

**Ministry of Environment & Forests  
(IA Division)**

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**SUMMARY RECORD OF THE 29<sup>TH</sup> MEETING OF EXPERT APPRAISAL COMMITTEE FOR ENVIRONMENTAL APPRAISAL OF MINING PROJECTS CONSTITUTED UNDER EIA NOTIFICATION, 2006.**

The 29<sup>th</sup> meeting of the Expert Appraisal Committee for Environmental Appraisal of Mining Projects of the Ministry of Environment and Forests was held on July 25-27, 2012. The list of participants is annexed.

The Chairman welcomed the members. The Committee observed that the Member Secretary Dr. S. K. Aggarwal, Director, MoEF would be superannuating from service by this month end and the Chairman and all the Members recalled his valuable contributions to the functioning of the EAC (Mining) all these years. They placed on record their appreciation of the same and wished him a happy and active life after his retirement.

Thereafter, discussion on each of the Agenda item was taken up ad-seriatim.

**Item No. 1:**

**1.1 Confirmation of the minutes of the 28<sup>th</sup> Meeting.**

The minutes of the 28<sup>th</sup> meeting were confirmed as circulated.

**2.1 Mahamaya Dulki Mining of M/s SAIL Ltd. (Bhilai Steel Plant), Durg & Rajnandgoan District, Chhattisgarh (1522.67 ha) ( Consultant: Project proponent)**

The proposal was considered by the Committee and the proponent made a presentation on the same. The proposal is for renewal of mine lease which fell due on 4.11.2001 and enhancement of production of Iron Ore from 0.96 MTPA to 1.46 MTPA. TOR for this project were prescribed on 13.4.2007. Public hearing has been held on 17.2.2011 and 2.5.2011 as the project area falls in two Districts i.e Durg and Rajnandgaon of Chhattisgarh. Mine lease area is 1522.67 ha, which includes 84.00 ha of forestland. No National Park /Sanctuary / Wildlife Corridors are reported within 10 kms of the mine lease. It is a violation case as the mine continued to work after its lease fell due for renewal in 2001. Mine working will be opencast semi-mechanised. Life

of the mine is 9-10 years. Water requirement is 30 kld, which will be obtained from Boirdih Dam. It is estimated that 36,16,108 m<sup>3</sup> of waste will be generated at the conceptual stage. The issues raised during public hearing were also considered and discussed during the meeting, which inter-alia included repair of roads, provision of medical facilities, education, water supply, sanitation etc. It was reported that there is no court case pending against the project.

It was noted that the TOR of the project were prescribed on 13.4.2007 and the OM No. J-11013/41/2006-IA.II(M) Dt. 22.3.2010 issued by MOEF prescribe validity of TOR as 4 years from the date of issue of TOR. Since the TOR for the project is older than 4 years, the project proponent requested the Committee for extension of validity of TOR. The Committee considered the request and directed the project proponent to approach the Ministry in this regard. The Committee further directed that after obtaining extension of validity of TOR from the Ministry, the EIA may be updated with additional validatory base-line data for at least one month covering 10 Km study area. The Committee did not feel it necessary to conduct Public Hearing again.

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

- (i) Year-wise production details prior to 1994 and thereafter till date should be furnished.
- (ii) Filled in Questionnaire giving correct and complete information should be provided.
- (iii) A copy of the lease document should be submitted.
- (iv) Status of forestry clearance for the forestland involved in the project may be intimated.
- (v) Details of waste generation and its management for the lease period should be provided.
- (vi) Compliance of consent conditions should be furnished.
- (vii) Status of environment quality in the study area should be furnished.
- (viii) Action plan to address the issues raised during public hearing with financial allocation should be provided.

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

## **2.2 Enhancement of Ore Processing / Beneficiation capacity including pelletization in Rajhara Hill of M/s SAIL, located at District Durg, Chhattisgarh-( Consultant-Project proponent)**

The proposal was earlier considered by the Expert Appraisal Committee during its meeting held on Oct 19-21, 2011, wherein the Committee had sought additional Information/clarifications on various related issues. Based on the same, the proposal was considered further. It was clarified by the project proponent that Pelletization is not part of the project. The Beneficiation Plant is in replacement of the existing plant. It was reported that the raw material will be fed from Rawghat mine for which, environmental clearance was obtained on 4.6.2009. Forestry clearance for 283.60 ha was obtained on 6.4.2004 vide letter no. F.No. 8- 57/2003- FC dt 6.4.2004. The Oxidation pond is divided into two components. Capacity of the pond is 450 m<sup>3</sup> and total discharge rate is about 250 m<sup>3</sup>/day which is used for plantation in the area. Greenbelt area will 33 ha. AAQ data for Dec 2011 was collected and found to be within limits. The proposed new tailings pond is 24.00 ha and will be lined with clay. Rajhara Hills mine lease fell due for renewal on 1.6.2003, but operated without a fresh prior environmental clearance, thereby violating E(P) Act,1986. The Committee observed some deficiencies in baseline data on water quality, land requirement, source of lining material, budget etc.

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

- (i) Land requirement shall be given correctly including all inside and outside activities.
- (ii) Raw data (time series) for Manganese in ground water shall be provided.
- (iii) Source of Clay to be used in lining of Tailings Pond may be indicated.
- (iv) Breakup of financial allocation of pollution control measures should be furnished.
- (v) Details of project cost, EMP cost (recurring as well as capital) may be given.

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

**2.3 Proposed Vikram Cement Limestone Mine(ML area: 564.106 ha) of M/s Ultra Tech Cement Ltd., Village Nayagaon, Kesharpura, Damodarpura, Khor & Kanka, Tehsil Jawad, District Neemuch, M.P. (Consultant: J.M.Environment Pvt Ltd,Gurgaon)**

The proposal was considered by the Committee and the proponent made a presentation on the same. The proposal is for opening of a new mine for production of 2 MTPA of Limestone for the captive use in their Cement plant. Mine lease area is 564.106 ha. No forestland is involved. No National Park / Sanctuary / Wildlife Corridors are reported within 10 km of the mine lease. TOR for this project were prescribed on 24.03.2010. Public hearing has been held on 1.3.2012. Mine working will be opencast mechanised. Life of the mine is reported 29 years. Water requirement is estimated as 143 kld, which will be obtained from existing mine sump water (Mine-I) and proposed mine sump after five years. Drinking water will be sourced from bore wells. Ground water table is at 458 mRL to 455 m RL in post monsoon and 433m RL to 423m RL during pre-monsoon season. Ultimate working depth will be 421m RL(52m bgl) .Mine will intersect ground water table after 10 years of working. Total OB waste generation at the conceptual stage will be 9.19 Million tonnes. OB dump area is 6.00ha and backfilling is proposed after 7<sup>th</sup> year. Area under greenbelt/plantation will be 107.96 ha which will include 33.82 ha un-worked area.

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

- (i) All project documents shall be brought in conformity with each other in respect of their contents and data.
- (ii) Reasons for opposition to the proposed project during the public hearing by the local population with details shall be submitted.
- (iii) Details of agricultural land and grazing land shall be given.
- (iv) Isopleth details shall be furnished.
- (v) Data in respect of Arsenic in ground water shall be rechecked and furnished.
- (vi) Water source shall be confirmed and copy of necessary permission from competent authority for drawing ground water shall be furnished.
- (vii) The proponent may explore the possibility of avoiding acquisition of land not required for the mining project and report the outcome.
- (viii) Radius of influence with quantity of discharge of water be given.

- (ix) Correct Coordinates of the project shall be furnished.
- (x) R&R details in respect PAPs shall be given.
- (xi) Ownership details of M/s UltraTech Cement Limited in chronological order with supporting documents shall be provided.
- (xii) At least one AAQ monitoring station shall be in d/w direction within 500m distance from mine lease boundary. Measured data for at least a month may be furnished.
- (xiii) Likewise the AAQ monitoring stations should represent fully the Study area of the project i.e upto 10 km radius from lease boundary. The results of the extended survey for at least a month, shall be furnished.

It was decided that the proponent will submit the response / information on the above-mentioned points and simultaneously circulate the same to the Members of the EAC and thereafter the proposal will be considered by the EAC during its meeting to be held in August, 2012.

**2.4 Limestone Mining Project of M/s Siddhi Vinayak Cement Pvt. Ltd. Located at village Digrana, Tehsil Jaitaran, District Pali, Rajasthan ( Consultant J.M.Environment Pvt Ltd,Gurgaon)**

The proposal was considered by the Committee and the proponent made a presentation on the same. The proposal is for renewal of mine lease which fell due on 20.4.2011 and enhancement of production of limestone (Minor Mineral) from 14,631 TPA to 15,00,000 TPA. Mine is closed since 2009. TOR for this project were prescribed on 30<sup>th</sup> July, 2010. Public hearing has been held on 28.11.2011. Mine lease area is 100 ha. No forestland and Gochar land is involved. The project area does not fall under the 'Aravalli Hills' as per letter no. KHA/SOJAT/ CC-11/ML/377/90/9/2182 Dt: 10.12.2009 of Deptt of Mines and Geology, Rajasthan addressed to the project proponent. A letter dated 4.3.2010 from Regional Officer Rajasthan SPCB addressed to the project proponent states that the said village, where the mine is located, is approximately 130 Kms from the Pali City Industrial Area. No National Park /Sanctuary / Wildlife Corridors are reported within 10 km of the mine lease. Mine working will be opencast semi-mechanised with drilling and blasting. Life of the mine is 18 years. Water requirement is 40 kld, which will be obtained from nearby villages by tankers. The baseline AAQ data in the study area was shown to be within permissible limit. At the end of the mine life, an area of 19.92 ha will be covered under greenbelt/plantation and an area of 80.08 ha will be converted into water reservoir. The groundwater table varies between 240 mRL

– 230 mRL. It is estimated that 27.11 lakh m<sup>3</sup> of waste will be generated at the conceptual stage. Backfilling is proposed, which will start at the end of the 4<sup>th</sup> year. There will be no external OB dump at the end of the mine life. The issues raised during public hearing were also considered and discussed during the meeting, which inter-alia included air pollution, improvement of road, employment, rain water harvesting, socio economic development etc. It was reported that there is no court case pending against the project.

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

## **2.5 Godadih Limestone Mines of M/s Jindal Steel and Power, located at District Bilaspur, Chhattisgarh ( Consultant: Project Proponent)**

The proposal was last considered by the Expert Appraisal Committee during its meeting held on December 22-23, 2011 wherein the Committee had sought additional information/clarifications on various related issues. Based on the additional information/clarifications submitted by the proponent, the proposal was considered further. Water requirement will be 110 KLD and will be sourced from bore wells for which permission is obtained from CGWA on 9.4.2012. Mine plan was approved by IBM on 19.5.2010. Out of total grazing land area of 22 ha in Godadih village, 6.59 ha is proposed under this mining project. To meet the feed requirement for livestock, additional grazing land outside ML area is being identified for proper fodder cultivation and irrigation support for high yield feed product. 24.414 ha of forestland is involved in the project for which stage-I forest clearance is yet to be granted. There are two ponds, one near Soradih village which falls within ML area and this pond will be left undisturbed throughout mine life. The 2<sup>nd</sup> pond is outside the ML area. local road passing through ML area at northern side will be diverted at 5<sup>th</sup> year of mining and the second road at southern side will not be diverted and power line will be diverted at 1<sup>st</sup> year of mining. Land losers will be 161 and landless agricultural labours will be compensated as per Model R&R Policy of Chhattisgarh, 2007 and its amendments. The nearest hutment/habitation is at 45 m and farthest at 140m. There is no intent to draw water from GW5 as its water quality is bad and the villagers also complained about the same. The baseline AAQ data for the summer season of 2012 was carried out and presented, which showed the levels to be within permissible limits. A wildlife conservation plan prepared and approved by PCCF & CWLW, Raipur was submitted and

presented . The plan was found to be satisfactory. The other issues raised by the Committee were also discussed and taken note of.

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

- a) Soon after commencement of blasting operations in the mine, studies may be undertaken to set out the pattern of Controlled blasting (Muffled blasting where needed), to be practiced when the mining operations approach sensitive areas like the village.
- b) A 15 m wide greenbelt on Soradih village side and use of rock breaker from the nearby habitation up to 75 m inward to mining area complying with DGMS guidelines shall be done.
- c) The water supply to the affected population/users should be ensured.
- d) The wildlife conservation plan for schedule –I animals should be in place for implementation before start of mining activity.
- e) Ministry may issue EC after stage-I FC clearance for forest land diversion is granted and copy submitted to MOEF as per the OM dt . 9.9.2011.

## **2.6 China Clay Mining Project of M/s Pentapati Lakshman Swamy located at village Hatasuku and Malikhubudi, District Koraput, Odisha ( Consultant: Project Proponent)**

The proposal was earlier considered by the Expert Appraisal Committee during its meeting held on April 16-18, 2012 wherein the Committee had deferred the consideration of the proposal at the request of the proponent as they were in the process of getting the mine plan approved for 15,000 TPA capacity in conformity with the EIA and public hearing documents as submitted by the project proponent vide his letter dt. 17.4.2012. It was decided that the proposal will be considered after the approved revised mine plan has been received.

The project proponent submitted modified mining plan, approved by IBM vide letter dt. 5.7.2012 and EIA/EMP report for 2,40,000 TPA which were placed before the committee for its consideration. The Committee considered the documents. The Committee noted that the EIA report which was submitted to the SPCB to get the public

hearing conducted for the project was of 3,220 TPA capacity and the Mine plan also of the same capacity. The Questionnaire submitted also mention 3,220 TPA capacity.

The TOR were prescribed for 15,000 TPA based on revised documents i.e Form-I as submitted by proponent vide his letter dt. 27.8.2010. The earlier documents submitted for prescribing TOR were for 3,220 TPA only.

In view of the above inconsistencies in the documents submitted by the project proponent, the Committee noted that the documents are not mutually consistent with each other and the public hearing is for 15,000 TPA, therefore, project proponent has to get the public hearing done based on draft EIA/EMP report for 2,40,000 TPA and then submit the proposal afresh as per procedure prescribed in the EIA Notification, 2006.

## **2.7 Iron and Manganese Ore Mining Project at Naibaga, District Keonjhar, Orissa by M/s Naibaga and Katupali Iron Ore Mines (Consultant: M/s 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 enhancement in production of iron Ore from 60,000 TPA to 6,00,000 TPA and manganese ore from 6,000 TPA to 25,000 TPA along with two crushing and two screening Units of 150 TPH capacity each. Mine lease area is reported as 47.219 ha which include 30.258 ha of forestland. Out of 30.258 ha, forest clearance for 26.89 ha has been obtained vide letter no. 5-ORC 029/20060FCE dt.19.9.2008 and balance 3.368 ha is yet to be obtained. The EIA/EMP report and the Public hearing are for 47.219 ha where as Mine plan and forestry clearance mentioned ML area as 48.117 ha. Earlier environmental clearance was also issued for 48.117 ha ML area. No National Park / Sanctuary is reported within 10 km of the mine lease. TOR for this project were prescribed on 11.9.2009 by the SEIAA, Odisha. The term of the SEIAA Odisha had expired on 17.11.2011 therefore the proposal for environmental clearance has been considered at MOEF. Public Hearing has been held on 2.11.2011. Life of the mine is 13 years at proposed rate of production. Mine working will be opencast semi-mechanised. It is estimated that at the conceptual stage 6,00,332 M<sup>3</sup> of OB will be generated. There would be 2 external OB dumps. The groundwater table is reported at 440m AMSL. Compliance status was not found to be satisfactory. It was submitted 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) All the project documents i.e EIA/EMP report, Public hearing, Mine Plan, forestry clearance, land use details etc should be in conformity with each other in terms of ML area and other project data.
- (ii) Copy of mine lease, if there is any surrender of mine lease area, then details of the same, and letter of acceptance by concerned authorities shall be provided.
- (iii) Details of stage-I forestry clearance for 3.368 ha of forest land along with copy of the same shall be provided.
- (iv) Details of compliance of environmental conditions/safeguards stipulated in the project environmental clearance shall be provided with supporting documents.
- (v) AAQ baseline data shall be rechecked and details furnished.
- (vi) Details of land use of mine lease area/ project area shall be rechecked and furnished.
- (vii) Copy of mine plan approval shall be furnished.
- (viii) Copy of water withdrawal permission from the competent authority shall be furnished.
- (ix) The set of documents submitted to the SEIAA, Odisha for obtaining TOR along with correspondence shall be provided.
- (x) An action plan with financial details and time schedule on the issues raised in the Public Hearing shall be submitted.

## **2.8 Colour Granite Deposit of M/s Tamil Nadu Minerals Ltd., village Kodarankulam, Taluk Ambasamudram, District Tirunelveli, Tamil Nadu ( Consultant: Creative Engineers & 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 opening of a new mine for production of 5000 M<sup>3</sup>/annum of colour granite. The mine lease area is 22.50 ha. No forestland is involved. Kalakad Wildlife Sanctuary is within buffer zone and Kalakad Tiger Reserve is reported at a distance of 1.2 km from the mine lease. Mine working will be opencast semi-mechanized involving drilling and blasting. Water requirement is 12 kld, which will be obtained through tankers. Backfilling is not proposed.

The distance of the Kalakad Tiger reserve is very crucial, being so close to the mine lease, if the distance is less than 1 km, then the proposed mining may not be allowed. Therefore, the distance of Tiger reserve as well as wildlife Sanctaury has to be authenticated by the Chief Wildlife Warden in the first instance.

The Committee decided that project proponent should, in the first instance, get the distance of Tiger Reserve and wildlife Sanctuary authenticated on a map by the State Chief Wildlife Warden/ Director of the Tiger Reserve as the case may be, and submit to the Ministry. The Committee deferred the consideration of the proposal in absence of the verified distance of the mine lease from Tiger Reserve closeby.

**2.9 Nadidih Iron & Manganese Mine ((121.405 ha) of M/s Feegrade & Co. (P) Ltd., Village Nadikasira & Rengalbeda, District Sundergarh, Orissa (Consultant: Ecomen laboratories 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.

2. The proposal is for enhancement of production of Iron Ore from 2.6 MTPA to 2.88 MTPA (ROM), Manganese production of 0.0036 MTPA and dry processing of 4.571 MTPA of low grade Iron Ore and installation of wet beneficiation plant of 1.142 MTPA . The earlier EC was granted on 20.2.2009. The mine lease area is 121.405 ha which include 89.87 ha of forestland. Out of 89.87 ha, 5.443 ha has been reported surrendered and for balance 39.309 ha, FC clearance was obtained on 16.3.2006 and for 45.118 ha stage-I FC clearance was obtained on 5.12.2011. Life of mine is 58 years. Mine working will be opencast mechanized for Iron Ore. For Manganese mining, it will

be Semi-mechanised. Transport will be through Dumpers. Wet beneficiation will be through filter press technology. Slime pond will be lined with HDPE lining, if required.

3. 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) Status of compliance of the earlier EC conditions along with supporting documents and photographs should be submitted.
- 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/topo sheet 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) 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.
- 13) 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.
- 14) 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 Committee.
- 15) 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 letter should also be furnished.
- 16) 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.
- 17) 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.
- 18) The vegetation in the RF / PF area with necessary details should be given.
- 19) 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.
- 20) Location of the proposed plant w.r.t. the source of raw material and mode of transportations of the ore from mines to the beneficiation plant, and outbound movement of the products should be provided.
- 21) Details of the technology and process involved in the project may be furnished.
- 22) Proposed treatment of runoff from the fines/waste dump should be provided. Estimation of the fines going into the washings and its management should

- be given. Details of the equipment, settling pond etc. should be provided.
- 23) Detailed material balance should be provided.
  - 24) Source of raw material and its transportation should be given. Steps proposed to be taken to protect the ore from getting air borne should be given.
  - 25) Management and disposal of tailings and closure plan of the tailing pond, if any, after the project is over, should be provided.
  - 26) Size distribution of the iron ore with percentage weight shall also be done to assess the source of fugitive dust emission of the ore feed to the plant.
  - 27) Measures to manage the under size / over-size waste from the feed ore shall be provided.
  - 28) Details of the solid waste to be generated and its management should be outlined. Adequacy of the tailing pond for the life of the beneficiation plant should be provided with supporting data and documentation. Design and capacity of tailing pond should be such as to guard against overflow from the tailing pond during heavy rainfall. The provision of lining, nature of lining with supporting permeability studies should also be provided.
  - 29) 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.
  - 30) 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, 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.
- 31) Impact of change of land use should be given.
  - 32) 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.
- 33) One season (non-monsoon) primary baseline data on ambient air quality (PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM<sub>10</sub> particularly for free silica should be given.
  - 34) 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.
  - 35) The water requirement for the project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should be indicated.
  - 36) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
  - 37) Details of water conservation measures proposed to be adopted in the project should be given.
  - 38) 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.
  - 39) 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.
- 40) Details of first order stream, if any, passing through lease area and modification/ diversion proposed, if any and the impact of the same on the hydrology should be brought out.
  - 41) Details of rainwater harvesting proposed, if any, in the project should be provided.
  - 42) 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.
  - 43) Quantity of solid waste generation should 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 dumps (number of dumps, their height, terraces etc. to be brought out).
  - 44) The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
  - 45) 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.
  - 46) Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
  - 47) 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.
  - 48) 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.
- 49) 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.
  - 50) 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.
  - 51) 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.
  - 52) 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.
  - 53) 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.
  - 54) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
  - 55) The cost of the project (capital and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.
4. Besides the above, the below mentioned general points should also be followed:-
- a) A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
  - b) All documents may be properly referenced with index and continuous page numbering.
  - c) Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
  - d) Where the documents provided are in a language other than English, an English translation should be provided.
  - e) The Questionnaire for environmental appraisal of mining projects as



prescribed by the Ministry shall also be filled and submitted.

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

5. 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.

6. The prescribed TORs would be valid for a period of two years for submission of the EIA/EMP reports, as per the O.M. No. J-11013/41/2006-IA.II(I) dated 22.3.2010.

7. 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 Iolite Mines (52.795 ha) of M/s Manikeswari Gems (P) Ltd., Village Bandoguda, District Kalahandi, 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.

2. The proposal is for opening of a new mine for production of Iolite ore of 36,237.5 M3/year (ROM), out of this finished product will be 3.59 TPA. Mine lease area is 52.795 ha, which include 49.343 ha of agriculture land. Karlapat Wildlife Sanctuary is reported at a distance of 7 Km in SE direction of the mine lease. Mine lease was granted was granted on 25.6. 2004 for 59.617 ha, an area of 6.822 ha of forest land was surrendered and balance area of 52.795 ha was granted for mining operation. The Mining activity has not been started for want of environmental clearance. Mine working will be opencast manual. Ultimate working depth will be 254mRL and water table is at 249m RL. Life of mine is 20 years. It is estimated that 7,20,732 m<sup>3</sup> of waste will be generated during mine life, which will be backfilled. Water requirement will be 3.5 KLD.

3. 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) Status of compliance of the earlier EC conditions along with supporting documents and photographs should be submitted.
- 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/topo sheet 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) 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.
- 13) 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.
- 14) 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 Committee.
- 15) 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 letter should also be furnished.
- 16) 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.

- 17) 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.
- 18) The vegetation in the RF / PF area with necessary details should be given.
- 19) 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.
- 20) Location of the proposed plant w.r.t. the source of raw material and mode of transportations of the ore from mines to the beneficiation plant, and outbound movement of the products should be provided.
- 21) Details of the technology and process involved in the project may be furnished.
- 22) Proposed treatment of runoff from the fines/waste dump should be provided. Estimation of the fines going into the washings and its management should be given. Details of the equipment, settling pond etc. should be provided.
- 23) Detailed material balance should be provided.
- 24) Source of raw material and its transportation should be given. Steps proposed to be taken to protect the ore from getting air borne should be given.
- 25) Management and disposal of tailings and closure plan of the tailing pond, if any, after the project is over, should be provided.
- 26) Size distribution of the iron ore with percentage weight shall also be done to assess the source of fugitive dust emission of the ore feed to the plant.
- 27) Measures to manage the under size / over-size waste from the feed ore shall be provided.
- 28) Details of the solid waste to be generated and its management should be outlined. Adequacy of the tailing pond for the life of the beneficiation plant should be provided with supporting data and documentation. Design and capacity of tailing pond should be such as to guard against overflow from the tailing pond during heavy rainfall. The provision of lining, nature of lining with supporting permeability studies should also be provided.
- 29) 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.
- 30) 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, 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.
  - 31) Impact of change of land use should be given.
  - 32) 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.
  - 33) One season (non-monsoon) primary baseline data on ambient air quality (PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM<sub>10</sub> particularly for free silica should be given.
  - 34) 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.

- 35) The water requirement for the project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should be indicated.
- 36) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
- 37) Details of water conservation measures proposed to be adopted in the project should be given.
- 38) 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.
- 39) 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.
- 40) Details of first order stream, if any, passing through lease area and modification/ diversion proposed, if any and the impact of the same on the hydrology should be brought out.
- 41) Details of rainwater harvesting proposed, if any, in the project should be provided.
- 42) 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.
- 43) Quantity of solid waste generation should 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 dumps (number of dumps, their height, terraces etc. to be brought out).
- 44) The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
- 45) 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.
- 46) Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
  - 47) 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.
  - 48) 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.
  - 49) 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.
  - 50) 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.
  - 51) 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.
  - 52) 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.
  - 53) 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.
  - 54) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.

55) The cost of the project (capital and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.

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

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

5. 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.

6. The prescribed TORs would be valid for a period of two years for submission of the EIA/EMP reports, as per the O.M. No. J-11013/41/2006-IA.II(I) dated 22.3.2010.



7. 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.

**2.11 Iolite Mines (14.394 ha) of M/s Manikeswari Gems (P) Ltd., Village Kutingpadar, District Kalahandi, 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.

2. The proposal is for opening of a new mine for production production of Iolite ore of 55611 M3/year (ROM), out of this finished product will be 6.256 TPA. Mine lease area is 14.394 ha, which include 9.682 ha of agriculture land. Karlapat Wildlife Sanctuary is reported at a distance of 2.5 Km in SE direction of the mine lease. Mine lease was granted was granted on 12.1.2005. The Mining activity started on 17.1.2005 and mine was closed on 19.3.2010 due to requirement of environmental clearance. The mine was in operation without environmental clearance therefore it is case of violation case. Mine working will be opencast semi-mechanized. Ultimate working depth will be 254mRL and water table is at 249m RL. Life of mine is 20 years. Water requirement will be 3.5 KLD.

3. 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) Status of compliance of the earlier EC conditions along with supporting documents and photographs should be submitted.
- 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/topo sheet 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) 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.
  - 13) 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.
  - 14) 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 Committee.
- 15) 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 letter should also be furnished.
  - 16) 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.
  - 17) 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.
  - 18) The vegetation in the RF / PF area with necessary details should be given.
  - 19) 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.
  - 20) Location of the proposed plant w.r.t. the source of raw material and mode of transportations of the ore from mines to the beneficiation plant, and outbound movement of the products should be provided.
  - 21) Details of the technology and process involved in the project may be furnished.
  - 22) Proposed treatment of runoff from the fines/waste dump should be provided. Estimation of the fines going into the washings and its management should be given. Details of the equipment, settling pond etc. should be provided.
  - 23) Detailed material balance should be provided.
  - 24) Source of raw material and its transportation should be given. Steps proposed to be taken to protect the ore from getting air borne should be given.
  - 25) Management and disposal of tailings and closure plan of the tailing pond, if any, after the project is over, should be provided.
  - 26) Size distribution of the iron ore with percentage weight shall also be done to assess the source of fugitive dust emission of the ore feed to the plant.
  - 27) Measures to manage the under size / over-size waste from the feed ore shall be provided.
  - 28) Details of the solid waste to be generated and its management should be

- outlined. Adequacy of the tailing pond for the life of the beneficiation plant should be provided with supporting data and documentation. Design and capacity of tailing pond should be such as to guard against overflow from the tailing pond during heavy rainfall. The provision of lining, nature of lining with supporting permeability studies should also be provided.
- 29) 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.
  - 30) 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, 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.
  - 31) Impact of change of land use should be given.
  - 32) 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.
  - 33) One season (non-monsoon) primary baseline data on ambient air quality (PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one

- monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM<sub>10</sub> particularly for free silica should be given.
- 34) 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.
  - 35) The water requirement for the project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should be indicated.
  - 36) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
  - 37) Details of water conservation measures proposed to be adopted in the project should be given.
  - 38) 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.
  - 39) 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.
  - 40) Details of first order stream, if any, passing through lease area and modification/ diversion proposed, if any and the impact of the same on the hydrology should be brought out.
  - 41) Details of rainwater harvesting proposed, if any, in the project should be provided.
  - 42) 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.
  - 43) Quantity of solid waste generation should 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 dumps (number of dumps, their height, terraces etc. to be brought out).
- 44) The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
  - 45) 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.
  - 46) Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
  - 47) 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.
  - 48) 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.
  - 49) 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.
  - 50) 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.
  - 51) 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.
- 52) 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.
  - 53) 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.
  - 54) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
  - 55) The cost of the project (capital and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.
4. Besides the above, the below mentioned general points should also be followed:-
- a) A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
  - b) All documents may be properly referenced with index and continuous page numbering.
  - c) Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
  - d) Where the documents provided are in a language other than English, an English translation should be provided.
  - e) The Questionnaire for environmental appraisal of mining projects as prescribed by the Ministry shall also be filled and submitted.
  - f) Approved mine plan along with copy of the approval letter for the proposed capacity should also be submitted.
  - g) While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4<sup>th</sup> August, 2009, which are available on the website of this Ministry should also be followed.
  - h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the F.R for securing the TOR) should be brought to the attention of MoEF with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.

5. 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.
6. The prescribed TORs would be valid for a period of two years for submission of the EIA/EMP reports, as per the O.M. No. J-11013/41/2006-IA.II(I) dated 22.3.2010.
7. 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 China clay & Soapstone Mine of M/s Mahadev Mining Works, near village Nathun, Tehsil Jahajpur & District Bhilwara, Rajasthan ( Consultant: Project Proponent)**

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.

2. The proposal is for renewal of mine lease which will fall due in August, 2012 for enhancement of production 61,000 TPA of China Clay and 5000 TPA of Soapstone. The mine working will be opencast semi- mechanised involving drilling and blasting. Mine lease area is 67.875 ha. No forestland is involved. No National Park / Sanctuary is reported within 10 km of the mine lease. Life of the mine is 8 years. Ultimate working depth will be 326 m AMSL. Groundwater table is at 317m AMSL. Mine working will not intersect groundwater table. Backfilling is proposed. Water requirement will be 9 KLD and will be met from mine sump and from nearby village. Waste generation will be 4,12,886 M3.
3. 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
5. 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 preoperational, 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<sup>ble</sup> 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<sup>ble</sup> 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, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction.
28. The mineralogical composition of PM10 particularly for free silica should be given.

29. 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.
30. 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.
31. Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
32. Details of water conservation measures proposed to be adopted in the project should be given.
33. 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.
34. 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.
35. 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.
36. Details of rainwater harvesting proposed, if any, in the project should be provided.
37. 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.
38. 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).
39. The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
  40. Impact on local transport infrastructure due to the project should be indicated.
  41. 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.
  42. Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
  43. 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.
  44. 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.
  45. Occupational health impact of project should be anticipated and preventive measures initiated. Details in this regard should be provided. Details of preplacement medical examination and periodical medical examination schedules should be incorporated in the EMP.
  46. 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.
  47. 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.
  48. 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.

49. 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.
  50. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
  51. The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.
4. 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.

5. 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.
6. The prescribed TORs would be valid for a period of two years for submission of the EIA/EMP reports, as per the O.M. No. J-11013/41/2006-IA.II(I) dated 22.3.2010.
7. 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 Mining Project of Sand Stone of M/s Devendra Sharma, village Nangal, Tehsil Pahari, District Bharatpur, Rajasthan (ML No. 1/02)( Consultant: Project Proponent)**

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.

2. The proposal is for opening of new mine for production of 7,000 TPA of Silica sand. The mine working will be opencast semi- mechanised involving drilling and blasting. Mine lease area is 5.00 ha. No forestland is involved. No National Park / Sanctuary is reported within 10 km of the mine lease. The mine lease falls within 10 Km of interstate boundary of state of Rajasthan and Haryana. Life of the mine is 62 years. Ultimate working depth will be 290 m AMSL. Groundwater table is at 280-275m AMSL. Water requirement will be 4 KLD and will be met from mine sump and from nearby village. Waste generation will be 1,08,000 M3.
3. 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
4. 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. Issues relating to mine safety based on subsidence study should be detailed. The proposed safeguard measure in this regard should also be provided.
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 preoperational, 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<sup>ble</sup> Supreme Court of India in the matter of T.N. Godavarman Vs. Union of India. In the event of any claim by the project proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
16. Status of forestry clearance for the broken up area and virgin forestland involved in the project including deposition of net present value (NPV) and compensatory afforestation (CA). A copy of the forestry clearance should also be furnished.
17. Implementation of status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
18. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly detailed mitigative measures required should be worked out with cost implications and submitted.
19. The vegetation in the RF / PF area with necessary details should be given.
20. A study shall be got done to ascertain the impact of the mining project on wildlife of the area including on the elephant population and details furnished.
21. A confirmation may be adduced, duly authenticated by the competent authority in the State Government to the effect whether the project falls in Aravalli and whether it is covered by the order of the Hon<sup>ble</sup> Supreme Court dated 8.4.2005 in the contempt petition (c) 412/2004 in writ petition 202 of 1995 in the matter of Godavarman vs Union of India.
22. Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves (existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated supported by a location map duly authenticated by Chief Wildlife Warden. Necessary

clearance, if any, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above should be obtained from the State Wildlife Department/Chief Wildlife Warden under the Wildlife (Protection) Act, 1972 and copy furnished.

23. A detailed biological study for the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, duly authenticated, separately for core and buffer zone should be furnished based on primary field survey clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
24. Impact, if any, of change of land use should be given.
25. 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.
26. One season (non-monsoon) primary baseline data on ambient air quality (PM10, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction.
27. 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.
40. 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.
41. Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
42. 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.
43. 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.
44. Occupational health impact of project should be anticipated and preventive measures initiated. Details in this regard should be provided. Details of preplacement medical examination and periodical medical examination schedules should be incorporated in the EMP.
45. 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.
46. 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.
47. 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.
48. 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.

49. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
50. The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.

4. 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.

5. 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.

6. The prescribed TORs would be valid for a period of two years for submission of the EIA/EMP reports, as per the O.M. No. J-11013/41/2006-IA.II(I) dated 22.3.2010.

7. 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 Limestone Mining (Minor Mineral) of M/s Chemical Limes Mundwa Pvt. Ltd., village Inana Rupasar & Bhadana, P.O. Mundwa, Tehsil & District Nagaur, Rajasthan.**

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

**2.14A Belkundi Iron and Manganese Ore Mine of M/s OMDC Ltd located at District Keonjhar, Odisha.**

The proposal was earlier considered by the Expert Appraisal Committee during its meeting held on Jan 24,2012 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 by the project proponent that there is no proposal to expand the township area as part of this project. There will be six OB dumps during conceptual period of mine which will be stabilized. Lean season water flow in Karo river is 161778 cum/day. 30 M3/day will be sourced from river Karo and balance requirement of 170 m3/day will be sourced from water harvesting pond and underground water source. Three Rain water harvesting ponds have been constructed in the project area. Baseline AAQ data has been collected for one season (March,12- May,12) and found to be satisfactory. The predicted increase in SPM level will be 9.63 Micrgram within one Km. Correct coordinates of the project were also provided. It was submitted that as per DFO, Keonjhar, Odisha, there was no proposal for Keonjhar Elephant reserve. It was stated by the project proponent that the 'Wildlife Conservation Plan' will take care of all the issues of biological environment.

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

- (i) Stage-I forestry clearance for the forest land involved in the project area shall be submitted.
- (ii) A letter from Chief Wildlife warden of the State as to whether mine lease forms part of the Keonjhar Elephant Reserve shall be submitted.

**2.15 Malanjkhanda Copper Ore Project of M/s Hindustan Copper Ltd., village Malanjkhanda, District Balaghat, M.P. (Consultant: SENES Consultant India Pvt Ltd ,NOIDA).**

The proposal is for renewal of mine lease which will fall due in August, 2013 and enhancement of production of copper ore from 2.0 million TPA to 5.0 million TPA with increase in lease area from 479.9 ha to 728.4 ha along with change in technology from opencast to underground mining and beneficiation plant with a total capacity of 5.0 million TPA by adding another Unit. The total project area is 2016.77 ha. The facility wise breakup of land is as - Mine I&II and existing beneficiation plant 479.9 ha; Mine-III 248.5 ha; tailing disposal facility 230.0 ha; housing complex, market, auditorium & club, oxidation ponds for sewage disposal and others - 1057.6 ha. 728.8 ha of forest land is involved. Application for renewal is reported to have been submitted. The Kanha National Park (core zone) is reported at a distance of 8.05 km from the project area and the buffer zone of the Kanha National Park is at a distance of 4.24 km from the project area. The total water requirement is 52,577 m<sup>3</sup>/day out of this 21,260 M<sup>3</sup>/day will be recycled and net water requirement will be 31,317 M<sup>3</sup>/day which will be sourced from Banjar river. Method of mining will be underground mechanized with mass blasting and filling. Life of U/g mine will be 30 years. There are two mine leases, one mine lease consisting of mine-I & II which was amalgamated in 1993 on first renewal and now falling due for 2<sup>nd</sup> renewal in 2013. Second mine is Mine -III of a ML area 248.5 ha which is yet to be executed. TOR for the project was prescribed on 29.3.2011. Public hearing was held on 6.1.2012. The mine is in operation since 1973 and obtained environmental clearance in 1992. Mining scheme is for 479.9 ha.

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

- (i) Status of forest clearance for forest land involved in the project with supporting documents along with a copy of the application submitted for FC clearance shall be provided.

- (ii) A complete and correct chronology of the mine with mine lease documents giving details of total land involved in the project for which environmental clearance is sought may be given, which should be in conformity with other documents such mine plan/scheme, EIA/EMP report, public hearing, Questionnaire for appraisal of mining projects etc.
- (iii) Details of Beneficiation plant with its all activities along with land requirements for the existing beneficiation plant and details of any additional Unit in this Plant or separate Unit may be submitted.
- (iv) AAQ data shall be given as per TOR condition for the same i.e upwind and downwind of the prominent wind direction.
- (v) Noise data shall be rechecked and details furnished.
- (vi) Status of permission from Standing Committee for National Board for Wildlife( NBWL) in respect of Kanha National Park/Tiger Reserve. Wildlife Corridorsbe indicated.
- (vii) Distance of the project boundary from Kanha National Park/Tiger Reserve on a map duly authenticated by Chief Wildlife Warden (CWLW)of the State shall be submitted.
- (viii) Copy of Public Hearing advertisement given in the two newspapers shall be provided.
- (ix) Coordinates of the project and all other facilities including mine lease area shall be given correctly.
- (x) Details of impact of mining on wildlife with comments of CWLW shall be given.
- (xi) Study area shall be from the project boundary. This should be given on a map with distance along with details.
- (xii) Compliance of condition of EC granted to the project on 29.10.1992 with supporting documents.

It was decided that the proponent will submit the response / information on the above-mentioned points and simultaneously circulate the same to the Members of the EAC and thereafter the proposal will be considered by the EAC during its meeting to be held in August, 2012.

**2.16 Proposed Salaiya Limestone Mining Project of M/s ADA Enterprises & Ventures Pvt. Ltd. Located at Tehsil-Maihar, District Satna, Madhya Pradesh (Consultant: GIS ENABLED ENVIRONMENT & NEO-GRAPHIC CENTRE(GreenC))**



The proposal was considered by the Committee and the proponent made a presentation on the same. The proposal is for opening of new mine lease for production of 2.0 MTPA. The mine shall be captive to their Cement plant located at 5 Km distance. TOR for this project were prescribed on 29.11.2010. Public hearing has been held on 9.9.2011. Mine lease area is 459.566 ha which includes 384.489 ha of Pvt land and 75.077 Govt land. No National Park /Sanctuary / Wildlife Corridors are reported within 10 km of the mine lease. Mine working will be opencast mechanised. Life of the mine is 25 years. Ultimate working depth will be 12m and ground water table is at 15-20m. Ground water table will not be intersected. Water requirement is 100m<sup>3</sup>/day which will be sourced from ground water. It is estimated that 0.216925 Million m<sup>3</sup> of waste will be generated. Backfilling is proposed from 3<sup>rd</sup> years onwards. The issues raised during public hearing were also considered and discussed during the meeting, which inter-alia included wildlife conservation, adoption of villages, employment to one person from each PAP, blasting impact on villages, maintenance of drainage of the mine area 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) Permission from competent authority in the State Govt for using grazing land ( 48.617 ha) shall be submitted.
- (ii) A copy of ground water withdrawal from the competent authority shall be given.
- (iii) Copy of approved mine plan from the competent authority shall be provided.
- (iv) An undertaking that all TORs have been included in the EIA report for the project shall be furnished.
- (v) Baseline AAQ data shall be rechecked and submitted as per TOR No.3(10).
- (vi) A confirmation from PCCF ( Forest), M.P. that no forest land is involved, if involved, then a copy of Stage-I forestry clearance for forest land involved shall be submitted.
- (vii) Biological study of core zone of the project shall be done and details provided.
- (viii) Details of R&R plan with financial details for all PAPs shall be submitted.
- (ix) Response on the issues raised during public hearing with financial details and time schedule shall be submitted.
- (x) Details of ground water quality shall be given.

- (xi) Details of evaporation of water shall be given.
- (xii) A fresh watershed map shall be submitted.
- (xiii) Details of runoff data be given correctly.
- (xiv) Transport mode of material from Salaiya mine to Sodhana mine shall be provided.
- (xv) The difference in land use details as given in mine plan and EIA report may be clarified.
- (xvi) Cumulative impact assessment of both mines shall be given.
- (xvii) Details of Cement plant ownership with supporting documents be provided.

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.

**2.17 Bandhi Ghorwai Limestone Mining Project of M/s Reliance Cementation Pvt. Ltd. located at Tehsil-Maihar, District Satna, Madhya Pradesh (Consultant: GIS ENABLED ENVIRONMENT & NEO-GRAPHIC CENTRE(GreenC))**

The proposal was considered by the Committee and the proponent made a presentation on the same. The proposal is for opening of new mine lease for production of 1.0 MTPA. The mine shall be captive to their Cement plant located at 5 Km distance. TOR for this project were prescribed on 21.12.2010. Public hearing has been held on 7.9.2011. Mine lease area is 129.802 ha which includes 113.702 ha of agricultural land and 75.077 Govt land. It is reported that no forest land is involved. No National Park /Sanctuary / Wildlife Corridors are reported within 10 km of the mine lease. Mine working will be opencast mechanized. Life of the mine is 16 years. Ultimate working depth will be 12m and ground water table is at 15-20m depth. Ground water table will not be intersected. Water requirement is 100m<sup>3</sup>/day which will be sourced from ground water. It is estimated that 0.2135 Million m<sup>3</sup> of waste will be generated. Backfilling is proposed from 3<sup>rd</sup> year onwards. The issues raised during public hearing were also considered and discussed during the meeting, which inter-alia included wildlife conservation, adoption of villages, employment to one person from each PAP, blasting impact on villages, maintenance of drainage of the mine area 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) Permission from competent authority in the State Govt for using grazing land ( 48.617 ha) shall be submitted.
- (ii) A copy of ground water withdrawal from the competent authority shall be given.
- (iii) Copy of approved mine plan from the competent authority shall be provided.
- (iv) An undertaking that all TORs have been included in the EIA report for the project shall be furnished.
- (v) Baseline AAQ data shall be rechecked and submitted as per TOR No.3(10).
- (vi) A confirmation from PCCF ( Forest), M.P. that no forest land is involved, if involved, then a copy of Stage-I forestry clearance for forest land involved shall be submitted.
- (vii) Biological study of core zone of the project shall be done and details provided.
- (viii) Details of R&R plan with financial details for all PAPs shall be submitted.
- (ix) Response on the issues raised during public hearing with financial details and time schedule shall be submitted.
- (x) Details of ground water quality shall be given.
- (xi) Details of evaporation of water shall be given.
- (xii) A fresh watershed map shall be submitted.
- (xiii) Details of runoff data be given correctly.
- (xiv) Transport mode of material from Salaiya mine to Sodhana mine shall be provided.
- (xv) The difference in land use details as given in mine plan and EIA report may be clarified.
- (xvi) Cumulative impact assessment of both mines shall be given.
- (xvii) Details of Cement plant ownership with supporting documents be provided.

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.

**2.18 Limestone Mining (ML No. 21/82) Project of M/s Lucky Minmat Ltd. (subsidiary of ACC Ltd.), village Rampur-Ballupura, District Sikar, Rajasthan (Consultant: Project proponent)**

The proposal was last considered by the Expert Appraisal Committee during its meeting held on October 19-21, 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 letter issued by Mine deptt of Govt of Rajasthan dt. 14.3.2012 stated that the mine does not fall under Aravalli Range. Blast vibration will be monitored and it will be ensured that permissible limit as prescribed by DGMS is followed. TDS value in the water are reported within permissible limit. Data on flora and fauna was also provided and was found satisfactory. The resultant incremental values are within limits which also include crusher impact. The mine lease area falls under overexploited zone. Maximum water accumulation due to intersection of ground water table and rain water will be 475 m<sup>3</sup>/day and a small quantity will be used. Distance of the pit from river Kasawanti will be 404 m. There will be six dumps and the nearest dump will be 212m from the river. The nala passing through the mine lease will be diverted to be outside the mine lease area. A letter from the Gram Panchayat of Ballupura has given a conditional permission to the company for use of grazing land for afforestation purpose only and ownership will remain with the Panchayat. Other points made were also considered by the Committee.

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

- (i) Ballupura School shall be shifted outside the mine lease prior to start of work.

**2.19 Gogi Uranium Project of M/s Uranium Corporation of India Ltd., District Yadgir, Karnataka ( Consultant: MECON LIMITED)**

The proposal was last considered by the Expert Appraisal Committee during its meeting held on November 28-30, 2011 wherein the Committee had sought additional information/clarifications on various related issues. Based on the additional information/clarifications submitted by the proponent, the proposal was considered further. It was submitted that the Ore processing plant site adjacent to tailing pond

was shifted on the advice of AERB selection committee and Consent for setting up from AERB has been obtained. The project area will now be 39.133 ha for mine lease and 102.234 ha for ore processing plant, the increase in land requirement was due to having independent approach for process plant, exclusive provisions for road, water, drainage, power & security and maintaining buffer zone between plant and tailing pond as per AERB guidelines. Subsidence study report suggests that any damage to the surface structure there is unlikely. Township area will be 9000 m<sup>2</sup>. The public Hearing was chaired by the Assistant Commissioner on behalf of the Deputy Commissioner, Yadgir. No forest land is reportedly involved in the project. To mitigate the high level of PM<sub>10</sub>, certain measures have been proposed by the project proponent. One month data of baseline AAQ was also done and data furnished. The points raised in the representation received by Karnataka State Pollution Control Board were also responded by the PP before the committee and other issues were also discussed in detail.

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

- (i) A 30 m wide greenbelt all around the processing plant be developed in the first 3 years.
- (ii) A copy of compensation paid /to be paid to land losers should be submitted to the MOEF as soon as it is finalised.
- (iii) Monitoring of radiation part by Health Physics Unit of BARC shall be done regularly including air, water and biota.

**2.20 Proposed Project of Chromite Underground Mine of M/s Balasore Alloys Ltd., Village Kaliapani, Tehsil Sukinda, District Jajpur, Orissa (35.6 ha) (Consultant: J.M.EnviroNet Pvt Ltd,Gurgaon)**

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

The proposal is for enhancement in production from 0.03 MTPA to 0.04 MTPA and change in technology from opencast to underground. The mine lease area is 35.60 ha. Total ML area is forestland. Forestry clearance is reported to have been obtained on 26.6.2009. Earlier EC was granted on 17.4.2008. The mine lease is neither executed nor

LOI has been issued by the State Govt so far, therefore, the Committee deferred consideration of the project till the mine lease is either executed or LOI is issued to the project proponent .

**2.21 Proposed Project of Chromite Underground Mine of M/s Balasore Alloys Ltd., Village Kaliapani, Tehsil Sukinda, District Jajpur, Orissa (64.463 ha) (TOR)**

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.

2. The proposal is for enhancement in production from 0.42 MTPA to 0.60 MTPA and change in technology from opencast to underground. The mine lease area is 64.463 ha. No forestland is involved. Earlier EC was granted on 3.7.2007. Mine working will be underground and mechanized. Life of mine is 29 years. Ground water table has been intersected.

3. 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) A detailed note on technology changes should be given in the EIA report.

- 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 provided.
- 15) A Certificate from the Competent Authority in the State Forest Department should be furnished 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) should be indicated. 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.
  - 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 should be given. Details in this regard 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 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 of change of land use should be given.
  - 24) R&R plan/compensation details for the project affected people should be furnished. While preparing the R&R plan, the National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs / STs and other



weaker sections, need based sample survey, family-wise, should be undertaken to assess their requirement and action programmes prepared accordingly integrating the sectoral programme of line departments of the State Government.

- 25) One season (non-monsoon) primary baseline data on ambient air quality (PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be justified. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM<sub>10</sub> particularly for chrome and 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) Details of waste management from the beneficiation plant should be discussed in detail. Adequacy of the tailing disposal area for the life of the plant should be shown.
- 28) Details of the slime treatment and their management should be furnished. The safeguard measures for confinement of tailings and slimes should also be given.
- 29) Proposed treatment of run off from the slimes should be given.
- 30) Estimation of the chrome going into the washings and its management should be given.
- 31) Details of the equipment, settling pond etc. should be given.
- 32) Detailed material balance should be provided.
- 33) Source of raw material and its transportation should be given. Steps proposed to be taken to protect the ore from getting air borne should be given.
- 34) Management and disposal of tailings and closure plan of the tailing pond after the project is over should be given.
- 35) 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.
- 36) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
  - 37) Details of water conservation measures proposed to be adopted in the project should be given.
  - 38) Impact of the project on the water quality both surface and ground should be assessed and necessary safeguard measures, if any required should be provided.
  - 39) Leachate study should be carried out and results furnished.
  - 40) Chromite content in water in each stream, the total water received, treated and discharged should be given separately.
  - 41) Water budget including run of water from the mine lease area particularly in view of the chromite content in water should be drawn and furnished.
  - 42) Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed hydro geological study should be undertaken and report furnished. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.
  - 43) Details of first order stream, if any passing through lease area and modification/ diversion proposed, if any and the impact of the same on the hydrology should be brought out.
  - 44) Details of rainwater harvesting proposed, if any, in the project should be provided.
  - 45) Information on site elevation, working depth, groundwater table etc. should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
  - 46) Issues relating to mine safety based on subsidence study dumps stability should be detailed. The proposed safeguard measure in this regard should also be provided.
  - 47) Risk assessment should also be carried out which may address the issues relating to inundation of mine and disaster management plan to address any such situation arising.
  - 48) Quantity of solid waste generation to be estimated and details for its disposal and management should be provided. The quality, 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).
- 49) The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
  - 50) 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.
  - 51) Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
  - 52) 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.
  - 53) 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.
  - 54) 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.
  - 55) 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.
  - 56) 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.

- 57) 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.
  - 58) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
  - 59) The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.
4. Besides the above, the below mentioned general points should also be followed:-
- a) A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
  - b) All documents may be properly referenced with index and continuous page numbering.
  - c) Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
  - d) Where the documents provided are in a language other than English, an English translation should be provided.
  - e) The Questionnaire for environmental appraisal of mining projects as prescribed by the Ministry shall also be filled and submitted.
  - f) Approved mine plan along with copy of the approval letter for the proposed capacity should also be submitted.
  - g) While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4<sup>th</sup> August, 2009, which are available on the website of this Ministry should also be followed.
  - h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the F.R for securing the TOR) should be brought to the attention of MoEF with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.
5. 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.

6. The prescribed TORs would be valid for a period of two years for submission of the EIA/EMP reports, as per the O.M. No. J-11013/41/2006-IA.II(I) dated 22.3.2010.

7. 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.

**2.22 Nadidih Iron & Manganese Mine of M/s Bonai Industrial Co. Ltd., Village Nadikashira & Rengalbera, District Sundergarh, Orissa (73.855 ha) (Consultant: Ecomen laboratories 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.

2. The proposal is for enhancement of production of Iron Ore from 2.0 MTPA to 4.30 MTPA (ROM), dry screening and crushing of 1.00 MTPA of low grade Iron Ore and installation of wet beneficiation plant of 1.00 MTPA and renewal of lease which fell due on 10.12.2007 and the project proponent has applied for renewal. The earlier EC was granted on 18.2.2009 for 2.00 MTPA. The mine lease area is 73.855 ha which include 67.637 ha of forestland. FC clearance(Stage-II) has been obtained on 9.2.2011 for 65.237 ha and for 2.4 ha balance forest land is yet to be obtained. Life of mine is 8 years. Mine working will be opencast mechanized. Transport will be through Dumpers. Wet beneficiation will be through filter press technolgy. Additional Water requirement will be 789 m3/day.

3. 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) Status of compliance of the earlier EC conditions along with supporting

- documents and photographs should be submitted.
- 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/topo sheet 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) 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.
  - 13) 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.
  - 14) 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 Committee.
- 15) 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.
  - 16) 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.
  - 17) 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.
  - 18) The vegetation in the RF / PF area with necessary details should be given.
  - 19) 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.
  - 20) Location of the proposed plant w.r.t. the source of raw material and mode of transportations of the ore from mines to the beneficiation plant, and outbound movement of the products should be provided.
  - 21) Details of the technology and process involved in the project may be furnished.
  - 22) Proposed treatment of runoff from the fines/waste dump should be provided.
  - 23) Estimation of the fines going into the washings and its management should be given.
  - 24) Details of the equipment, settling pond etc. should be provided.
  - 25) Detailed material balance should be provided.
  - 26) Source of raw material and its transportation should be given. Steps proposed to be taken to protect the ore from getting air borne should be given.
  - 27) Management and disposal of tailings and closure plan of the tailing pond, if any, after the project is over, should be provided.
  - 28) Size distribution of the iron ore with percentage weight shall also be done to

- assess the source of fugitive dust emission of the ore feed to the plant.
- 29) Measures to manage the under size / over-size waste from the feed ore shall be provided.
  - 30) Details of the solid waste to be generated and its management should be outlined. Adequacy of the tailing pond for the life of the beneficiation plant should be provided with supporting data and documentation. Design and capacity of tailing pond should be such as to guard against overflow from the tailing pond during heavy rainfall. The provision of lining, nature of lining with supporting permeability studies should also be provided.
  - 31) 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.
  - 32) 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.
  - 33) Impact of change of land use should be given.
  - 34) 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.
  - 35) One season (non-monsoon) primary baseline data on ambient air quality (PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA



- and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM<sub>10</sub> particularly for free silica should be given.
- 36) 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.
  - 37) 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.
  - 38) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
  - 39) Details of water conservation measures proposed to be adopted in the project should be given.
  - 40) 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.
  - 41) 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.
  - 42) Details of first order stream, if any passing through lease area and modification/ diversion proposed, if any and the impact of the same on the hydrology should be brought out.
  - 43) Details of rainwater harvesting proposed, if any, in the project should be provided.

- 44) 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.
- 45) 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).
- 46) The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
- 47) 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.
- 48) Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
- 49) 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.
- 50) 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.
- 51) 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.
- 52) 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.

- 53) 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.
  - 54) 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.
  - 55) 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.
  - 56) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
  - 57) The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.
4. Besides the above, the below mentioned general points should also be followed:-
- a) A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
  - b) All documents may be properly referenced with index and continuous page numbering.
  - c) Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
  - d) Where the documents provided are in a language other than English, an English translation should be provided.
  - e) The Questionnaire for environmental appraisal of mining projects as prescribed by the Ministry shall also be filled and submitted.
  - f) Approved mine plan along with copy of the approval letter for the proposed capacity should also be submitted.
  - g) While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4<sup>th</sup> August, 2009, which are available on the website of this Ministry should also be followed.
  - h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the F.R for securing the TOR) should be brought to the attention of MoEF with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public

Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.

5. 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.
6. The prescribed TORs would be valid for a period of two years for submission of the EIA/EMP reports, as per the O.M. No. J-11013/41/2006-IA.II(I) dated 22.3.2010.
7. 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 River bed mining project of sand, bajri and stone (minor mineral) of Shri Harbhajan Singh, Village & P.O. Sandholi, Tehsil Nalagarh, District Solan, H.P. (Consultant: M/s Udaipur Min-Tech 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.

2. The proposal is for renewal of mine lease which fell due in April, 2012 and enhancement of production from 41568 TPA to 52950 TPA of limestone. It is a violation case as the mine has been operating without obtaining requisite prior environmental clearance. The mine is reported to be closed since Oct,2011. Mine lease area is 40.00 ha. Mine working will be opencast manual.
3. 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. A confirmation from the Forest Deptt that there is no forest land involved in the project area.
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.  
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 preoperational, 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.  
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<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM<sub>10</sub> particularly for free silica should be given.
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. The details of plantation already done should be given.
  31. Occupational health impact of project should be anticipated and preventive measures initiated. Details in this regard should be provided. Details of preplacement 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.
4. 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.

5. 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.
6. The prescribed TORs would be valid for a period of two years for submission of the EIA/EMP reports, as per the O.M. No. J-11013/41/2006-IA.II(I) dated 22.3.2010.
7. 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 Karigohi Bauxite & Laterite Mine of M/s Rajendra Kumar Agrawal, Village Karigohi, Tehsil Birsinghpur, District Satna, M.P. (8.094 ha) ( Consultant: Grass Roots Research & creation 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.

2. The proposal is for production 40,000 TPA of bauxite and laterite. Mine is located within 10 km interstate boundary of MP & UP. Mine lease area is 8.094 ha. Mine working will be opencast manual. Ultimate working depth will be 6 m bgl. Water requirement is 7 kld to be obtained from ground water source. Life of mine is 13 years. It is violation case as mine was in operation since 2004 and is reported to be closed since 14.11.2011. Mine lease was granted in 2.12.2002 for 30 years.
3. 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 preoperational, 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<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM<sub>10</sub> particularly for free silica should be given.
- 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 preplacement 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.
4. 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.

5. 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.

6. The prescribed TORs would be valid for a period of two years for submission of the EIA/EMP reports, as per the O.M. No. J-11013/41/2006-IA.II(I) dated 22.3.2010.

7. 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.

**2.25 Bunder Diamond Mine of M/s Rio Tinto Exploration India Pvt. Ltd.,  
District Chhatarpur, M.P. (954 ha)(Consultant: Project proponent)**

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.

2. The proposal is for opening of new mine for production 7.15 MTPA (ROM) of Kimberlite (diamond) ore. Mine lease area is 954.00 ha. Whole area is forest land. Forest clearance applied. No NP/WLS is reported within 10 km. Mine working will be opencast mechanised. Ultimate working depth will be 345m. Water requirement is 16050 M3/day to be obtained from constructing dams in the area. Life of mine is 11 years. It is violation case as mine was in operation since 2004 and is reported to be closed since 14.11.2011. Mine lease was granted in 2.12.2002 for 30 years.

3. 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) A copy of Forest Clearance for the forest land involved in the project shall be submitted.
- 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 preoperational, 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, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10 particularly for free silica should be given.
- 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 preplacement 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.
4. 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.

5. 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.

6. The prescribed TORs would be valid for a period of two years for submission of the EIA/EMP reports, as per the O.M. No. J-11013/41/2006-IA.II(I) dated 22.3.2010.

7. 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 Proposed Limestone Mine of M/s Ultra Tech Cement Ltd., (Rajashree Cement Works), Village Udgi, Kalkamba & Benkanhalli, Taluka Sedam, District Gulbarga, Karnataka**

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

**2.27 Proposed Limestone Mine & Clay Minerals (ML No. 2276) of M/s Ultra Tech Cement Ltd., (Rajashree Cement Works), Village Benkanhalli, Chittapur, Taluka Sedam, District Gulbarga, Karnataka.**

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

**2.28 Kala Pahad Dimensional Granite Stone of Sri Shashi Bhushan Singh, Village Kala Pahad, Tehsil Lalitpur, District Lalitpur, U.P. (TOR) (Consultant: Perfect Enviro Solutions 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.

2. The proposal is for renewal of mine lease which fell due in April, 2012 and production of 1980 m<sup>3</sup>/annum of Granite Dimensional stone. The mine is reported to be closed since April, 2012. Mine lease area is 4.8 ha. The mine is located within 10 km of interstate boundary of M.P.& U.P. Betwa River is at a distance of 1.57 Km. LOI has been issued.

3. 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. A confirmation from the Forest Deptt that there is no forest land involved in the project area.
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.

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 preoperational, 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.  
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, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10 particularly for free silica should be given.
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. The details of plantation already done should be given.
  31. Occupational health impact of project should be anticipated and preventive measures initiated. Details in this regard should be provided. Details of preplacement 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.
4. 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.

5. 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.

6. The prescribed TORs would be valid for a period of two years for submission of the EIA/EMP reports, as per the O.M. No. J-11013/41/2006-IA.II(I) dated 22.3.2010.

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

## **2.29 GKW Limestone Mine of M/s Lafarge India Pvt Ltd, Tehsil Nimbahera, District Chittorgarh, Rajasthan ( Consultant: J M Enviro Net 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.

2. The proposal is for opening of new mine for production 2.6 MTPA of limestone. The mine will be captive to the proposed cement plant. Mine lease area is 602.00 ha which include Govt barren land ( 331.07 ha) and private agricultural land ( 270.93 Ha). No forestland is involved. No National Park / Sanctuary is reported within 10 km of the mine lease. The mine working will be opencast mechanised involving drilling and blasting. Life of the mine is 33 years. Ultimate working depth will be 46m bgl for Block 'A' and 40 m bgl for Block 'B'. Groundwater table is at 25-30m bgl. Mine working will intersect groundwater table. Water requirement will be 82 KLD and will be met from mine sump and ground water. Waste generation at conceptual stage will be 2.03 M3. No backfilling is proposed.

3. 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

5. 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 preoperational, 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<sup>ble</sup> 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<sup>ble</sup> 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 (PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction.
28. The mineralogical composition of PM<sub>10</sub> particularly for free silica should be given.
29. 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.
30. 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.
31. Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
32. Details of water conservation measures proposed to be adopted in the project should be given.

33. 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.
34. 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.
35. 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.
36. Details of rainwater harvesting proposed, if any, in the project should be provided.
37. 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.
38. 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).
39. The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
40. Impact on local transport infrastructure due to the project should be indicated.
41. 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.



42. Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
  43. 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.
  44. 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.
  45. Occupational health impact of project should be anticipated and preventive measures initiated. Details in this regard should be provided. Details of preplacement medical examination and periodical medical examination schedules should be incorporated in the EMP.
  46. 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.
  47. 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.
  48. 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.
  49. 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.
  50. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
  51. The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.
4. 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 process again with the revised documentation.

5. 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.

6. The prescribed TORs would be valid for a period of two years for submission of the EIA/EMP reports, as per the O.M. No. J-11013/41/2006-IA.II(I) dated 22.3.2010.

7. 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.

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

The authorized person of the project proponent attended the meeting and informed the Committee that the Primary survey of flora and fauna is going on which will require some more time and therefore requested that the proposal may be considered in Oct, 2012 meeting. Further, the project proponent did not circulate the project documents/ additional information sought by the committee in its meeting held on March 19-21, 2012 for its consideration.

The committee agreed to the request of the proponent and asked to submit information to the MOEF after completing survey etc. the committee decided that after receipt of the information the project may be brought back to the Committee for its consideration.

### **2.31 Ajitaburu Manganese & Iron Ore Mines of M/s Devkabai Velji located at District West Singhbhum, Jharkhand (Consultant: Shiva Test House, Patna)**

The proposal was last considered by the Expert Appraisal Committee during its meeting held on May 25-27, 2011 wherein the Committee had observed that land for waste dumps is not available in the non mineralised zone; therefore consideration was deferred. Based on the additional information/clarifications submitted by the proponent, the proposal was considered further. The proponent has done borehole drilling and found that some area is available in non mineralised zone and accordingly, the Management modified their Mining Plan and other documents were also revised and submitted. Total waste generation till the conceptual period will be 956236 M<sup>3</sup>, no. of waste dumps will be 3. Total waste will be backfilled. Greenbelt area will be 2.11 ha..OB dump area will be 2.16 ha. Other issues were also discussed. Out of total ML area 46.82 ha which is forest land and FC clearance is for 31.846 ha and FC clearance for the balance forest area is yet to be obtained.

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

- (i) Ministry may issue EC after stage-I FC clearance for balance forest land diversion is granted and copy submitted to MOEF as per the OM dt . 9.9.2011.

**2.32 Itarbaljori Iron Ore Mine of M/s Chandra Prakash Sarda, Village Itarbaljori, Tehsil Noamundi, District West Singhbhum, Jharkhand ( Consultant: Project proponent)**

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.

2. The proposal was considered by the Committee in its meeting held in Oct 19-21, 2011. The proposal is for renewal of mine lease which fall due in July, 2003. It is a violation case as the mine had been in operation after it fell due for renewal. The proposal was submitted with mine lease area of 57.466 ha, which includes 24.767 ha of forestland. The proponent had not submitted the proposal for diversion of forestland. It was stated during the meeting that they have proposed to surrender the forestland. Further, the comments of SPCB were also not available at this stage as the proposal falls in identified severely polluted area. The Committee, therefore, requested the proponent to first surrender the forestland and submit the revised proposal thereafter.

Now the proponent has submitted a revised proposal after surrendering the forest area to the State Mining Officer, West Singhbhum vide application dt. 25.2.2012. Now the ML area remains 33.682 ha which include no forest land. No NP/WLS is reported within 10 Km from mine boundary. Production of iron ore will be 85,434 TPA (ROM).Life of mine is 10 years. Mine working will be opencast semi-mechanized. Total waste generation will be 10,16,775 M3. Backfilling will be done at the end of mine life.

3. 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) 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) Status of compliance of the earlier EC conditions along with supporting documents and photographs should be submitted.
- 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 Committee.
- 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 the proposed plant w.r.t. the source of raw material and mode of transportations of the ore from mines to the beneficiation plant, and outbound movement of the products should be provided.
- 22) Details of the technology and process involved in the project may be furnished.
- 23) Proposed treatment of runoff from the fines/waste dump should be provided.
- 24) Estimation of the fines going into the washings and its management should be given.
- 25) Details of the equipment, settling pond etc. should be provided.

- 26) Detailed material balance should be provided.
- 27) Source of raw material and its transportation should be given. Steps proposed to be taken to protect the ore from getting air borne should be given.
- 28) Management and disposal of tailings and closure plan of the tailing pond, if any, after the project is over, should be provided.
- 29) Size distribution of the iron ore with percentage weight shall also be done to assess the source of fugitive dust emission of the ore feed to the plant.
- 30) Measures to manage the under size / over-size waste from the feed ore shall be provided.
- 31) Details of the solid waste to be generated and its management should be outlined. Adequacy of the tailing pond for the life of the beneficiation plant should be provided with supporting data and documentation. Design and capacity of tailing pond should be such as to guard against overflow from the tailing pond during heavy rainfall. The provision of lining, nature of lining with supporting permeability studies should also be provided.
- 32) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves (existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated supported by a location map duly authenticated by Chief Wildlife Warden Necessary clearance, if any, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above should be obtained from the State Wildlife Department/ Chief Wildlife Warden under the Wildlife (Protection) Act, 1972 and copy furnished.
- 33) A detailed biological study for the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, duly authenticated, separately for core and buffer zone should be furnished based on primary field survey clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
- 34) Impact of change of land use should be given.
- 35) R&R plan / compensation details for the project affected people should be furnished. While preparing the R&R plan, the National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs / STs and

other weaker sections, need based sample survey, family-wise, should be undertaken to assess their requirement and action programmes prepared accordingly integrating the sectoral programme of line departments of the State Government.

- 36) One season (non-monsoon) primary baseline data on ambient air quality (PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM<sub>10</sub> particularly for free silica should be given.
- 37) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
- 38) The water requirement for the project, its availability and source to be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should be indicated.
- 39) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
- 40) Details of water conservation measures proposed to be adopted in the project should be given.
- 41) Impact of the project on the water quality both surface and groundwater should be assessed and necessary safeguard measures, if any required should be provided.
- 42) Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed hydro geological study should be undertaken and report furnished. Necessary permission from Central Ground Water Authority for working



- below ground water and for pumping of ground water should also be obtained and copy furnished.
- 43) Details of first order stream, if any passing through lease area and modification/ diversion proposed, if any and the impact of the same on the hydrology should be brought out.
  - 44) Details of rainwater harvesting proposed, if any, in the project should be provided.
  - 45) Information on site elevation, working depth, groundwater table etc. should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
  - 46) Quantity of solid waste generation to be estimated and details for its disposal and management should be provided. The quantity, volumes and methodology planned for removal and utilisation (preferably concurrently) of top soil should be indicated. Details of backfilling proposed, if any, should also be given. It may be clearly indicated that out of the total waste generated during the mine life, how much quantity would be backfilled and how much quantity would be disposed off in the form of external dump (number of dumps, their height, terraces etc. to be brought out).
  - 47) The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
  - 48) Impact on local transport infrastructure due to the project should be indicated. Projected increase in truck traffic as a result of the project in the present road network (including those outside the project area) should be worked out, indicating whether it is capable of handling the increased load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered.
  - 49) Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
  - 50) Conceptual post mining land use and Reclamation and Rehabilitation of mined out area (with plans and with adequate number of sections) should be given in the EIA report.
  - 51) Phase-wise plan of greenbelt development, plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given.

- 52) Occupational health impact of project should be anticipated and preventive measures initiated. Details in this regard should be provided. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP.
- 53) Public health implication of the project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocation.
- 54) Measures of socio economic significance and influence to the local community proposed to be provided by project proponent should be indicated. As far as possible, quantitative dimensions may be given with time frame for implementation.
- 55) Detailed environmental management plan to mitigate the environmental impacts which, should inter-alia also include the impact due to change of land use, due to loss of agricultural land and grazing land, if any, occupational health impacts besides other impacts of the projects.
- 56) Public hearing points raised and commitment of the project proponent on the same along with time bound action plan to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
- 57) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
- 58) The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.

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

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

capacity should also be submitted.

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

5. 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.

6. The prescribed TORs would be valid for a period of two years for submission of the EIA/EMP reports, as per the O.M. No. J-11013/41/2006-IA.II(I) dated 22.3.2010.

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

The proposal was last considered by the Expert Appraisal Committee during its meeting held on May 23-25,2012, wherein the Committee had observed that data shows high levels of RSPM levels, and therefore, the Committee had desired that the proponent should effectively implement the safeguard measures and show their effectiveness by actual monitored data and come back thereafter. Based on the additional information/clarifications submitted by the proponent, the proposal was considered further. A report of State SPCB was also received which was considered by

the Committee. As per the report, the level of pollution has come down. The PP has also taken mitigation measures which have resulted in lowering the levels of pollution. The PP has monitored the AAQ data in June & July, 2012, which confirm the low level of pollution. Other issues and their reply were also found satisfactory.

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

### **2.34 Karampada Iron Ore Mine of M/s Shah Bros., Village Chaibasa, West Singhbhum, Jharkhand ( Consultant: Project Proponent).**

The proposal was last considered by the Expert Appraisal Committee during its meeting held on March 19-21,2012 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 confirmed by the District Collector, West Singhbhum vide letter dt. 28.3.2012 that the rank of the officer who chaired the public hearing meeting was of Addl District Magistrate (ADM). All the conditions of NOC of SPCB are complied. The production from the mine will not exceed 0.1 MTPA. The compliance to the earlier EC was presented and the committee considered it satisfactory. Baseline AAQ data collected during March, 12 to May, 12 are within permissible limits. The enhancement in production from the mine has been proposed from 0.1 MTPA to 0.8 MTPA as per draft EIA report and the Public Hearing proceedings. The mine area is forest land and FC clearance is yet to be obtained. The project area is located in the Core area of Singhbhum Elephant reserve and Karampada Elephant corridor is about 0.2 to 0.3 km from the proposed mine lease. The flora and fauna in the study has been done for core and buffer zone separately. Need based survey details were also presented. R&R details of area acquired outside the mine lease area has been provided. The report from state PCB, Jharkhand was also received in respect of this project which was also considered by the Committee. The AAQ levels are within permissible limits.

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

- (i) Ministry may issue EC after stage-I FC clearance for forest land diversion is granted and copy submitted to MOEF as per the OM dt . 9.9.2011.

- (ii) Ministry may take action in respect of mine being located in core zone of Singhbhum Elephant reserve and very close to the Karampada Elephant Corridor.
- (iii) Production from the mine shall not exceed 0.8 MTPA(ROM) at any point of time.
- (iv) The wildlife conservation plan for schedule –I animals should be in place for implementation before start of mining activity.
- (vi) Sufficient distance shall be maintained from the Odisha- Jharkhand State border as per law in force.
- (vii) Karampada – Bhagaon road shall be made semi-pucca for control of pollution.

**2.35 Jaypee Gujarat Cement Plant of M/s Jaiprakash Associates Ltd., Village Vayor, Abdasa, District Kutchh, Gujarat.**

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

**2.36 Mining and Mineral Separation of Beach Sand Minerals (Ilmenite, Rutile, Zircon, Monazite, Sillimanite and Garnet) of Indian Rare Earths Ltd, village Manavalakurichi, Taluk Kalkulam, District Kanyakumari, Tamil Nadu .**

It was listed in the agenda inadvertently.

**2.37 Chirodih Bauxite Mine of M/s P.S. Garg, Village Chirodih, Thana-Bishunpur, District Gumla, Jharkhand (16.750 ha) ( Consultant : GRC India (P) 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.

2. The proposal was last considered by the EAC in its meeting held in November 28-30,2011. However, prescribing of TORs was deferred for want of requisite

information on land use of mine lease area. Mine lease area is 16.59 ha which include 7.97 ha of forest land. The forest land area has been surrendered by the project proponent to the State Forest dept. vide their application dt. 28.3.2012 which is yet to be accepted by the state forest dept. The proposal is for production 1,35,925 TPA of bauxite. Mine working will be opencast Mechanised. Water requirement is 3 kld to be obtained from surface water source. Life of mine is 7 years.

3. 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) Status of forest land surrender with supporting documents shall be submitted.
- 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 preoperational, 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 (PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant

downwind direction. The mineralogical composition of PM10 particularly for free silica should be given.

- 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 preplacement 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.
4. 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.
5. 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.

6. The prescribed TORs would be valid for a period of two years for submission of the EIA/EMP reports, as per the O.M. No. J-11013/41/2006-IA.II(I) dated 22.3.2010.

7. 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 Teherai Iron & Manganese Mine of M/s Bonai Industries Co. Ltd., village Teherai & Kanther Koira, Tehsil Bonai, Sundergarh, Orissa ( Consultant: Ecomen Laboratories 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.

2. The proposal is for enhancement of production of Iron Ore from 1.5 MTPA to 1.857 MTPA (ROM), dry screening and crushing of 0.639 MTPA (ROM) of low grade Iron Ore and installation of wet beneficiation plant of 0.540 MTPA (through put) and renewal of lease which fell due on 31.12.2001 and the project proponent has applied for renewal. The earlier EC was granted on 16.4.2008 for 1.50 MTPA. The mine lease area is 137.460 ha which include 108.512 ha of forestland. FC clearance (Stage-II) has been obtained on 12.10.2010 for 82.609 ha, 20.888 ha is proposed to be surrendered and forest clearance is yet to be obtained. Life of mine is 8 years. Mine working will be opencast mechanized. Transport will be through Dumpers. Wet beneficiation will be through filter press technology. Slime pond will be lined with HDPE. Water permission for 843 m<sup>3</sup>/day is reported to have been obtained and 83m<sup>3</sup>/day will be from ground water source and permission for the same is obtained. Balance requirement if any, will be sourced from rain water and from other sources.

3. 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) Status of compliance of the earlier EC conditions along with supporting documents and photographs should be submitted.
- 3) Chemical analysis of tailings and tailing water shall be done and results submitted.
- 4) Diesel particulate from vehicles shall be done and results submitted.
- 5) 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.
- 6) All corner coordinates of the mine lease area superimposed on High Resolution Imagery/toposheet should be provided.
- 7) 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.
- 8) 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.
- 9) 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.
- 10) 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.
- 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 Committee.
- 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) Location of the proposed plant w.r.t. the source of raw material and mode of transportations of the ore from mines to the beneficiation plant, and outbound movement of the products should be provided.
- 23) Details of the technology and process involved in the project may be furnished.
- 24) Proposed treatment of runoff from the fines/waste dump should be provided.

- 25) Estimation of the fines going into the washings and its management should be given.
- 26) Details of the equipment, settling pond etc. should be provided.
- 27) Detailed material balance should be provided.
- 28) Source of raw material and its transportation should be given. Steps proposed to be taken to protect the ore from getting air borne should be given.
- 29) Management and disposal of tailings and closure plan of the tailing pond, if any, after the project is over, should be provided.
- 30) Size distribution of the iron ore with percentage weight shall also be done to assess the source of fugitive dust emission of the ore feed to the plant.
- 31) Measures to manage the under size / over-size waste from the feed ore shall be provided.
- 32) Details of the solid waste to be generated and its management should be outlined. Adequacy of the tailing pond for the life of the beneficiation plant should be provided with supporting data and documentation. Design and capacity of tailing pond should be such as to guard against overflow from the tailing pond during heavy rainfall. The provision of lining, nature of lining with supporting permeability studies should also be provided.
- 33) 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.
- 34) 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.
- 35) Impact of change of land use should be given.

- 36) 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.
- 37) One season (non-monsoon) primary baseline data on ambient air quality (PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM<sub>10</sub> particularly for free silica should be given.
- 38) 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.
- 39) 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.
- 40) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
- 41) Details of water conservation measures proposed to be adopted in the project should be given.
- 42) 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.
- 43) 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.

- 44) Details of first order stream, if any passing through lease area and modification/ diversion proposed, if any and the impact of the same on the hydrology should be brought out.
- 45) Details of rainwater harvesting proposed, if any, in the project should be provided.
- 46) 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.
- 47) 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).
- 48) The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
- 49) 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.
- 50) Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
- 51) 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.
- 52) 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.

- 53) 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.
- 54) 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.
- 55) 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.
- 56) 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.
- 57) 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.
- 58) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
- 59) The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.

4. Besides the above, the below mentioned general points should also be followed:-
  - a) A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
  - b) All documents may be properly referenced with index and continuous page numbering.
  - c) Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
  - d) Where the documents provided are in a language other than English, an English translation should be provided.
  - e) The Questionnaire for environmental appraisal of mining projects as

prescribed by the Ministry shall also be filled and submitted.

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

5. 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.

6. The prescribed TORs would be valid for a period of two years for submission of the EIA/EMP reports, as per the O.M. No. J-11013/41/2006-IA.II(I) dated 22.3.2010.

7. 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 Captive Limestone Mining Project of M/s ACC Ltd., Village Gollapalli, Mylavaram Mandalam, District Kadapa (YSR), Andhra Pradesh (997.08 ha) (TOR)**

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.

2. The proposal is for opening of new mine for production of 7.00 million TPA of limestone. The mine will be captive to their Cement plant which is nearby. Mine lease area is 997.08 ha. No forestland is involved. No NP/WLS is reported within 10 km. Mine working will be opencast mechanized involving drilling and blasting. Life of mine is 50 years. Ultimate working depth will be 166msl. Ground water level is at 150 msl. Transportation will be by closed conveyor to the crusher and from crusher to cement plant by conveyor. Water requirement is estimated as 60 kld, which will be obtained from mine pit.

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

than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.

5. 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.

6. The prescribed TORs would be valid for a period of two years for submission of the EIA/EMP reports, as per the O.M. No. J-11013/41/2006-IA.II(I) dated 22.3.2010.

7. 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 Renewal of Captive Rawan Jhipan Limestone Mine of M/s Ultra Tech Cement Ltd. (Rawan Cement Works), village Rawan, Tehsil Simga, District Raipur, Chhattisgarh.**

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

**2.41 Iron Ore & Laterite Mining Project of M/s Sai Dharani Sponge Iron Pvt. Ltd., village Sirasanambedu, Mandal Pellakur, District SPSR Nellore, Andhra Pradesh ( Consultant: Pioneer Enviro Laboratories & Consultants 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.

2. The proposal is for enhancement of production of iron ore from 18,720 TPA to 1,18,285 TPA and production of laterite of 6,226 TPA. Mine lease area is 40.469 ha. No forest land is involved. Nela pattu Bird sanctuary is at a distance of 6.51 kms. Therefore



this project has been considered at MOEF, being category 'A' project. The mine lease was granted in Feb, 2006. It was also observed that the mine is in operation since grant of mine lease without any EC. It was, thus a violation case.

3. 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) Status of compliance of the earlier EC conditions along with supporting documents and photographs should be submitted.
- 4) Chemical analysis of tailings and tailing water shall be done and results submitted.
- 5) Diesel particulate from vehicles shall be done and results submitted.
- 6) 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.
- 7) All corner coordinates of the mine lease area superimposed on High Resolution Imagery/toposheet should be provided.
- 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) 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.
  - 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 should be indicated.
  - 14) Land use plan of the mine lease area should be prepared to encompass pre-operational, operational and post operational phases and submitted.
  - 15) 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.
  - 16) 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.
  - 17) 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 Committee.
  - 18) 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.
  - 19) 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.
  - 20) 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.
  - 21) The vegetation in the RF / PF area with necessary details should be given.

- 22) 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.
- 23) Location of the proposed plant w.r.t. the source of raw material and mode of transportations of the ore from mines to the beneficiation plant, and outbound movement of the products should be provided.
- 24) Details of the technology and process involved in the project may be furnished.
- 25) Proposed treatment of runoff from the fines/waste dump should be provided.
- 26) Estimation of the fines going into the washings and its management should be given.
- 27) Details of the equipment, settling pond etc. should be provided.
- 28) Detailed material balance should be provided.
- 29) Source of raw material and its transportation should be given. Steps proposed to be taken to protect the ore from getting air borne should be given.
- 30) Management and disposal of tailings and closure plan of the tailing pond, if any, after the project is over, should be provided.
- 31) Size distribution of the iron ore with percentage weight shall also be done to assess the source of fugitive dust emission of the ore feed to the plant.
- 32) Measures to manage the under size / over-size waste from the feed ore shall be provided.
- 33) Details of the solid waste to be generated and its management should be outlined. Adequacy of the tailing pond for the life of the beneficiation plant should be provided with supporting data and documentation. Design and capacity of tailing pond should be such as to guard against overflow from the tailing pond during heavy rainfall. The provision of lining, nature of lining with supporting permeability studies should also be provided.
- 34) 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.
- 35) 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.

- 36) Impact of change of land use should be given.
- 37) 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.
- 38) One season (non-monsoon) primary baseline data on ambient air quality (PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM<sub>10</sub> particularly for free silica should be given.
- 39) 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.
- 40) 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.

- 41) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
- 42) Details of water conservation measures proposed to be adopted in the project should be given.
- 43) 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.
- 44) 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.
- 45) Details of first order stream, if any passing through lease area and modification/ diversion proposed, if any and the impact of the same on the hydrology should be brought out.
- 46) Details of rainwater harvesting proposed, if any, in the project should be provided.
- 47) 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.
- 48) 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).
- 49) The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
- 50) 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.

- 51) Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
- 52) 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.
- 53) 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.
- 54) 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.
- 55) 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.
- 56) 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.
- 57) 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.
- 58) 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.
- 59) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
- 60) The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.

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

- a. A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
  - b. All documents may be properly referenced with index and continuous page numbering.
  - c. Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
  - d. Where the documents provided are in a language other than English, an English translation should be provided.
  - e. The Questionnaire for environmental appraisal of mining projects as prescribed by the Ministry shall also be filled and submitted.
  - f. Approved mine plan along with copy of the approval letter for the proposed capacity should also be submitted.
  - g. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4<sup>th</sup> August, 2009, which are available on the website of this Ministry should also be followed.
  - h. Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the F.R for securing the TOR) should be brought to the attention of MoEF with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.
5. 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.
6. The prescribed TORs would be valid for a period of two years for submission of the EIA/EMP reports, as per the O.M. No. J-11013/41/2006-IA.II(I) dated 22.3.2010.
7. 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 Manganese Ore Mines of M/s Special Blasts Ltd., village Miragpur Forest, Tehsil Katangi, District Balaghat, M.P.**

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

**2.43 Limestone (Kota Stone) Mining Project of M/s Pankaj Kumar Swaroop Chand near village Satal Khedi, Tehsil Ramganj Mandi, District Kota, Rajasthan ( Consultant: Project Proponent)**

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.

2. The proposal is for renewal of mine lease which will fall due in Jan 19, 2012, and for enhancement of production from 58,475 TPA to 83,334 TPA of Limestone (Minor mineral). Mine is reported to be closed since Jan 31, 2012. This is a violation case for operating the mine from 19.1.2012 to 31.1.2012 without requisite prior environmental clearance. The mine working will be opencast semi-mechanised. Mine lease area is 43.24 ha. No forestland is involved. Dara wildlife Sanctuary is reported within 10 km of the mine lease. Life of the mine is 40 years. Water requirement will be 28 KLD.

3. 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
5. 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 preoperational, 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<sup>ble</sup> 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<sup>ble</sup> 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 NOx), water quality, noise level, soil and flora and fauna shall be collected and the AAQ data so collected presented date-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction.
  28. The mineralogical composition of PM10 particularly for free silica should be given.
  29. 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.

30. 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.
31. Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
32. Details of water conservation measures proposed to be adopted in the project should be given.
33. 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.
34. 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.
35. 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.
36. Details of rainwater harvesting proposed, if any, in the project should be provided.
37. 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.
38. 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).

39. The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form (prescribed format) and submitted.
40. Impact on local transport infrastructure due to the project should be indicated.
41. 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.
42. Details of the infrastructure facilities to be provided for the mine workers should be included in the EIA report.
43. 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.
44. 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.
45. Occupational health impact of project should be anticipated and preventive measures initiated. Details in this regard should be provided. Details of preplacement medical examination and periodical medical examination schedules should be incorporated in the EMP.
46. 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.
47. 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.
48. 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.
49. 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.

50. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
51. The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.

4. 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.

5. 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.

6. The prescribed TORs would be valid for a period of two years for submission of the EIA/EMP reports, as per the O.M. No. J-11013/41/2006-IA.II(I) dated 22.3.2010.

7. 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.

**2.44 Sand Mine Project of Shri Sabir Khan, Village Naseni, Tehsil Naraini, District Banda, U.P. (18.00 Acres) ( Consultant: Perfect Enviro Solutions 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.

2. The proposal is for production from 50,000TPA (ROM) of sand from the sand dunes. Mine is reported to be closed from 30.6.2011. Mine lease area is 7.28 ha. It has been considered as category 'A' because of its location within 10 km of interstate boundary of M.P. and U.P. No forestland is involved. No National Park / Sanctuary is reported within 10 km of the mine lease. Mine working will be opencast manual. Ken River is at 400m (East) away from mine lease.

3. 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, SO<sub>2</sub> and NO<sub>x</sub>), water quality, noise level, soil and flora and fauna, site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the predominant 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.
4. 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 4<sup>th</sup> August, 2009, which are available on

the website of this Ministry should also be followed.

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

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

6. The prescribed TORs would be valid for a period of two years for submission of the EIA/EMP reports, as per the O.M. No. J-11013/41/2006-IA.II(I) dated 22.3.2010.

7. 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.

#### **2.45 Any other matter with permission of the Chair.**

#### **Finalisation of draft guidelines regarding categorization of projects into 'B1' and 'B2'.**

The Draft guidelines, based on the detailed discussion held by the Committee on the same, was submitted by the Member Secretary, EAC (M). The draft after due deliberations was approved for taking a decision on the same by the MOEF.

#### **Next Meeting:**

It was decided that the next meeting will be held on August 29-31, 2012.

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

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

- |     |  |   |                  |
|-----|--|---|------------------|
| 1.  | Shri M.S. Nagar  | - | Chairman         |
| 2.  | Dr. S. Subramaniam   | - | Vice Chairman    |
| 3.  | Prof. C.K. Varshney  | - | Member           |
| 4.  | Dr. T.K.Joshi  | - | Member           |
| 5.  | Shri Ranjan Sahai  | - | 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. S.K. Aggarwal, Director                                  | - | Member Secretary |
| 12. | Shri Om Prakash, Deputy Director                             |   |                  |
| 13. | Shri Neeraj Khatri, Deputy Director                          |   |                  |
| 14. | Representative of M/s Steel Authority of India Ltd           |   |                  |
| 15. | Representative of M/s Ultra Tech Cement Ltd                  |   |                  |
| 16. | Representative of M/s Siddhi Vinayak Cement Pvt. Ltd.        |   |                  |
| 17. | Representative of M/s Jindal Steel and Power                 |   |                  |
| 18. | Representative of M/s Pentapati Lakshman Swamy               |   |                  |
| 19. | Representative of M/s Naibaga and Katupali Iron Ore Mines    |   |                  |
| 20. | Representative of Shri Tamil Nadu Minerals Ltd.              |   |                  |
| 21. | Representative of M/s Feegrade & Co. (P) Ltd.                |   |                  |
| 22. | Representative of M/s Manikeswari Gems (P) Ltd.              |   |                  |
| 23. | Representative of M/s Mahadev Mining Works                   |   |                  |
| 24. | Representative of M/s Devendra Sharma                        |   |                  |
| 25. | Representative of M/s OMDC Ltd                               |   |                  |
| 26. | Representative of M/s Hindustan Copper Ltd.,                 |   |                  |
| 27. | Representative of M/s ADA Enterprises & Ventures Pvt. Ltd.   |   |                  |
| 28. | Representative of M/s Reliance Cementation Pvt. Ltd. located |   |                  |
| 29. | Representative of M/s Lucky Minmat Ltd.                      |   |                  |
| 30. | Representative of M/s Uranium Corporation of India Ltd       |   |                  |
| 31. | Representative of M/s Balasore Alloys Ltd.                   |   |                  |
| 32. | Representative of M/s Bonai Industrial Co. Ltd.,             |   |                  |
| 33. | Representative of Shri Harbhajan Singh                       |   |                  |
| 34. | Representative of M/s Rajendra Kumar Agrawal                 |   |                  |

35. Representative of M/s Rio Tinto Exploration India Pvt. Ltd
36. Representative of Sri Shashi Bhushan Singh
37. Representative of M/s Lafarge India Pvt Ltd
38. Representative of M/s P. Abdul Rawoof Khan
39. Representative of M/s Devkabai Velji
40. Representative of M/s Chandra Prakash Sarda
41. Representative of M/s Padam Kumar Jain
42. Representative of M/s Shah Bros
43. Representative of M/s P.S. Garg
44. Representative of M/s Bonai Industries Co. Ltd
45. Representative of M/s ACC Ltd
46. Representative of M/s Sai Dharani Sponge Iron Pvt. Ltd.
47. Representative of M/s Pankaj Kumar Swaroop Chand
48. Representative of Shri Sabir Khan

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