and will make their recommendations within the time frames prescribed in the EIA Notification, 2006 for appraisal of the project. If need be, a Sub-group of EAC would undertake a site visit for 'on the spot' verification /assessment of the related issues.

12. The aforesaid facts and observations may be brought to the notice of the Hon'ble NGT for their consideration and passing appropriate orders as deemed fit in the circumstances of the case.

2.7 Proposal of Mining of Bauxite from Pakhar Bauxite Mines of M/s Jaywanti Kumari Bhagat, Village Pakhar, District Lohardaga, Jharkhand (35.828 ha) (Consultant: Grassroot 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 is for renewal of mine lease which fell due on 3rd June, 2006 and enhancement of production of bauxite to 61,000 TPA. It is a violation case as the mine has continued to operate after it fell due for renewal in 2006 and as enhanced production after the EIA Notification, 1994 coming into force. The mine lease area is 35.828 ha, which include 15.29 ha of forestland. It was, however, observed that the information regarding involvement of forestland as given in Form-I and in their pre-feasibility report and as also stated during the meeting was at variance. In the absence of reliable information on the subject, the Committee desired that the proponent should first reconcile the information relating to the extent of forestland involved in the mine lease and thereafter come for presentation. The consideration of the proposal was therefore deferred till the correct information is submitted by the proponent.

2.8 Production of 0.5 MTPA Iron Ore of M/s Sri Anjani Mines and Minerals, Village Chabali & Thummalur, District YSR Kadapa, Andhra Pradesh (208.30 ha)

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

2.9 Renewal of Mine Lease of Paraswani Limestone Mine of M/s Ultra Tech Cement Ltd., Hirmi, Tehsil Simga, District Raipur, Chhattisgarh (Consultant: B.S. Envitech Pvt. Ltd., Hyderabad)

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 on 21.2.2013 for production of 4.2 million TPA of limestone. The earlier EC was granted on 16.3.2006. Mine lease area is 997.355 ha. No forestland is involved. Mine working will be opencast mechanized involving drilling and blasting. Life of mine is 34 years. Ultimate working depth will be 37 m bgl. Transportation will be by closed conveyor. It is estimated that 3.363 million m³ of waste will be generated during the mine life. Water requirement is estimated as 300 kld, which will be obtained from mine pit.

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/topo sheet 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_{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.
 - 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 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 (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.

2.10 Silica Sand Mining Project of Shri Devendra Sharma located in village Nangal, Tehsil Pahari, District Bharatpur, Rajasthan (TOR)

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

2.11 Khetri Copper Mine of M/s Hindustan Copper Ltd., village Gothra-Banwas, Tehsil Khetri, District Jhunjhunu, Rajasthan (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 would fall due in February, 2013 and enhancement of production of copper to 1.5 million TPA. The proposal was last considered in the meeting of EAC held in November, 2011, however, the Committee had deferred its recommendations for want of clarifications regarding the applicability of the order of the Hon'ble Supreme Court dated 8.4.2005 in the Godavarman matter restraining mining in Aravali Hills. The Committee took note of the letter dated 13.3.2012 from the Department of Mines and Geology, Govt. of Rajasthan stating that the said mine lease is of prior to 2002 and as such is not in violation of the order of the Hon'ble Supreme Court. The legal opinion obtained from M/s Bhandari Advocates as submitted by the project

proponent was also taken on record. The mine lease area is 395.07 ha, which includes 164.44 ha of forestland. The earlier EC was granted on 5th March, 2009. The mine working will be underground.

Based on the information furnished and presentation made and taking into consideration the letter of the State Mining Department as also the legal opinion, 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) Issues relating to mine safety based on subsidence study should be detailed. The proposed safeguard measure in this regard should also be provided.
- 11) 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.
- 12) 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.
- 13) Land use plan of the mine lease area should be prepared to encompass pre-operational, operational and post operational phases and submitted.
- 14) 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.
- 15) 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.
 - 16) 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.
 - 17) 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.
 - 18) 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.
 - 19) 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.
 - 20) The vegetation in the RF / PF area with necessary details should be given.
 - 21) 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.
 - 22) 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.
 - 23) 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.
 - 24) 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.
- 25) Impact, if any, of change of land use should be given.
 - 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 (PM₁₀, SO₂ 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 PM₁₀ particularly for free silica should be given.
 - 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 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 (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.

2.12 Lakharshi Bauxite Mine of M/s Hindalco Industries Ltd., village Lakharishi, Kashipur, District Rayagada, 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 opening of a new mine for production 0.3 million TPA of bauxite. Mine lease area is 237.632 ha, which include 117.572 ha of forestland for which forest diversion proposal has been submitted. Mine working will be opencast mechanized. Ultimate working depth will be 6 m bgl. Water requirement is 20 kld to be obtained from nearby nallah and rainwater. Life of mine is 15 years.

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) 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.
- 12) 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.
- 13) 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.
- 14) Impact, if any, of change of land use should be given.
- 15) 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.
- 16) One season (non-monsoon) primary baseline data on ambient air quality (PM₁₀, SO₂ 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 PM₁₀ particularly for free silica should be given.
- 17) 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.

- 18) 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.
- 19) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
- 20) Details of water conservation measures proposed to be adopted in the project should be given.
- 21) 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.
- 22) 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.
- 23) 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.
- 24) Details of rainwater harvesting proposed, if any, in the project should be provided.
- 25) 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.
- 26) 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).
- 27) The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
- 28) 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.
- 29) Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
- 30) 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.
- 31) 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.
 - 32) 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.
 - 33) 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.
 - 34) 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.
 - 35) 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.
 - 36) 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.
 - 37) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
 - 38) 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 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 (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 Chanchbani China clay & Silica Sand Mines along with washing plant of M/s Chanchbani China Clay Mines, Village Chanchbani, District Mayubhanj, Orissa (Consultant: Kalyani Laboratories 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 renewal of mine lease which fell due in 1997 for production of 10,000 TPA of china clay and silica sand along with washing plant. It is a violation case as the mine has operated after it fell due for renewal without requisite prior environmental clearance. Mine is reported to be closed since 2009. Mine lease area is 119.446 ha. No forestland is involved. Mine working will be opencast manual. Water requirement is 50 kld, which include 42 kld for washing plant which will be obtained from mine drainage water and harvested rainwater and groundwater. Mine will intersect sub-surface water table. It is estimated that 2,58,970 m³ of waste will be generated during conceptual period. Ultimate working depth will be 39 m. Life of mine is 20 years. The waste generated will be dumped in an area of 2.726 ha.

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 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.
- 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, 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.
 - 4) All corner coordinates of the mine lease area superimposed on High Resolution Imagery/toposheet should be provided.
 - 5) 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.
 - 6) 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.
 - 7) 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.
 - 8) 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.
 - 9) 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.
 - 10) 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.
 - 11) Land use plan of the mine lease area should be prepared to encompass pre-operational, operational and post operational phases and submitted.
 - 12) 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.
 - 13) 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.
 - 14) Impact, if any, of change of land use should be given.

- 15) 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.
- 16) One season (non-monsoon) primary baseline data on ambient air quality (PM₁₀, SO₂ 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 PM₁₀ particularly for free silica should be given.
- 17) 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.
- 18) 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.
- 19) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
- 20) Details of water conservation measures proposed to be adopted in the project should be given.
- 21) 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.
- 22) 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.
- 23) Details of treatment and disposal / management of effluents generated from the washing plant should be given.
- 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 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 (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 Thakurani Iron and Manganese Ore Mining of M/s The Orissa Minerals Development Co. Ltd., located in Village Thakurani, District Keonjhar, Orissa (Consultant: Geomin Consultants Pvt. Ltd., Bhubaneswar)

The proposal was earlier 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. It was clarified that the Ministry of Steel has requested the State Government of Orissa to transfer the lease from BPMEL, which has gone under liquidation to OMDC. The State Govt. has agreed to consider the transfer of lease in the name of OMDC at the time of renewal for which EC and FC is pre-requisite. The certificate under Forests Rights Act, 2006 has been issued to OMDC. The Committee deliberated on the issue of rightful lessee and having satisfied itself the proposal was further considered. Out of 1546.55 ha of mine lease area, surrender of 767.788 ha is under process. The coordinates of the site (mine lease) were submitted. The location of habitation with respect to the mine blocks was also presented. It was observed that the closest habitation is at Barbil at a distance of 50 m from Block-C, Belkundi at 500 m from Block-B, Kara at 570 m from Block-D, Dalki Seding Basti and Kara are adjacent to Block-A and Barbil adjacent to Block-D. The baseline AAQ data collected was also presented, which showed the values within prescribed limit. The Committee was concerned regarding the impact of blasting on the villages which are located within the mine lease and or within close proximity to the mine lease. The proponent clarified that control blasting will be adopted. The details of flora and fauna were also presented. The Committee, however, was neither satisfied with the methodology of biological survey as presented nor with the details of flora and fauna, more particularly with the fauna part. The site specific Wildlife Conservation Plan was also found to be far from satisfactory.

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

- (i) Detailed biological study bringing out the critical wildlife habitats in the study area, impact of the project on these wildlife habitats and the conservation plan for their protection duly approved by the Chief Wildlife Warden should be furnished. The methodology adopted for biological survey should also be given.
- (ii) Updated status on forestry clearance should be furnished.
- (iii) Details of controlled blasting proposed, keeping in view the location of habitation should be furnished.

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 received.

2.15 Limestone & Dolomite Mines of M/s The Bisra Stone Lime Company Ltd. in Sundargarh District, Orissa

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. The compliance of the earlier EC conditions (EC granted on 5.8.1994) was presented and discussed during the meeting. The baseline AAQ data collected was also presented. It was, however, observed that the AAQ data representative of the entire study area has not been collected. The protocols prescribed in this regard have also not been followed. Even the raw data was not given. As such, it was not acceptable. It was observed that there is habitation nearby and the issues relating to vibration due to blasting have not been adequately addressed in the report. The report was not found to be satisfactory. No biological survey of the core zone was submitted. (The Biological Survey Report needs to properly demarcate as between the Core Zone and the Buffer Zone.)

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

- (i) One season baseline AAQ data of the study area should be collected by proper selection of monitoring stations and following the monitoring protocol and data submitted.
- (ii) The report on blasting should be redone and submitted. It should clearly bring out the impacts on the habitation nearby. The specific type of blasting to be adopted in the project and whether it conforms to various circulars and guidelines issued from DGMS in this regard, should also be brought out.
- (iii) Baseline data on biological environment along with Wildlife Conservation Plan as was requested in the last meeting should be submitted.

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

2.16 KJST Iron, Manganese and Bauxite Ore Mine of Shri Prabodh Mohanty in village Kalamanga, Sidimba, Jaldihi and Tantigram, District Sundergarh, Odisha (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 was earlier considered by the EAC during its meeting held in August, 2011, however, consideration of the proposal was deferred as the lease execution document for the reduced mine lease area of 188.523 ha was not submitted. Based on

the clarification now submitted by the proponent, the proposal was considered. The proposal is for enhancement of production of iron ore from 0.7 million TPA to 2.0169 million TPA and bauxite ore from 0.05 million TPA to 0.13 million TPA. Mine lease area is 188.523 ha, which is a forestland. Forestry clearance has been obtained for an area of 177.517 ha. No National Park / Sanctuary is reported within 10 km of the mine lease. Water requirement is estimated as 100 kld. Mine working will be opencast. The earlier environment clearance was granted on 28.1.2008. 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) 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 (PM₁₀, SO₂ 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 PM₁₀ particularly for free silica 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 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 (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.

2.17 Iron Ore Beneficiation Plant of M/s Essar Steel Orissa Ltd., Joda, District Keonjhar, Orissa (change in scope of EC condition) (Consultant: S.S. Environics India Pvt. Ltd., Bhubaneswar)

The proposal was earlier considered by the Expert Appraisal Committee during its meeting held on February 21-23, 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 made a feasibility study of various modes of transport inter-alia aerial ropeways, belt conveyor, rail transport and road transport. It was shown that ropeways and belt conveyors are not feasible options due to various constraints inter-alia multiple picking points, prohibition of creation of stack yard as per OMPPS Rules, 2007, involvement of forests and tribal lands and large handling capacity. As regards rail transport, this option was also stated to be unviable due to limitations in terms of limited unloading facility, rake allotment by railways, multiple handling etc. Additionally, topography of the area was also stated to be a major constraint in adopting rail route as the mode of transportation. As regards the road mode, it was stated to be the viable option due to established road connectivity to all the mines. These roads are reported to have adequate handling capacity in terms of the vehicular load. The KIDCO road and feeder roads are reported to have adequate capacity. It was stated that 12.4 tonne capacity trucks will be used. The expected truck density will be 124 trucks per hour. Pollution load estimation was also presented.

Based on the presentation made and discussion held, keeping in view the spatial distribution of mines from which the mineral is to be sourced, limitation of rail network, topography of the area and the environmental scenario presented including the anticipated impact due to adoption of road transportation, the Committee agreed to recommend the proposed change of mode of transportation from rail to road.

2.18 Proposed increase in Limestone production from Yepalamadhavaram Limestone Mine of M/s My Home Industries Ltd., Village Yepalamadhavaram, District Nalgonda, A.P. (121.408 ha) (TOR)

The Committee took note of the letter dated 22.5.2012 from the proponent requesting for withdrawal of the proposal as the proponent is proposing to submit a fresh proposal. The Committee agreed to the request and recommended that the proposal may be taken as withdrawn.

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

The matter was discussed during the meeting, however, the issues could not be finalized. It was decided to continue further discussion on the subject during next meeting of EAC.

2.20 Dolomite Mine of M/s Ranganayaka Mines and Minerals, village Peddapappur Mandal, District Ananthapur, Andhra Pradesh (Consultant: Vision Labs, Hyderabad)

The proposal was earlier considered by the Expert Appraisal Committee during its meeting held on July 20-22, 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 data collected during the post monsoon season was presented. It was seen that the levels are within permissible limit. The water requirement is estimated as 6 kld, which will be obtained from local supply. No groundwater will be drawn. The issues raised during public hearing were also considered and discussed which inter-alia included impact on surrounding lands, employment to local people, adherence to the guidelines framed by APPCB etc. The other issues raised by the Committee were also be clarified.

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

2.21 Chanpi Bauxite and Laterite Mining Project of M/s Arbind Kumar Singh, located at village Chanpi, P.O. Bagru, District Lohardaga, Jharkhand (Consultant: Grassroot Research and Creation India Pvt. Ltd., Noida)

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. The additional ambient air quality data collected during February, 2012 was also presented. It was shown that the levels are now within permissible limits. Site specific data on flora and fauna was also presented. It was stated that the area is not a common migratory route for wild animals, no rare, threatened or endangered wildlife species are observed near the lease area. The mining activity will be carried out on the hill top and the agriculture activities are 4 -5 km away from the mine lease. No significant adverse impact on agriculture is expected due to the proposed project.

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

- (i) Necessary permission from the Forest Department for transportation of mineral through the forest road shall be got revalidated before restarting mining operation which are reported to be closed since March, 2010.

2.22 Proposed Lodhikheda Manganese Deposit of M/s Ajay Khandelwal, village Lodhikheda, Tehsil Sausar, District Chhindwara, M.P. (Consultant: Bhagvathi Anna Labs Ltd., Hyderabad)

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 opening of a new mine for float ore mining of manganese for a capacity of 1700 TPA. Mine lease area is 17.498 ha. No forestland is involved. It has been considered as category 'A' because of inter-state boundary of M.P. and Maharashtra at 6.6 km. Ultimate working depth will be 2 m from the top. Mine working will not intersect groundwater table. Mine working will be opencast manual. Anticipated life of mine is 5 years. Water requirement is 10 kld, which will be obtained from groundwater.

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) 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.

- 12) 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.
- 13) Impact, if any, of change of land use should be given.
- 14) 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.
- 15) One season (non-monsoon) primary baseline data on ambient air quality (PM₁₀, SO₂ 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 PM₁₀ particularly for free silica should be given.
- 16) 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.
- 17) 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.
- 18) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
- 19) Details of water conservation measures proposed to be adopted in the project should be given.
- 20) 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.
- 21) 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.
- 22) 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.
 - 23) Details of rainwater harvesting proposed, if any, in the project should be provided.
 - 24) 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.
 - 25) 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).
 - 26) The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
 - 27) 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.
 - 28) Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
 - 29) 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.
 - 30) 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.
 - 31) Occupational health impact of project should be anticipated and preventive measures initiated. Details in this regard including manganese poisoning should be provided. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP.
 - 32) 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.

- 33) 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.
- 34) 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 including that due to manganese poisoning besides other impacts of the projects.
- 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 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 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 (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.

2.23 Balda Block Iron Ore Mines of M/s Serajuddin & Co., village Balda, Bada Kalimati & Nayagarh, Tehsil Barbil, District Keonjhar, Orissa (Consultant: Creative Engineers and Consultants, Chennai)

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 4.5 million TPA to 15.15 million TPA (ROM). The earlier EC for 1.48 million TPA capacity was granted in 2007 and for 4.5 million TPA in April, 2012. Mine lease area is 335.594 ha, which include 258.133 ha of forestland. Forestry clearance has been obtained for 137.219 ha. Mine working will be opencast mechanised. Compliance of the earlier EC conditions was also presented. Ultimate working depth will be 480 m AMSL. Mine working will intersect groundwater table at 517 m AMSL.

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 (PM₁₀, SO₂ 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 PM₁₀ 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 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 (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.

2.24 Soapstone Mine of M/s New Hills Mines & Minerals, village Kidai Khwasi, Tehsil Bageshwar, District Bageshwar, Uttarakhand (TOR)

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

2.25 Kirai Soapstone Mine of Shri Praveen Singh Papola, Village Kirai, Tehsil & District Bageshwar, Uttarakhand (Consultant: Wolkem Consultancy Services, Udaipur)

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 opening of a new mine for production of 29,824 TPA of soapstone. Mine lease area is 10.007 ha. No forestland is involved. It has been considered in MoEF as the SEIAA for Uttarakhand is not in place. Life of mine is 20 years. Mine working will be opencast semi-mechanised without drilling and blasting. Ultimate working depth will be 20 m bgl.

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) 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.
 - 12) 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.
 - 13) Impact, if any, of change of land use should be given.
 - 14) 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.
 - 15) 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 PM₁₀ particularly for free silica should be given.
- 16) 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.
 - 17) 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.
 - 18) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
 - 19) Details of water conservation measures proposed to be adopted in the project should be given.
 - 20) 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.
 - 21) 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.
 - 22) 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.
 - 23) Details of rainwater harvesting proposed, if any, in the project should be provided.
 - 24) 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.
 - 25) 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).
- 26) The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
 - 27) 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.
 - 28) Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
 - 29) 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.
 - 30) 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.
 - 31) 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.
 - 32) 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.
 - 33) 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.
 - 34) 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.
 - 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 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 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 (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.

2.26 Sirala Soapstone Mine of Shri Mahesh Singh Bhauryal, village sirala, Raikhola & Badyuda Chak Pahruda, Tehsil & District Bageshwar, Uttarakhand (Consultant: Wolkem Consultancy Services, Udaipur)

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 soapstone to 21,195 TPA. It is a violation case as the mine started working after its grant in 1997 without obtaining requisite prior environment clearance. Mine lease area is 5.8 ha. No forestland is involved. It has been considered in MoEF as the SEIAA for Uttarakhand is not in place. Mine working will be opencast semi-mechanised without involving drilling and blasting. Life of

mine is 17 years. Ultimate working depth will be 20 m bgl. The request of the proponent to allow them to use the baseline data already collected 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) 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.
- 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, 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.
- 4) All corner coordinates of the mine lease area superimposed on High Resolution Imagery/toposheet should be provided.
- 5) 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.
- 6) 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.
- 7) 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.
- 8) 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.
- 9) 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.
- 10) 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.
- 11) Land use plan of the mine lease area should be prepared to encompass pre-operational, operational and post operational phases and submitted.
- 12) 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.
- 13) 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.
 - 14) Impact, if any, of change of land use should be given.
 - 15) 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.
 - 16) One season (non-monsoon) primary baseline data on ambient air quality (PM₁₀, SO₂ 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 PM₁₀ particularly for free silica should be given.
 - 17) 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.
 - 18) 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.
 - 19) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
 - 20) Details of water conservation measures proposed to be adopted in the project should be given.
 - 21) 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.
 - 22) 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.
- 23) 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.
 - 24) Details of rainwater harvesting proposed, if any, in the project should be provided.
 - 25) 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.
 - 26) 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).
 - 27) The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
 - 28) 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.
 - 29) Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
 - 30) 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.
 - 31) 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.
 - 32) 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.

- 33) 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.
- 34) 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.
- 35) 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.
- 36) 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.
- 37) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
- 38) 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 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 (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 Collection of river bed sand / muram from of Shri Virendra Rai, villages Devisinghpura, Luhargaon, Mailoni, Maukhas, Bhakoro, Sitora & Khishi Bujurg, Tehsil Mauranipur, District Jhansi, Uttar Pradesh (Consultant: Grassroot 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 is for renewal of mine lease which fell due in 2010 for production of 1,40,000 TPA of Sand / Muram from the bed of river Sukhnai and Dumrai. It is a violation as the mine started operation after grant of lease in 2007 without obtaining requisite prior environment clearance. Mine is reported to be closed after December, 2010. Mine lease area is 54.61 ha spread over seven blocks. The mine is located within 10 km from interstate boundary of U.P. and M.P. Ultimate working depth will be 3 m or depth of groundwater table, whichever is less. Mine working will be manual. No working will be carried out during monsoon season and during night time.

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

- 1) Year-wise production prior to EIA Notification, 2006 coming into force and clearly stating the highest production achieved in any one year prior to 2006. It may also be categorically informed whether there had been any increase in production after the EIA Notification, 2006 coming into force w.r.t. the highest production achieved prior to 2006.
- 2) 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.
- 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 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, mode of working, working shift, transportation of mineral etc.
 - 9) 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.
 - 10) Land use of the study area should be provided, delineating forest area, agricultural land, grazing land, wildlife sanctuary and national park, migratory routes of fauna, water bodies, human settlements and other ecological features.
 - 11) Land use plan of the mine lease area should be prepared to encompass pre-operational, operational and post operational phases.
 - 12) 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.
 - 13) Detailed description of the vegetation in the RF / PF area should be given.
 - 14) A study shall be got done to ascertain the impact of the mining project on wildlife of the area including on the elephant population.
 - 15) 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. A location map duly authenticated by Chief Wildlife Warden should be provided in this regard. Necessary clearance from the Chief Wildlife Warden for operating the mine within 10 km of the National Park, if any, should also be obtained and furnished.
 - 16) 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 / amphibians especially fresh water turtles and other nesting sites, if any, in the riverine system shall be carried out. Avian fauna should also be covered. The biological value on either bank of the river should also be studied and given. 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 and close monitoring 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.

- 17) Impact of the project on land use including change of river course, if any, should be brought out.
- 18) Impact on topography, drainage, agricultural fields, cattle fields, wildlife, water logging leading to water borne diseases, if any, should also be studied and spelt out. It may also be shown whether it will lead to change of watercourse of the river. Modeling exercise should also be carried out through an expert agency to show the change in river flow dynamics, if any.
- 19) Collection of one season (non-monsoon) primary baseline data on ambient air quality (PM₁₀, SO₂ and NO_x), 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 PM₁₀ 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.
- 20) 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.
- 21) 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.
- 22) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
- 23) Impact of the project on the water quality should be assessed and necessary safeguard measures, if any required should be provided.
- 24) 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.
- 25) Quantity of solid waste generation, if any, should be estimated and details for its disposal and management should be provided.
- 26) 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.
- 27) Details of the infrastructure facilities to be provided for the mine workers.
- 28) Phase-wise plan of greenbelt development, plantation and compensatory afforestation should be drawn and presented, clearly indicating the area to be

- covered under plantation and the species to be planted.
- 29) Occupational health impact of project should be anticipated and preventive measures initiated. Details in this regard should be provided.
 - 30) Occupational health impact of the project should be anticipated and preventive measures built in. Details of pre-placement medical examination and periodical medical examination schedules and medical facilities proposed to be provided should be incorporated in the EMP.
 - 31) 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 dimension should be given.
 - 32) Detailed environmental management plan to mitigate the environmental impacts should be prepared and furnished. Specific safeguard measures to control PM10 as well as pollution due to transportation should be given.
 - 33) 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.
 - 34) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
 - 35) 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 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 (i) surface plan of the area indicating contours of main topographic features, drainage and mining area and (ii) geological maps and sections.

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.

2.28 Bleaching Clay of M/s Ashapura Volclay Ltd., village Ler, Bhuj Taluka, District Kutch, Gujarat (0.072 MMTPA to 0.12 MMTPA) (Consultant: SGS India Pvt. Ltd.)

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 bleaching clay (mineral beneficiation plant) from 0.072 million TPA to 0.12 million TPA. The throughput will be 0.13 million TPA. The earlier EC was obtained from SEIAA in February, 2010 for the existing 0.072 million TPA capacity. The expansion will be carried out in the existing complex having land area of 14.97 ha by utilizing the existing open area. About 6,400 tonnes/month of sulphuric acid will be used, which will be obtained from Gandhi Dham. Total water requirement is estimated as 838 kld, which will be obtained from Gujarat Water Infrastructure Ltd through pipeline. Power requirement of 2200 KVA will be met from Paschim Gujarat Vj Company Ltd., however, three DG sets will be kept as backup supply. The fuel requirement is estimated as 321 liter/hr of furnace oil, 46 TPD of coal and 150 liter/day of HSD (during power failure). The ETP sludge will be sold to cement manufacturing industry, spent acid will be sold to IFFCO, used oil will be reused in the plant and tar waste will be sent to integrated common hazardous waste management facility.

It was observed from the documents submitted that Gujarat Pollution Control Board had issued closure notice to the said unit in March, 2011 based on the inspection wherein ponding of untreated waste water, absence of provision of hazardous waste storage facility and dumping of huge quantity of gypsum waste was observed. It was also observed that show-cause notice was also issued under Air Act in April, 2011. The Committee also took note of the revocation order under section 33A of Water Act dated 30.7.2011 and 2.12.2011 vide which revocation was made in phases up to 6.4.2012. As the status of working existing unit was not clear, it was decided to obtain up to date factual report from GPCB regarding the working of the unit and their compliance with the consent conditions under Air and Water Act. Additionally, it was also felt that a site visit report may be obtained from the Regional Office of MoEF on the compliance status of EC

conditions for which EC was given by SEIAA. It was decided that the proposal will be considered further after the report from GPCB and Regional Office of MoEF as mentioned above has been received.

2.29 Limestone Mining Project (Minor Mineral) M.L. No.122/91 of M/s Nitesh Minerals Pvt. Ltd., Village Hariyadhana, Tehsil Bilara & District Jodhpur, Rajasthan (Consultant: J.M. Environet Pvt. Ltd., Gurgaon)

The proposal was earlier considered by the Expert Appraisal Committee during its meeting held on June 21-23, 2011, however, consideration of the proposal was deferred for want of eco friendly mine plan. Based on submission of the same, the proposal has been considered further.

The proposal is for renewal of mine lease which fell due on 16.11.2011 and enhancement of production of limestone (minor mineral) from 14,600 TPA to 15,00,000 TPA. It is a violation case as the production from the mine was enhanced in 2009-10 without requisite prior environment clearance. Mine is reported to be closed since November, 2011. Mine lease area is 100 ha. No forestland is involved. No National Park / Sanctuary is reported within 10 km of the mine lease. TORs for this project was prescribed on 17.12.2009. Public hearing has been held on 9.12.2010. It has been stated that the mine lease area does not fall in Aravali and a letter from the State Mine Department has been submitted in this regard. Mine working will be opencast mechanized involving drilling and blasting. Ultimate working depth will be 297 mRL. Ground water table is reported to vary between 223 – 233 m AMSL. Mine working will not intersect groundwater table. Life of mine is 18 years. It is estimated that 4.51 million m³ of waste will be generated, which will be backfilled in an area of 34 ha at the end of the mine life. Backfilling will start from 4th year. Water requirement is 13 kld, which will be obtained from nearby villages. The baseline AAQ data showed the levels within permissible limit. Issues raised during public hearing were also considered and discussed which inter-alia included employment to local people, Peripheral development and community development in the field of education, health and drinking water. At the end of the mine life plantation will be raised in an area of 37.28 ha and an area of 62.72 ha will be converted into water body. It was stated by the project proponent that there is no court case against the project.

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

2.30 Limestone Mining Project (minor mineral) M.L. No. 133/92 of M/s Gotan Lime Stone Company, Village Borunda, Tehsil Bilara, District Jodhpur, Rajasthan (Consultant: J.M. Environet Pvt. Ltd., Gurgaon)

The proposal was earlier considered by the Expert Appraisal Committee during its meeting held on June 21-23, 2011, however, consideration of the proposal was deferred for want of eco friendly mine plan. Based on submission of the same, the proposal has been considered further.

The proposal is for renewal of mine lease which would fall due on 2.11.2012 and enhancement of production of limestone (minor mineral) from 51,974 TPA to 15,00,000 TPA. Mine is reported to be closed since February, 2010. Mine lease area is 100 ha. No forestland is involved. No National Park / Sanctuary is reported within 10 km of the mine lease. TORs for this project was prescribed on 17.12.2009. Public hearing has been held on 9.12.2010. It has been stated that the mine lease area does not fall in Aravali and a letter from the State Mine Department has been submitted in this regard. Mine working will be opencast mechanized involving drilling and blasting. Ultimate working depth will be 304 mRL. Ground water table is reported to vary between 230 – 240 m AMSL. Mine working will not intersect groundwater table. Life of mine is 18 years. It is estimated that 4.6 million m³ of waste will be generated, which will be backfilled in an area of 34.4 ha at the end of the mine life. Water requirement is 13 kld, which will be obtained from nearby villages. The baseline AAQ data showed the levels within permissible limit. Issues raised during public hearing were also considered and discussed which inter-alia included employment to local people, Peripheral development and community development in the field of education, health and drinking water. At the end of the mine life plantation will be raised in an area of 37.4 ha and an area of 62.6 ha will be converted into water body. It was stated by the project proponent that there is no court case against the project.

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

2.31 Quartz Mine of M/s P. Abdul Rawoof Khan, Village Hattibelagal, Aluru Mandal, District Kurnool, Andhra Pradesh (Reconsideration Case)

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

2.32 Srikurmam Mineral Sand Mine of M/s Trimex Sands Pvt. Ltd., Village Vatsavalasa, Mandal Gara, District Srikakulam, Andhra Pradesh

The proposal was last considered by the EAC during its meeting held on March 19-21, 2012, wherein the report of the Sub-Group of EAC which visited the site was considered and the proponent had also made their presentation on the issues raised by the site visit team during their inspection. Based on the discussions held and the clarifications sought in the last meeting, it was decided that the proposal will be considered internally after the requisite information has been submitted. Accordingly, after receipt of information from the proponent, the proposal was taken up for internal consideration. The Committee took note of the submissions made by the proponent on various issues vide their letter dated 26.4.2012 and taking note that the court case has been withdrawn by the petitioner, the Committee prescribed TORs for this project.

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. Mapping of existing sand dunes along with their number, location with coordinates should also be given.
- 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 from the competent authority regarding the involvement of forestland, if any, in the project or otherwise should be submitted.
- 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) Identification of CRZ area. A CRZ map duly authenticated by one of the authorised agencies demarcating LTL, HTL, CRZ area, location of the mine lease as also of the mineral separation plant and other components of the project including waste

- dumping sites w.r.t. CRZ, coastal features such as mangroves, if any. It may also clearly be shown whether any pipeline of the project is passing through CRZ.
- 16) A fresh detailed study should be done for the nesting site, if any, olive ridley turtle within the study area.
 - 17) Location of the temple (Sri Kurmam) with respect to the mine lease should be given. It may clearly be indicated whether it is an identified heritage site. If so, necessary clearance from Archeological Survey of India as applicable, should be obtained and copy furnished.
 - 18) 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.
 - 19) Impact, if any, of change of land use should be given.
 - 20) 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.
 - 21) One season (non-monsoon) primary baseline data on ambient air quality (PM₁₀, SO₂ 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. There should also be one station at Sri Kurmam Temple. The mineralogical composition of PM₁₀ particularly for free silica should be given.
 - 22) 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. The impact should also be projected for the Sri Kurmam site.
 - 23) 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.
 - 24) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.

- 25) Details of water conservation measures proposed to be adopted in the project should be given.
- 26) 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.
- 27) Details of Mineral Separation Plant, waste generated there from and their management should be clearly detailed in the report.
- 28) A detailed hydro-geological study showing the impact of the project on groundwater regime should be provided. Impact on groundwater due to ingress of seawater, if any, may also be brought out.
- 29) 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.
- 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.
- 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. The details of plantation already done should be given.

- 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 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 (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 Collection of river bed sand from Kanhan river for underground coal mine of M/s Western Coalfields Ltd, District Nagpur, Maharashtra

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 June, 1999 for production of 3.5 lakh m³ of sand from the bed of river Kanhan. The mine is reported to be closed since 16.1.2010. Mine lease area is 92.02 ha comprising of 7 areas in a stretch of 9 km. The sand so extracted will be used for stowing in their coal mine at Patansaongi and Pipla underground mines. No forestland is involved. The extraction of sand will be done by small excavators and the depth of mining will be restricted to a maximum of 3 meters. Sand will be transported through tippers.

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 (PM10, SO₂ and NO_x), 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 PM10 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 PM10 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.

2.34 Kayar Lead Zinc Ore Underground Mine of M/s Hindustan Zinc Ltd., village Kayar, District Ajmer, Rajasthan (Consultant: Vimta Labs Ltd., Hyderabad)

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 in April 16-18, 2012, however, consideration of proposal was deferred for want of compliance report of the earlier EC conditions. The proposal was again taken up in this meeting. The proposal is for enhancement of production from 0.35 million TPA to 1.0 million TPA of lead, zinc by underground mining. The earlier EC was granted in January, 2009. The mine lease area is 480.45 ha.No forestland is involved. Life of mine is 15 years. The compliance of the earlier EC conditions was also considered and discussed. It was stated by the proponent that no grazing land is proposed to be acquired for the project. It was observed that although the overall compliance appeared satisfactory, however, compliance needs to be more quantified in nature and there is scope for further improvement. The Committee desired that the proponent should take immediate steps for such improvement as discussed and be duly reflected in the Compliance of the EC conditions to be submitted at the time of EIA/EMP presentation.

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 (PM₁₀, SO₂ 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 PM₁₀ 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) Issues relating to mine safety based on subsidence study should be detailed. The proposed safeguard measure in this regard should also be provided.
 - 21) 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.
 - 22) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
 - 23) Details of water conservation measures proposed to be adopted in the project should be given.
 - 24) 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.
 - 25) 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.
- 26) 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.
 - 27) Details of rainwater harvesting proposed, if any, in the project should be provided.
 - 28) 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.
 - 29) 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).
 - 30) The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
 - 31) 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.
 - 32) Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
 - 33) 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.
 - 34) 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.
 - 35) 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.
 - 36) 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.

- 37) 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.
- 38) 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.
- 39) 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.
- 40) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
- 41) 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 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 (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 Chirodih Bauxite Mine of Shri Jagmohanlal Gupta, Village Chirodih, Taluk P.S. Bishunpur, District Gumla, Jharkhand (84.411 ha) (TOR)

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

2.36 River Bed Mining Project of (Minor Mineral) of Shri Ajay Kumar, P.O. Sandholi, Tehsil-Nalagarh, District Solan, H.P. (11.0464 ha) (Consultant: Udaipur Mintech Pvt. Ltd., Udaipur)

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 February, 2012 and enhancement of production of sand, bajri and stone from 55,790 TPA to 1,13,400 TPA put together from the bed of river Sirsa. It is a violation case as the mine started after its grant in 2007 without requisite prior environment clearance. Mine lease area is 10.0464 ha. It has been considered in MoEF because of its location within 10 km of interstate boundary of H.P. and Punjab. No forestland is involved. The linked crusher is at a distance of 4 km. 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) Cumulative impact should be worked out and presented in the EIA.
- 7) Involvement of forestland, if any, in the project and status of forestry clearance should be given.
- 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) 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.
- 10) 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.
- 11) 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.
- 12) 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.
- 13) 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.
- 14) 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.
- 15) Land use plan of the mine lease area should be prepared to encompass pre-operational, operational and post operational phases.
- 16) 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.
- 17) The vegetation in the RF / PF in the study area, if any, should be indicated.

- 18) A study shall be got done to ascertain the impact of the mining project on wildlife of the area including aquatic life.
- 19) 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.
- 20) 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.
- 21) Impact of the project on land use including change of river course, if any should be given.
- 22) 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.
- 23) Collection of one season (non-monsoon) primary baseline data on ambient air quality (PM₁₀, SO₂ and NO_x), 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 PM₁₀ 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.
- 24) 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.

- 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) Impact of the project on the water quality should be assessed and necessary safeguard measures, if any required should be provided.
- 28) 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.
- 29) Quantity of solid waste generation, if any, should be estimated and details for its disposal and management should be provided.
- 30) 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.
- 31) Details of the infrastructure facilities to be provided for the mine workers should be furnished.
- 32) 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.
- 33) 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.
- 34) 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.
- 35) Detailed environmental management plan to mitigate the environmental impacts. Specific safeguard measures to control PM₁₀ as well as pollution due to transportation should be given. It should also address the impact due to stone crusher nearby.

- 36) 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.
- 37) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
- 38) 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.

2.37 Mining of Sand, Stone & Bajari of M/s Amarjit Singh, Village Berson, Post Office Manjholi, Tehsil Nalagarh, District Solan, H.P.

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 would fall due in March, 2013 and enhancement of production of sand, stone and bajri put together to 1,73,200 TPA from the bed of Luhand Khad in village Kulari, Tehsil Nalagarh, District Solan. It is a violation case as the mine has been operating after its grant in March, 2008 without obtaining requisite prior environmental clearance. The mine is reported to be closed since November, 2011. Mine lease area is 45.4292 ha. No forestland is involved. Naina Devi Sanctuary is reported at a distance of 8 km from the mine lease. It has been considered in MoEF for this reason and also because of its location within 10 km of the inter-state boundary with Punjab and within 10 km of Sanctuary. Mining will be done manually up to a maximum of one meter depth. No mining will be done during monsoon. The area has been divided into two blocks. River bed material from each block will be excavated alternate year.

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) Cumulative impact should be worked out and presented in the EIA.
- 7) Involvement of forestland, if any, in the project and status of forestry clearance should be given.
- 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) 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.
- 10) 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.
- 11) 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.
- 12) 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.
- 13) 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.
- 14) 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.
- 15) Land use plan of the mine lease area should be prepared to encompass pre-operational, operational and post operational phases.
- 16) 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.
- 17) The vegetation in the RF / PF in the study area, if any, should be indicated.
- 18) A study shall be got done to ascertain the impact of the mining project on wildlife of the area including aquatic life.
- 19) 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.

- 20) 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.
- 21) Impact of the project on land use including change of river course, if any should be given.
- 22) 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.
- 23) Collection of one season (non-monsoon) primary baseline data on ambient air quality (PM₁₀, SO₂ and NO_x), 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 PM₁₀ 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.
- 24) 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.
- 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) Impact of the project on the water quality should be assessed and necessary safeguard measures, if any required should be provided.
 - 28) 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.
 - 29) Quantity of solid waste generation, if any, should be estimated and details for its disposal and management should be provided.
 - 30) 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.
 - 31) Details of the infrastructure facilities to be provided for the mine workers should be furnished.
 - 32) 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.
 - 33) 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.
 - 34) 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.
 - 35) Detailed environmental management plan to mitigate the environmental impacts. Specific safeguard measures to control PM₁₀ as well as pollution due to transportation should be given. It should also address the impact due to stone crusher nearby.
 - 36) 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.
 - 37) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.

- 38) 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.

2.38 River Bed Mining Project of (Minor Mineral) of Smt. Shashi Adlakha and Shri Pritam Singh, near village Bersan, P.O. Manjholi, Tehsil-Nalagarh, District Solan, H.P. (Consultant: Udaipur Min Tech Pvt. Ltd., Udaipur)

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, 2011 and enhancement of production from 36,538 TPA to 3,25,000 TPA of sand, bajri and stone put together from the bed of river Sirsa. It is a violation case as the mine has been operating after it fell due for renewal without obtaining requisite prior environment clearance. Mine is reported to be closed after May, 2012. The linked crusher is reported at a distance of 7 km. Mine lease area is 79.3616 ha. No forestland is involved. It has been considered in MoEF because of its location at 3 km from inter-state boundary of H.P. and Punjab. 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 (PM₁₀, SO₂ and NO_x), 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 PM₁₀ 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 PM₁₀ 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.

2.39 River Bed Mining Project of (Minor Mineral) of Shri Harbhajan Singh, Village Haripur, P.O. Sandholi, Tehsil-Nalagarh, District Solan, H.P. (Consultant: Udaipur Min Tech Pvt. Ltd., Udaipur)

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, 2011 and enhancement from 51,434 TPA to 75,000 TPA of sand, bajri and stone put together from the bed of river Sirsa near village Haripur Sandholi. Mine is reported to be closed after

May, 2011. It is a violation case as the mine has operated after it fell due for renewal without requisite prior environment clearance. Mine lease area is 8.9672 ha. It has been considered in MoEF because of its location within 10 km of the inter-state boundary of H.P. and 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 (PM₁₀, SO₂ and NO_x), 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 PM₁₀ 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 PM₁₀ 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.

2.40 Bhootmarhi Limestone Mine of Shri Virender Kumar Walia, Mauza Mandoli, Tehsil Sangrah, District Sirmour, H.P. (Consultant: Wolkem Consultancy Services, Udaipur)

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 April, 2005 for production of 2,50,000 TPA of limestone. It is a violation case as the mine has been operating after fell due for renewal and enhanced production without obtaining requisite prior environmental clearance. The mine is reported to be closed since January, 2012. Mine lease area is 32.57 ha. No forestland is involved in the project, however, Renuka Wildlife Sanctuary is at a distance of about 8.75 km from the mine lease. Mine working will be opencast mechanized involving drilling and blasting. It was stated by the proponent that the earlier TORs were obtained on 31.10.2008, however, due to various changes undergone in the project, they have sought for TORs afresh.

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

- 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 (PM₁₀, SO₂ 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 PM₁₀ 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 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 (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.

2.41 Sangrah Limestone Mine of Shri Virender Kumar Walia, village Sangrah, District Sirmour, H.P. (Consultant: Wolkem Consultancy Services, Udaipur)

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 May, 2002 for production of 81,053 TPA of limestone. It is a violation case as the mine has been operating after the ML fell due for renewal and enhanced production without obtaining requisite prior environmental clearance. The mine is reported to be closed since January, 2012. Mine lease area is 8.0555 ha. No forestland is involved in the project, however, Renuka Tiger Sanctuary is at a distance of about 8.5 km from the mine lease. Mine working will be opencast mechanized involving drilling and blasting. It was stated by the proponent that the earlier TORs were obtained on 31.10.2008, however, due to various changes undergone in the project, they have sought for TORs afresh.

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 (PM₁₀, SO₂ 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 PM₁₀ 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 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 (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.

2.42 Marudhara Ball Clay Mine of M/s Bikaner Ceramics Pvt. Ltd., N/V Indo ka Bala, Tehsil Kolayat, District Bikaner, Rajasthan (Consultant: Apex Mintech Consultants, Udaipur)

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 April, 2012 and enhancement of production of fire clay and ball clay from 75,000 TPA to 1,00,000 TPA. Earlier environmental clearance for 75,000 TPA was obtained in September, 2006. Mine lease area is 79.01 ha. No forestland is involved. Mine working will be opencast semi-mechanized. Life of the mine is 60 years. Status of compliance of earlier EC conditions were also presented and discussed. It was observed that the compliance needs improvement.

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_{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.
- 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 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 (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.

2.43 Ball Clay, Red & Yellow Ochre of M/s Sharda Sales Corporation, N/V Jaisinghdesar, Tehsil Nokha, District Bikaner, Rajasthan (Consultant: Apex Mintech Consultants, Udaipur)

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 would fall due on 21.1.2013 and enhancement of production of ball clay, red and yellow ochre from 13,587 TPA to 1,00,000 TPA. Mine lease area is 129.5 ha. No forestland is involved. Mine working will be opencast semi-mechanized. Life of the mine is 20 years.

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 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.
- 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, 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.
- 4) All corner coordinates of the mine lease area superimposed on High Resolution Imagery/toposheet should be provided.
- 5) 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.
- 6) 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.
- 7) 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.
- 8) 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.
- 9) 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.
- 10) 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.
 - 11) Land use plan of the mine lease area should be prepared to encompass pre-operational, operational and post operational phases and submitted.
 - 12) 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.
 - 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 (PM₁₀, SO₂ 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 PM₁₀ 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.
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- 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.
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 - 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 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 (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.

Annexure**List of Participants**

- | | | | |
|-----|---|---|------------------|
| 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. | Dr. S.K. Aggarwal, Director | - | Member Secretary |
| 13. | Shri Om Prakash, Dy. Director | | |
| 14. | Shir Neeraj Khatri, Dy. Director | | |
| 15. | Representative of M/s Uranium Corporation of India Ltd. | | |
| 16. | Representative of M/s The Singhbhum Mineral Co. | | |
| 17. | Representative of M/s Padam Kumar Jain | | |
| 18. | Representative of M/s Naaraayani Sons Pvt. Ltd. | | |
| 19. | Representative of M/s Ashok Somany | | |
| 20. | Representative of M/s Gogte Minerals in Maharashtra | | |
| 21. | Representative of M/s Jaywanti Kumari Bhagat | | |
| 22. | Representative of M/s Ultra Tech Cement Ltd. | | |
| 23. | Representative of M/s Hindustan Copper Ltd. | | |
| 24. | Representative of M/s Hindalco Industries Ltd. | | |

25. Representative of M/s Chanchbani China Clay Mines
26. Representative of M/s The Orissa Minerals Development Co. Ltd.
27. Representative of M/s The Bisra Stone Lime Company Ltd.
28. Representative of Shri Prabodh Mohanty
29. Representative of M/s Essar Steel Orissa Ltd.
30. Representative of M/s Ranganayaka Mines and Minerals
31. Representative of M/s Arbind Kumar Singh
32. Representative of M/s Ajay Khandelwal
33. Representative of M/s Serajuddin & Co.
34. Representative of M/s Shri Praveen Singh Papola
35. Representative of M/s Shri Mahesh Singh Bhauryal
36. Representative of M/s Shri Virendra Rai
37. Representative of M/s Ashapura Volclay Ltd.
38. Representative of M/s Nitesh Minerals Pvt. Ltd.
39. Representative of M/s Gotan Lime Stone Company
40. Representative of M/s Western Coalfields Ltd
41. Representative of M/s Hindustan Zinc Ltd.
42. Representative of Shri Ajay Kumar
43. Representative of M/s Amarjit Singh
44. Representative of Smt. Shashi Adlakha and Shri Pritam Singh
45. Representative of Shri Virender Kumar Walia
46. Representative of Shri Harbhajan Singh
47. Representative of M/s Bikaner Ceramics Pvt. Ltd.
48. Representative of M/s Sharda Sales Corporation
