

**MINUTES OF THE 3<sup>rd</sup> RECONSTITUTED EXPERT APPRAISAL COMMITTEE  
(INDUSTRY) HELD DURING 3<sup>rd</sup> – 5<sup>th</sup> DECEMBER, 2012**

**VENUE: Tansen Hall, Scope Convention Centre, Scope Complex, Lodhi Road, New Delhi 110 003.**

**TIME 10.00 A.M.**

**3.0 Opening Remarks of the Chairman**

At the outset, Chairman welcomed the members of the Expert Appraisal Committee (Industry). Thereafter, agenda items were taken up for discussion. The deliberations held and decisions taken are as under.

**3.1 Confirmation of the Minutes of the 2<sup>nd</sup> reconstituted expert appraisal committee (industry) held during 29<sup>TH</sup> – 31<sup>ST</sup> October, 2012.**

The minutes of the 2<sup>nd</sup> Reconstituted Expert Appraisal Committee (Industry) held during 29<sup>th</sup> – 31<sup>st</sup> October, 2012 were confirmed.

**3<sup>rd</sup> December, 2012**

**3.2.0 Consideration of the Projects:**

**3.2.1 Expansion of Sponge Iron Plant ( 1 x 350 TPD) into Integrated Steel Plant at village Godwali & Bastali Biran, Tehsil Devassar & Chitarangi, District, Singrauli, Madhya Pradesh by M/s Trimula Industries Limited. - regarding EC**

The proponent requested MoEF for deferment to next meeting. The Committee also noted that the consultant who prepared the EIA report is not accredited by QCI/NABET.

**3.2.2 Drug and Intermediate Unit (678.98 TPA) at Khasra No, Kite-3 on Khata No. & Hadbast No. 198, Village Behra, Gulberga-Behra Road, Derabassi, District S.A.S Nagar, Mohali, Punjab by M/s Dhruv Chemicals & Pharmaceuticals Pvt. Ltd. - regarding EC**

The Committee noted that the consultant who prepared the EIA report is not accredited by QCI/NABET and deferred the proposal.

**3.2.3 Proposed Integrated Steel Plant and Captive Power Plant (100 MW) at Villages Dagori, Ameri Akberi and Udgaon, Tehsil Bilha, District Bilaspur, Chhattisgarh by M/s Jayaswal Neco Industries Limited - regarding EC**

The project authorities and their consultant, M/s EMTRC Consultants, Delhi gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of Reference (TORs) awarded during the 26<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry-1) held during 22.7.2011 & 23.7.2011 for preparation of EIA/EMP report. The steel plants are listed at S. No. 3(a) in primary metallurgical industry under Category 'A' of the Schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s Jayaswal Neco Industries Limited have proposed for Integrated Steel Plant and Captive Power Plant (100 MW) at Villages Dagori, Ameri Akberi and Udgaon, Tehsil Bilha, District Bilaspur, Chhattisgarh. The total project area is 210.8 ha. (520.6 acres) of which 8.83 ha. is Govt. Land, 10.11 ha. is Tribal land and 191.83 ha. is Private land. Additional 1.6

ha. land shall be required for the railway line from Dagori station to site and 2 ha. land shall be required to lay the water pipeline from Shivnath River Anicut (proposed at Ghogra Village) to site. No displacement of human settlement is involved. No forest land is involved. 58.75 ha. land has been purchased directly from the land owners. Green belt will be developed in 33% of the total area i.e. 72.6 ha. Rehabilitation of project affected persons will be done as per the Policy of Chhattisgarh Government. Preference will be given to land losers for employment in the project. No National Park/Wildlife Sanctuary is located within 10 km radius of the project site. River Maniari and River Shivnath flow at a distance of 3 km and 3.5 km respectively from the project site. Devrani Jethani Temple, which is protected under the State Archaeological Act, 1976 is located at 3 km from project site. The project cost is Rs. 3,800 Crores and the cost towards EMP is Rs. 255 Crores. Rs. 7 Crores is earmarked for the conservation of Devrani Jethani Temple.

The details of various units and products are as follows:

S.No.	Name of the Unit	Capacity	Products
1.	Iron ore Benefication and Pellet Plant	1.2 MTPA	Iron ore pellets
2.	Blast Furnace	0.4 MTPA	Hot metal/ Pig iron
3.	DRI Plant	0.6 MTPA	Sponge iron
4.	Coke Oven (non-recovery type)	0.2 MTPA	Metallurgical Coke
5.	Sinter Plant	0.4 MTPA	Sinter
6.	Steel Melting Shop	0.7 MTPA	Steel
7.	Rolling Mill	0.65 MTPA	Steel Products
8.	Oxygen Plant	400 TPD	Oxygen
9.	Captive Power Plant	100 MW	Electricity

Iron ore, coal, middlings, dolomite, limestone, ferro alloys, bentonite and lime/dolime are the raw materials. Transportation of coal and iron ore shall be only by rail. Coal linkage documents (allocation of coal block) were submitted. EC for coal block exists, but allocated for sponge iron production at Siltara, Raipur Dist. i.e. a different unit of the company than the instant one.

Secondary dedusting systems will be provided at all points to control fugitive dust emission. ESP & Bag filters will be provided to control point emissions. The approach road from NH to site will be strengthened. Base line data of ambient air quality monitored at eight locations in the study area indicates that the concentrations of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> are varying from 42 to 60 µg/m<sup>3</sup>, 19 to 35 µg/m<sup>3</sup>, 5.0 to 8.6 µg/m<sup>3</sup> and 9.0 to 16.4 µg/m<sup>3</sup> respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 7.2 µg/m<sup>3</sup>, 7.2 µg/m<sup>3</sup>, 22.4 µg/m<sup>3</sup> and 12.4 µg/m<sup>3</sup> with respect to PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> respectively. The resultant concentrations are within the NAAQS.

The total water requirement is 825 m<sup>3</sup>/h (19,800 m<sup>3</sup>/h) and will be sourced from Shivnath River and transported to site by pipelines. The wastewater from all sources would be segregated, treated and reused/recycled. The treated wastewater will be reused within the plant premises. The iron bearing solid wastes will be reused in the Sinter plant. MoUs for use of fly ash and tailings were submitted.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the State Pollution Control Board on 29<sup>th</sup> June, 2012. The issues raised in the public hearing were regarding the compensation for land, project site is a farming site & full of trees, effect of water drawl from Maniari River on agriculture etc., bad condition of roads for heavy vehicle movement, location of famous Devrani Jhetahani Temple at approx. 3 kms from the project site etc. All these issues were addressed.

The Committee discussed on the issues regarding Coal linkage documents for the instant project instead of another unit of the company; Permission/NOC from ASI reg. location of Devrani Jethani temple at 3 kms from project site shall be submitted; Revised layout plan after excluding the existing pond from the project area; Alternate route for the villagers duly approved by the State Govt; Revised project area and layout plan shall be submitted after exclusion of all the water bodies from the project site ; Documents reg. tribal land; Optimization of water requirement. The project proponent submitted the above information in detail. The proponent also committed that they would provide the alternate route to the villagers other than passing through project area. The Committee decided that the above information may be circulated among the Committee members without calling the project proponent.

3.2.4 Expansion of Sponge Iron Plant (300 TPD to 800 TPD), Induction Furnace (1,35,000 TPA), Rolling Mill (1,20,000 TPA) and Captive Power Plant-25 MW (16 MW of WHRB and 9 MW of AFBC ) at village Dhauhan, Tehsil Chunar, District Mirzapur in Uttar Pradesh by **M/s Shanti Gopal Concast Limited. - regarding EC**

The above proposal was considered in the 30<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry-1) held during 28<sup>th</sup> & 29<sup>th</sup> November, 2011. The Committee noted the complaints, compliance status of NOC from SPCB, comments of SPCB in the last monitoring report etc. and recommended that a site visit be undertaken by a sub-committee for further consideration. In the meanwhile, the proponent vide letter dated 13.12.2011 informed the Ministry that due to the adverse market conditions, not to pursue their application for environmental clearance any further. Accordingly, the project proponent was informed vide letter dated 4.1.2012 that the proposal is delisted and the file is closed.

The proponent vide letters dated 31.7.2012 and 10.11.2012 requested MoEF to revive the above proposal for grant of EC. It was also submitted that the ownership & the management of the company has been changed & taken over by another group, which finds itself fully competent & capable to take up the expansion proposal and there is no change in the proposed expansion project configuration. The documents regarding change in ownership were submitted.

As recommended earlier, the Committee recommended that a site visit be undertaken by a sub-committee for further consideration.

3.2.5 Expansion of cement grinding capacity (from 1.7 MTPA to 2.3 MTPA) at Village Morak, Tehsil-Ramganj Mandi, District Kota in Rajasthan by **M/s Neer Shree Cement (A Unit of M/s Mangalam Cement Limited). - regarding EC**

The project authorities and their consultant, M/s. J.M. EnviroNet Pvt. Ltd., Gurgaon, gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of Reference (TORs) awarded during the 35<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry-1) held during 26.4.2012 – 27.4.2012 for preparation of EIA/EMP report. Although the proposed expansion project ac. The Committee decided that the above information may be circulated among the Committee members without calling the project proponent. tivity falls under Category B of the

Schedule of EIA Notification, 2006, since it is an expansion of a Category A project, the proposal is appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s Neer Shree Cement (a unit of M/s. Mangalam Cement Ltd.) have proposed for expansion of Cement Grinding Capacity (from 1.7 to 2.3 MTPA) at Village: Morak, Tehsil: Ramganj Mandi, District: Kota (Rajasthan). Total Plant area is 94 ha. Since, the proposed expansion will be within the existing plant premises, no additional land will be required for the same. 33% of the total project area has already been developed under greenbelt and the same will be maintained & further enhanced for proposed expansion project. No National Park, Wildlife Sanctuary and Biosphere Reserve fall within 10 km radius of the study area. Two Reserved Forests (at 3.5 km in NE direction and 3.5 km in NW direction) and two Protected Forests (at 2.2 km in WSW direction and 4.8 km in ENE direction) exist within 10 km radius study area. No R&R is applicable. Total cost of the project is Rs. 2.865 Crores. Capital cost for Environmental Protection Measures is Rs. 7.5 lakhs and Recurring Cost is Rs. 2.5 lakhs/annum.

Details of the products along with their production capacity are given below:

<b>Project Activity</b>	<b>Existing capacity</b>	<b>Proposed Expansion</b>	<b>Total Capacity After Expansion</b>
Clinker (MTPA)	1.32	None	1.32
Cement (MTPA)	1.7	0.6	2.3

Certified compliance report of the existing unit was received from the MoEF, RO and found satisfactory by the Committee. The cement plant is based on the dry process technology for cement manufacturing with pre-heating and pre-calciner technology. Major raw materials required for the proposed expansion project is Fly ash, sourced from CPP, Kota TPP and nearby TPPs. Other raw material is Gypsum which will be procured from nearby areas in Rajasthan. Existing Power requirement is 17 MW. Additional Power required for the proposed expansion project will be 0.76 MW, which will be sourced from RSEB, wind farms & own power source.

To control particulate emissions, all major sources of air pollution are provided with ESPs/ Bag filters to maintain the PM emission level below 50 mg/Nm<sup>3</sup>. All material transfer points have been provided with bag filters to entrap the emissions at the source itself. Clinker is stored in gantry covered, fly ash is stored in silo and gypsum in covered shed. Base line data of ambient air quality monitored at eight locations in the study area indicates that the concentrations of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>2</sub> are varying from 55 to 81.4 µg/m<sup>3</sup>, 25.3 to 44.7 µg/m<sup>3</sup>, 6.5 to 10.1 µg/m<sup>3</sup> and 12 to 18.4 µg/m<sup>3</sup> respectively. AAQ modeling study indicates that the maximum incremental GLC after the proposed expansion would be 2.113 µg/m<sup>3</sup> with respect to PM<sub>10</sub>. The resultant concentration of PM<sub>10</sub> is within the NAAQS.

Existing water requirement for the project is 1,240 m<sup>3</sup>/d, sourced from the Mine sump water. No additional water will be required for proposed expansion. No industrial wastewater is being generated from the Cement Plant. Domestic wastewater generated from Cement plant / Colony is being treated in STP and treated water is being used for green belt development / Horticulture activities. Rain water harvesting is being practiced at plant and colony area. No solid waste is generated in cement manufacturing process. Dust collected from various pollution control equipments is recycled back to the process. STP Sludge is utilized as manure for green belt development within the plant premises.

The proposal was exempted from public hearing as per Para 7(II) of EIA Notification 2006 due to no additional land and water allocation requirement, use of energy efficient technology, no clinker manufacturing at the proposed site, no sensitive area within 10 km. radius, 'zero' effluent discharge, utilization of all the solid waste in the process itself including utilization of fly ash etc. Environmental Clearance for the existing plant was accorded on 5.4.2007 and Public Hearing was held on 23.12.2006.

After detailed deliberations, the Committee found the EIA/EMP report adequate and suggested to stipulate following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i. Particulate emissions shall be controlled within 50 mg/Nm<sup>3</sup> by installing adequate air pollution control system viz. Bag filters and stacks of adequate height etc. Data on ambient air, fugitive and stack emissions shall be submitted to the Ministry's Regional Office at Lucknow, State Pollution Control Board (SPCB) and CPCB regularly.
- ii. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be followed.
- iii. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines/Code of Practice issued by the CPCB should be followed.
- iv. The company shall install adequate dust collection and extraction system to control fugitive dust emissions at various transfer points, raw mill handling (unloading, conveying, transporting, stacking), vehicular movement, bagging and packing areas etc. All the raw material stock piles should be covered. A closed clinker stockpile system shall be provided. All conveyers should be covered with GI sheets. Covered sheds for storage of raw materials and fully covered conveyers for transportation of materials shall be provided besides coal, cement, fly ash and clinker shall be stored in silos. Pneumatic system shall be used for fly ash handling.
- v. Asphalting/concreting of roads and water spray all around the stockyard and loading/unloading areas in the cement plant shall be carried out to control fugitive emissions. Regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RSPM such as haul road, loading and unloading points, transfer points and other vulnerable areas. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
- vi. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash should be transported in the closed containers only and should not be overloaded. Vehicular emissions should be regularly monitored.
- vii. Total water requirement shall not exceed 1,240 m<sup>3</sup>/d. Efforts shall be made to further reduce water consumption by using air cooled condensers. All the treated wastewater should be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge should be adopted.

- viii. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- ix. All the bag filter dust, raw meal dust, coal dust, clinker dust and cement dust from pollution control devices should be recycled and reused in the process used for cement manufacturing. Spent oil and batteries should be sold to authorized recyclers / reprocessors only.
- x. Green belt shall be developed in at least 33 % area in and around the cement plant as per the CPCB guidelines to mitigate the effects of air emissions in consultation with local DFO.
- xi. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on locals need and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Lucknow. Implementation of such program should be ensured accordingly in a time bound manner.

3.2.6 Expansion of Cement grinding capacity (from 1.3 MTPA to 1.7 MTPA) at village Morak, Tehsil-Ramganj Mandi, District Kota in Rajasthan by **M/s Mangalam Cement Limited. - regarding EC**

The project authorities and their consultant, M/s. J.M. EnviroNet Pvt. Ltd., Gurgaon, gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of Reference (TORs) awarded during the 35<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry-1) held during 26.4.2012 – 27.4.2012 for preparation of EIA/EMP report. Although the proposed expansion project activity falls under Category B of the Schedule of EIA Notification, 2006, since it is an expansion of a Category A project, the proposal is appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s.Mangalam Cement Ltd have proposed expansion of Cement Grinding Capacity by addition of Fly ash (from 1.3 to 1.7 MTPA) At Village: Morak, Tehsil: Ramganj Mandi, District: Kota (Rajasthan). Total Plant area is 36 ha. As the proposed expansion will be within the existing plant premises, no additional land acquisition is required for the proposed expansion project. 33% of the total project area has already been developed under greenbelt and the same will be maintained & further enhanced for proposed expansion project. No National Park, Wildlife Sanctuary, Biosphere Reserve exist within 10 km radius of the study area. Two Reserved Forests (3.5 km in NE direction and 3.5 km in NW direction) and two Protected Forest (2.2 km in WSW direction and 4.8 km in ENE direction) exist within 10 km radius of the study area. R&R is not applicable. Total cost of the project is Rs. 84.5 Lakhs. Capital cost for Environmental Protection Measures is Rs. 7.50 Lakhs and Recurring Cost is Rs. 2.5 Lakhs /annum.

Details of the products along with their production capacity are given below:

Category	Existing Capacity (Line I)	Proposed Capacity (Line II)	Total Capacity after Expansion
Clinker (MTPA)	0.99	None	0.99
Cement (MTPA)	1.3	0.4	1.7

Certified compliance report of the existing unit was received from the MoEF, RO and found satisfactory by the Committee. Major raw materials required for the proposed

expansion project is Fly ash, which will be sourced from Kota thermal power plant, captive power plant, Parichha Thermal Power Station Jhansi, Chabra Thermal power Plant, Chabra and Adani Power Ltd., Jhalawar. Very less quantity of Gypsum is required, which will be procured from nearby areas in Rajasthan. Existing Power requirement is 15 MW. Additional Power required for the proposed expansion project will be 1.01 MW, which will be sourced from RSEB, Captive Power Plant (I & II) and Wind farms.

To control particulate emissions, all major sources of air pollution are provided with ESPs, Bag filters to maintain the PM emission level below 50 mg/Nm<sup>3</sup>. All material transfer points have been provided with bag filters to entrap the emissions at the source itself. Clinker is stored in covered gantry. Fly ash is stored in silo and gypsum in covered shed. Base line data of ambient air quality monitored at eight locations in the study area indicates that the concentrations of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>2</sub> are varying from 55 to 81.4 µg/m<sup>3</sup>, 25.3 to 44.7 µg/m<sup>3</sup>, 6.5 to 10.1 µg/m<sup>3</sup> and 12 to 18.4 µg/m<sup>3</sup> respectively. AAQ modeling study indicates that the maximum incremental GLC after the proposed expansion would be 2.113 µg/m<sup>3</sup> with respect to PM<sub>10</sub>. The resultant concentration of PM<sub>10</sub> is within the NAAQS.

Existing water requirement for the project is 642 m<sup>3</sup>/d, sourced from the Mine Sump Water. No additional water is required for the proposed expansion project. No industrial wastewater is generated in the Cement Plant. Domestic waste water generated from Cement Plant/Colony is treated in the STP. The treated water is utilized for Greenbelt Development/Horticulture activities. Rain water harvesting structures are constructed. No solid waste is generated in cement manufacturing process. Dust collected from various pollution control equipments is recycled back to the process. STP Sludge is utilized as manure for green belt development within the plant premises.

The proposal was exempted from public hearing as per Para 7(II) of EIA Notification 2006 due to no additional land and water allocation requirement, use of energy efficient technology, no clinker manufacturing at the proposed site, no sensitive area within 10 km. radius, 'zero' effluent discharge, utilization of all the solid waste in the process itself including utilization of fly ash etc. Environmental Clearance for the existing plant was accorded on 5.4.2007 and Public Hearing was held on 23.12.2006.

After detailed deliberations, the Committee found the EIA/EMP report adequate and suggested to stipulate following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i. Particulate emissions shall be controlled within 50 mg/Nm<sup>3</sup> by installing adequate air pollution control system viz. Bag filters and stacks of adequate height etc. Data on ambient air, fugitive and stack emissions shall be submitted to the Ministry's Regional Office at Lucknow, State Pollution Control Board (SPCB) and CPCB regularly.
- ii. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be followed.
- iii. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines/Code of Practice issued by the CPCB should be followed.
- iv. The company shall install adequate dust collection and extraction system to control fugitive dust emissions at various transfer points, raw mill handling (unloading, conveying, transporting, stacking), vehicular movement, bagging and packing areas etc. All the raw material stock piles should be covered. A closed clinker stockpile system shall be provided. All conveyers should be covered with GI sheets. Covered

sheds for storage of raw materials and fully covered conveyers for transportation of materials shall be provided besides coal, cement, fly ash and clinker shall be stored in silos. Pneumatic system shall be used for fly ash handling.

- v. Asphaltting/concreting of roads and water spray all around the stockyard and loading/unloading areas in the cement plant shall be carried out to control fugitive emissions. Regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RSPM such as haul road, loading and unloading points, transfer points and other vulnerable areas. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
- vi. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash should be transported in the closed containers only and should not be overloaded. Vehicular emissions should be regularly monitored.
- vii. Total water requirement shall not exceed 642 m<sup>3</sup>/d. Efforts shall be made to further reduce water consumption by using air cooled condensers. All the treated wastewater should be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge should be adopted.
- viii. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- ix. All the bag filter dust, raw meal dust, coal dust, clinker dust and cement dust from pollution control devices should be recycled and reused in the process used for cement manufacturing. Spent oil and batteries should be sold to authorized recyclers / reprocessors only.
- x. Green belt shall be developed in at least 33 % area in and around the cement plant as per the CPCB guidelines to mitigate the effects of air emissions in consultation with local DFO.
- xi. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on locals need and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Lucknow. Implementation of such program should be ensured accordingly in a time bound manner.

3.2.7 Enhancement in production capacity from 6000 TPA to 18,000 TPA Ferro Alloys at Village Matkambada, Tehsil Barbil, District Keonjhar, Orissa by **M/s Pankaj Ferro Tech Pvt. Limited. - regarding EC**

The Committee noted that the consultant who prepared the EIA report is not accredited by QCI/NABET and deferred the proposal.

3.2.8 Proposed expansion of existing Pig Iron plant to improve the fuel efficiency and to increase the capacity from 1,20,000 TPA to 2,00,000 TPA, establishment of Coke Oven Plant of capacity 1,60,000 TPA, Captive Power Plant of capacity 30 MW, expansion of Ductile Iron Pipe Plant from 1,20,000 TPA to 2,00,000 TPA Sinter Plant - 3,00,000 TPA, Cement grinding plant 1,00,000 TPA at Honnarahalli Village and

Holkote Village, Post Hatcholi, Taluk Siruguppa, District Bellary in Karnataka by **M/s Shree Ram Electrocast Pvt. Limited. - regarding EC**

The Committee noted that the existing units are not operational since April 2011 and the value addition project which was accorded environmental clearance by MoEF is yet to start at the site and deferred the proposal for implementation of the previous projects.

3.2.9 Alkyd Manufacturing Unit (1,500 TPA) at J.L. No. 15, Plot No. 650/780, 635/781, 636/861, Village Surjpur, Tehsil Barackpore, District North 24 Parganas, West Bengal by **M/s Subham Oils Resins Pvt. Ltd. - regarding EC**

The project authorities and their consultant, Pacific Scientific Consultancy Pvt. Ltd., Kolkata gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of Reference (TORs) awarded during the 17<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry-2) held during 22.12.2010 – 23.12.2010 for preparation of EIA/EMP. The Committee noted that the consultant who prepared the EIA report is not accredited by QCI/NABET. However, proponent has submitted an Order dated 19.9.2012 of Hon'ble High Court staying the applicability of QCI accreditation to the instant consultant. Hence, allowed by the Committee. All the Resin manufacturing plants located outside notified industrial area are listed at S.No. 5(f) under Category 'A' of the Schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s Subham Oils Resins Pvt. Ltd. have proposed for setting up of Alkyd Manufacturing Unit (1,500 TPA/42.5 MTPM) at J. L. No. 15, Plot No. 650/780, 635/781, 636/861, Village Surjopur, Tehsil Barackpore, District North 24 Parganas, West Bengal. The existing unit didn't require EC and the Alkyd Resin unit is proposed in the same premises. Plot area is 2,711 m<sup>2</sup> and Green belt will be developed in 895 m<sup>2</sup>. River Hooghly flows at a distance of 5 Km. No National park/ wildlife sanctuary / Reserve Forests are located within 10 Km. Project cost is Rs. 1.65 Crores. Rs. 17.0 Lakhs and Rs. 2.05 Lakhs are earmarked towards capital cost and recurring cost / annum for pollution control measures.

Penta Erythritol, Pthalic Anhydride, Dry Qils, Rosin, Glycerine, Maliec Anhydride, M.T.O. will be used as raw materials. Power requirement from WBSEDCL will be 22.5 KW. DG set (65 KVA) will be installed. Maleic anhydride is categorized as hazardous chemical. Oil modified alkyd resin will be prepared with dehydrated castor oil, glycerol and phthalic anhydride using NaOH catalyst. FO fired thermic fluid heater will be installed and adequate height of stack will be installed for dispersion of pollutants. Stack (3.5 m) above the roof top will be provided to DG set. Total ground water requirement will be 0.4 m<sup>3</sup>/d. Effluent from process will be treated in ETP and after treatment, will be stored and reused in the plant for gardening, sprinkler system. Sludge from ETP will be given to Ramkey, Haldia, West Bengal for disposal as per Hazardous waste Management Rules.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the West Bengal Pollution Control Board on 30.1.2012. The issues raised in the public hearing were regarding provision of pollution control measures, infrastructure development, employment to the local people etc. which were addressed in the EIA/EMP report.

After detailed deliberations, the Committee found the EIA/EMP report adequate and suggested to stipulate following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i) Ambient air quality data should be collected as per NAAQS standards notified by the Ministry on 16<sup>th</sup> September, 2009.
- ii) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.
- iii) Stack of adequate height should be installed to oil fired boiler to disperse waste gases into atmosphere.
- iv) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits imposed by SPCB.
- v) Wet scrubber should be provided to control process emissions. Methanol should be recovered from the process area.
- vi) Total water requirement should not exceed 0.4 m<sup>3</sup>/d and prior permission should be obtained from the concerned Authority.
- vii) As proposed, Industrial effluent will be treated in ETP. Treated effluent should be reused/recycled within the factory premises. Water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB.
- viii) As proposed Phenol should be extracted/treated from the effluent before sending to the ETP.
- ix) The company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from SPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire fighting facilities in case of emergency.
- x) Solvent management should be as follows :
  - Reactor should be connected to chilled brine condenser system
  - Reactor and solvent handling pump should have mechanical seals to prevent leakages.
  - The condensers should be provided with sufficient Heat Transfer Area (HTA) and residence time so as to achieve more than 95% recovery.
  - Solvents should be stored in a separate space specified with all safety measures.
  - Proper earthing should be provided in all the electrical equipments wherever solvent handling is done.
  - Entire plant where solvents are used should be flame proof. The solvent storage tanks should be provided with breather valve to prevent losses.
- xi) As proposed, green belt should be developed in at least 33 % of the project area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xii) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- xiii) All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 30.1.2012 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bhubaneswar.

3.2.10 Expansion of Integrated Cement Project by installation of new Line III (Clinker-2.0 MTPA, Cement-3.0 MTPA & WHRB-6.05 MW) at Aditya Cement Works, Village Sawa- Shambhupura, Tehsil & District Chittorgarh in Rajasthan by **M/s UltraTech Cement Limited. - regarding EC**

The project authorities and their consultant M/s. J.M. EnviroNet Pvt. Ltd., Gurgaon gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of Reference (TORs) awarded during the 28<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry-1) held during 26.9.2011 & 27.9.2011 for preparation of EIA/EMP report. The Cement Plants with

production capacity more than 1.0 MTPA are listed at S. No. 3 (b) under Category "A" of the Schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s UltraTech Cement Limited has proposed for expansion of Integrated Cement Project by installation of new Line III (Clinker 2.0 MTPA, Cement 3.0 MTPA & WHRB -6.05 MW) at Aditya Cement Works, Village Sawa- Shambhupura, Tehsil & District Chittorgarh in Rajasthan. Total existing project area is 240.42 ha. and an additional area of 90 ha. is proposed for Line III. Green belt development has been carried out over an area of 92.54 ha. (39%) and an additional 24 ha. of area is proposed to be further developed under green belt after expansion. No national park/wildlife sanctuary/biosphere reserve is located within 10 km. radius of the project site. Seven reserve forests and two protected forests exist at a distance of 2.5 to 10.0 km from the plant site. Chittorgarh fort is at a distance of 13 km from the plant site in NNE direction. Water bodies existing within the 10 km study area of the project site are Gambhiri River (seasonal) which is about 6.5 km in NE direction, Sathkhanda River (seasonal) at a distance of 4.0 km in East direction and Murliya Dam at a distance of 6.5 Km in SSE direction. No R & R plan is applicable in this project. Total cost of the project is Rs. 1,500 Crores. Rs. 90.0 Crores and Rs. 3.6 Crores has been earmarked towards total capital cost and recurring cost/annum respectively for environmental pollution control measures.

Certified compliance report of the existing unit was received from the MoEF, RO and is found satisfactory by the Committee. The raw materials required after expansion of Integrated cement project will be Limestone, Gypsum, Fly ash, Bauxite/Laterite. Coal for the kiln will be imported, pet coke and coal for CPP will be lignite. The existing power requirement is 87 MW and an additional 33 MW of power is required for the proposed expansion, which will be met from CPP & RSEB.

To control particulate emissions, Bag house, ESP and bag filters have been installed in the existing plant. Clinker & fly ash are stored in silos and Gypsum is stored in covered shed. The same practice will continue for the proposed expansion project. Base line data of ambient air quality monitored at eight locations in the study area indicates that the concentrations of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> are varying from 36.2 to 71.5 µg/m<sup>3</sup>, 15.6 to 38.1 µg/m<sup>3</sup>, 5.76 to 19.4 µg/m<sup>3</sup> and 9.2 to 26 µg/m<sup>3</sup> respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 8.64 µg/m<sup>3</sup> (including that due to captive mining), 4.2 µg/m<sup>3</sup> and 1.9 µg/m<sup>3</sup> with respect to PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub> respectively. The resultant concentrations are within the NAAQS.

The existing water requirement is 6,725 m<sup>3</sup>/d and an additional 3,000 m<sup>3</sup>/d of water is required for the proposed expansion, which will be sourced from ground water & mine sump. The feasibility for use of surface water is being explored. No industrial wastewater is generated from the process. Domestic wastewater generated is being properly treated via STP. The treated water is then used for greenbelt development and dust suppression. There is no discharge outside the plant premises. No solid waste is generated. However, material collected by the dust collectors is automatically recycled in the process.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Rajasthan State Pollution Control Board on 19.7.2012. The issues raised in the public hearing were regarding issues of previous PH are not completed till date, lot of air pollution due to fly ash, depletion of ground water due to increase in water consumption etc. which were addressed in the EIA/EMP report.

After detailed deliberations, the Committee found the EIA/EMP report adequate and suggested to stipulate following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i. Continuous stack monitoring facilities to monitor gaseous emissions from the process stacks shall be provided. After expansion, limit of PM shall be controlled within 50 mg/Nm<sup>3</sup> by installing adequate air pollution control system. Electrostatic precipitators to clinker cooler, bag house to raw mill/kiln and bag filters to coal mill and cement mill. Low NO<sub>x</sub> burners should be provided to control NO<sub>x</sub> emissions.
- ii. Possibilities shall be explored for the proper and full utilization of gases generated from the kiln in waste heat recovery boiler (WHRB) and a feasibility report shall be prepared and submitted to the Ministry and its Regional Office at Lucknow within 3 months from the date of issue of the letter.
- iii. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 shall be followed.
- iv. Secondary fugitive emissions shall be controlled and shall be within the prescribed limits and regularly monitored. Guidelines / Code of Practice issued by the CPCB in this regard should be followed.
- v. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash should be transported in the closed containers only and shall not be overloaded. The company shall have separate truck parking area. Vehicular emissions should be regularly monitored.
- vi. Total water requirement for the proposed expansion plant shall not exceed 3,000 m<sup>3</sup>/d. Efforts shall be made to further reduce water consumption by using air cooled condensers. All the treated wastewater shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge should be adopted.
- vii. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- viii. Regular monitoring of influent and effluent surface, sub-surface and ground water should be ensured and treated wastewater should meet the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act, 1986 whichever are more stringent. Leachate study for the effluent generated and analysis should also be regularly carried out and report submitted to the Ministry's Regional Office at Lucknow, SPCB and CPCB.
- ix. All the bag filter dust, raw mill dust, coal dust, clinker dust and cement dust from pollution control devices should be recycled and reused in the process and used for cement manufacturing. Spent oil and batteries shall be sold to authorized recyclers/reprocessors only.
- x. All the fly ash shall be utilized as per Fly ash Notification, 1999 subsequently amended in 2003 and 2008. Efforts should be made to use fly ash maximum in making Pozollona Portland Cement (PPC).

- xi. Efforts shall be made to use low-grade lime, more fly ash and solid waste in the cement manufacturing.
- xii. An effort shall be made to use of high calorific hazardous waste in the cement kiln and necessary provision should be made accordingly.
- xiii. As proposed, green belt shall be developed in at least 33 % area in and around the cement plant as per the CPCB guidelines to mitigate the effects of air emissions in consultation with local DFO.
- xiv. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants should be implemented.
- xv. All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 19<sup>th</sup> July, 2012 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Lucknow.
- xvi. Based on the study report of socio economic survey and Public Hearing issues, revised action plan for 5% Enterprise Social Commitment (ESC) in a period of 10 years shall be submitted to the Ministry and Ministry's Regional Office at Lucknow. The ESC shall include a hospital, ITI institute, treated drinking water system for the nearby villages. Implementation of such program shall be ensured accordingly in a time bound manner.
- xvii. A study on the existing crop and soil quality shall be conducted and report submitted to the Ministry and Ministry's Regional Office at Lucknow within 1 year.

3.2.11 Resin {PF Resin 30 MTPM & MF Resin (100 MTPM) at Plot No. 9, Village Chandrada, Kadi, District Mehsana, Gujarat by **M/s Prabhu Creations Pvt. Ltd. - regarding EC**

The Committee noted that the consultant who prepared the EIA report is not accredited by QCI/NABET and deferred the proposal.

3.2.12 Laminated Sheets Manufacturing Unit along with Intermediate Products (Resins) at Sy. No. 451 to 453/P, Village Chandrala, Tehsil & District Gandhi Nagar, Gujarat by **M/s Noble Laminates Pvt. Ltd. - regarding EC**

The project authorities and their consultant, M/s Anand Consultants, Ahmedabad gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of Reference (TORs) awarded during the 17<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry-2) held during 22.12.2010 – 23.12.2010 for preparation of EIA/EMP. All the synthetic organic chemicals industry (basic organic, chemicals, other, synthetic organic chemicals and chemical Intermediates) located outside the industrial area/estate are listed at S. No. 5(f) under Category 'A' and appraised at the Central level.

M/s Noble Laminates Pvt. Ltd has proposed for Laminated Sheets Manufacturing Unit along with inter-mediate products (Resins) at Sy. No. 451 to 453/P, Village Chandrala, Tehsil & District Gandhi Nagar, Gujarat. Total plot area is 17,832 m<sup>2</sup> and Green belt will be developed in 7,526.14 m<sup>2</sup>. No forest land is involved. No court case/litigation is pending against the project. Project proponent confirmed that the project is not located in the critically /severely polluted area. No national park/ wild life sanctuary/ reserve forest is located within 10 Km. Total project cost is Rs. 8.00 Crores.

Following products will be manufactured:

S. No.	Products	Production Capacity
1	Lamination sheet	1,00,000 sheets/month
2	Melamine Formaldehyde	50 MTPM
3	Phenol Formaldehyde	170 MTPM
4	Urea Formaldehyde	30 MTPM

Power requirement (200 KVA) will be met from UGVCL and DG set (250 KVA) will be installed. Dust collector and stack will be provided to coal/agro waste fired IBR and thermic fluid heater. The water requirement from ground water source will be 22.91 m<sup>3</sup>/d. Industrial effluent (7.81 m<sup>3</sup>/d) will be treated in ETP and the treated water (3.4 m<sup>3</sup>/d) will be evaporated through steam jacketed evaporator. ETP Sludge will be sent to TSDF. Lubricating oil will be used for low grade Lubrication for machinery. Acoustic enclosure will be provided to control noise pollution.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 19.6.2012. The issues raised in the public hearing were regarding benefits to Sadra and Chandrala Villages due to the project which were addressed in the EIA/EMP report.

After detailed deliberations, the Committee found the EIA/EMP report adequate subject to submission of revised layout plan with green belt of 33% and min thickness of 15 m and suggested to stipulate following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i) Ambient air quality data should be collected as per NAAQS standards notified by the Ministry on 16<sup>th</sup> September, 2009.
- ii) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.
- iii) Stack of adequate height should be installed to oil fired boiler to disperse waste gases into atmosphere.
- iv) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits imposed by SPCB.
- v) Wet scrubber should be provided to control process emissions. Methanol should be recovered from the process area.
- vi) Total water requirement should not exceed 22.91 m<sup>3</sup>/d and prior permission should be obtained from the concerned Authority.
- vii) As proposed, Industrial effluent will be treated in ETP. Treated effluent should be reused/recycled within the factory premises. Water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB.
- viii) As proposed Phenol should be extracted/treated from the effluent before sending to the ETP.
- ix) The company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from SPCB should be obtained for disposal of

solid / hazardous waste in the TSDF. Measures should be taken for fire fighting facilities in case of emergency.

- x) Solvent management should be as follows :
- Reactor should be connected to chilled brine condenser system
  - Reactor and solvent handling pump should have mechanical seals to prevent leakages.
  - The condensers should be provided with sufficient Heat Transfer Area (HTA) and residence time so as to achieve more than 95% recovery.
  - Solvents should be stored in a separate space specified with all safety measures.
  - Proper earthing should be provided in all the electrical equipments wherever solvent handling is done.
  - Entire plant where solvents are used should be flame proof. The solvent storage tanks should be provided with breather valve to prevent losses.
- xi) As proposed, green belt should be developed in at least 33 % of the project area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xii) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- xiii) All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 19.6.2012 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bhopal.

**3.2.13 Dye Unit At Sy. No. 34, Village Paldi, Taluka Khambhat, District Anand, Gujarat by M/s Shreenathji Enterprise. - regarding EC.**

The Committee noted that the consultant who prepared the EIA report is not accredited by QCI/NABET and deferred the proposal.

**3.2.14 Proposed 2x4.9 MVA Ferro Alloys Plant (25,740 TPA, combination of Fe-Si, Si-Mn and Fe-Mn) at Village Lodsara, Tehsil Panposh, District Sundergarh in Orissa by M/s Thakur Prasad Sao & Sons Pvt. Limited- regarding EC.**

The project authorities and their consultant, M/s Environmental Research Services (India) Pvt. Ltd., Bhubaneswar gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of Reference (TORs) awarded during the 27<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry-1) held during 26.8.2011 to 27.8.2011 for preparation of EIA/EMP report. The Committee noted that the consultant is not accredited by QCI/NABET. However, proponent has submitted an order of Hon'ble High Court directing the concerned to permit the consultant to make presentations before EAC. The Ferro Alloy Plants are listed at S.No. 3(a) in Primary Metallurgical Industries under category 'A' of the Schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s Thakur Prasad Sao & Sons Pvt. Limited have proposed for 2x4.9 MVA Ferro Alloys Plant at Village Lodsara, Tehsil Panposh, District Sundergarh in Orissa. Total land requirement is 13.27 Acres, which is already acquired and around 33% of the total land will be developed as green belt by planting local species. No national park/ wild life sanctuary/ reserve forest is located within 10 Km. The cost of project is Rs.29.4 Crores and the capital cost towards environmental protection measures is Rs.40.0 Lacs. It was informed that, the unit has been constructed without EC, since SPCB did not mandate for EC at that time for the unit and similar other cases also. The Committee recommended that MoEF shall deal with the violation matter accordingly.

The following either or combination of products would be manufactured.

1. Ferro Silicon = 7,740 MTPA
2. Silico Manganese = 17,960 MTPA
3. Ferro Manganese = 25,740 MTPA

Mn. Ore, Mn. Slag, Cr. Ore, Quartz, Reductants, Dolomite, Electrode Paste, Casing sheet, M.S. Round, Lancing pipe and Oxygen are the raw materials that would be used. The power requirement is 9,141.05 KW and will be taken from State Electricity Grid. Stack height of 30.0 Meters from the ground level, Gas Cleaning Plant, Dust Extraction System, Fumes Extraction System, Smoke Hood followed by Bag Filters and Spark Arrester are the proposed air pollution control measures. Fugitive dust control will be as per the guidelines prescribed by the Central Pollution Control Board. Fugitive dust is generated during raw material handling (unloading, conveying, transporting, stacking etc.), vehicular movement, bagging and packing. Asphaltting or concreting the work area, of the plant controls the fugitive dust emissions. For control of fugitive dust, water spray arrangement is provided to spray water all around the coal stockpiles and in the coal conveyor system.

About 77 KLD of makeup water will be required for process cooling including sprinkling purpose to suppress the dust and for potable use. Ground water will be used with prior permission from Central Ground Water Authority. The "zero wastewater discharge concept" will be implemented and the entire wastewater after treatment will be recycled to the plant for various uses. No wastewater will be discharged outside the plant premises. Ferro Manganese Slag will be reused as raw material in the manufacture of Silico Manganese. Silico Manganese Slag will be used for road making or will be sold to the Brick Manufactures. Used oil will be disposed to authorized reprocessing units having valid authorization from Orissa State Pollution Control Board.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Odisha State Pollution Control Board on 17.4.2012. The issues raised in the public hearing were regarding provision of employment to the locals, CSR activities should be on top priority, drinking water facility, electricity etc. which were addressed in the EIA/EMP report.

After detailed deliberations, the Committee found the EIA/EMP report & its addendum adequate and suggested to stipulate following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

1. No charcoal shall be used as fuel. Pet coke shall be used as fuel instead of charcoal from unknown sources.
2. Continuous monitoring facilities for the process stacks and sufficient air pollution control equipments viz. fume extraction system with bag filters, ID fan and stack of adequate height to submerged arc furnace shall be provided to control emissions below 50 mg/Nm<sup>3</sup>.
3. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 shall be followed.
4. Secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed. The raw material storage shall be covered.
5. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the

State Pollution Control Board or described under the Environment (Protection) Act, 1986 whichever are more stringent. Leach ate study for the effluent generated and analysis should also be regularly carried out and report submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB.

6. The water requirement shall not exceed 77 m<sup>3</sup>/d. 'Zero' effluent discharge shall be strictly followed and no wastewater should be discharged outside the premises.
  7. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.
  8. Slag produced in Ferro Manganese (Fe-Mn) production shall be used in manufacture of Silico Manganese (Si-Mn). All the other ferro alloy slag shall be used in the preparation of building materials.
  9. No Ferro Chrome shall be manufactured without prior approval from the Ministry of Environment & Forests.
  10. Risk and Disaster Management Plan along with the mitigation measures should be prepared and a copy submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB within 3 months of issue of environment clearance letter.
  11. As proposed, green belt should be developed in at least 33 % of the project area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
  12. All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 17.4.2012 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bhubaneswar.
  13. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on locals need and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program shall be ensured accordingly in a time bound manner.
- 3.2.15 Enhancement of Cement Grinding capacity from 0.525 MTPA to 0.6 MTPA at Damodhar Cement Works, Village Madhukunda, Tehsil Raghunathapur, District Purulia, West Bengal by **M/s ACC Limited - regarding EC**

The project authorities and their consultant, M/s. Cholamandalam MS Risk Services Limited., Chennai, gave a detailed presentation on the salient features of the project and proposed environmental protection to be undertaken as per the Terms of Reference (TORs) accorded during the 19<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry-1) held during 22<sup>nd</sup> –23<sup>rd</sup> February 2011 for preparation of EIA/EMP report. All the Standalone Cement Grinding Units are listed at S.No. 3 (b) under Category 'B' of the schedule of EIA Notification, 2006. The proposal should have been appraised by SEIAA/SEAC, since the project site falls within 10 km. radius of Asansol, a critically polluted area, the proposal is appraised at the Central level.

M/s ACC Limited have proposed for capacity enhancement of their Damodhar Cement Works cement plant from 0.525 MTPA to 0.6 MTPA cement within the existing facilities at Village Madhukunda, Tehsil Raghunathapur District Purulia, West Bengal by

adopting minor modifications in the cement mill circuit. No additional cement grinding units and supporting utilities will be added to the existing facility. No additional land will be acquired for the capacity enhancement project. An area of 29.25 acres was developed as green belt in the existing facilities which is 38.8% of the total plant area. Additional 3,000 plants will be planted in next two years. National Park, Wildlife Sanctuary, Reserve forest and Biosphere Reserve are not located within the study area. Biharinath Protected Forest at 9 km on the South East direction and *Dandahit Protected Forest at 8.5 km on South West direction are located from the project site*. Total cost of the expansion project Rs. 3.5 Crores. An additional capital cost for environmental protection measures under capacity enhancement is Rs. 15 Lakhs. The existing 0.525 MTPA facility has been operating with a valid consent till 31<sup>st</sup> January 2013 to operate issued by West Bengal State Pollution Control Board.

The existing facility is a cement grinding unit. Major raw material required for the capacity enhancement of the cement grinding unit is clinker, which is sourced from ACC Plants located at Chaibasa, Bargarh, Jamul. Other raw materials are Gypsum & steel plant slag, which are sourced from Rajasthan and IISCO steel plant at Burnpur respectively. Fly ash will be sourced from locally available sources. The power requirement of existing cement grinding unit is 5.2 MW and an additional 0.3 MW would be required to meet the additional cement grinding capacity, which will be sourced from the state grid.

Pollution control equipments like ESP, Bag houses and Bag filters are maintaining the particulate matter emission concentration within the prescribed NAAQS in the existing facility. Clinker is stored in covered storage shed. An additional bag house dust collector in will be installed under the capacity enhancement program. The baseline study was conducted for the project from November 2011 to January 2012. As per the Ambient Air Quality Monitoring carried out, 98<sup>th</sup> Percentile value of PM<sub>2.5</sub>& PM<sub>10</sub> ranges between 19.2 to 23.5 µg/m<sup>3</sup> and 52.7 to 75.5 µg/m<sup>3</sup>, respectively. 98<sup>th</sup> Percentile value of SO<sub>2</sub>& NO<sub>x</sub> concentrations were found in the range of 10.6 to 13.1 µg/m<sup>3</sup> and 12.1 to 18.6 µg/m<sup>3</sup>, respectively. The max.incremental GLC for particulate matter will be in the order of 1.29 µg/m<sup>3</sup> and the resultant concentration is within the permissible limit. No additional water will be required for the capacity enhancement. No industrial wastewater will be generated in the Cement grinding Plant. No solid waste will be generated from the proposed capacity enhancement. Dust collected from the various pollution control equipments is being recycled back in the process in the existing plant.

The proposal was exempted from public hearing by categorizing in B-2 category due to use of energy efficient technology, no clinker manufacturing at the proposed site, no sensitive area within 10 km. radius, 'zero' effluent discharge, utilization of all the solid waste in the process itself including utilization of fly ash etc.

After detailed deliberations, the Committee found the EIA/EMP report adequate and suggested to stipulate following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i. Particulate emissions shall be controlled within 50 mg/Nm<sup>3</sup> by installing adequate air pollution control system viz. Bag filters and stacks of adequate height etc. Data on ambient air, fugitive and stack emissions shall be submitted to the Ministry's Regional Office at Bhubaneswar, State Pollution Control Board (SPCB) and CPCB regularly.
- ii. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be followed.

- iii. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines/Code of Practice issued by the CPCB should be followed.
- iv. The company shall install adequate dust collection and extraction system to control fugitive dust emissions at various transfer points, raw mill handling (unloading, conveying, transporting, stacking), vehicular movement, bagging and packing areas etc. All the raw material stock piles should be covered. A closed clinker stockpile system shall be provided. All conveyers should be covered with GI sheets. Covered sheds for storage of raw materials and fully covered conveyers for transportation of materials shall be provided besides coal, cement, fly ash and clinker shall be stored in silos. Pneumatic system shall be used for fly ash handling.
- v. Asphaltting/concreting of roads and water spray all around the stockyard and loading/unloading areas in the cement plant shall be carried out to control fugitive emissions. Regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RSPM such as haul road, loading and unloading points, transfer points and other vulnerable areas. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
- vi. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash should be transported in the closed containers only and should not be overloaded. Vehicular emissions should be regularly monitored.
- vii. No additional water shall be required for the proposed expansion. All the treated wastewater should be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge should be adopted.
- viii. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- ix. All the bag filter dust, raw meal dust, coal dust, clinker dust and cement dust from pollution control devices should be recycled and reused in the process used for cement manufacturing. Spent oil and batteries should be sold to authorized recyclers / reprocessors only.
- x. Green belt shall be developed in at least 33 % area in and around the cement plant as per the CPCB guidelines to mitigate the effects of air emissions in consultation with local DFO.
- xi. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on locals need and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program should be ensured accordingly in a time bound manner.

3.2.16 Expansion of Steel Manufacturing Unit at Village Ajnali, Opp. Focal Point, Mandi Gobindgarh, District Fatehgarh Sahib, Punjab by **M/s Bhawani Industries Limited-regarding EC**

The Committee noted that the consultant who prepared the EIA report is not accredited by QCI/NABET and deferred the proposal.

### 3.2.17 Integrated Steel Plant (0.6 MTPA) at Villages Dutunur Kaval & Kanave Aladahalli, Tehsil Channarayapatna, District Hassan in Karnataka by **M/s Mineral Enterprises Limited (MEL) - regarding TORs**

The project authorities and their consultant, M/s MECON, Ranchi gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA/EMP report. The steel plants are listed at S. No. 3(a) in primary metallurgical industry under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s Mineral Enterprises Limited (MEL) have proposed for Integrated Steel Plant (0.6 MTPA) at Villages Dutanurkaval & Kanave Aladahalli, Tehsil Channarayapatna, District Hassan in Karnataka. The project area is 250 acres, which has been acquired by KIADB, Govt. of Karnataka and handed over to MEL for setting up the proposed project. Green belt will be developed in 33% of the total area. The total cost of project (phase I & II) is approx. Rs. 3,372 crores and the total cost towards environment protection measures is approx. Rs. 110 crores.

The following facilities will be installed in the proposed project:

#### **Phase 1 (Beneficiation & Pellet plant)**

1. RMHS
2. 1.0 Mt/yr Beneficiation plant
3. 0.60 MTPA Pellet Plant (Grate kiln process)
4. Auxiliaries and Services as required

#### **Phase 2 (Integrated Steel Plant)**

1. Augmentation of RMHS
2. Coal Gasification plant
3. 1 x 2200 t/d Midrex DRI
4. 85 t EAF & LF units with future provision of VD unit
5. 1 x 4 strand Billet caster
6. Bar & Rod Mill
7. 2 x 30 MW Captive Power Plant
8. 1 x 850 t/d Oxygen plant
9. Auxiliaries and Utilities as required

Dust collection equipments such as Cyclone separators, bag filters, ESP will be installed to control particulate matter. Chimney heights will be as per CPCB norms. Gases produced from DRI plant and EAF will be reutilized. The total water requirement (phase I & II) is 1,355 m<sup>3</sup>/hr. The process and domestic effluent would be treated in ETP & STP respectively and the treated water will be reused. Rain water harvesting will be implemented. The solid waste would be reutilized to the extent possible. Steel scrap will be melted in EAF and slag from EAF will be granulated and sold as a by-product.

After detailed deliberations, the Committee prescribed following TORs for undertaking detailed EIA/EMP study:

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. A line diagram/flow sheet for the process and EMP

4. Coal linkage documents
5. Certificate from the state govt. that no roads are passing through the project site.
6. A copy of the mutual agreement for land acquisition signed with land oustees.
7. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. A photograph of the site should also be included.
8. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
9. Topography of the area should be given clearly indicating whether the site requires any filling. If so, details of filling, quantity of fill material required, its source, transportation etc. should be given.
10. Location of national parks/wildlife sanctuary/reserve forests within 10 km. radius should specifically be mentioned. A map showing land use/land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.
11. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
12. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates of the plant site as well as ash pond with topo sheet should also be included.
13. Details and classification of total land (identified and acquired) should be included.
14. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
15. Permission from the tribals, if tribal land has also to be acquired along with details of the compensation plan.
16. Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department. .
17. A list of industries containing name and type in 25 km radius should be incorporated.
18. Residential colony should be located in upwind direction.
19. List of raw material required, analysis of all the raw materials and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
20. Petrological and Chemical analysis and other chemical properties of raw materials used (with GPS location of source of raw material) i.e. ores, minerals, rock, soil, coal, iron, dolomite quartz etc. using high definition and precision instruments mentioning their detection range and methodology such Digital Analyzers, AAS with Graphite furnace, ICPMS, MICRO-WDXRF, EPMA, XRD, Nano studies or at least as per ISO-10500 and WHO norms. These analysis should include trace element and metal studies like Cr (VI) Ni, Fe, As, Pb, Zn, Hg, Se, S etc. Presence of radioactive elements (U, Th etc.), if applicable, should also be included..
21. Petrography, grain size analysis and Major element analysis of raw material and soil from project site and raw material should be done on the same parameters along with analysis for SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, MgO, MnO, K<sub>2</sub>O, CaO, FeO, Fe<sub>2</sub>O<sub>3</sub>, P<sub>2</sub>O<sub>5</sub>, H<sub>2</sub>O, CO<sub>2</sub>.
22. If the rocks, ores, raw material has trace elements their petrography, ore microscopy, XRD, elemental mapping EPMA, XRF is required to quantify the amount present in it and hence future risk involved while using it and management plan.

23. Action plan for excavation and muck disposal during construction phase.
24. Studies for fly ash, muck, slurry, sludge material disposal and solid waste generated, if the raw materials used has trace elements and a management plan should also be included.
25. Manufacturing process details for all the plants should be included.
26. Mass balance for the raw material and products should be included.
27. Energy balance data for all the components of steel plant including proposed power plant should be incorporated.
28. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
29. Data generated in the last three years i.e. air, water, raw material properties and analysis (major, trace and heavy metals), ground water table, seismic history, flood hazard history etc.
30. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
31. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
32. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
33. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
34. Air quality modeling for steel plant for specific pollutants needs to be done. APCS for the control of emissions from the kiln and WHRB should also be included to control emissions within 50 mg/Nm<sup>3</sup>.
35. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be included.
36. Ambient air quality monitoring modeling along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
  - i) Emissions (g/second) with and without the air pollution control measures
  - ii) Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height using SODAR) on hourly basis
  - iii) Model input options for terrain, plume rise, deposition etc.
  - iv) Print-out of model input and output on hourly and daily average basis
  - v) A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
  - vi) Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
  - vii) Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
  - viii) No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
  - ix) Graphs of monthly average daily concentration with down-wind distance
  - x) Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
  - xi) Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.

37. A plan for the utilization of waste/fuel gases in the WHRB for generating power have to be set out.
38. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided. The alternate method of raw material and end product transportation should also be studied and details included.
39. One season data for gaseous emissions other than monsoon season is necessary.
40. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> May, 2008.
41. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
42. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included. Information regarding surface hydrology and water regime should be included.
43. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
44. Ground water modeling showing the pathways of the pollutants should be included
45. Column leachate study for all types of stockpiles or waste disposal sites at 20°C-50°C should be conducted and included.
46. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
47. Permission for the drawl of water from the State Irrigation Department or concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
48. A note on the impact of drawl of water on the nearby River during lean season.
49. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
50. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean River discharge as well as flood occurrence frequency.
51. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
52. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
53. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
54. Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from any other source should be included.
55. The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, and lakes), sub-surface and ground water with a monitoring and management plans.
56. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.

57. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly slag from all the sources, char and fly ash. Copies of MOU regarding utilization of ash should also be included.
58. Details of evacuation of ash, details regarding ash pond impermeability and whether it would be lined, if so details of the lining etc. need to be addressed.
59. A note on the treatment, storage and disposal of all type of slag should be included. Identification and details of land to be used for SMS slag disposal should be included. Details of secured land fill as per CPCB guidelines should also be included.
60. End use of solid waste and its composition should be covered. Toxic metal content in the waste material and its composition should also be incorporated particularly of slag.
61. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
62. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
63. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
64. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
65. Occupational health:
  - a) Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
  - b) Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
  - c) Annual report of health status of workers with special reference to Occupational Health and Safety.
  - d) Plan and fund allocation to ensure the occupational health & safety of all contracts and sub-contract workers.
  - e) Action plan for the implementation of OHS standards as per OSHAS/USEPA.
66. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
67. Impact of the project on local infrastructure of the area such as road network and whether any additional infrastructure needs to be constructed and the agency responsible for the same with time frame.
68. Environment Management Plan (EMP) to mitigate the adverse impacts due to the project along with item wise cost of its implementation. Total capital cost and recurring cost/annum for environmental pollution control measures should be included.
69. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines must be prepared.
70. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on public hearing issues and item-wise

details along with time bound action plan should be included. Socio-economic development activities need to be elaborated upon.

71. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart.
72. A note on identification and implementation of Carbon Credit project should be included.
73. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof should also be included.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report shall be submitted to the Karnataka State Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

The TORs prescribed shall be valid for a period of two years for submission of the EIA/EMP reports along with Public Hearing Proceedings.

3.2.18 EC for the proposed Sponge Iron Production Unit at Village Haraginadoni, Distt. Bellary, Karnataka by **M/s Sri Subramanya Sponge Iron Pvt. Ltd. - regarding TORs**

The proponent did not attend the meeting. The Committee decided to consider the project as and when requested by the proponent.

3.2.19 Proposed Iron ore Beneficiation Plant (1.2 MTPA) and Pellet Plant (1.2 MTPA) at Village Kotegal, Tehsil Badami, District Bagalkot in Karnataka by **M/s. KNK Corp Pvt. Ltd. - regarding TORs**

The project authorities and their consultant, M/s. METAMORPHOSIS, Bengaluru gave a detailed presentation on the salient features of the project and proposed environmental protection measures, to be undertaken along with the draft Terms of Reference for the preparation of EIA/EMP Report. The primary metallurgical industry is listed at S. No. 3(a) under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s. KNK Corp Pvt. Ltd. has proposed for a beneficiation plant of capacity 1.2 MTPA & pelletisation plant of capacity 1.2 MTPA to be set up at Village Kotegal, Tehsil Badami, District Bagalkot in Karnataka. The project will be established on 524 acres of barren land which will be acquired through Karnataka Industrial Area Development Board (KIADB) out of which 33% area will be developed under green belt. The project site is not located within 10 km of Critically Polluted Area/National Park/Wildlife Sanctuary. RFs are located within 10 km radius. Total cost of the project is Rs. 569.46 Crores. No litigation or court case is pending against the project and/or land.

Iron ore, Coal and Bentonite will be used as the major raw materials in the plant process. The total power requirement will be about 35 MW, which will be met from the State Electricity Board GESCOM (State Grid). The emissions from handling of raw materials and products will be controlled by dust suppression system. All the transfer points will be provided with dry fogging system. The emissions from the production processes will be passed through bag filters to retain flue dust particles. The cleaned gases will be discharged to the atmosphere through stacks of adequate height. Total water requirement will be 3,600

m<sup>3</sup>/d, which will be met from the Krishna River upstream. The water balance system will be designed for Zero Discharge wherein all discharges will be treated and reused in the plant.

The proponent requested the Committee for baseline data collection during winter season 2012-13 i.e. December 2012 to February 2013, which was agreed to.

After detailed deliberations, the Committee prescribed following TORs for undertaking detailed EIA/EMP study:

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. A line diagram/flow sheet for the process and EMP
4. Coal linkage documents
5. A copy of the mutual agreement for land acquisition signed with land oustees.
6. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. A photograph of the site should also be included.
7. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
8. Topography of the area should be given clearly indicating whether the site requires any filling. If so, details of filling, quantity of fill material required, its source, transportation etc. should be given.
9. Location of national parks/wildlife sanctuary/reserve forests within 10 km. radius should specifically be mentioned. A map showing land use/land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.
10. Revised project area and layout plan shall be submitted after exclusion of the project area on one side of the nalah/drainage passing through the project site and maintaining 33% of green belt.
11. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
12. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates of the plant site as well as ash pond with topo sheet should also be included.
13. Details and classification of total land (identified and acquired) should be included.
14. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
15. Permission from the tribals, if tribal land has also to be acquired along with details of the compensation plan.
16. Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department. .
17. A list of industries containing name and type in 25 km radius should be incorporated.
18. Residential colony should be located in upwind direction.
19. List of raw material required, analysis of all the raw materials and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
20. If the rocks, ores, raw material has trace elements their petrography, ore microscopy, XRD, elemental mapping EPMA, XRF is required to quantify the

amount present in it and hence future risk involved while using it and management plan.

21. Action plan for excavation and muck disposal during construction phase.
22. Studies for fly ash, muck, slurry, sludge material disposal and solid waste generated, if the raw materials used has trace elements and a management plan should also be included.
23. Manufacturing process details for all the plants should be included.
24. Mass balance for the raw material and products should be included.
25. Energy balance data for all the components of steel plant including proposed power plant should be incorporated.
26. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
27. Data generated in the last three years i.e. air, water, raw material properties and analysis (major, trace and heavy metals), ground water table, seismic history, flood hazard history etc.
28. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
29. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
30. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
31. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
32. Air quality modelling for steel plant for specific pollutants needs to be done. APCS for the control of emissions from the kiln and WHRB should also be included to control emissions within 50 mg/Nm<sup>3</sup>.
33. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be included.
34. Ambient air quality monitoring modeling along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
  - i) Emissions (g/second) with and without the air pollution control measures
  - ii) Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height) on hourly basis
  - iii) Model input options for terrain, plume rise, deposition etc.
  - iv) Print-out of model input and output on hourly and daily average basis
  - v) A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
  - vi) Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
  - vii) Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
  - viii) No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
  - ix) Graphs of monthly average daily concentration with down-wind distance
  - x) Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.

- xi) Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
- 35. A plan for the utilization of waste/fuel gases in the WHRB for generating power have to be set out.
- 36. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided. The alternate method of raw material and end product transportation should also be studied and details included.
- 37. One season data for gaseous emissions other than monsoon season is necessary.
- 38. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> May, 2008.
- 39. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
- 40. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included. Information regarding surface hydrology and water regime should be included.
- 41. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
- 42. Ground water modeling showing the pathways of the pollutants should be included
- 43. Column leachate study for all types of stockpiles or waste disposal sites at 20°C-50°C should be conducted and included.
- 44. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
- 45. Permission for the drawl of water from the State Irrigation Department or concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
- 46. A note on the impact of drawl of water on the nearby River during lean season.
- 47. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
- 48. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean River discharge as well as flood occurrence frequency.
- 49. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
- 50. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
- 51. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
- 52. Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from any other source should be included.
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54. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
55. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly slag from all the sources, char and fly ash. Copies of MOU regarding utilization of ash should also be included.
56. Details of evacuation of ash, details regarding ash pond impermeability and whether it would be lined, if so details of the lining etc. need to be addressed.
57. A note on the treatment, storage and disposal of all type of slag should be included. Identification and details of land to be used for SMS slag disposal should be included. Details of secured land fill as per CPCB guidelines should also be included.
58. End use of solid waste and its composition should be covered. Toxic metal content in the waste material and its composition should also be incorporated particularly of slag.
59. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
60. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
61. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
62. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
63. Occupational health:
  - a) Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
  - b) Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
  - c) Annual report of health status of workers with special reference to Occupational Health and Safety.
  - d) Plan and fund allocation to ensure the occupational health & safety of all contracts and sub-contract workers.
64. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
65. Impact of the project on local infrastructure of the area such as road network and whether any additional infrastructure needs to be constructed and the agency responsible for the same with time frame.
66. Environment Management Plan (EMP) to mitigate the adverse impacts due to the project along with item wise cost of its implementation. Total capital cost and recurring cost/annum for environmental pollution control measures should be included.
67. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on public hearing issues and item-wise

details along with time bound action plan should be included. Socio-economic development activities need to be elaborated upon.

68. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart.
69. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof should also be included.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report shall be submitted to the Karnataka State Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

The TORs prescribed shall be valid for a period of two years for submission of the EIA/EMP reports along with Public Hearing Proceedings.

### 3.2.20 Expansion of existing 4 x 100 TPD Sponge Iron Plant to 50,000 TPA Steel Plant/SMS and addition of 15 MW Captive Power Plant at Village Senegarha, Dist. Hazaribagh, Jharkhand by **M/s Anindita Trades & Investment Ltd. - regarding TORs**

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA/EMP report. Although the proposed expansion project activity falls under Category B of the Schedule of EIA Notification, 2006, since it is an expansion of a Category A project, the proposal is appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s Anindita Trades & Investment Ltd. have proposed for expansion of existing 4 x 100 TPD Sponge Iron Plant to 50,000 TPA Steel Plant/SMS and addition of 15 MW Captive Power Plant at Village Senegarha, Dist. Hazaribagh, Jharkhand. Total Project Area is 30 acres (12.14 hectares). The proposed Steel making section and CPP will be established in the unutilised area within the existing area under possession for sponge iron plant. No forest land is involved. No national park/sanctuary is located within 10 Km. No R&R is involved. Damodar River (6.0 km, SW), Maramgarha Nala (2.8 km, W), Naikari (7.9 km, SW), Dhobdhab Nala (7.3 km, S), Chothe Nadi (8.7 km, NE), Serbhukl Nala (8.5 km, SSE), Bahura Nala (5.0 km, NE), Pararu Nala (1.1 km, E), Ratua Nala (6.2 km, E) flow within 10 km radius of the proposed site. PF near Hosir (0.5, NW), PF near Asnagarha (6.3 km, W), PF near Kusumbera (5.0 km, NE), PF near Bundu (4.2 km, S), PF near Indraband (9.5 km, NNE), PF near Lapanga (9.4 km, SSW), PF near Kuju colony (9.2 km, NE), Naisarai PF (9.0 km, SE), PF near Tilaiya (6.3 km, ESE), Rauta PF (10.9 km, SE), PF near Orla (2.9 km, E), Murpa PF (9.8 km, E), Bongawar PF (7.0 km, E), Kuju PF (7.0 km, E), Aswa PF (8.4 km, WNW), PF near Lukia 6.5 km, WNW) and PF near Balsugara (3.9 km, N) are the forests present in 10 km radius of the project site. Total cost of the project is estimated as Rs. 75.0 Crores.

Raw materials required for the power plant include Coal Char (19,200 TPA), Coal dust (15,360 TPA) and fresh coal (2,000 TPA). Raw material for steel making section includes sponge iron (57,000 TPA), steel scrap (11,500 TPA), molten metal (60,000 TPA) and billet (50,000 TPA). Total water requirement for the proposed project will be 115 cum/hr and will be sourced from the Damodar River. The power requirement of 15 MW will be met from the proposed CPP.

Air pollution control equipment such as ESPs, bag filters will be provided and the emissions will be restricted within the standards. Spent oil will be stored in closed containers in storage yard with concrete flooring and mechanical handling (through pumps). Surplus oil, if any, will be removed by means of oil traps and skimming devices and finally sold to the authorized recycling vendors. Entire wastewater from the SMS and CPP complex shall be treated and reused for afforestation, green belt, sprinkling and dust suppression. There shall be no liquid waste discharge from the Plant premises except during monsoon when the sprinkling and watering demand will be almost negligible. The main solid waste generated would be bottom and fly ash in 20:80 ratio. The ash will be used to the extent possible in cement plants, brick manufacturing, as fill material or disposed in abandoned mine areas. Provision will be made for emergency ash storage.

After detailed deliberations, the Committee prescribed following TORs for undertaking detailed EIA/EMP study:

1. Executive summary of the project.
2. Photographs of the existing and proposed plant area.
3. A certified report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
4. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
5. A line diagram/flow sheet for the process and EMP
6. Coal linkage documents
7. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s).
8. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
9. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
10. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
11. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing landuse/landcover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.
12. A list of industries within 10 km radius of the plant area.
13. Details and classification of total land (identified and acquired) should be included.
14. Project site layout plan showing raw materials and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
15. List of raw material required and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
16. Quantification & Characterization of solid /hazardous waste & its action plan for management should be included.
17. Mass balance for the raw material and products should be included.

18. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
19. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
20. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
21. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
22. Ambient air quality as per National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be included.
23. Air Quality Impact Prediction Modelling based on ISCST-3 or the latest models.
24. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
25. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> May, 2008.
26. Presence of aquifer/aquifers within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
27. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.
28. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
29. 'Permission' for the drawl of water should be obtained. Water balance data must be provided.
30. A note on the impact of drawl of water on the nearby River during lean season.
31. Action plan for rainwater harvesting measures.
32. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
33. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
34. Pretreatment of raw water, treatment plant for waste water should be described in detail. Design specifications may be included.
35. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
36. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly slag from all the sources should also be included.
37. Identification and details of land to be used for all type of slag disposal in the secured land fill as per CPCB guidelines should be included.
38. End use of solid waste and its composition should be covered. Toxic metal content in the waste material and its composition should also be incorporated particularly of slag.
39. Provision of Toxic Chemical Leachability Potential (TCLP) test for the slag and its end use should be included.
40. Action plan for the green belt development plan in 33 % area should be included.
41. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
42. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
43. Occupational health:

- a) Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
  - b) Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
  - c) Annual report of health status of workers with special reference to Occupational Health and Safety.
  - d) Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
44. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing proceedings and item-wise details along with time bound action plan should be included. Socio-economic development activities need to be elaborated upon.
45. Total capital cost and recurring cost/annum for environmental pollution control measures should also be included.
46. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
47. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report shall be submitted to Jharkhand State Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

The TORs prescribed shall be valid for a period of two years for submission of the EIA/EMP reports, after public consultation.

3.2.21 EC for the expansion of the existing RE-rolled Steel Product Unit (Under Construction) and Proposed Ferro Alloys Plant/Pig Iron Plant Unit Located in the Urla Industrial area, Urla, District Raipur, Chhattisgarh by **M/s Shri Siddhi Vinayak Dhatu Udyog Pvt. Ltd.- regarding TORs.**

The Committee noted that the proposal is incomplete and deferred the proposal. The details of existing unit including photos etc. shall also be submitted.

3.2.22 Proposed capacity expansion of existing 200 TPD cement Plant to 2,500 TPD cement Plant (Phase1: 300 TPD expansion and Phase II: 2,000 TPD expansion) and mining of limestone in 29.4141 hectares of land at village Khrew, Tehsil Pampore, District Pulwama, J &K by **M/s Cemtac Cement Pvt. Ltd.- regarding TORs**

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA/EMP report. Although the proposed project

activity falls under Category B of the Schedule of EIA Notification, 2006, since the project site falls within 10 km radius of Dachigam National Park, the proposal is appraised by the Expert Appraisal Committee (Industry) of MoEF only for the cement plant.

M/s Cemtac Cement Pvt. Ltd. have proposed for capacity expansion of existing 200 TPD cement Plant to 2500 TPD cement Plant (Phase I: 300 TPD expansion and Phase II: 2000 TPD expansion) at village Khrew, Tehsil Pampore, District Pulwama, J &K. The existing project area is 25 acres and an additional 37.5 acres is required for the proposed expansion. Dachigam National Park is located within 10 km radius of the project site. The total expansion project cost is Rs. 426 crores.

Limestone, coal/pet coke, gypsum/clay and iron dust are the raw materials. The total power and water requirement for expansion are 18 MW and 165 KLD respectively. Multiple cyclone separator, Bag filter, wet scrubber and ESP are the APCD that will be installed. Domestic effluent will be treated in septic tank and disposed for irrigation purpose. Solid waste generated will be reused in cement production. Use oil will be sold to authorized recyclers.

After detailed deliberations, the Committee prescribed following TORs for undertaking detailed EIA/EMP study for the Cement Plant. **For mining, the TORs shall be obtained from the EAC (mining):**

1. Executive summary of the project
2. Photographs of the existing and proposed plant area.
3. A certified report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
4. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
5. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s).
6. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, from the Standing Committee of the National Board for Wildlife as the project is located within 10 Km of Dachigam National Park.
7. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing land use / land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc. in 10 km of the project site.
8. A map duly authenticated by the Chief Wild Life Warden showing the location of national park, wildlife sanctuaries etc. vis-à-vis the project location including the cement plant and the recommendations or comments of Chief Wild Life Warden.
9. A line diagram/flow sheet for the process and EMP
10. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
11. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
12. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-

- 6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
13. Project site layout plan showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
  14. Details and classification of total land (identified and acquired) should be included.
  15. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
  16. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
  17. Permission and approval for the use of forest land and recommendations of the State Forest Department regarding impact of proposed expansion on the surrounding reserve forests, if applicable, should be included.
  18. A list of industries containing name and type in 10 km radius shall be incorporated.
  19. Residential colony should be located in upwind direction.
  20. List of raw material required and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
  21. If the rocks, ores, raw material has trace elements their petrography, ore microscopy, XRD, elemental mapping EPMA, XRF is required to quantify the amount present in it and hence future risk involved while using it and management plan.
  22. Studies for fly ash, muck disposal, slurry, sludge material and solid waste generated should also be included, if the raw materials used has trace elements and a management plan.
  23. Manufacturing process details for all the cement plant, captive power plant and mine should be included.
  24. Possibility of installation of WHRB will be explored and details included
  25. Mass balance for the raw material and products should be included.
  26. Energy balance data for all the components including proposed power plant should be incorporated.
  27. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
  28. Sources of secondary emissions, its control and monitoring as per the CPCB guidelines should be included. A full chapter on fugitive emissions and control technologies should be provided.
  29. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> May, 2008.
  30. Vehicular pollution control and its management plan should be submitted.
  31. A write up on use of high calorific hazardous wastes from all the sources in kiln and commitment regarding use of hazardous waste should be included.
  32. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
  33. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
  34. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.

35. Air quality modeling for all the plants proposed including mine for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm<sup>3</sup> should be included. Cumulative impacts of cement plant, Captive Power Plant and mines on the ambient air quality shall be assessed.
36. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be included.
37. Ambient air quality monitoring modeling along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
  - i) Emissions (g/second) with and without the air pollution control measures
  - ii) Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height) on hourly basis
  - iii) Model input options for terrain, plume rise, deposition etc.
  - iv) Print-out of model input and output on hourly and daily average basis
  - v) A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
  - vi) Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
  - vii) Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
  - viii) No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
  - ix) Graphs of monthly average daily concentration with down-wind distance
  - x) Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
  - xi) Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
38. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
39. One season data for gaseous emissions other than monsoon season is necessary.
40. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
41. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.
42. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
43. Ground water modeling showing the pathways of the pollutants should be included
44. Column leachate study for all types of stockpiles or waste disposal sites, at 20 °C-50 °C should be conducted and included.
45. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.

46. Permission for the drawl of water from the concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
47. A note on the impact of drawl of water on the nearby River during lean season.
48. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
49. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
50. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
51. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
52. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
53. The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, lakes), sub-surface and ground water with a monitoring and management plans.
54. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
55. Action plan for solid/hazardous waste generation, storage, utilization and disposal. A note on the treatment, storage and disposal of all type of solid waste should be included. End use of solid waste viz. fly ash etc. and its composition should be covered.
56. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
57. Action plan for the green belt development plan in 33 % area should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
58. A scheme for rainwater harvesting has to be put in place. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well. Efforts should be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.
59. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
60. Action plan for the green belt development plan in 33 % area should be included. The green belt should be around the project boundary and a scheme for greening of the traveling roads should also be incorporated. All rooftops/terraces should have some green cover.
61. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
62. Disaster Management Plan including risk assessment & damage control needs to be addressed and included. Landslide hazard map and mitigation plan, Earthquake history and management plan should be submitted.
63. Occupational health:
  - a) Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,

- b) Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
  - c) Annual report of health status of workers with special reference to Occupational Health and Safety.
  - d) Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
64. Plan for the implementation of the recommendations made for the cement plant in the CREP guidelines must be prepared.
  65. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
  66. A note on identification and implementation of Carbon Credit project should be included.
  67. Total capital cost and recurring cost/annum for environmental pollution control measures.
  68. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
  69. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report shall be submitted to the State Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

The TORs prescribed shall be valid for a period of two years for submission of the EIA/EMP report including public hearing proceedings.

### 3.2.23 Expansion of existing Sponge Iron Plant and CPP by installation of 2 x 9 MVA Submerged Arc Furnaces at Village Ikra, Jamuria, Jamuria Industrial Estate, District Burdwan in West Bengal by **M/s Bhagwati Sponge (P) Ltd.- regarding TORs**

The project authorities and their consultant, M/s Envirotech East Pvt. Ltd., Kolkata gave a detailed presentation on the salient features of the project and proposed environmental protection measures, to be undertaken along with the draft Terms of Reference for the preparation of EIA/EMP Report. The ferro alloy plants are listed at S.No. 3(a) in Primary Metallurgical Industries under category A of Schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s Bhagwati Sponge Pvt. Ltd. has proposed for the Installation of Ferro alloys Plant in the existing Sponge Iron Plant and CPP at village Ikra, Jamuria, Jamuria Industrial Estate, District Burdwan in West Bengal. The proposed project will be installed in 3 acres (only for Plant & Machineries, excluding greenbelt) of land within the existing plant area of 19.8 acres. Green belt will be developed in 33% area of the total land. There is no National Park, Wildlife Sanctuary & Reserve Forest within 10 km radius of the Project Site. Ajoy River is flowing at 7.5 km while Damodar River is passing at 10.5 km w.r.t. the project site. Asansol town is around 14 km from the project site. Total cost of the project is Rs. 25.78 Crores.

The existing as well as proposed units along with their capacities and products are as follows:

UNITS	CAPACITY	PRODUCT
<b>EXISTING PLANT SCENARIO</b>		
Sponge Iron Plant (2 x 100 TPD)	60,000 TPA	Sponge Iron
Captive Power Plant * (12 MW)	4 MW (WHRB Based)	Power
	8 MW (AFBC Based)	
<b>PROPOSED PLANT</b>		
Ferro Alloys Plant (2x9 MVA SAFs)	20,460 TPA	Ferro Manganese or
	14,850 TPA	Silico Manganese or
	6,600 TPA	Ferro Silicon or
	24,750 TPA	Pig Iron

\* - Under Construction

The total power requirement will be around 20 MW, which will be met from Captive Power Plant and Damodar Valley Corporation (DVC) supply. Adequate air pollution control measures like installation of bag filters, dust suppression system and stack of adequate height at relevant points will be implemented. The emissions from handling of raw materials and products will be controlled by dust suppression system. The emissions from the production processes will be passed through bag filters to retain flue dust particles. The cleaned gases will be discharged to the atmosphere through stack of adequate height.

Total water requirement for the proposed project will be 348 m<sup>3</sup>/d and will be supplied by Asansol Durgapur development Authority (ADDA) from Ajoy River. There will be no discharge of Industrial Effluent (zero discharge plant). Domestic wastewater will be treated in Septic tank - Soak pit system. Fe-Mn slag will be used in the manufacture of Si-Mn. Slag generated during Silico Manganese production will be used for road construction / paver block making.

Public hearing is not required as per Para 7(i) III (b) of EIA Notification, 2006 as the project is located in notified Jamuria industrial area. EC was accorded to Jamuria Industrial Estate.

After detailed deliberations, the Committee prescribed following TORs for undertaking detailed EIA/EMP study:

1. Executive summary of the project.
2. Photographs of the existing and proposed plant area.
3. A certified report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
4. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.

5. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s)
6. A line diagram/flow sheet for the process and EMP
7. Coal linkage documents
8. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
9. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
10. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
11. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing land use/land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.
12. A list of industries within 10 km radius of the plant area.
13. Details and classification of total land (identified and acquired) should be included.
14. Project site layout plan showing raw materials and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
15. List of raw material required, Chemical analysis of all the raw materials including Trace Elements and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
16. Quantification & Characterization of solid /hazardous waste & its action plan for management should be included.
17. Mass balance for the raw material and products should be included.
18. Energy balance data for all the components of ferro alloy plant should be incorporated.
19. Design details of Ferro Alloy Plant and manufacturing process details should be included.
20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
21. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out including cumulative Impact of the surrounding industries.
22. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
23. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
24. Air quality modeling for ferro alloy plant for specific pollutants needs to be done. APCS for the control of emissions should also be included to control emissions within 50 mg/Nm<sup>3</sup>.
25. Ambient air quality as per National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be included.

26. Air Quality Impact Prediction Modeling based on ISCST-3 or the latest models.
27. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
28. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> May, 2008.
29. Presence of aquifer/aquifers within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
30. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.
31. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
32. 'Permission' for the drawl of water should be obtained. Water balance data must be provided.
33. A note on the impact of drawl of water on the nearby River during lean season.
34. Action plan for rainwater harvesting measures.
35. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
36. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
37. Pretreatment of raw water, treatment plant for waste water should be described in detail. Design specifications may be included.
38. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
39. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly slag from all the sources should also be included. Land filling is not allowed.
40. End use of solid waste and its composition should be covered. Toxic metal content in the waste material and its composition should also be incorporated particularly of slag.
41. Provision of Toxic Chemical Leachability Potential (TCLP) test for the slag and its end use should be included.
42. Commitment that no Ferro chrome will be manufactured without prior approval of the Ministry.
43. Action plan for the green belt development plan in 33 % area should be included.
44. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
45. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
46. Occupational health:
  - a) Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
  - b) Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.

- c) Annual report of health status of workers with special reference to Occupational Health and Safety.
  - d) Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
47. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
48. Total capital cost and recurring cost/annum for environmental pollution control measures should also be included.
49. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance. Public hearing is not required as per Para 7(i) III (b) of EIA Notification, 2006 as the project is located in notified industrial area.

The TORs prescribed shall be valid for a period of two years for submission of the EIA/EMP Report.

**3.2.24 Proposed Expansion of Induction Furnace & Rolling mill in existing plant premises of Plot No. 29, APIIC Industrial Park Gollapuram, Gollapuram Village, Hindupur Mandal, Ananthapur District, Andhra Pradesh by M/s Hindupur Steel & Alloys Pvt. Ltd. - regarding TORs**

The project authorities and their consultant, M/s Pioneer Enviro Laboratories & Consultants Pvt. Ltd., Hyderabad gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft TORs for preparation of EIA/EMP report. Although the proposed project activity falls under Category B of the Schedule of EIA Notification, 2006, since the project site falls within 10 km radius of interstate boundary of Karnataka, the proposal is appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s Hindupur Steels & Alloys Pvt. Ltd. have proposed for expansion of Induction Furnace & Rolling Mill in the existing plant premises of Plot No. 29, APIIC Industrial Park Gollapuram, Gollapuram Village, Hindupur Mandal, Ananthapur District, Andhra Pradesh. The existing unit did not require EC. Total project area is 10.0 acres and green belt will be developed in 33% (inclusive of existing) of the total plant area. Expansion will be taken up in the existing premises only. No National Park / Wild life sanctuary is located within 10 km radius of the project site. Penneru River is flowing at a distance of 3.2 Km. from the site. Total cost of the expansion project is Rs. 24.15 Crores.

Following will be manufactured:

Units	Existing Capacities (TPA)	Existing Permitted Capacities (TPA)	Proposed Expansion Capacities (TPA)	After Expansion (TPA)
MS Billets / MS Ingots	18,000 ( 6 MT IF)	12,000 ( 4 MT IF)	70,000 (2 x 12 MT IF)	1,00,000
TMT Bars / Rolled	--	30,000	70,000	1,00,000

Products				
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The sponge iron will be fed to Induction furnace to make ingots / billets which will be casted in rolling form of steel i.e. TMT bars / Structural Steel. Coal will be used in gasifier to producer gas. Fume extraction system with bag filters will be provided to Induction Furnaces. Bag filters will be provided to Rolling Mill. Total water required for the proposed expansion project is 90 m<sup>3</sup>/d. The water requirement for the proposed expansion project will be supplied by APIIC. Domestic wastewater will be disposed off into the soak pit via septic tank. Zero discharge will be maintained in the proposed plant. Slag generated from SMS will be crushed and after iron recovery the inert material will be used in road construction. Mill scale from Rolling mill will be reused in SMS. Power requirement for the proposed plant will be met from State electricity board.

Public hearing is not required as per Para 7(i) III (b) of EIA Notification, 2006 as the project is located in notified industrial area.

After detailed deliberations, the Committee prescribed following TORs for undertaking detailed EIA/EMP study:

1. Executive summary of the project.
2. Photographs of the existing and proposed plant area.
3. A certified report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
4. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
5. A line diagram/flow sheet for the process and EMP
6. Coal linkage documents
7. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s).
8. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
9. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
10. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
11. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing landuse/landcover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.
12. A list of industries within 10 km radius of the plant area.
13. Details and classification of total land (identified and acquired) should be included.
14. Project site layout plan showing raw materials and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
15. List of raw material required and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".

16. Quantification & Characterization of solid /hazardous waste & its action plan for management should be included.
17. Mass balance for the raw material and products should be included.
18. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
19. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
20. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
21. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
22. Ambient air quality as per National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be included.
23. Air Quality Impact Prediction Modelling based on ISCST-3 or the latest models.
24. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
25. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> May, 2008.
26. Presence of aquifer/aquifers within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
27. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.
28. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
29. 'Permission' for the drawl of water should be obtained. Water balance data must be provided.
30. A note on the impact of drawl of water on the nearby River during lean season.
31. Action plan for rainwater harvesting measures.
32. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
33. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
34. Pretreatment of raw water, treatment plant for waste water should be described in detail. Design specifications may be included.
35. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
36. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly slag from all the sources should also be included.
37. Identification and details of land to be used for all type of slag disposal in the secured land fill as per CPCB guidelines should be included.
38. End use of solid waste and its composition should be covered. Toxic metal content in the waste material and its composition should also be incorporated particularly of slag.
39. Provision of Toxic Chemical Leachability Potential (TCLP) test for the slag and its end use should be included.
40. Action plan for the green belt development plan in 33 % area should be included.
41. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.

42. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
43. Occupational health:
  - a) Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
  - b) Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
  - c) Annual report of health status of workers with special reference to Occupational Health and Safety.
  - d) Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
44. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing proceedings and item-wise details along with time bound action plan should be included. Socio-economic development activities need to be elaborated upon.
45. Total capital cost and recurring cost/annum for environmental pollution control measures should also be included.
46. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance. Public hearing is not required as per Para 7(i) III (b) of EIA Notification, 2006 as the project is located in notified industrial area.

The TORs prescribed shall be valid for a period of two years for submission of the EIA/EMP Report.

### 3.2.25 Proposed Clinker Grinding Unit (1.50 MTPA) and CPP (10 MW) at Villages Balipur & Kumarpur, Tehsil Athagarh, District Cuttack, Odisha by **M/s Emami Cement Limited** - regarding TORs

The project authorities and their consultant, M/s. J.M. EnviroNet Pvt. Ltd., Gurgaon, gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA/EMP report. Although the proposed project activity falls under Category B of the Schedule of EIA Notification, 2006, since the project site falls within 10 km radius of Kapilas wildlife sanctuary, the proposal is appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s Emami Cement Limited have proposed for Clinker Grinding Unit (1.50 MTPA) and CPP (10 MW) at Villages Balipur & Kumarpur, Tehsil Athagarh, District Cuttack, Odisha. The total area required for the project is 55 ha. out of which the greenbelt area will be 18.15 ha (33% of the total area). Kapilas wildlife sanctuary is at a distance of 7.5 km from the project site. Total cost of the project is Rs. 401 Crores. Capital cost for Environmental Protection Measures is Rs. 4.1 Crores and Recurring Cost is Rs. 0.41 Crore/annum.

Clinker required for the proposed Grinding Unit will be procured from the own Cement plant in Chhattisgarh. Total water requirement for the project is 550 KLD and will be met from the Mahanadi River/Ground Water. Total Power requirement for the project is 11 MW, which will be sourced from CPP, 1 MVA from grid. DG set - 500 KVA will be provided for emergency backup. To control particulate emissions, all major sources of air pollution will be provided with Bag Houses/Bag filters and ESP for CPP to maintain the PM emission level below 50 mg/Nm<sup>3</sup> and 100 mg/Nm<sup>3</sup> respectively. All material transfer points will be provided with bag filters to control the emissions at the source itself. Clinker & fly ash will be stored in the silos and slag & gypsum in the covered yard. No industrial wastewater will be generated from the Grinding Unit. Domestic wastewater will be treated in the STP. The treated water will be utilized for Greenbelt Development/Horticulture activities. Rain water harvesting will be implemented. Dust collected from various pollution control equipments will be recycled back to the process. STP Sludge will be utilized as manure for green belt development.

After detailed deliberations, the Committee prescribed following TORs for undertaking detailed EIA/EMP study:

1. Executive summary of the project.
2. Photographs of the proposed plant area.
3. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, from the Standing Committee of the National Board for Wildlife as the project is located within 10 Km of Kapilas wildlife sanctuary.
4. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing land use/land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.
5. A map duly authenticated by the Chief Wild Life Warden showing the location of national park, wildlife sanctuaries etc. vis-à-vis the project location including the cement plant and the recommendations or comments of Chief Wild Life Warden.
6. A line diagram/flow sheet for the process and EMP
7. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
8. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
9. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
10. A list of industries within 10 km radius of the plant area.
11. Details and classification of total land (identified and acquired) should be included.
12. Project site layout plan showing raw materials and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
13. List of raw material required and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
14. Quantification & Characterization of solid /hazardous waste & its action plan for management should be included.
15. Mass balance for the raw material and products should be included.
16. Energy balance data for all the components of plant should be incorporated.

17. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
18. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
19. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
20. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
21. Air quality modeling for specific pollutants needs to be done. APCS for the control of emissions should also be included to control emissions within 50 mg/Nm<sup>3</sup>.
22. Ambient air quality as per National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be included.
23. Air Quality Impact Prediction Modeling based on ISCST-3 or the latest models.
24. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
25. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> May, 2008.
26. Presence of aquifer/aquifers within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
27. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.
28. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
29. 'Permission' for the drawl of water should be obtained. Water balance data must be provided.
30. A note on the impact of drawl of water on the nearby River during lean season.
31. Action plan for rainwater harvesting measures.
32. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
33. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
34. Pretreatment of raw water, treatment plant for waste water should be described in detail. Design specifications may be included.
35. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
36. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly slag from all the sources should also be included.
37. Acton plan for the green belt development plan in 33 % area should be included.
38. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
39. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
40. Occupational health:
  - a) Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company

- has adopted to keep them within PEL so that health of the workers can be preserved,
- b) Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
  - c) Annual report of health status of workers with special reference to Occupational Health and Safety.
  - d) Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
41. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on locals need and item-wise details along with time bound action plan should be included. Socio-economic development activities need to be elaborated upon.
  42. Total capital cost and recurring cost/annum for environmental pollution control measures should also be included.
  43. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart.
  44. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report shall be submitted to the State Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

The TORs prescribed shall be valid for a period of two years for submission of the EIA/EMP report including public hearing proceedings.

3.2.26 Expansion of Steel Plant (Sponge Iron, 4,60,000 to 6,10,000 TPA; Steel Ingot/Billets 2,00,000 to 3,60,000 TPA; Rolling Mill 1,80,000 TPA and Pig Iron 1,80,000 TPA) and Captive Power Plant (FBC boiler 20 MW & WHRB 20 MW) at Phase-I, Industrial Growth Centre, Siltara, Raipur, Chhattisgarh by M/s Raipur Alloys and Steel Ltd. **(currently M/s Sarda Energy and Minerals Ltd.) - regarding extension of validity of EC.**

Environmental clearance to the above proposal was accorded by MoEF vide letter no. J-11011/498/2006-IA II (I) dated 28.9.2007. The PP (M/s Sarda Energy and Minerals Ltd.) vide letter dated 18.6.2012 along with Form I requested MoEF for extension of validity of environmental clearance by a period of five years. The PP also made a presentation before the Committee.

It was submitted that of the above EC expansion facilities/units, sponge iron plant (1,50,000 TPA) along with WHRB needs to be installed. The Pig Iron (BF) and 20 MW WHRB were dropped. The Steel Ingot/Billets facility and Rolling Mill were commissioned. The reason for delay is due to law & order problem (naxalite activity) in the villages near captive iron ore mine and hence, due to unavailability of raw material, the establishment of sponge iron plant is delayed. The situation is expected to improve in future.

After detailed deliberations, the committee recommended for the extension of validity of environmental clearance by a period of five years w.e.f 28.9.2012 subject to the specific and general environmental conditions and the transfer of above environmental clearance from M/s Raipur Alloys and Steel Ltd. to M/s Sarda Energy and Minerals Ltd.

3.2.27 EC for proposed Ferro Alloys Manufacturing Unit at Ikra, Distt.Bankura, West Bengal for the Production of Ferro Maganese-35175 MTPA, Silico Manganese-23450 MTPA, Ferro Silicon-11585 MTPA by **M/s Shree PSP Ferro Alloys Pvt. Ltd. - regarding TORs**

The proponent did not attend the meeting. The Committee decided to consider the project as and when requested by the proponent.

3.2.28 Proposed Iron Ore Beneficiation & Pelletization Plant and Ferro Alloys Plant at village Shahgarh, Tehsil Sihora, District Jabalpur, Madhya Pradesh by **M/s Special Blasts Limited. - regarding TORs.**

The project authorities and their consultant, M/s Pioneer Enviro Laboratories & Consultants Pvt. Ltd., Hyderabad gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA/EMP report. The primary metallurgical industry is listed at S. No. 3(a) under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s Special Blasts Ltd. have proposed to set up an Iron Ore beneficiation & Pelletization Plant & Ferro alloys unit at Khasra No. 85, Shahgarh Village, Sihora Tehsil, Jabalpur District, Madhya Pradesh. Total project area is 30.52 acres which is acquired and green belt will be developed in 11 acres. No forest land is involved in the project site. No national park / wildlife sanctuary is located within 10 km. Borha Reserve Forest is situated within 10 Kms. radius of the project site. Heran River is flowing at distance of 0.7 Km. from the project site. No litigation or court case is in pending against the project and/or land. Total cost of the project is Rs. 135 Crores.

Following is the plant configuration:

S. No.	UNIT	PLANT CONFIGURATION	PRODUCTION CAPACITY (TPA)	
1.	Iron ore beneficiation	2 x 2,000 TPD	12,00,000	
2.	Iron ore pelletization	1 x 2,000 TPD	6,00,000	
3.	Submerged Electric Arc Furnace (SEAF)	3 x 9 MVA	FeSi	19,050
			SiMn	42,750
			FeMn	55,500

Iron ore fines, bentonite & coal fines will be used as raw materials for Iron ore beneficiation and pellet plant. Manganese ore, Pet Coke, Quartz, Fe-Mn Slag, MS Scarp & Electrode paste will be used as basic raw materials for Ferro alloy production. Power required for the proposed plant will be supplied by nearby Grid. DG sets will be installed. The Iron Ore concentrate is taken to the proportioning section where Bentonite will be added. This proportioned mixture is fed to rotating drum, which thoroughly mixes the Ore

and Bentonite. This mixture will be taken to the Ball mill where the mixture is thoroughly ground to desired fineness and moisture. This fine mixture will be taken in a surge bin from there it will be fed to Pelletiser through weigh feeders. From the Pelletiser, green pellets will be discharged on to a collecting conveyor which takes the product to the screening section. From the Roller Screen, charge of 8-16 fraction will be taken to the Traveling Grate Oven. The cooled pellets will be discharged from the annular cooler on a belt conveyor, which carries the final product to the silos or stock pile, from where it will be dispatched. Submerged Electric Arc Furnace (SEAF) will be used for manufacture of ferro alloys. The molten metal and slag will be tapped at regular time intervals into a ladle or onto cast iron pans. The slag will be overflowed to another ladle or in casting pans.

Electrostatic precipitator (ESP) will be provided to pellet plant to control the emissions below 50 mg/Nm<sup>3</sup>. Fume extraction system & cleaning system with bag filters will be provided to the SEAF to control the emissions below 50 mg/Nm<sup>3</sup>. Total water required for the proposed plant will be 710 m<sup>3</sup>/d. Closed circuit cooling system will be adopted so that no effluent is discharged from the proposed plant. Domestic effluent will be treated in septic tank followed by soak pit. No effluent will be discharged outside the premises and Zero discharge will be adopted. Rain water harvesting will be developed. Tailings generated from the pellet plant will be given to ceramic industry. Bag filter dust will be recycled in the process. Ferro Manganese Slag will be used in manufacture of Silico manganese. Silico Manganese Slag will be used for road construction / crushed & after recovery of mineral given to brick manufactures.

After detailed deliberations, the Committee prescribed following TORs for undertaking detailed EIA/EMP study:

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. A line diagram/flow sheet for the process and EMP
4. Coal linkage documents
5. A copy of the mutual agreement for land acquisition signed with land oustees.
6. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. A photograph of the site should also be included.
7. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
8. Topography of the area should be given clearly indicating whether the site requires any filling. If so, details of filling, quantity of fill material required, its source, transportation etc. should be given.
9. Location of national parks/wildlife sanctuary/reserve forests within 10 km. radius should specifically be mentioned. A map showing land use/land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.
10. Revised project area and layout plan shall be submitted after exclusion of the project area on one side of the nalah/drainage passing through the project site and maintaining 33% of green belt.
11. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.

12. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates of the plant site as well as ash pond with topo sheet should also be included.
13. Details and classification of total land (identified and acquired) should be included.
14. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
15. Permission from the tribals, if tribal land has also to be acquired along with details of the compensation plan.
16. Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department. .
17. A list of industries containing name and type in 25 km radius should be incorporated.
18. Residential colony should be located in upwind direction.
19. List of raw material required, analysis of all the raw materials and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
20. If the rocks, ores, raw material has trace elements their petrography, ore microscopy, XRD, elemental mapping EPMA, XRF is required to quantify the amount present in it and hence future risk involved while using it and management plan.
21. Action plan for excavation and muck disposal during construction phase.
22. Studies for fly ash, muck, slurry, sludge material disposal and solid waste generated, if the raw materials used has trace elements and a management plan should also be included.
23. Manufacturing process details for all the plants should be included.
24. Mass balance for the raw material and products should be included.
25. Energy balance data for all the components of steel plant including proposed power plant should be incorporated.
26. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
27. Data generated in the last three years i.e. air, water, raw material properties and analysis (major, trace and heavy metals), ground water table, seismic history, flood hazard history etc.
28. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
29. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
30. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
31. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
32. Air quality modelling for steel plant for specific pollutants needs to be done. APCS for the control of emissions from the kiln and WHRB should also be included to control emissions within 50 mg/Nm<sup>3</sup>.
33. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be included.
34. Ambient air quality monitoring modeling along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
  - i) Emissions (g/second) with and without the air pollution control measures
  - ii) Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height) on hourly basis

- iii) Model input options for terrain, plume rise, deposition etc.
  - iv) Print-out of model input and output on hourly and daily average basis
  - v) A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
  - vi) Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
  - vii) Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
  - viii) No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
  - ix) Graphs of monthly average daily concentration with down-wind distance
  - x) Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
  - xi) Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
35. A plan for the utilization of waste/fuel gases in the WHRB for generating power have to be set out.
  36. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided. The alternate method of raw material and end product transportation should also be studied and details included.
  37. One season data for gaseous emissions other than monsoon season is necessary.
  38. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> May, 2008.
  39. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
  40. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included. Information regarding surface hydrology and water regime should be included.
  41. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
  42. Ground water modeling showing the pathways of the pollutants should be included
  43. Column leachate study for all types of stockpiles or waste disposal sites at 20°C-50°C should be conducted and included.
  44. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
  45. Permission for the drawl of water from the State Irrigation Department or concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
  46. A note on the impact of drawl of water on the nearby River during lean season.

47. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
48. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean River discharge as well as flood occurrence frequency.
49. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
50. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
51. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
52. Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from any other source should be included.
53. The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, and lakes), sub-surface and ground water with a monitoring and management plans.
54. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
55. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly slag from all the sources, char and fly ash. Copies of MOU regarding utilization of ash should also be included.
56. Details of evacuation of ash, details regarding ash pond impermeability and whether it would be lined, if so details of the lining etc. need to be addressed.
57. A note on the treatment, storage and disposal of all type of slag should be included. Identification and details of land to be used for SMS slag disposal should be included. Details of secured land fill as per CPCB guidelines should also be included.
58. End use of solid waste and its composition should be covered. Toxic metal content in the waste material and its composition should also be incorporated particularly of slag.
59. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
60. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
61. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
62. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
63. Occupational health:
  - a) Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
  - b) Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.

- c) Annual report of health status of workers with special reference to Occupational Health and Safety.
  - d) Plan and fund allocation to ensure the occupational health & safety of all contracts and sub-contract workers.
64. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
  65. Impact of the project on local infrastructure of the area such as road network and whether any additional infrastructure needs to be constructed and the agency responsible for the same with time frame.
  66. Environment Management Plan (EMP) to mitigate the adverse impacts due to the project along with item wise cost of its implementation. Total capital cost and recurring cost/annum for environmental pollution control measures should be included.
  67. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on public hearing issues and item-wise details along with time bound action plan should be included. Socio-economic development activities need to be elaborated upon.
  68. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart.
  69. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof should also be included.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report shall be submitted to the Madhya Pradesh Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

The TORs prescribed shall be valid for a period of two years for submission of the EIA/EMP reports along with Public Hearing Proceedings.

### **3.3.0 Any Other Item**

3.3.1 Expansion of Iron and Steel Plant (2,60,000-12,60,000 MTPA) and installation of Captive Power Plant (87 MW) at Adityapur Industrial Area, Village & Tehsil Gamhoria, District Saraikela, Kharsawan, Jamshedpur, Jharkhand by **M/s Usha Martin Ltd.-regarding amendment in EC.**

The above proposal was accorded environmental clearance by MoEF vide letter no. J-11011/681/2007-IA II (I), dated 11.10.2007. The proponent vide letters dated 27.8.2012 and 20.11.2012 requested for the change in configuration of Sponge Iron Plant from 3 Nos. 500 TPD capacity Sponge Iron to 4 nos. of 350 TPD capacity sponge Iron Units.

It was submitted that the 500 TPD capacity of Sponge Iron Units were proposed at that time based on the predicted availability of high grade iron ore from the captive mine as per exploratory data. However, the iron ore when mined was found to have low Fe content (Fe - 57-59%) and soft in nature (tumbling index 74-76 %). This grade ore is not suitable for 500 TPD kiln having higher diameter of kilns because of early accretion formation and lower campaign life. Therefore the company has proposed to change configuration from 500 TPD to 350 TPD. There will be no change in any other production facility/capacity except the change in configuration of Sponge Iron Plant i.e. from proposed 3 nos. 500 TPD capacity to

4 nos. 350 TPD capacity. The comparative stack & emission characteristics of sponge iron units i.e. 3X500 TPD vs. 4X350 TPD show that the proposed change in configuration will lead to decrease in pollution load.

After detailed deliberations, the Committee recommended the amendment in above EC for change in configuration of proposed Sponge Iron units from 3 nos. 500 TPD capacity to 4 nos. 350 TPD capacity subject to the specific and general environmental conditions.

**3.3.2 Proposed Dahej Petrochemical Complex At Dahej SEZ Ltd. Village: Ambheta, Tal. Vagra, Bharuch District (Gujarat) By M/s ONGC Petro Additions Ltd.- regarding extension of validity of EC.**

Environmental clearance to the above proposal was accorded by MoEF vide letter no. J-11011/316/2006-IA II (I) dated 21.11.2007. The PP vide letter dated 13.6.2012 along with Form I requested MoEF for extension of validity of environmental clearance by a period of five years. The PP also made a presentation before the Committee.

It was submitted that the project was originally envisaged to be completed in 48 months from the date of award of Cracker with concurrent award of Polymer and Utility units. Cracker package was awarded in Dec'2008 with a completion schedule of 48 months. PMC for the project –M/s EIL – came on board in Nov'2008. The project configuration was optimized based on advice of EIL. Product slate was tweaked to suit the market conditions. The configuration of Polymer units was changed from 2x 540 KTPA –PE (Swing) to 2x 360 KTPA (Swing) + 1x340 Dedicated HDPE. Consequently, the award of Licensors for polymer got delayed. This resulted in extended schedule for Utility packages as the requisite data from Licensors was required to float the Utility tenders and EPC tender for Process packages. Although an aggressive completion schedule of 28 months was kept for all the Polymer and Utility packages, the overall completion schedule got extended mainly due to the extended period in award of Licensor, the requisite Govt. approval (i.e SIA approval) and receipt of Process package. The actual overall progress as of Oct'12 is 67 % against scheduled progress of 77%. The detailed progress report unit wise as on 31.10.2012 and the expected date of completion was also submitted.

After detailed deliberations, the committee recommended for the extension of validity of environmental clearance by a period of five years w.e.f 21.11.2012 subject to the specific and general environmental conditions.

**3.3.3 Ferro Alloy Plant ( 5 X 9 MVA & 1 X 5.4 Electric Arc Furnace; Fe-Mn 36,000 TPA & Si-Mn 72,000 TPA) along with Captive Power Plant (imported coal based CFBC, 2 X 36 MW and gas based, 4 X 9 MW) at Sy. No. 148 Pt., 149 Pt., 151-153, 154 pt., 162-163, 164 pt., Village& Tehsil Peddapuram, District East Godavari, Andhra Pradesh by M/s Sri Girija Power Private Limited. (currently M/s Shri Girija Alloy & Power (I) Private Limited) - regarding amendment in EC.**

The above proposal was accorded environmental clearance by MoEF vide letter no. J-11011/679/2009-IA II (I), dated 24.12.2010. The proponent (M/s Shri Girija Alloy & Power (I) Private Limited) vide letters dated 10.9.2012, 27.10.2012 and 17.12.2012 requested for amendment in above EC for replacement of 4 X 9 MW Gas Engine by 1 X 36 MW Coal based Power Plant. The project proponent also made a presentation before the Committee.

W.r.t change in the name of the company, an affidavit on a non judicial stamp paper duly notarized was submitted. It was submitted that there is no gas available in the D6 well. Most of the existing operation plants based on D6 well have been closed. The ferro alloy plant is ready for commissioning since December 2011 and is lying idle for want of power. APSEB is unable to supply power for the ferro alloy plant. Hence, it is proposed to replace

the 4 X 9 MW Gas Engine by 1 X 36 MW Coal based Power Plant. The documents regarding coal linkage and utilization of fly ash were submitted.

The Committee sought the impacts due to the proposed replacement of 4 X 9 MW Gas Engine by 1 X 36 MW Coal based Power Plant under the three possible scenarios i.e. 100% use of imported coal, 100% use of domestic coal and mix of 60% use of imported coal and 40% use of domestic coal. The same was circulated to the Committee.

After detailed deliberations, the committee recommended for the amendment in above EC for replacement of 4 X 9 MW Gas Engine by 1 X 36 MW Coal based Power Plant by use of 100 % imported/domestic coal and mix of 60 % use of imported coal and 40 % use of domestic coal subject to the specific and general environmental conditions and the transfer of above environmental clearance from M/s Sri Girija Power Private Limited to M/s Shri Girija Alloy & Power (I) Private Limited.

### 3.3.4 Expansion of Integrated Steel Plant (3.1 MTPA to 5.6 MTPA) at Meramandali, District Dhenkanal in Orissa by **M/s Bhushan Steel Limited - regarding amendment in EC.**

The above proposal was accorded environmental clearance by MoEF vide letter no. J-11011/829/2008-IA II (I), dated 20.7.2012. The proponent requested for amendment in the above EC for change in product mix through establishing 2.6 MTPA CRM complex and 7.0 MTPA Pellet plant for value addition in HRC (Hot Rolled Coils) without changing the overall production capacity. The project proponent and their consultant, M/s MECON Ltd., Ranchi also made a presentation before the Committee in its 2<sup>nd</sup> meeting held during October, 2012.

The Committee recommended that EC cannot be amended for installation of pellet plant. A separate proposal for amendment in EC may be submitted. For installation of CRM complex, the company shall provide the following additional details for reconsideration:

- i) Cumulative impacts on the air and water quality due to addition of CRM complex.
- ii) Status of existing plant by visuals.
- iii) Measures for effluent treatment.

The proponent vide letter dated 14.11.2012 has submitted a detailed environmental appraisal report and EMP for change in product mix through establishing 2.6 MTPA CRM complex and also made a presentation before the Committee along with their consultant, M/s MECON Ltd., Ranchi. The anticipated environmental impacts and the proposed mitigation measures for the proposed 2.6 MTPA CRM Complex were discussed.

After detailed deliberations, the Committee recommended the amendment in above EC for change in product mix through establishing 2.6 MTPA CRM complex without increasing the overall production capacity subject to the specific and general environmental conditions.

**4<sup>th</sup> December, 2012**

### **3.4.0 Consideration of the Projects:**

#### 3.5.1. Proposed Phase -IV Expansion of Integrated Steel Plant at Village Chadri Hariharpur, Tehsil Panposh, block Kuarmunda, District Sundargarh in Orissa by **M/s Adhunik Metaliks Limited. - regarding EC.**

The project authorities and their consultant (Sun Consultancy and Services, Bhubaneswar) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 16<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry) held during 22<sup>nd</sup>-24<sup>th</sup> November, 2010 for preparation of EIA/EMP. All the Integrated Steel Plants are listed at S.No. 3(a) in Primary Metallurgical Industries under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

M/s Adhunik Metaliks Limited have proposed for Phase-IV expansion of coal beneficiation plant, Iron ore beneficiation plant, iron ore pelletisation plant, sinter plant at Village Chadri Hariharpur, Tehsil Panposh, Block Kuarmunda, District Sundergarh, Orissa. The land area for the existing project is 81.78ha. Additional land requirement for the proposed expansion is 71.75 ha. Total cost of the project is Rs. 8124.97 Crores. Rs. 650.0 Crore and Rs. 55.0 Crore will be earmarked towards total capital cost and recurring cost/annum for environmental pollution control measures. No national park, sanctuary, biosphere reserves, wildlife corridors, elephant/tiger reserve are located within 10 Km from the project site. Koel River is flowing at a distance of 6.5 Km. Stage-I and Stage-II forest clearance for diversion of 23.34 ha of forest land has been obtained vide MoEF Regional Office letter no. 5-ORC057/2007-FCE dated 30<sup>th</sup> November, 2007 and letter no. 5-ORC057/2007-BHU dated 11<sup>th</sup> January, 2011 respectively. Reserve Forests namely Chadri (0 Km), Jogisar (3.3 Km), Kamarpaha (3.5 Km), Bamini (4.0 Km), Kacharu (7.0 Km), Madra (3.7 Km), Harapali (5.6 Km), Lassey (2.0 Km), Jhitiyara (3.6 Km), Jallangbe (5.7 Km), Dhumag (6.72 Km), Ghaghari (5.0 Km), Rathakh (6.0 Km), Satbhay (6.2 Km), other RF (3.36 Km) are located from the project site. The existing and proposed Facilities are as follows:

S. No.	Product/ Plant	Approved Capacity [TPA]	Installed Capacity [TPA]	Proposed Additional Capacity in Phase -4 Expansion [TPA]	Total Capacity After Expansion [TPA]
1	Sponge Iron	3,60,000	3,60,000	4,20,000	7,80,000
2	Hot Metal / Pig Iron	2,96,700	1,48,350	2,51,300	3,99,650
3	Steel from EAF	4,16,300	4,16,300	4,63,300	8,79,600
4	Steel from LRF	4,16,300	4,16,300	4,63,300	8,79,600
5	Steel from IF	1,47,200	1,47,200	1,14,000	2,61,200
6	Steel From LRF (IF Route)	-	-	114000	114000
7	Stainless Steel from AOD	1,23,000	1,23,000	nil	1,23,000
8	Steel Billets/Blooms (CCM)	5,24,300	5,24,300	5,55,400	10,79,700

9	Billets (Stainless steel)	1,65,000	1,65,000	nil	1,65,000
10	Ferro Alloy	47,500	47,500	nil	47,500
11	Sinter (for MBF)	96,000	96,000	3,05,000	4,01,000
12	Rolled Product (Stainless Steel Alloy Steel)	2,20,000	2,20,000	nil	2,20,000
13	Oxygen Plant (M <sup>3</sup> /annum)	97,92,000 m <sup>3</sup> /annum & 100 PD	97,92,000 m <sup>3</sup> annum & 100 TPD	2 x 50 TPD	200 TPD
14	(WHRB + STEAM BOILER) Cpative Power (MWH)	38	34	75	109
15	Coke oven (TPA)	1,00,000	1,00,000		1,00,000
16	Coal washery (TPA)	7,00,000	7,00,000	10,00,000	17,00,000
17	Lime Calcination Plant ( 2x 80 TPD)	52,800	26,400		26,400
18	Producer Gas Plant	7000 Nm <sup>3</sup> /Hr	7000 Nm <sup>3</sup> /Hr		7000 Nm <sup>3</sup> /Hr
19	Iron ore Beneficiation Plant			41,52,500	41,52,500
20	Iron ore pellet Plant			30,00,000	30,00,000
21	Steam Generator			25 T / Hr	25 T / Hr

Following are proposed Phase- IV configuration :

Unit	Configuration	Annual Capacity
Coal Beneficiation Plant	1 MTPA (Throughput)	1,000,000 TPA

Iron Ore Beneficiation Plant	4.5 MTPA (Throughput)	4,152,500 TPA
Iron Ore Pelletisation Plant	3.0 MTPA 464 sq.m	3,000,000 TPA
Sinter Plant	1 x 30 sq.m	3,05,000 TPA (Gross) 2,90,000 TPA (Net)
<b>Iron Making</b>		
Sponge Iron (DRI) Plant	4 X 350 TPD	420,000 TPA
Blast Furnace	1 X 350 cu.m	261,800 TPA (gross) 251,300 TPA (net)
<b>Steel Making</b>		
SMS (IF route)	2 X 20 T IF /7.5 MW 1 X 40 T Lf/ 8 MVA	115,200 TPA (crude steel) 114,000 TPA (refined steel)
SMS (EAF Route)	1 X 65 T EAF/ 50 MVA 1 X 65 T LF/ 12 MVA	468,000 TPA (crude steel) 463,300 TPA (refined steel)
Billet Caster	1X 2 STRAND	110,600 TPA
Bloom Caster	1 X 1 strand	444,800 TPA
<b>Captive Power Plant</b>		
WHR Boilers CFBC Boiler	4X 38 TPH 1 X 130 TPH	4X 38 TPH 1 X 130 TPH
Turbo Generator	1x 30 MW 1x 45 MW	1x 30 MW 1x 45 MW

The following will be the product mix with their production capacity:

<b>S. No.</b>	<b>Product</b>	<b>Total Quantity (TPA)</b>
1	Steel Billets	1,10,600
2	Steel Blooms	4,44,800
3	Sponge Iron	26,500
4	Pellets	17,27,000 (12,73,000 for in house consumption)
5	Coal washery rejects	1,30,000
6	Granulated BF slag	90,700

Iron Ore Fines (Sinter Grade) from captive/merchant mines, Iron Ore Lumps (BF Grade) from captive/merchant mines, E/ F Grade Coal from Talcher/ Ib Valley, Imported Injection Coal, Bentonite from Kutch, imported Coke, Pet Coke, Limestone from Biramitrapur, Dolomite from Biramitrapur, Manganese Ore from Banspani/Koira, Calcined Lime, Calcined Dolomite and Si-Mn will be used as raw materials.

Ambient air quality monitoring was carried out at 11 locations during December 2010 – February 2011 and submitted baseline data indicates that ranges of concentrations of PM<sub>10</sub>(42.6 µg/m<sup>3</sup> to 74.3 µg/m<sup>3</sup>), PM<sub>2.5</sub>(19.3 µg/m<sup>3</sup> to 40.9 µg/m<sup>3</sup>), SO<sub>2</sub>(6.6 µg/m<sup>3</sup> to 8 µg/m<sup>3</sup>) and NO<sub>x</sub>(10.1 µg/m<sup>3</sup> to 16.8 µg/m<sup>3</sup>) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 1.4133 µg/m<sup>3</sup>, 8.25371 µg/m<sup>3</sup> and 10.34176 µg/m<sup>3</sup> with respect to PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub> respectively. The resultant concentrations are within the NAAQS.

Dust suppression system such as Dry Fog System and water sprinkling will be used at the iron beneficiation plant and coal washery and different conveyor transfer points in raw material handling area. Bag filter will be provided at the transfer points of material at raw material handling, transfer points, junction houses. ESP along with adequate stack height will be provided to Induction Furnace. Dust extraction system comprising suction hood, duct, bag filter, fan, stack etc will be provided at ore screening & coal crushing section, cooler discharge end & surge bin, product processing building of DRI Plant, Proportioning unit, mixing unit, sinter crushing & screening unit & Jn houses of sinter plant, Stock house of Blast Furnace, Induction Furnace & Ladle Refining Furnace and Electric Arc Furnace & Ladle Refining Furnace of Steel Making. Dust extraction system comprising of suction hood, duct, ESP, fan, stack etc will be provided at DRI Kiln and Sinter machine discharge end and cooler and AFBC boiler.

Additional water requirement for the expansion will be around 1,045 m<sup>3</sup>/hr. and shall be sourced from River Bramhani. The industrial effluent generation from the proposed expansion will be 105 m<sup>3</sup>/hr. Effluent will be treated in ETP and treated effluent will be recycled and re-used for dust suppression and gardening in the plant. Domestic waste water (5 m<sup>3</sup>/hr) shall be sent to STP.

Greenbelt has been developed in 27 ha. of the plant area and additional greenbelt will be developed in 24 ha. of land. BF Slag will be Granulated and sent to Cement Plants. SMS Slag will be used crushed and passed through magnetic separator to recover metallic portion of the slag. 10 % SMS slag will be used in sinter plant and remaining will be used to fill low lying areas and road making. Char will be used in CFBC Power Generation and Kiln accretion will be used for Filling of low lying areas and road making. DRI Product Dust & Flue dust will be used in Sinter Making. DRI DSC Dust, WHRB Dust, ESP Dust, Ore Slimes & AFBC Fly ash will be disposed in dust disposal yard. Coal Washery Rejects will be sold to Power Plants. Fly ash will be utilized as per fly ash notification dated 3<sup>rd</sup> November, 2009.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Orissa Pollution Control Board on 12<sup>th</sup> March, 2012. The issues raised were regarding acute water scarcity during summer, acquisition of 43 ha. Of forest land, local employment, negative impact due to pollution, health check up facility, social development activity, pollution control measures. In response, project proponent informed that dust suppression system has been provided to control and same will be upgraded if required. Rs. 500 lakhs and Rs. 60 lakh per annum are earmarked towards capital and recurring cost for dust suppression measures. 70000 nos. of saplings already planted and greenbelt has already been developed. The total of 51 ha. of land will be planted in entire plant premises including ash pond area in a phased manner. As regards to local employment, project proponent informed that in consultation with local panchayat local youth eligible for training and skill up-gradation will be identified and employment will be provided. Road of nearby village will be repaired. Tubewell will be constructed in the water scarce village. Besides, existing ponds of the village will be restore and creation of new pond will be explored to collect rain water and ground water recharge. Issues raised during public hearing have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

The Committee also discussed the compliance status report on the conditions stipulated in the existing environmental clearance, which were monitored by the Ministry's Eastern regional office, Bhubaneswar on 15<sup>th</sup> November, 2011. It is reported that unit needs to be taken special attention towards control of fugitive dust inside plant, sampling points of ambient air quality, monitoring of plant effluent discharge, community welfare measures, statistical analysis of the occupational health, community welfare measures and uploading of the six monthly compliance report etc. The compliance of other specific conditions has been reported satisfactorily.

After deliberations, the Committee desired following additional information and a sub-committee of EAC (I) comprising of Members from EAC and a representative from MOEF should visit the unit to assess the pollution control measures being adopted in the existing plant and suggest additional pollution control measures to be adopted in the proposed plant, if any:

- (i) Total forest land involved in the existing and expansion project. Status of forest clearance.
- (ii) Fresh water requirement for the existing project, additional water to be used and total fresh water requirement after expansion.
- (iii) Details of fly ash generation and utilisation in the existing unit as per Fly ash utilisation notification. Action plan for fly ash utilisation for the proposed expansion.
- (iv) Analysis of health data of the existing unit in respect of chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
- (v) The detailed compliance to the points suggested by the Ministry's Eastern regional office, Bhubaneswar in their monitoring report carried out on 15<sup>th</sup> November, 2011.

The proposal is deferred till the additional information is submitted and site visit is conducted.

### 3.5.2. Proposed Induction Furnace (2x28 MT) and Rolling Mill for manufacture of TMT bars (0.2 MTPA) at Plot No. SPA-227 & SPA-228, RIICO Industrial area, Phase-II, Abu Road, District Sirohi, Rajasthan by **M/s JBS Alloy & Steel Pvt. Ltd. - regarding EC.**

The project authorities and their consultant (Enkay Enviro Services) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 24<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry) held during 19<sup>th</sup>-20<sup>th</sup> May, 2011 for preparation of EIA/EMP report. All the Induction Furnace (> 30,000 TPA) and Rolling Mill are listed at S.No. 3(a) in Secondary metallurgical processing industries under category 'B' of the amendment to the Schedule of EIA Notification, 2006 and appraised at the State level, but due to location of the plant within 10 Km of inter-state boundary of Gujarat, the proposal has been appraised by Expert Appraisal Committee (Industry).

M/s JBS Alloy & Steel Pvt. Limited have proposed for setting up of Induction Furnace (2X28 MT) and Rolling Mill for manufacture of TMT bars (0.2 MTPA) at Plot No.-SPA-227 & SPA-228, RIICO Industrial area, Phase-II, Abu Road, District Sirohi, Rajasthan. The project area is 1,61,706.13 m<sup>2</sup> of which green belt will be developed in 53,363.03 m<sup>2</sup>. Suket Nadi (0.3

Km), Sewaran River (2.1 Km), Benas Nadi (2.2 Km), Teliya Nadi (6.4 Km), Kawasi Nadi (7 Km), Gomti Nadi (8.3 Km) and Teliya Nadi (6.3 Km) are flowing from the project site. Balaram Ambaji Wildlife Sanctuary is located at a distance of 3.1 Km. Total cost of the project is Rs. 75.11 Crores. Rs 82 lakhs & Rs. 8.0 Lakhs will be earmarked towards capital cost & recurring cost/annum for environmental pollution control measures.

The steel scrap, ferro alloys and spong iron will be used as raw material to manufacture billets.

Additionally, PAs informed to the Committee that ambient air quality monitoring was carried out at 6 locations during October 2011 – November 2011 and submitted baseline data indicates that range of concentrations of PM<sub>10</sub> (46.3 µg/m<sup>3</sup> to 69.3 µg/m<sup>3</sup>), PM<sub>2.5</sub> (23.9 µg/m<sup>3</sup> to 38.1 µg/m<sup>3</sup>), SO<sub>2</sub> (5.1 µg/m<sup>3</sup> to 6.9 µg/m<sup>3</sup>) and NO<sub>x</sub> (12.1 µg/m<sup>3</sup> to 18.9 µg/m<sup>3</sup>) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 10.7 µg/m<sup>3</sup>, 0.85 µg/m<sup>3</sup> and 1.3 µg/m<sup>3</sup> with respect to PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub> respectively. The resultant concentration are within the NAAQS. Dust extraction system comprising of suction hood, duct, bag filter, fan, stack etc will be provided to Induction furnace and AOD Furnace. Stack height of 30 m will be provided to reheating furnace.

The total water requirement for the proposed project will be 584 m<sup>3</sup>/day of which 155m<sup>3</sup>/day will be the fresh water requirement and will be met from ground water source and RIICO water supply. Industrial effluent generation will be 224 m<sup>3</sup>/day. Effluent will be treated in ETP and treated effluent will be recycled and reused within factory premises. Domestic wastewater will be treated in the sewage treatment plant based on SAFF technology.

Slag will be sent to cement industries. ETP sludge will be sent to TSDF. STP sludge would be used as manure after treatment. The spent oil will be disposed as per RSPCB guidelines to authorized agencies.

The power requirement of 25 MW will be met from the Vidyut Vitran Nigam. 4D.G. sets with cumulative capacity of 1000 kVA (250 kVA-4 nos.) will be provided for power back up. D.G. set will be housed in an inbuilt acoustic enclosure. HSD (167 lph) will be used as fuel. All the employees will be provided with PPE so as to ensure that the impact of noise is minimum.

After deliberations, the Committee desired following additional information:

1. A copy of the map authenticated by the Chief Wildlife Warden showing the location of Balaram Ambaji Wildlife Sanctuary and the plant alongwith the recommendations/comments.
2. A copy of application submitted to National Wildlife Board for wildlife clearance.
3. Copy of Gazette Notification of Government of Rajasthan indicating project is located in the notified industrial area/estate.

The proposal was deferred till the desired information is submitted. The above information shall be provided with the uploading of minutes on the website.

3.5.3. Proposed Greenfield Cement plant for production of Clinker -2.00 MTPA, Cement (3.23 MTPA) and Coal based Captive Power Plant (50 MW) at Kirni Village, Gulbarga Taluk & District, Karnataka by **M/s Gulbarga Cement Ltd. - regarding EC.**

The project authorities and their consultant (B S Envi-Tech (P) Ltd., Hyderabad) gave a detailed presentation on the salient features of the project and proposed environmental

protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 15<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry) held during 25<sup>th</sup> – 27<sup>th</sup> October, 2010 for preparation of EIA/EMP. All the cement plants are listed at S.No. 3(b) of the Schedule of EIA Notification, 2006 and appraised at the Central level.

M/s Gulbarga Cement Ltd. have proposed for setting up of Cement plant for production of Clinker -2.00 MTPA, Cement (3.23 MTPA) and Coal based Captive Power Plant (50 MW) at Kirni Village, Gulbarga Taluk & District, Karnataka. Total land area for cement plant alongwith residential colony is 160 ha. Total project cost is Rs. 1600 Crore, of which Rs 81 Crore and Rs. 80 Lakhs are earmarked towards capital cost and recurring cost for implementation of environmental management plan. Bhima River and Dargah nala are flowing at a distance of 4.7 Km and 5.6 Km respectively. No forests, national parks, sanctuary, elephant/tiger reserve, migratory routes are within 10 Km radius of the project site.

Limestone from captive mines (2 Km away), fly ash from CPP and RTPS, Bauxite from Belgaum, Goa & Kolhapur area, Iron Ore from Bellary (Karnataka), Gypsum from SPIC/ Sterlite Industries/ RCF/ EID Parry India/ Coramandel Fertilizers Ltd, coal from Singareni collieries/western Coal Fields and Slag from Jindal Steel will be used as raw materials.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 8 locations during December 2010 – February, 2011 and submitted baseline data indicates that ranges of concentrations of PM<sub>10</sub> (46.4 µg/m<sup>3</sup> to 51.3 µg/m<sup>3</sup>), PM<sub>2.5</sub> (19.2 µg/m<sup>3</sup> to 22.6 µg/m<sup>3</sup>), SO<sub>2</sub> (6.2 µg/m<sup>3</sup> to 9.1 µg/m<sup>3</sup>) and NO<sub>x</sub> (7.0 µg/m<sup>3</sup> to 10.2 µg/m<sup>3</sup>) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 6.3 µg/m<sup>3</sup>, 33.9 µg/m<sup>3</sup> and 23.97 µg/m<sup>3</sup> with respect to PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub> respectively. The resultant concentrations are within the NAAQS. Glass bag house will be installed in the raw mill/kiln to control the particulate emissions. Bagfilter will be provided to cooler. 5 major bagfilter systems will be provided to the various process units to control dust. 120 bagfilters alongwith ventilation system will be provided to control the fugitive dust generated from the material handling areas. Low NO<sub>x</sub> burner will be installed. X ray analyser will be installed to monitor the raw material quality and smooth pyro processing to have better control on the process and thereby on the baghouse of the kiln. Bagfilters alongwith stack height of 75 m will be provided to boilers (2 x 110 tph). Water requirement for the cement plant, power plant including colony will be 4500 m<sup>3</sup>/day and sourced from River Bhima. Effluent will be treated/diluted and treated effluent will be recycled and reused within the factory premises. Domestic wastewater will be treated in STP.

Dust collected in the cement plant will be recycled back to the process. Fly ash from CPP will be used for manufacturing cement. Spent oil will be sent to authorized recyclers. Greenbelt will be developed in 45 ha of land in cement plant and 20.0 ha. in the colony.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Karnataka State Pollution Control Board on 25<sup>th</sup> July, 2012. The issues raised were regarding clarification on project's details, drought prone area, protection of flora and fauna, local employment, water usage from River Bhima, compensation against land acquisition. In response, the Project proponent informed that a separate water availability studies were carried out and based on the findings, the Government of Karnataka is permitting to draw water. The water supply to Gulbarga will not be hampered. Most of the material will be conveyed through rail. The compensation against land will be paid as per prevailing Government/District Administration rules. For the employment, preference will be given to the locals only. School, hospital, road will be constructed as per CSR. Construction of toilets and sanitation programmes will be given

priority. Greenbelt will be developed to improve the biodiversity of the area. Existing ponds will be restored and new ponds will be created to collect rain water and recharge the ground water. Issues raised have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

After deliberations, the Committee desired following additional information:

1. Coal linkage showing the coal quantity parameters alongwith supporting documents to be submitted.
2. Layout plan showing the greenbelt.
3. R & R plan for small and medium farmers to be submitted.
4. Hydrogeological study of the area to be carried out and report submitted.
5. Plan of water management vis-à-vis drinking water to the villagers as well as fluoride management plan for drinking water in the fluoride affected area.

The proposal was deferred till the desired information is submitted. The above information shall be provided with the uploading of minutes on the website.

3.5.4. Expansion of Grain / Molasses based Distillery ( from 330 KLPD to 660 KLPD) by addition of Grain based Distillery alongwith Captive Power Plant (8.25 MW) at Village Banur, Tehsil & District Mohali (SAS Nagar), Punjab by **M/s Chandigarh Distillery & Bottlers. - regarding EC.**

The project authorities and their consultant (M/s J M Environet Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 31<sup>st</sup> Meeting of the Expert Appraisal Committee (Industry) held during 12<sup>th</sup> -13<sup>th</sup> January, 2012 for preparation of EIA/EMP report. All non-molasses based distillery (>30 KLD) are listed at S.N. 5(g) under category 'A' and appraised at Central level.

M/s Chandigarh Distillers & Bottlers have proposed for the expansion of Grain/Molasses based Distillery (from 330 KLPD to 660 KLPD) by addition of Grain based Distillery (330 KLPD) alongwith Captive Power Plant (8.25 MW) at Village Banur, Tehsil & District Mohali (SAS Nagar), Punjab. Capacity of the existing Distillery Unit is 330 KLPD (165 KLPD grain based and 165 molasses based). Total project area is 68.8 ha (170 acres). Expansion will be carried in the existing plant premises. No national park, wildlife sanctuary, bio sphere reserve is located within 20 Km. of the project site. Total cost of the project is Rs. 150.00 Crores. Rs. 15.00 Crores & Rs. 1.25 Crores/annum are earmarked towards capital cost and recurring cost/annum. Grain based distillery will be operated for 330 days. Bir Hansla PF and Bir Barauli PF are located at a distance of 9.0 Km and 9.5 Km respectively from the project site. Ghaggar River is flowing at a distance of 8.5 Km. No ecological sensitive areas, national parks, wildlife sanctuaries, biosphere reserves, etc are located within 10 Km distance. Following are the details of the existing and proposed unit :

S.N.	Product	Existing	Proposed	Total
1	Distillery	330 KLPD	330 KLPD	660 KLPD
	a) Grain based	165 KLPD	330 KLPD	495 KLPD
	b) Molasses based	165 KLPD	-	165 KLPD
2	Power Generation (2 units)	8.25 MW 3.10 MW	8.25 MW	19.6 MW

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 8 locations during Winter Season, 2012 and submitted baseline data indicates

that ranges of concentrations of PM<sub>10</sub> (58.20 µg/m<sup>3</sup> to 89.93 µg/m<sup>3</sup>), PM<sub>2.5</sub> (23.31 µg/m<sup>3</sup> to 38.7 µg/m<sup>3</sup>), SO<sub>2</sub> (6.82 µg/m<sup>3</sup> to 11.57 µg/m<sup>3</sup>) and NO<sub>x</sub> (10.08 µg/m<sup>3</sup> to 20.12 µg/m<sup>3</sup>) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 1.4 µg/m<sup>3</sup> with respect to PM<sub>10</sub>. The resultant concentrations are within the NAAQS. ESP alongwith stack of adequate height will be provided to proposed rice husk fired boiler (55 TPH) to control particulate emissions. Fresh water requirement from the ground water source will be increased from 4190 m<sup>3</sup>/day to 7160 m<sup>3</sup>/day. Permission has already been obtained for extracting 5661 m<sup>3</sup>/day of water from CGWA vide letter no. CGWA/Ind/Proj/2002-60 dated 23<sup>rd</sup> July, 2002. Application has been submitted to CGWA for obtaining permission for drawl of additional water (1500 m<sup>3</sup>/day). Spentwash will be sent to decanter in which wet cake and thin slop will be separated. Dry cake will be sold in the market. Thin slop will be sent to bio-methanation treatment and treated effluent will be evaporated in MEE. Evaporated solid will be mixed with agro waste and burnt in the boiler to achieve zero discharge.

Greenbelt will be developed in 22 ha. out of 68 ha of plant area. Wet cake will be sold as cattle feed. Fly ash will be sent to brick kiln. Total power requirement will be increased from 4100 KW to 8200 KW after expansion and sourced from the CPP. Rice husk will be used as fuel.

The Committee also discussed the compliance status report on the conditions stipulated in the existing environmental clearance, which were monitored by the Ministry's Northern regional office, Chandigarh submitted vide their letter no. 5-44/2001-RO (NZ). Vol. III/2213 dated 20<sup>th</sup> November, 2012. It was reported that ESP alongwith stacks having 56 m and 52 m height have been provided in the existing boiler. The emissions from the boiler are within the limits. Total spentwash is treated in anaerobic treatment facility followed by two stage aerobic treatment facility and treated effluent is being used for ferti-irrigation by the villagers. The project authorities have agreement with the farmers for ferti-irrigation. The compliance of other specific conditions has been reported satisfactorily.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Punjab Pollution Control Board on 8<sup>th</sup> August, 2012. The issues raised were regarding to reduce water consumption, lowering of ground water table, odour problem, improper disposal of fly ash, approach road in bad shape, local employment etc. In response, the project proponent informed that latest technology will be used in distillery to consume less water. The water recycling will be done. Besides, rainwater harvesting structures have been constructed. Adequate measures are taken for proper hygiene conditions in and around factory for which Rs. 15.00 lakhs are earmarked. The additional area for fly ash disposal will be developed. The proposed unit is based on zero discharge concept. 80 % of road network by the Mandi Board has been completed. Ground water is being monitored by established 8 nos. piezometers wells. Greenbelt will be further strengthened. Issues raised have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

After detailed deliberations, the Committee found the final EIA/EMP report adequate and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i. ESP alongwith stack of adequate height should be provided to coal/biomass fired boiler.

- ii. Pucca approach road to project site should be constructed prior to commencing construction activity of the main distillery so as to avoid fugitive emissions.
- iii. Additional fresh water requirement from ground water source should not exceed 2970 m<sup>3</sup>/day for distillery and cogeneration unit. Prior permission for drawl of ground water should be obtained from the CGWA and a copy submitted to the Ministry's regional office at Chandigarh.
- iv. Water consumption should be reduced by adopting 3 R's (reduce, reuse and recycle) concept in the process.
- v. Spent wash generation should not exceed 6 KI/KI of alcohol. Spentwash will be treated in decanter followed by bio-methanation. Treated effluent will be evaporated in MEE. Evaporated solid will be mixed with agro waste and burnt in the boiler to achieve zero discharge. Spentless effluent from bottle washing, utilities and cogeneration unit should be treated in effluent treatment plant (ETP) and water quality of treated effluent should meet the norms prescribed by CPCB/SPCB and recycle/reuse.
- vi. Any directions issued by the CPCB/SPCB in respect of use of treated spentwash for ferti-irrigation shall be complied. No treated spentwash generated from the expansion unit shall be used for ferti-irrigation.
- vii. Company shall follow good management practices viz. collection of waste yeast sludge from fermentation section in a closed system and proper disposal, reduced volume of effluent by adopting strategic approaches, closed drains carrying spent wash to the treatment units; minimization of fugitive emissions from anaerobic treatment; proper collection & handling of excess sludge generated from the anaerobic & aerobic treatment units; minimum retention of treated & untreated spent wash in the lagoons; effective composting of the spent wash by controlled effluent spraying through mechanical system to avoid spillages & over application, blending of sludge in correct proportion with press mud; and properly finished compost and green belt development with suitable plantation in and around the treatment units to mitigate odour from the distillery unit.
- viii. All measures to control dust emissions and rice husk (if used) flying around should be taken.
- ix. Spent wash should be stored in impervious lagoon with HDPE lining as per CPCB guidelines and should be kept in proper condition to prevent ground water pollution. Storage capacity of spent wash lagoon should be for 5 days.
- x. No effluent from distillery and co-generation power plant should be discharged outside the premises and Zero discharge should be adopted.

- xi. Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area should be set up. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to SPCB and this Ministry. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and total dissolved solids should be monitored.
- xii. No storage of wet cake should be done at site. An additional dryer should be installed so that at any time wet cake is not sold then wet cake should be converted into dry cake by operating additional dryer.
- xiii. Biomass storage should be done in such a way that it does not get air borne or fly around due to wind.
- xiv. Boiler ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust should be avoided.
- xv. As proposed, ash will be transferred in the covered truck. Ash shall be transferred to the brick manufacturing for which an agreement to be made in advance.
- xvi. Occupational health surveillance programme should be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre should be strengthened and the regular medical test records of each employee should be maintained separately.
- xvii. Dedicated parking facility for loading and unloading of material should be provided in the factory premises. Unit should develop and implement good traffic management system for their incoming and outgoing vehicles to avoid congestion on the public road.
- xviii. As proposed, green belt should be developed in 33% of the plant area and plantation shall be done as per the CPCB guidelines in consultation with DFO. Thick greenbelt with suitable plant species shall be developed around the proposed distillery to mitigate the odour problem.
- xix. All the commitment made regarding issues raised during the public hearing/consultation meeting held on 8<sup>th</sup> August, 2012 shall be satisfactorily implemented.
- xx. At least 5 % of the total cost of the project should be earmarked towards the environment social commitmentbased on public hearing issues and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Chandigarh. Implementation of such program should be ensured accordingly in a time bound manner.

- xxi. The Company shall submit within three months their policy towards Corporate Environment Responsibility which should inter-alia address (i) Standard operating process/procedure to bring into focus any infringement/deviation/violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.

3.5.5. Grain based Distillery (100 KLPD) and Cogeneration power plant (5 MW) at Village Jalalabad (W), District Ferozpur, Punjab by **M/s S.R. Spirits - regarding EC.**

The project authorities and their consultant (Ace Engineers & Consultants, Patiala, Hon'ble High Court of Punjab & Haryana, Chandigarh has stayed order to the petitioner on 1.10.2012) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 30<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry) held during 15<sup>th</sup> -16<sup>th</sup> December, 2011 for preparation of EIA/EMP.. All cane juice/non-molasses based distilleries ( $\geq 30$  KLD) are listed at S.N. 5 (g) under category 'A' and appraised at Central level.

M/s S. R. Spirits have proposed for setting up of Grain based Distillery (100 KLPD) and cogeneration power plant (5 MW) at Village Jalalabad, Tehsil Jalalabad (W), District (Ferozpur), Punjab. Total plot area is 16.5 acres. Total cost of project is Rs. 128 Crores. The product mix will be ethanol, extra-neutral alcohol (ENA), bottling of country liquor and IMFL. Unit will be operated for 300 days. No national park/wildlife sanctuary/biosphere reserve forests is located within 10 km. Rs. 20 Crore and Rs. 25 Lakhs are earmarked toward capital cost and recurring cost per annum for pollution control measures.

Grains (@ 2.5 MT/KL of alcohol), enzymes (@200 kg/day), (Sodium hydroxide @ 100 kg/day), urea @ 450 kg/day, antifoam agent @ 50 kg/day), yeast@200 kg/day will used as raw materials.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during September, 2011 to November, 2011 and submitted baseline data indicates that ranges of concentrations of PM<sub>10</sub> (35  $\mu\text{g}/\text{m}^3$  to 85  $\mu\text{g}/\text{m}^3$ ), PM<sub>2.5</sub> (21  $\mu\text{g}/\text{m}^3$  to 46  $\mu\text{g}/\text{m}^3$ ), SO<sub>2</sub> (2.5  $\mu\text{g}/\text{m}^3$  to 18.3  $\mu\text{g}/\text{m}^3$ ) and NO<sub>x</sub> (4.9  $\mu\text{g}/\text{m}^3$  to 35.3  $\mu\text{g}/\text{m}^3$ ) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 8  $\mu\text{g}/\text{m}^3$  and 1.4  $\mu\text{g}/\text{m}^3$  with respect to SPM and SO<sub>2</sub> respectively. The resultant concentrations are within the NAAQS. ESP alongwith stack of adequate height will be provided to rice husk fired boiler (35 TPH). Fresh water requirement from canal will be 1255 m<sup>3</sup>/day. Spent wash will be centrifuged in the decanter to form wet cake and thin slop. Thin slop will be concentrated in MEE. Concentrate will be mixed with thick cake to form DWGS. Spent wash and MEE condensate will be treated in biological ETP followed by tertiary treatment. Fly ash will be sent to brick manufacturers. DDGS will be used as cattle feed. Greenbelt will be developed in 4.5 acres. Rainwater harvesting structure will be constructed for ground water recharging of rooftop rain water and storm water.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Punjab Pollution Control Board on 10<sup>th</sup> February, 2012. The issues raised were regarding impact of proposed unit on surrounding, local employment, any impact on ground water, pollution control measures to be taken,

apprehension on discharge of wastewater into nearby drain etc. In response, the Project proponent informed that MEE will be installed to treat the spent wash generated and condensate will be recycled/reused in the cooling tower. For treatment of other wastewater, a state of art technology ETP will be installed and treated wastewater will be utilized for horticulture purpose. There will be no odour problem from the industry since all the process will be carried out in closed type vessels. Regarding employment, project proponent informed that about 300 persons of the area will be employed. Besides, a lot of indirect employment/work will be generated.

After deliberations, the Committee desired following additional information:

1. Confirmation needs to be obtained from the District Administration whether any of the District Magistrate/ District Collector/ Dy. Commissioner or his or her representative not below the rank of Additional District Magistrate has supervised and presided over the entire public hearing process.

The proposal was deferred till the desired information is submitted. The above information shall be provided with the uploading of minutes on the website.

3.5.6. Increase in crude oil production capacity from Mangala Processing Terminal (MPT) (in RJ-ON-90/1 Block, Rajasthan) from 175,000 to 200,000 Bopd (Barrels of oil per day) and associated gas from 35 to 40 million standard cubic feet per day at village Nagana, Tehsil & District Barmer, Rajasthan **by M/s Cairn Energy India Pvt. Ltd. regarding EC**

The project authorities and their consultant (ERM India Pvt. Ltd., Gurgaon) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 36<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry) held during 11<sup>th</sup>-12<sup>th</sup> June, 2012 for preparation of EIA/EMP. All the Offshore and Onshore oil and gas exploration, development and production projects are listed at S.N. 1(b) under Category 'A' and appraised at the Central level.

M/s Cairn Energy India Pvt. Ltd have proposed for increase in crude oil production capacity from Mangala Processing Terminal (MPT) (in RJ-ON-90/1 Block, Rajasthan) from 175,000 to 200,000 Bopd (Barrels of oil per day) and associated gas from 35 to 40 million standard cubic feet per day at village Nagana, Tehsil & District Barmer, Rajasthan. The block was awarded to CEIL-ONGC joint venture for exploration and production of hydrocarbons by the Govt. of India. The RJ-ON-90/1 block as per current retention of development areas spreads over an area of about 3112 km<sup>2</sup>. The block lies within the Barmer and Jalore Districts, in the northern development area of the block comprising of Mangla, Aishwarya and Bhagyam field. No forest land is involved. No case is pending against the project. Proposed increase of oil production and associated gas production will be achieved by utilizing already permitted processing facilities. No national park/wildlife sanctuary/reserve forest/eco-sensitive area is located with 10 km from MPT. Following are the existing infrastructure/facilities:

S.N.	Description	Existing Permitted Capacity
1	Processing Trains/Crude Oil Production	Three (3)/ 175,000 BOPD
2	Associated Natural Gas Production	35 million standard cubic feet per day.
3	Plant fluid handling capacity	680,000 Barrels of fluid per day
4	No. of well pads	Mangala (18), Bhagyan (15),

		Aishwariya (8)
5	No. of wells ( Production + Injection Wells)	Mangala (390), Bhagyan (81 ), Aishwariya (80)
6	Captive Power Generation	62 MW ( 5 No. Steam Turbine Generators)
7	Steam Boilers	6 W + 1 SB ( Each of 115 TPH)
8	Crude Oil Storage	6 Tanks /1,00,000 barrels
9	Deep Dump Wells (>1,000 m)	Six (6)
10	Hazardous Waste Landfill Capacity with Incinerator	185,000 m <sup>3</sup> & Incinerator (500 Kg/d)

Following is the important features of the proposed project:

- i. Number of wells and well pads required for the proposed production capacity will be within the total permitted numbers. Therefore no additional facilities/wells required other than those already permitted.
- ii. The permitted fluid handling capacity at MPT is 680,000 bopd constituting of crude oil and water. This is sufficient to cater for production of 200,000 bopd of crude oil operating on early filed life of a low water cut profile.
- iii. The associated gas produced from the well fluid separation is used as fuel for steam boilers and gas engines.
- iv. The power requirement for the MPT is based on total fluid processing, pumping and heating requirements. Since the total fluid handled is within the existing capacity no additional power is required for the production increase.
- v. No increase in hazardous waste generation. The landfill capacity is based on 20 years waste generation, hence adequate capacity exists for waste produced due to the proposed production increase.
- vi. No additional emission source other than what has already been permitted.
- vii. No additional land is required for the MPT as there is no new facility proposed to cater for increase in production.
- viii. No surface discharge /produced water re-injection for reservoir pressure support.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 8 locations during January, 2012 to June, 2012 and submitted baseline data indicates that ranges of concentrations of PM<sub>10</sub> (47.12 µg/m<sup>3</sup> to 81.58 µg/m<sup>3</sup>), PM<sub>2.5</sub> (17.06 µg/m<sup>3</sup> to 36.8 µg/m<sup>3</sup>), SO<sub>2</sub> (2.29 µg/m<sup>3</sup> to 13.14 µg/m<sup>3</sup>) and NO<sub>x</sub> (11.64 µg/m<sup>3</sup> to 28.09 µg/m<sup>3</sup>) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 8.5 µg/m<sup>3</sup>, 0.4 µg/m<sup>3</sup> and 40.9 µg/m<sup>3</sup> with respect to PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>. The resultant concentrations are within the NAAQS. Three additional vapour recovery units will be provided. Total requirement of saline water will be 32,500 m<sup>3</sup>/day, for which permission is already obtained from CGWA. Fresh water requirement of 4,200 m<sup>3</sup>/day is met from saline water through desalination plant. The rejects from the desalination process is comingled with the injection water and injected back into the oil reservoir for pressure maintenance. There is no surface water discharge of the reject water. Sewage will be treated in STP. Storm water drain will be connected to rain water harvesting structure.

The Committee also discussed the compliance status report on the conditions stipulated in the existing environmental clearance, which were monitored by the Ministry's (Central Region) regional office, Lucknow and submitted vide their letter no. IV/ENV/R/PL-17/810/2010/318 dated 12<sup>th</sup> September, 2012. It was reported that the drill cuttings and residual drilling mud are/were stored in pits lined with concrete and HDPE. This drill cutting are being disposed to captive TSDF. The deep aquifer saline water from Thumbli wter field is being extracted and used for production and domestic purpose after treatment as per CGWA

guidelines. PAs have obtained NOC from Chief Wild life Warden (CWW), Govt of Rajasthan vide their letter dated 25.11.2006. MPT fire water system and fire fighting facility has been designed based on OISD-116 standards. The inter distance and spacing of various blocks and facilities have been constructed as per OISD 118 standards. It was reported that project proponent has assured that the monitoring data will be posted on the website of the company from November, 2012. The Committee asked the project proponent to comply with the condition stipulated. The compliance of other specific conditions has been reported satisfactorily.

The Committee exempted the public hearing under 7 (ii) of EIA Notification, 2006 as no additional facilities will be created for the enhanced production.

After detailed deliberations, the Committee found the final EIA/EMP report adequate and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i) Compliance to all the specific and general conditions mentioned in environmental clearance letters nos. J-11011/382/2005-IAII (I) dated 21<sup>st</sup> March, 2006, J-11011/174/2007-IAII(I) dated 12<sup>th</sup> March, 2008, J-11011/98/2019-IAII(I) dated 23<sup>rd</sup> November, 2010 and 16<sup>th</sup> October, 2012 shall be ensured.
- ii) The company shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on its website and shall update the same periodically. It shall simultaneously be sent to the Regional office of MOEF, the respective Zonal office of CPCB and the RSPCB. The levels of PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO and nonmethane hydrocarbon) in ambient air and emissions from the stacks shall be monitored and/ displayed at a convenient location near the main gate of the company and at important public places.
- iii) At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on locals need , issues raised during the earlier public hearing meeting and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Lucknow. Implementation of such program should be ensured accordingly in a time bound manner.
- iv) The Company shall submit within three months their policy towards Corporate Environment Responsibility which shall inter-alia address (i) Standard operating process/ procedure to being into focus any infringement/deviation/violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.

**3.5.7. Bulk Drug Unit (24 MTPM) at Plot No. 198 & 199, Raaichur Growth Centre Industrial Area, Village Chicksugur, District Raichur, Karnataka by M/s SRC Laboratories Pvt. Ltd.- regarding EC.**

The project authorities and their consultant (Rightsource Industrial Solutions Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 30<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry) held during 15<sup>th</sup> – 16<sup>th</sup> December, 2011 for preparation of EIA/EMP. All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B' and appraised at State level. However, applicability of general condition due to project location within interstate boundary, proposal is treated as category 'A' and appraised at Central Level.

M/s SRC Laboratories Pvt. Ltd have proposed for setting up of Bulk Drug Unit (24 MTPM) at Plot No. 198 & 199, Raichur Growth Centre Industrial Area, Village Chicksugur, District Raichur, Karnataka. Total plot area is 8101.60 m<sup>2</sup>. Karnataka State boundary is located at a distance of 7.6 km. Total cost of the project is Rs. 4.80 Crores. River Krishna and River Tunga Badra are flowing at a distance of 7.6 Km and 40 Km respectively. Following products will be manufactured:

S.N.	Name of the Product	Quantity (TPM)
1	Abacavir Sulfate	1.0
2	Candesartan	1.0
3	Citalopram Hydrobromide	1.0
4	Darifenacin	1.0
5	Donepezil Hydrochloride	1.5
6	Fexofenadine Hydrochloride	1.0
7	Irbesartan	1.0
8	Levofloxacin	2.0
9	Montelukast Sodiuk	2.0
10	Pantaprazole sodium	2.0
11	Pregabalin	1.0
12	Rabeprazole sodium	2.0
13	Ritanovir	1.5
14	Tamsulosin Hydrochloride	1.0
15	Telmisartan	2.0
16	Terbinafine Hydrochloride	1.0
17	Valsatran	1.0
18	Venlafaxine Hydrochloride	1.0
	Total	24.0

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 8 locations during March, 2012 to May, 2012 and submitted baseline data indicates that ranges of concentrations of PM<sub>10</sub> (56.54 µg/m<sup>3</sup> to 62 µg/m<sup>3</sup>), PM<sub>2.5</sub> (26 µg/m<sup>3</sup> to 33.08 µg/m<sup>3</sup>), SO<sub>2</sub> (5.45 µg/m<sup>3</sup> to 8.07 µg/m<sup>3</sup>) and NO<sub>x</sub> (7.1 µg/m<sup>3</sup> to 8.6 µg/m<sup>3</sup>) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 0.788 µg/m<sup>3</sup>, 1.556 µg/m<sup>3</sup> and 1.880 µg/m<sup>3</sup> with respect to PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>. The resultant concentrations are within the NAAQS.

Bagfilter alongwith stack of 30 m height will be provided to coal fired boiler. Adequate scrubbing system will be provided to the process vents to control process emissions viz. HCl, SO<sub>2</sub> and NH<sub>3</sub>. Total fresh water requirement from KIADB water supply will be 33.60 m<sup>3</sup>/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low

TDS/COD effluent stream will be treated in effluent treatment plant (ETP) comprising primary, secondary and tertiary treatment. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted. Inorganic & evaporation salt and ETP sludge will be sent to Treatment Storage Disposal Facility (TSDF) for hazardous waste. Fly ash will be sold to brick manufacturers. Waste oil and used batteries will be sold to authorized recyclers/re-processors. Green belt will be developed in 2835.56 m<sup>2</sup> out of total plant area of 8101.60 m<sup>2</sup>. Power (500 KVA) will be sourced from SEB. D.G. set (1x250 KVA) will be installed. HSD (100 l/day) will be used as fuel. Coal (150 MTPM) will be used as fuel in boiler (2 MTPM).

The Committee noted that no public hearing / consultation is required due to project being located in notified Raichur Growth Centre Industrial Area as per stage Section 7 (i), III Stage (3), Para (i)(b) of EIA Notification 2006.

After detailed deliberations, the Committee found EIA/EMP report satisfactory and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i) Bag filter shall be provided to the boiler to control particulate emissions within permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/KSPCB guidelines.
- ii) The levels of PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, VOC, NH<sub>3</sub> and HCl shall be monitored in ambient air.
- iii) Two stage chilled water/caustic scrubber should be provided to process vents to control HCl. Two stage scrubber with caustic lye media solution should be provided to process vents to control SO<sub>2</sub>. Two stage scrubber with chilled water media should be provided to process vents to control NH<sub>3</sub>. The scrubbing media should be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber should be monitored regularly and maintained properly. At no time, the emission levels should go beyond the prescribed standards.
- iv) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits imposed by KSPCB.
- v) Total fresh water requirement from KIADB water supply shall not exceed 33.6 m<sup>3</sup>/day and prior permission shall be obtained from the competent Authorities.
- vi) Trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD should be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream should be treated in ETP and then passed through RO system. Condensate and recover water will be recycled/reused within factory premises. 'Zero' effluent discharge should be adopted and no effluent will be discharged outside the premises.
- vii) All the solvent storage tanks should be connected with vent condensers with chilled brine circulation.
- viii) As proposed, process organic residue and spent carbon shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt should be disposed off

to the TSDF. The ash from boiler should be sold to brick manufacturers/cement industry.

- ix) The company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from KSPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire-fighting facilities in case of emergency.
- x) Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust should be avoided.
- xi) Solvent management should be as follows :
  - Reactor should be connected to chilled brine condenser system
  - Reactor and solvent handling pump should have mechanical seals to prevent leakages.
  - The condensers should be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
  - Solvents should be stored in a separate space specified with all safety measures.
  - Proper earthing should be provided in all the electrical equipment wherever solvent handling is done.
  - Entire plant where solvents are used should be flame proof. The solvent storage tanks should be provided with breather valve to prevent losses.
- xii) As proposed, green belt should be developed in 2835.56 m<sup>2</sup> out of total land 8101.60 m<sup>2</sup>.
- xiii) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

3.5.8. Integrated Steel plant (Beneficiation Plant -1.40 MTPA, Pellet Plant 1.2 MTPA, DRI Kilns- 4x350 TPD- 4,35,000 TPA, Tunnel furnaces SMS- 8x100 TPD- 2,64, 000 TPA, Ladle Furnace 1x30 TPD 4, 35,000 TPA, 1no. CCM Machine for manufacturing of 4,22,400 TPA Billets, 2 no. (25T each) of rolling Mill- 2,90,000 TPA) along with 70 MW captive power plant at Village Parakheda, Tahsil sihora, district Jablapur in Madhya Pradesh by **M/s Pacific Iron Manufacturing ltd. - regarding EC.**

The Committee noted that EIA/EMP report was prepared by M/s Techno Analytical Kolkata, who is a non-accredited consultant as on date. Therefore, Committee advised them to validate EIA/EMP report first by the QCI/NABET accredited consultant and submitted to the Ministry for consideration of environmental clearance.

The proposal was deferred till EIA/EMP report validated by the QCI/NABET accredited consultant is submitted.

3.5.9. Expansion of steel plant by installing Iron Ore Beneficiation and Pelletization (450000 TPA) at Sy. No. 30, 31, 32, 240, 250, 251, 252, village & Mandal Kesoram, District Ranga Reddy in Andhra Pradesh by **M/s Genext Steels Pvt. Ltd. - regarding EC.**

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 24<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry) held during 19<sup>th</sup>-20<sup>th</sup> May, 2011 for preparation of EIA/EMP report. All the Pellet Plants and Iron Ore beneficiation plants (> 0.1 MTPA throughput) are listed at S.No. 3(a) in Primary Metallurgical Industries and 2(a) respectively under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

M/s Genext Steels Pvt. Limited have proposed for expansion of its Steel Plant by installing Iron Ore Beneficiation and Pelletization (4,50,000 TPA) at Sy. No. 30, 31, 32, 33, 34, 240, 250, 251, 252, Village & Mandal Kesoram, District Ranga Reddy in Andhra Pradesh. The land acquired for the proposed project is 5 acres and 33 % area is earmarked for green belt development. No national Park/wild life sanctuary is located within 10 km radius of the project site. Total cost of the proposed project is Rs. 30 Crores and the budget for Environment Management & Pollution Control measures is Rs. 1 Crores. Project proponent informed that environmental clearance has been obtained for the steel plant. They could not carry forward the project due to non-availability of raw material i.e. iron ore. Therefore unit has not implemented existing environmental clearance and proposed project is a backward integration. The Committee noted that in such case certified compliance report for the existing activities is not required.

Following are the details of existing and proposed expansion facilities:

S. N.	Name of the project	Existing	Proposed Expansion
1	Sponge Iron (3 Rotary Kilns x100 TPD)	300 TPD/90,000 TPA (Iron Ore)	----
2	Captive Power Plant	10 MW	----
3	Induction Furnace / Arc Furnace (10TPHx2) (with 4 Crucibles – 2 Standby and 2 Operating modes)	400 TPD / 1,20,000 TPA (Ingots / Billets)	----
4	Rolling Mill(Re – heating Furnae@180 TPDx2)	360 TPD / 1,08,000 TPA (M.S.Bars / Structures)	----
5	Iron Ore Benefication & Pelletization	----	1250 TPD/4,50,000 TPA (Iron Ore/ Pellets)

Iron ore, coal and Bentonite will be used as raw materials. Coal will be procured from Apple Commodities Ltd.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 8 locations during October-December, 2011 and submitted baseline data indicates that ranges of concentrations of PM<sub>10</sub> (17.6 µg/m<sup>3</sup> to 50.8 µg/m<sup>3</sup>), PM<sub>2.5</sub> (0.4 µg/m<sup>3</sup> to 10.3 µg/m<sup>3</sup>), SO<sub>2</sub> (10.2 µg/m<sup>3</sup> to 19.2 µg/m<sup>3</sup>) and NO<sub>x</sub> (13.6 µg/m<sup>3</sup> to 29.9 µg/m<sup>3</sup>) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 2.0 µg/m<sup>3</sup>, 0.85 µg/m<sup>3</sup> and 1.2 µg/m<sup>3</sup> with respect to PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>. The resultant concentrations are within the NAAQS. Bagfilter will be installed at crushing unit of raw materials and Pelletization kiln. Fugitive emissions from material uploading operations, material transfer points will be controlled fully with total enclosure and all the transfer emission will be connected with extractor inlet point and will pass through a high efficiency bag filter before discharging into the atmosphere. Water requirement from ground water source will be 20 m<sup>3</sup>/day. Sewage will be disposed off through in septic tank followed by soak pit. Solid waste generated is silica waste after magnetic separation, which is used for brick manufacturing.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the AP Pollution Control Board on 15<sup>th</sup> April, 2012. The issues raised were regarding pollution control measures, CSR, greenbelt, dust pollution from transportation etc. In response, project proponent committed that all pollution control equipments will be installed to control air and water pollution. No effluent will be discharged outside the factory premises. Greenbelt will be developed. The unit will set up online monitoring system. Rain water harvesting structure will be created to conserve water. The CSR activities will be planned in consultation with the local body. Local employment will be created. The Management has also allocated 5 % of its total expenditure for the socio-economic development. All the issues raised have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

1. Measures shall be taken to reduce PM levels in the ambient air. Continuous stack monitoring facilities for all the stacks should be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), bag house, bag filters etc. should be provided to keep the emission levels below 50 mg/Nm<sup>3</sup> and installing energy efficient technology.
2. The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be followed.
3. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines/Code of Practice issued by the CPCB should be followed. New standards for the sponge iron plant issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> May, 2008 should be followed.
4. Vehicular pollution due to transportation of raw material and finished product should be controlled. Proper arrangements should also be made to control dust emissions during loading and unloading of the raw material and finished product.
5. Total fresh water requirement from ground water source shall not exceed 20 m<sup>3</sup>/day. Prior 'permission' for the drawl of 20 m<sup>3</sup>/day ground water from the Competent Authority shall be obtained. 'Zero' effluent discharge should be strictly followed and no wastewater should be discharged outside the premises.
6. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.

7. Regular monitoring of influent and effluent surface, sub-surface and ground water should be ensured and treated wastewater should meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent.
8. Proper handling, storage, utilization and disposal of all the solid waste should be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste should be submitted to the Ministry's Regional Office at Bangalore, SPCB and CPCB.
9. A time bound action plan should be submitted to reduce solid waste, its proper utilization and disposal.
10. A Risk and Disaster Management Plan (including Earth quake and Seismic hazard) shall be prepared and a copy submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB within 3 months of issue of environment clearance letter.
11. As proposed, green belt should be developed in at least 33 % of the project area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
12. All the commitments made to the public during public hearing/public consultation meeting held on 15<sup>th</sup> April, 2012 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
13. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on earlier Public Hearing Issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner.
14. The Company shall submit within three months their policy towards Corporate Environment Responsibility which should inter-alia address (i) Standard operating process/procedure to bring into focus any infringement/deviation/ violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non-compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.

3.5.10. Proposed chelates, esters and coupling agents manufacturing unit at S.No. 131, 132 and 133, Village Dhobikuva, Taluka Padra, District Vadodara in Gujarat by **M/s Mamta Polycoats. - regarding EC.**

The project authorities and their consultant (Envicare Consultant (I) Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 3<sup>rd</sup> Meeting of the Expert Appraisal Committee (Industry) held during 15<sup>th</sup> & 16<sup>th</sup> September, 2009 for preparation of EIA/EMP report. All the synthetic organic chemical industries (bulk drugs & intermediates) located outside the notified industrial estate/area are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Mamta Polycoats have proposed for setting up of Synthetic Organic Manufacturing Unit at S. No. 131, 132 and 133, Village Dhobikuva, Taluka Padra, District Vadodara in Gujarat. Total plot area is 1.8 acres. Mahi River is flowing at a distance of 4.25 Km. Total cost of the project is Rs. 1.0 Crore. Rs. 7.4 Lakhs and Rs. 3.6 Lakhs are earmarked toward capital cost and recurring cost per annum. Following products will be manufactured:

S.N.	Products	Quantity ( MTPM)
1	Ortho Titanate Esters	50
2	Phosphate Ester	10
3	Organic Chelates	25
4	Ortho Zirconate Esters	10
5	Titanate Coupling Agents	25
6	Modified Urethane Compound	25
7	Ammonium chloride	10
	Total	155

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 5 locations during winter 2010-2011 and submitted baseline data indicates range of PM<sub>10</sub> (52–89 ug/m<sup>3</sup>), SO<sub>2</sub> (4.6 – 11 ug/m<sup>3</sup>) and NO<sub>x</sub> (8.8-15.1 ug/m<sup>3</sup>). The results of the modeling study indicate that the maximum increase of GLCs due to the proposed project is 0.86 µg/m<sup>3</sup>, 1.49 µg/m<sup>3</sup> and 0.53 µg/m<sup>3</sup> for SPM, SO<sub>2</sub> and NO<sub>x</sub> respectively. The resultant GLCs are within the NAAQS.

Total water requirement from ground water source will be 3.4 m<sup>3</sup>/day. Industrial effluent generation will be 0.2 m<sup>3</sup>/day from blowdown. Effluent will be treated in ETP and treated water will be reused for gardening purpose after achieving the norms. Project proponent informed that there are no air emissions but the Committee informed that process emissions viz. HCl and NH<sub>3</sub> have been envisaged. To control the process emissions, scrubber should be installed. Adequate stack height will be provided to DG set and natural gas/ diesel fired hot water generator.

Used/spent oil will be sent to authorized recyclers. Spent carbon and Distillation residues will be sent for incineration. LDO and natural gas will be used as fuel. Greenbelt will be developed in 2395 m<sup>2</sup> out of total 7255 m<sup>2</sup>.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 4<sup>th</sup> October, 2011. The issues raised were regarding construction of the unit, CSR activity in the village such as health programme, education, ground water drawl, increase the fund for socio-economic development etc. In response, the Project proponent informed that the unit has already obtained NOC from the SPCB for manufacture of inorganic products and hence the office building was constructed for the same. Rain water harvesting has been proposed to carry out to recharge of the ground water. About 20-25 persons as per required qualification will be employed in the industry from the local areas. Unit agreed to give training to the youth and then employ them to their industry. Issues raised have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report. The Committee noted that GPCB vide their letter no PC/NOC-VRD-3261/GPCB ID29050/122368 dated 20<sup>th</sup> August, 2012 has issued NOC for the proposed activity, which indicates that GPCB has recommended the project.

After detailed deliberations, the Committee found the final EIA/EMP report adequate and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i) Adequate stack height should be provided to oil fired water generator.
- ii) The levels of PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, HCl, NH<sub>3</sub> and VOC should be monitored in ambient air.
- iii) Adequate scrubber shall be provided to process vents to control HCl and NH<sub>3</sub>. The scrubbing media should be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber should be monitored regularly and maintained properly. At no time, the emission levels should go beyond the prescribed standards.
- iv) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits imposed by GPCB.
- v) Total fresh water requirement from ground water source shall not exceed 3.4 m<sup>3</sup>/day and prior permission should be obtained from the Competent Authority.
- vi) Industrial effluent generation shall not exceed 0.2 m<sup>3</sup>/day. Effluent shall be treated in ETP. Treated effluent shall be recycled/reused within factory premises.
- vii) No effluent should be discharged outside the factory premises and zero discharge of the effluent should be implemented.
- viii) The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from GPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire-fighting facilities in case of emergency.
- ix) Green belt should be developed in 33 % of the total land.
- x) All the recommendations made in the risk assessment report should be satisfactorily implemented.
- xi) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- xii) All the commitments made to the public during public hearing/public consultation meeting held on 4<sup>th</sup> October, 2011 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xiii) At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing Issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.
- xiv) The Company shall submit within three months their policy towards Corporate Environment Responsibility which should inter-alia address (i) Standard operating process/procedure to bring into focus any infringement/deviation/ violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System

of reporting of non-compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.

**3.5.11. Grain/Molasses based Distillery (60 KLPD) Unit and Cogeneration Power Plant (1 MW) at Village & Tehsil Nowgong, District Chhatarpur, Madhya Pradesh by M/s Cox India Limited- regarding EC.**

The project authorities and their consultant ( J M Environet Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 25<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry) held during 28<sup>th</sup>-30<sup>th</sup> July, 2011 for preparation of EIA/EMP reprot. All molasses and cane juice/non-molasses based distillery are listed at S.N. 5(g) (i) (ii) under category 'A' and appraised at Central level.

M/s Cox India Limited has proposed for setting up of grain/molasses based Distillery (60 KLPD) and Cogeneration Power Plant (1 MW) at Village & Tehsil Nowgong, District Chhatarpur, Madhya Pradesh. Existing plant was based on molasses having capacity 3 KLPD, which was established in 1914. PAs confirmed during presentation that existing 3 KLPD plant was not operational and will be scrapped. Total plant area is 6.195 ha. Products to be manufactured are industrial alcohol, rectified spirit & Indian made foreign Liquor (IMFL). Total project cost is 20.00 Crore. Rs. 4.00 Crore and 0.6 Crore are earmarked towards capital cost and recurring cost/annum for pollution control measures. No forest land is involved. No national parks/wildlife Sanctuaries/ Biosphere reserves are located within 10 km radius. Mahema PF (7.2 km) and Amkhera PF (9.0 km) are located within 10 km. State Forest Department's letter no. 2012/2215 dated 14<sup>th</sup> September, 2012 is submitted. River Dhashan (8.5 Km), River Bhadar (4.7 Km), Silpa Nala (0.1 KM), Jagat Reservoir (7.1 Km) and Gora reservoir (8.0 Km) are located within a distance of 10 Km. Molasses based distillery will be operated for 270 days and grain based distillery will be operated for 330 days. Grain and molasses will be sourced from nearby market/ sugar mills as raw materials. Coal will be procured through E-auction.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 8 locations during October-December, 2011 and submitted baseline data indicates range of PM<sub>10</sub> (43.14–71.54 ug/m<sup>3</sup>), PM<sub>2.5</sub> (20.78–37.41 ug/m<sup>3</sup>), SO<sub>2</sub> (6.51 – 14.06 ug/m<sup>3</sup>) and NO<sub>x</sub> (9.12-23.12 ug/m<sup>3</sup>). The results of the modeling study indicate that the maximum increase of GLCs due to the proposed project is 0.6 µg/m<sup>3</sup>, 1.1 µg/m<sup>3</sup> and 0.3 µg/m<sup>3</sup> for SPM, SO<sub>2</sub> and NO<sub>x</sub> respectively. The resultant GLCs are within the NAAQS.

ESP/Bagfilter alongwith stack (40 m) will be provided to the rice husk/coal /spentwash fired boiler (25 TPH). Fresh water requirement from ground water source will be 887 m<sup>3</sup>/day for molasses based distillery and 770 m<sup>3</sup>/day for grain based distillery. The Committee desired to restrict the water requirement to 10.5 KL per KL of alcohol. Spent wash from molasses will be evaporated in MEE and evaporated spent wash will be mixed with coal or rice husk and incinerated in an incineration boiler. Spent wash from grain based distillery will be treated in decanter and then concentrated in MEE to concentrate the solids to 30 % and then taken to a dryer alongwith wet cake from decanter to concentrate the solids to 90 % and will be sold as cattle feed.

Fly ash will be sent to brick manufacturers and for land application. DGWS will be used as cattle feed.

Green belt will be developed in 2.2 ha. Operation working close to machine will be provided with personal protective equipments viz. ear plugs/ear muffs etc. Acoustic enclosure will be provided to DG Sets. Total power requirement will be 911.21 KW for grain based and 582 KW for molasses based and sourced from Cogen power plant. Coal (120 TPD) and rice husk (150 TPD) will be used as fuel.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the MP Pollution Control Board on 11<sup>th</sup> April, 2012. The issues raised were regarding pollution, employment, salary of employee, wastewater discharge, greenbelt etc. In response, the Project proponent informed that pollution control device will be installed for abatement of pollution. There is great potential of employment for the local people. No effluent will be discharged and the plant is based on zero effluent discharge. To recharge the ground water, rain water harvesting structure will be installed. Rs. 4 Crore and Rs. 60 Lakhs are earmarked towards capital cost and recurring cost for pollution control measures. Cattle feed will be given to locals on half rate of the market price. Rs. 1 Crore will be spent on CSR activities. Issues raised have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

After detailed deliberations, the Committee found the final EIA/EMP report adequate and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i. Distillery unit should be based on Molasses (60 KLPD)/ Grain (60 KLPD) only and production of the plant should not exceed the maximum capacity defined i.e. should never exceed 60 KLPD.
- ii. As proposed, bag filter alongwith stack of adequate height should be provided to boiler to control particulate emission within 50 mg/Nm<sup>3</sup>.
- iii. Company shall follow good management practices viz. collection of waste yeast sludge from fermentation section in a closed system and proper disposal, reduced volume of effluent by adopting strategic approaches, closed drains carrying spent wash to the treatment units; minimization of fugitive emissions from anaerobic treatment; proper collection & handling of excess sludge generated from the anaerobic & aerobic treatment units; minimum retention of treated & untreated spent wash in the lagoons; effective composting of the spent wash by controlled effluent spraying through mechanical system to avoid spillages & over application, blending of sludge in correct proportion with press mud; and properly finished compost and green belt development with suitable plantation in and around the treatment units to mitigate odour from the distillery unit.
- iv. Pucca approach road to project site should be constructed prior to commencing construction activity of the main distillery to avoid fugitive emissions.
- v. Total fresh water requirement from ground watersource should not exceed 10.5 KL/KL of alcohol (i.e. 630 m<sup>3</sup>/day) for distillery and cogeneration unit and prior permission for drawl of water should be obtained from the competent authorities.
- vi. Spent wash generation from molasses and grain based distillery should not exceed 8 KI/KI of alcohol and 6 KI/KI of alcohol respectively. Spent wash from molasses based distillery should be concentrated and incinerated in the incineration boiler to achieve zero discharge. Spent wash from grain based should be treated through decanter and concentrated in multi-effect evaporator (MEE) to form DWGS. DWGS should be dried in the dryer to form DDGS.

Spentlees, effluent from utilities and cogeneration unit should be treated in effluent treatment plant (ETP) and water quality of treated effluent should meet the norms prescribed by CPCB/SPCB and recycle/ reuse.

- vii. Spent wash for molasses should be stored in impervious lagoon with HDPE lining as per CPCB guidelines and should be kept in proper condition to prevent ground water pollution. Storage capacity of spent wash lagoon should be for 30 days. The storage capacity of spent wash lagoon in case of grain based will be 5 days.
- viii. As proposed, no effluent from distillery and co-generation power plant should be discharged outside the premises and Zero discharge should be adopted.
- ix. Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area should be set up. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to SPCB and this Ministry. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and total dissolved solids should be monitored.
- x. Baggase storage should be done in such a way that it does not get air borne or fly around due to wind.
- xi. Boiler ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust should be avoided. Bagasse ash and coal ash should be stored separately.
- xii. Occupational health surveillance programme should be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre should be strengthened and the regular medical test records of each employee should be maintained separately.
- xiii. Dedicated parking facility for loading and unloading of material should be provided in the factory premises. Unit should develop and implement good traffic management system for their incoming and outgoing vehicles to avoid congestion on the public road.
- xiv. All the commitment made regarding issues raised during the public hearing/ consultation meeting held on 11<sup>th</sup> April, 2012 shall be satisfactorily implemented.
- xv. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Responsibility based on public hearing issues and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.
- xvi. The Company shall submit within three months their policy towards Corporate Environment Responsibility which should inter-alia address (i) Standard operating process/procedure to being into focus any infringement/deviation/violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non compliance/violation

environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.

- xvii. Green belt should be developed in 2.2ha. to mitigate the effects of fugitive emissions all around the plant as per CPCB guidelines in consultation with the local DFO. Thick green belt with suitable plant species should be developed around the proposed distillery to mitigate the odour problem.

3.5.12. Proposed 50 TPD Stand alone Clinker grinding Unit at plot no. G-27, RIICO Industrial Area, Village Sotanala, Tehsil behror, district Alwar in Rajasthan by **M/s Jai Shree Krishana Cements Ltd. - regarding EC.**

The Committee noted that EIA/EMP report was prepared by Dr. Abha Garg, EQMS India Pvt. Ltd, who is an accredited consultant as on date. In meantime, M/s EQMS India Pvt. Ltd. vide letter dated 3<sup>rd</sup> January, 2013 have informed the Ministry that EIA/EMP report of M/s Jai Shree Krishana Cements Ltd. was not prepared by them. EQMS has no relationship as yet with M/s Jai Shree Krishna Cement as well.

The proposal was deferred till EIA/EMP report prepared/validated by the QCI/NABET accredited consultant is submitted.

3.5.13. Grain based distillery unit (60 KLPD) alongwith Captive Power Plant (3 MW) at Plot No. 10, 11 & part of 9, Khairatigaon Boregaon Industrial Area, Village Boregaon, Tehsil Sausar, District Chhindwara, Madhya Pradesh by **M/s Gulshan Polyols Ltd. - regarding EC.**

The project authorities and their consultant (Pioneer Enviro Laboratories & Consultant Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 32<sup>nd</sup> Meeting of the Expert Appraisal Committee (Industry) held during 16<sup>th</sup> -17<sup>th</sup> February, 2012 for preparation of EIA/EMP report. All the non-molasses based Distillery Units (more than 30 KLPD) are listed at S.N. 5(g) (ii) under Category 'A'.

M/s Gulshan Polyols Ltd have proposed for setting up of Grain based Distillery Unit (60 KLPD) alongwith Captive Power Plant (3 MW) at Plot No. 10, 11 & part of 9, Khairatigaon Boregaon Industrial Area, Village Boregaon, Tehsil Sausar, District Chhindwara, Madhya Pradesh. Total plot area is 12.25 acres. Kanhen River is flowing at a distance of 7.0 km. No national parks/wildlife sanctuaries are located within 10 Km distance from project site. Konder RF, Sapghota RF and Jalalkhera RF are located within 10 Km from the project site. Total cost of the project is Rs. 55.95 Crores. Rs. 12.0 Crores and Rs. 0.8 Crore are earmarked towards capital cost and recurring cost per annum for pollution control. Distillery will be operated for 330 days in a year. Grain from local market and coal will be imported or procured from Singareni collieries Ltd as raw materials.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during March-May, 2012 and submitted baseline data indicates range of PM<sub>10</sub> (23.8–31.2 ug/m<sup>3</sup>), SO<sub>2</sub> (5.9 – 9.8 ug/m<sup>3</sup>) and NO<sub>x</sub> (6.5-11.5 ug/m<sup>3</sup>). The results of the modeling study indicate that the maximum increase of GLCs due to the proposed project is 0.6 ug/m<sup>3</sup>, 6.1 ug/m<sup>3</sup> and 0.6 ug/m<sup>3</sup> for SPM, SO<sub>2</sub> and NO<sub>x</sub> respectively. The resultant GLCs are within the NAAQS.

Bagfilter alongwith stack height (45 m) will be provided to the rice husk/coal fired boiler (25 TPH). Fresh water requirement from M.P. Audyogik Kendra Vikas Nigam Ltd (MPAKVN) water supply will be 720 m<sup>3</sup>/day. Spent wash from grain based distillery will be treated in decanter and then concentrated in MEE to concentrate the solids to 30 % and then taken to a dryer alongwith wet cake from decanter to concentrate the solids to 90 % and will be sold as cattle feed. No effluent will be discharged outside the factory premises.

Fly ash will be sent to brick manufacturers/cement. DWGS will be used as cattle feed. Green belt will be developed in 4.5acres.

The Committee noted that no public hearing / consultation is required due to project being located in notified Boregaon Industrial Area as per stage Section 7 (i), III Stage (3), Para (i)(b) of EIA Notification 2006.

After detailed deliberations, the Committee found the final EIA/EMP report adequate and suggested to stipulate following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i. Distillery unit should be based on Grain based only and no Molasses based distillery unit should be operated.
- ii. Bag filter alongwith stack of adequate height should be provided to coal/biomass fired boiler to control particulate emission within 50 mg/Nm<sup>3</sup>.
- iii. Pucca approach road to project site should be constructed prior to commencing construction activity of the main distillery so as to avoid fugitive emissions.
- iv. Total fresh water requirement from M.P. Audyogik Kendra Vikas Nigam Ltd (MPAKVN) water supply should not exceed 10.5 KL/KL of alcohol (i.e. 630 m<sup>3</sup>/day)for distillery and cogeneration unit.
- v. Prior permission for drawl of water should be obtained from the concerned authorities. Water consumption should be reduced by adopting 3 R's (reduce, reuse and recycle) concept in the process.
- vi. Spent wash generation should not exceed 6 KI/KI of alcohol. Spent wash should be treated through decanter and concentrated in multi-effect evaporator (MEE) followed by dryer to form DDGS. Spentlees, effluent from bottle washing, utilities and cogeneration unit should be treated in effluent treatment plant (ETP) and water quality of treated effluent should meet the norms prescribed by CPCB/SPCB and recycle/reuse.
- vii. Spent wash should be stored in impervious lagoon with HDPE lining as per CPCB guidelines and should be kept in proper condition to prevent ground water pollution. Storage capacity of spent wash lagoon should be for 5 days.
- viii. No effluent from distillery and co-generation power plant should be discharged outside the premises and Zero effluent discharge concept should be adopted.
- ix. Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area should be set up. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to SPCB and this Ministry. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and total dissolved solids should be monitored.

- x. No storage of wet cake should be done at site. An additional dryer should be installed so that at any time wet cake is not sold then wet cake should be converted into dry cake by operating additional dryer.
- xi. Biomass storage should be done in such a way that it does not get air borne or fly around due to wind.
- xii. Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust should be avoided.
- xiii. As proposed, ash will be transferred in the covered truck. Ash shall be transferred to the brick manufacturing unit/cement plant. A tie-up should be made with brick manufacturer.
- xiv. Occupational health surveillance programme should be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre should be strengthened and the regular medical test records of each employee should be maintained separately.
- xv. Dedicated parking facility for loading and unloading of material should be provided in the factory premises. Unit should develop and implement good traffic management system for their incoming and outgoing vehicles to avoid congestion on the public road.
- xvi. As proposed, thick green belt will be developed in 4.5 acres land as per the CPCB guidelines in consultation with DFO. Thick greenbelt with suitable plant species shall be developed all round the plant boundary to act as noise attenuator and to mitigate the odour problem.

3.5.14. Specialty Chemical Products and Agrochemical Intermdiates Maufacturing Unit (20,075 TPA), Captive Power Plant (3 MW) and Turbine (2 MW) at Plot No. Z/107, SEZ Dahej, Party-II Taluka Vagra, Distirct Bharuch, Gujarat by **M/s Sajjan Specialty Limited. - regarding EC.**

The project authorities and their consultant (Eco-Chem Sales & Services) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 32<sup>nd</sup> Meeting of the Expert Appraisal Committee (Industry) held during 16<sup>th</sup>–17<sup>th</sup> February, 2012 for preparation of EIA/EMP report. All units producing technical grade pesticides are listed at S.N. 5(b) under category ‘A’ and appraised at Central level.

M/s Sajjan Specialty Limited have proposed for setting up of Specialty Chemical Products and Agrochemical Intermediates Manufacturing Unit (20,075 TPA), Captive Power Plant (3 MW) and Turbine (2 MW) at Plot No. Z/107, SEZ Dahej, Part-II, Taluka Vagra, District Bharuch, Gujarat. Bharuch is about 50 km. Project will be located in notified Dahej SEZ. Total plant area is 98,304.8 m<sup>2</sup>. Total cost of the project is Rs.100.00 Crore. Rs. 14 Crore and Rs. 70 Lakhs per annum are earmarked towards capital cost and recurring cost per annum for pollution control. Following products will be manufactured:

SR. NO.	PRODUCTS	PROPOSED QUANTITY (T/ANNUM)

<b>A.</b>	<b>SPECIALTY CHEMICALS</b>	
1	2,3-Dichloropyridine (2,3-DCP)	250
2	Dimethyl 1,3-acetonecarboxylate (ADC dimethyl)	300
3	N-(2-Amino-4,6-dichloropyrimidin-5-yl)formamide (FADCP)	250
4	Methyl 4-Methyl-3-oxopentanoate (MeOPMe)	100
5	N-Methylmethane Sulfonamide (MMSA)	300
6	4-Methyl-3-oxopentanoate (OPMe)	80
7	2-Carbethoxy-3-(2-thienyl)propanoic acid (Thiophen)	200
8	p-Xylene dimethyl ether (PXDM)	400
9	4,6-Difluoro-2-ethoxy pyrimidine (DFEP)	100
10	1,4-Bis(hydroxymethyl)benzene (PXG)	100
11	5-Bromopyrimidine (5-BrP)	100
12	1,1-Bis(4'-hydroxy-3'-methylphenyl)cyclohexane (DMBPC)	100
13	Exo-5-(p-tert-butylphenol)bicycle[2,2,1]-2-heptane (exo) (TBPH)	300
14	Chlorinated Paraffin Wax (JB92)	1800
15	2,4-Diamino-6-chloropyrimidine (MM ACID)	200
16	2,4,6-Trimethylbenzoylchloride (M ACID)	400
17	3-Amino-4-chlorobenzoic acid (P ACID)	600
18	2,3-Dihydroxy quinoxaline-6-carboxylic acid (Z ACID)	100
19	2-Amino-5-(aminomethyl)naphthalene-1-sulphonic acid (E ACID)	100
20	4,4-dimethoxy-2-butanone (AADMA)	225
21	Nitro guanidine (NGN)	1500
22	4,6-Dimethoxy-2-chloropyrimidine (DMP, 2-Cl)	150
23	2,2'-Oxybis[5,5-dimethyl-1,3,2-dioxaphosphorinane]2,2'disulphide (OPDDD)	1100
24	3,3'-Dichloro-4,4' Diamino Diphenyl	3600
25	2-Benzyl-2-(Dimethylamino)-4-Morpholino-Butyrophenone	600
26	Methyl Ethyl ketone	4000
<b>B.</b>	<b>AGROCHEMICAL INTERMEDIATES</b>	
27	2-Amino-5,8-dimethoxy(1,2,4)triazolo(1,5-C)pyrimidine (DAT)	120
28	2-Amino-4,6-dimethoxypyrimidine (O ACID)	400
29	4,6-Dimethoxy-2-((phenoxy-carbonyl)amino)pyrimidine (OC ACID)	200
30	4-Amino-2,5-dimethylphenol (AMP)	200
31	2-Benzyl thionicotinic (BTNA)	150
32	4-Chloro-2,6-dimethylbromobenzene (CLDMBB)	150
33	4,6-Dichloropyrimidine (RP ACID)	500
34	1,3-Thiazolan-2-one (2 Thiazo)	300
35	1-(4,6-Dimethoxypyrimidin-2-yl)propan-2-one (Pron, DMP)	100
36	Pyrimidine and Derivatives	1000
	<b>Total</b>	<b>20,075</b>

37	Captive Power Plant (3 nos.) & Turbine	1 MW Capacity (each) & 2 MW
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**TABLE-3 (CONTD.)**

**LIST OF BY-PRODUCTS ALONG WITH THEIR PRODUCTION CAPACITY**

<b>SR. NO.</b>	<b>PRODUCTS</b>	<b>PROPOSED QUANTITY (T/ANNUM)</b>
1	HCl (30%)	1421 KL
2	NaCl	2177.25
3	POCl <sub>3</sub>	6253
4	Dilute Sulphuric acid 25 to 50%	1125
5	Isopropyl Alcohol (recovered)	507
6	Acetic Acid (recovered)	325
7	1,4-Dioxane	693
8	N,N-Dimethyl aniline	150
9	Sodium sulphate	583
10	Hydrobromic Acid 30 to 40%	225
11	Formic acid (recover)	215
12	Ethyl acetate (recover)	516
13	Phthalic acid	85
14	Methanol (recover)	875
15	Polyethylene glycol 400	82
16	Methylene di chloride (MDC ) Recovered	908
17	Ethanol (recovered)	855
18	Methyl tertiary butyl ether MTBE (recovered)	125
19	Ethylene di chloride EDC (recovered)	380
20	Acetone (recovered)	275
21	Methyl isobutyl ketone MIBK (recovered)	135
22	Toluene (recovered)	410
23	Tetrahydrofuran (recovered)	31
24	Methylacetoacetate (recovered)	9.6
25	Pet. Ether (recovered)	784
26	Tertiary butanol (recovered)	309
27	Potassium chloride (recovered)	125
28	Tri ethyl amine HCl (recovered)	601.5
29	N-methylpyrrolidone NMP (recovered)	1240
30	N,N-Dimethyl Aniline HCl (recovered)	170

31	Ortho dichloro benzene ODCB (recovered)	295
32	Dimethylsulphoxide DMSO (recovered)	8176
33	2,5-Norbornadine NBD (recovered)	214
34	Xylene (recovered)	1540
35	Ethylene glycol dimethyl ether (recovered)	675
36	3-Picoline HCl (recovered)	2200
37	HCl gas (recovered)	587
38	Sodium bi sulphite (recovered) Soln. 20-25 %	225
39	Sodium Formate	900

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during March-May, 2012 and submitted baseline data indicates range of PM<sub>10</sub> (58–89 ug/m<sup>3</sup>), PM<sub>2.5</sub> (21-56 ug/m<sup>3</sup>), SO<sub>2</sub> (2 – 21 ug/m<sup>3</sup>) and NO<sub>x</sub> (6.0-24 ug/m<sup>3</sup>). The results of the modeling study indicate that the maximum increase of GLCs due to the proposed project is 0.7732 ug/m<sup>3</sup>, 1.5055 ug/m<sup>3</sup> and 0.4845 ug/m<sup>3</sup> for SPM, SO<sub>2</sub> and NO<sub>x</sub> respectively. The resultant GLCs are within the NAAQS.

Stack height of 30m will be provided to natural gas fired CPP-1, CPP-2 and CPP-3. Stack height of 30 m and stack height of 16 m will be provided to gas fired boiler and thermopack. Adequate scrubbing arrangement will be provided to control process emissions such as HCl and SO<sub>2</sub>. Stack of 10 m will be provided DG sets (2 x1500 KVA). Incinerator (double chamber) will be installed.

Total water requirement from GIDC Water supply will be 1,730 m<sup>3</sup>/day. The effluent (910 m<sup>3</sup>/day) generated will be segregated into high COD and low COD stream. The low COD stream effluent will be treated in ETP consisting of primary, secondary and tertiary treatment facility and then sent to GIDC effluent pipeline for final disposal into deep sea. The high COD effluent will be treated in multi effect evaporator (MEE) and then reused in cooling tower. The waste from MEE will be incinerated in the incinerator within premises or common incineration facility. Boiler feed water will be recovered from steam condensate to reduce effluent generation from CPP. Domestic effluent will be treated in biological treatment plant.

Process waste (10,000 TPA) will be disposed through own incinerator. Distillation residue (2000 MTPA) will be sent to cement industries. Incineration ash (1650 MTPA) and ETP sludge (19,000 MTPA) will be sent to TSDF. Waste/used oil (30 MTPA) will be sold to authorized recyclers / re-processors.

Green belt will be developed in 20,000 sq.m (20.34%) out of 98,304.8 sq.m of project area. Silencers will be provided to D.G. sets. Power (5000 KW) will be sourced from GEB. D.G. sets (2x1500 KVA), CPP (3x1 MW) and Turbine (2 MW) will be installed. Natural gas (35,000 SCM/day) will be used as fuel in CPP (3 MW).

The Committee noted that no public hearing / consultation is required due to project being located in the notified GIDC as per stage Section 7 (i), III Stage (3), Para (i)(b) of EIA Notification 2006.

After detailed deliberations, the Committee found the final EIA/EMP report adequate and suggested to stipulate following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i. National Emission Standards for Pesticide Manufacturing and Formulation Industry issued by the Ministry vide G.S.R. 46(E) dated 3<sup>rd</sup> February, 2006 and amended time to time shall be followed by the unit.
- ii. Adequate stack height shall be provided to natural gas fired boiler and thermic fluid heater to disperse waste gases into atmosphere.
- iii. Adequate scrubbing system shall be provided to process vent to control process emissions viz. H<sub>2</sub>S and SO<sub>2</sub> emissions. The scrubbed water should be sent to ETP for further treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. Scrubbers vent shall be provided with on-line detection and alarm system to indicate higher than permissible value of controlled parameters. At no time, the emission levels shall go beyond the prescribed standards. The system should be interlocked with the pollution control equipments so that in case of any increase in pollutants beyond permissible limits, plant should be automatically stopped.
- iv. Incinerator should be designed as per CPCB guidelines. SO<sub>2</sub>, NO<sub>x</sub>, HCl and CO emissions shall be monitored in the stack regularly.
- v. Chilled brine circulation system should be provided to condensate solvent vapors and reduce solvent losses. It should be ensured that solvent recovery should not be less than 95%.
- vi. Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits stipulated by GPCB.
- vii. All necessary steps should be taken for monitoring of chlorine, HCl and HBr as well as VOCs in the proposed plant.
- viii. A proper Leak Detection and Repair (LDAR) Program for pesticide industry shall be prepared and implemented as per CPCB guidelines.
- ix. Alarm for chlorine leakage if any in the liquid chlorine storage area is provided alongwith automatic start of the scrubbing system.
- x. The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be followed.
- xi. Total water requirement from GIDC water supply should not exceed 1,730 m<sup>3</sup>/day and prior permission should be obtained from the concerned Authority.
- xii. As proposed, industrial effluent generation should not exceed 700 m<sup>3</sup>/day. Effluent shall be segregated into High COD/TDS and low COD/TDS effluent streams. High TDS effluent should be treated through stripper followed by MEE. Low COD/TDS effluent should be treated in ETP. Treated effluent shall be discharged to deep sea through a separate conveyance pipeline after conforming to the standards prescribed for the effluent discharge and obtaining permission from the GPCB. No process effluent shall be discharged in and around the project site. Water quality of treated effluent shall be monitored regularly and monitoring report shall be submitted to the GPCB.

- xiii. Treated industrial effluent shall be passed through guard pond. The guard pond shall have online pH, TOC analyser and flowmeter and data shall be online transmitted to the GPCB website.
- xiv. The Company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans boundary movement) Rules, 2008 for management of hazardous wastes and prior permission from GPCB should be obtained for disposal of solid / hazardous waste in the TSDF. The concerned company should undertake measures for fire fighting facilities in case of emergency.
- xv. As proposed, ETP sludge and incineration ash should be sent to TSDF site. High calorific value waste such as spent organic should be incinerated.
- xvi. Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- xvii. The company should make the arrangement for protection of possible fire and explosion hazards during manufacturing process in material handling.
- xviii. Green belt should be developed at least in 33 % of the plant area in and around the plant premises to mitigate the effects of fugitive emissions all around the plant as per the CPCB guidelines in consultation with DFO. Selection of plant species should be as per the CPCB guidelines.

**3.5.15. Laminate Sheet Unit alongwith Resin Manufacturing Unit (Phenol Formaldehyde (47 MTPM), Melamine Formaldehyde Resin (43 MTPM)) at Ramdev Estate, Kadi-Kalol Road, Taluka Indrad, District Kadi, Mehsana, Gujarat by M/s Amar Décor. - regarding EC.**

The project authorities and their consultant (Pragathi Labs & Consultants Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 27<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry) held during 21<sup>st</sup>-22<sup>nd</sup> September, 2011 for preparation of EIA/EMP. All the Resin Units located outside the notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level

M/s Amar Decor have proposed for setting up of Laminate Sheet Unit alongwith Resin Manufacturing Unit [Phenol Formaldehyde (47 MTPM), Melamine Formaldehyde Resin (43 MTPM)] at Ramdev Estate, Kadi-Kalol Road, Taluka Indrad, District Kadi, Mehsana, Gujarat. Total project area is 4482.12 sq.m. No national park/wildlife sanctuary/ reserve forest is located within 10 Km. Total cost of the project is Rs. 111.68 Lakhs.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 7 locations during May-June, 2012 and submitted baseline data indicates range of PM<sub>10</sub> (37.6–62.2 ug/m<sup>3</sup>), PM<sub>2.5</sub> (37.6-62.1 ug/m<sup>3</sup>), SO<sub>2</sub> (17.9 – 24.8 ug/m<sup>3</sup>) and NO<sub>x</sub> (8.7-11.0 ug/m<sup>3</sup>). The results of the modeling study indicate that the maximum increase of GLCs due to the proposed project is 3.6 µg/m<sup>3</sup>, 7.0 µg/m<sup>3</sup> and 2.4 µg/m<sup>3</sup> for SPM, SO<sub>2</sub> and NO<sub>x</sub> respectively. The resultant GLCs are within the NAAQS.

Multi-cyclone cum-dust collector and stack (30 m) will be provided to white coal/biomass fired boiler. Scrubber will be provided to dryer.

Total water requirement from ground water source will be 16.6 m<sup>3</sup>/day. Effluent will be treated in ETP. Phenol will be treated with photo fenton process. Domestic effluent (1.2 m<sup>3</sup>/day) will be disposed through septic tank followed by soak pit. No effluent will be discharged outside the plant premises and 'Zero' discharge will be adopted. ETP sludge will be sent to TSDF. Resin waste will be sent for common incineration facility. Used oil will be sent to authorized recyclers.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 17<sup>th</sup> April, 2011. The issues raised were regarding air emissions, effluent disposal, employment etc and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

After detailed deliberations, the Committee found the final EIA/EMP report adequate and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.
- ii) Bag filter alongwith stack of adequate height should be installed to lignite/white coal fired boiler to control particulate emission.
- iii) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits imposed by GPCB.
- iv) Wet scrubber should be provided to control process emissions. Methanol should be recovered from the process area.
- v) Total ground water requirement should not exceed 16.6 m<sup>3</sup>/day and prior permission should be obtained from the Central Ground Water Authority/State Ground Water Board.
- vi) As proposed, Industrial effluent will be treated in ETP based on photo fenton process followed by evaporation to achieve zero discharge. Water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB.
- vii) The company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from GPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire fighting facilities in case of emergency.
- viii) Green belt should be developed in 33% of total plant area.
- ix) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

3.5.16. Laminate sheets (12,500 MTPM) at near Ornato, Ceramic, Rajpar Road, village Shakta Sanala Taluka Morbi, District Rajkot, Gujarat by **M/s Samarpan Laminates-regarding EC.**

The proponent did not attend the meeting. The Committee decided to consider the project as and when requested by the proponent.

**3.5.17. Expansion of Distillery Plant (Molasses/Cane Juice based (from 45 KLPD to 60 KLPD) and Grain based (from 37.5 KLPD to 60 KLPD) at Village Chikkonahalli & Hurugalawadi, Koppa Hubli, District Mandya, Karnataka by M/s NSL Sugar Limited. - regarding EC.**

The project authorities and their consultant (Pioneer Enviro Laboratories & Consultants Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 21<sup>st</sup> Meeting of the Expert Appraisal Committee (Industry) held during 23<sup>rd</sup>-24<sup>th</sup> March, 2011 for preparation of EIA/EMP. All molasses based distillery and cane juice/non-molasses based distillery (>30 KLD) are listed at S.N. 5(g) (i) (ii) under category 'A' and appraised at Central level.

M/s NSL Sugars Limited have proposed for expansion of distillery plant (Molasses/Cane Juice based (from 45 KLPD to 60 KLPD) and Grain based (from 37.5 KLPD to 60 KLPD) at Village Chikkonahalli & Hurugalawadi, Koppa Hubli, District Mandya, Karnataka. Existing unit comprises of sugar (5000 TCD) and Cogen unit (26 MW). Total plot area is 110 acres and no additional land is required. Shimsa River is flowing at a distance of 3 Kms. Total project cost for expansion is Rs. 20.00 Crore. Rs. 6 Crore and Rs. 15 Lakhs are earmarked towards capital cost and recurring cost per annum for pollution control measures. Ministry has accorded environmental clearance for expansion of distillery plant (45 KLPD molasses based to 120 KLPD) with 75 KLPD of cane juice based or 37.5 KLPD of grain based to manufacture RS/ENA/Ethanol in addition to 45 KLPD molasses) vide letter no. J-11011/499/2006-IA II(I) dated 24<sup>th</sup> October, 2008. Molasses, sugar cane juice and grain will be used as raw materials. No national parks/wildlife sanctuaries/biosphere reserves are located within 10 Km. The distillery will be operated for 300 days per annum.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during December-February, 2011 and submitted baseline data indicates range of PM<sub>10</sub> (32.1–58.4 ug/m<sup>3</sup>), PM<sub>2.5</sub> (19.3–34.9 ug/m<sup>3</sup>), SO<sub>2</sub> (8.5 – 14.3 ug/m<sup>3</sup>) and NO<sub>x</sub> (15.6-27.1 ug/m<sup>3</sup>). The results of the modeling study indicate that the maximum increase of GLCs due to the proposed project is 0.4 ug/m<sup>3</sup>, 3.1 ug/m<sup>3</sup> and 0.4 ug/m<sup>3</sup> for SPM, SO<sub>2</sub> and NO<sub>x</sub> respectively. The resultant GLCs are within the NAAQS.

Bagfilter alongwith stack height of 55 m will be provided to the rice husk/coal fired boiler (25 TPH). Total water requirement for existing and proposed change of feed stock of distillery will be 4198 m<sup>3</sup>/day, which is lower than permitted quantity. Spent wash from molasses/cane juice based distillery will be 480 m<sup>3</sup>/day and treated in the existing biomethanisation plant followed by concentration in MEE. Concentrate from MEE will be biocomposted to achieve zero discharge and remaining portion will be incinerated in cogeneration boiler. Spent wash from grain based distillery will be treated in decanter and then concentrated in MEE to concentrate the solids to 30 % and then taken to a dryer alongwith wet cake from decanter to concentrate the solids to 90 % and will be sold as cattle feed. No effluent will be discharged outside the factory premises.

Fly ash from biomassfuel will be used as manure and part will be blended with bio-composting. DDGS will be used as cattle feed. Green belt will be developed in 33 % of plant area.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Karnataka State Pollution Control Board on

30<sup>th</sup> August, 2012. The issues raised were regarding CSR activities, discharge of wastewater, biocomposting technology, smell nuisance etc. In response project proponent informed that air emission control systems such as ESP are already provided and outlet particulate emission is regularly monitored. For effluent management, zero effluent discharge technology has been implemented. The unit has earmarked more than 10.5 acres for greenbelt development at biocomposting site. At sugar, cogen & distillery plants about 37 acres of land has been developed into greenbelt. The court case is pending against the other plant is located at Hosagavi Village. The industry has identified borewells around the project site to test regular water quality. Regular health check up will be carried out in the villages. Issues raised have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

The Committee deliberated upon the compliance status report of the conditions stipulated in the existing environmental clearance, which were monitored by the Ministry's Regional Office on 22<sup>nd</sup> February, 2012. It was noted that they are trying to maintain it as a zero waste plant by further processing of all the by products into saleable products i.e. Molasses, Bagasse and press mud which are all byproducts of sugar manufacturing process are converted into ethanol/rectified spirit/ power and organic products respectively. The company has got credit by adopting rigid air pollution control measures and has entered into clean development mechanism and carbon credits with international Organization. Compliance status of the conditions stipulated in the existing environmental clearance letters has been reported satisfactory.

After detailed deliberations, the Committee found the final EIA/EMP report adequate and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i. Distillery unit should be based on (Molasses/Cane Juice based (60 KLPD) and Grain based (60 KLPD) and production of the plant should not exceed the maximum capacity defined i.e. should never exceed 120 KLPD.
- ii. Company shall follow good management practices viz. collection of waste yeast sludge from fermentation section in a closed system and proper disposal, reduced volume of effluent by adopting strategic approaches, closed drains carrying spent wash to the treatment units; minimization of fugitive emissions from anaerobic treatment; proper collection & handling of excess sludge generated from the anaerobic & aerobic treatment units; minimum retention of treated & untreated spent wash in the lagoons; effective composting of the spent wash by controlled effluent spraying through mechanical system to avoid spillages & over application, blending of sludge in correct proportion with press mud; and properly finished compost and green belt development with suitable plantation in and around the treatment units to mitigate odour from the distillery unit.
- iii. Total fresh water requirement should not exceed 4198 m<sup>3</sup>/day for sugar, distillery and cogeneration unit.
- iv. Spent wash generation from molasses and grain based distillery should not exceed 8 KI/KI of alcohol and 6 KI/KI of alcohol respectively. Spent wash from molasses/cane juice based distillery shall be treated in the existing biomethanisation plant followed by concentration in MEE. Concentrate from MEE shall be biocomposted to achieve zero discharge and remaining portion shall be incinerated in cogeneration boiler. Spent wash from grain based shall be treated through decanter and concentrated in

multi-effect evaporator (MEE) to form DWGS. DWGS shall be dried in the dryer to form DDGS. Spentlees, effluent from utilities and cogeneration unit should be treated in effluent treatment plant (ETP) and water quality of treated effluent should meet the norms prescribed by CPCB/SPCB and recycle/ reuse.

- v. Spent wash for molasses should be stored in impervious lagoon with HDPE lining as per CPCB guidelines and should be kept in proper condition to prevent ground water pollution. Storage capacity of spent wash lagoon should be for 30 days.
- vi. As proposed, no effluent from distillery and co-generation power plant should be discharged outside the premises and Zero discharge should be adopted.
- vii. Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area should be set up. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to SPCB and this Ministry. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and total dissolved solids should be monitored.
- viii. Occupational health surveillance programme should be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre should be strengthened and the regular medical test records of each employee should be maintained separately.
- ix. Dedicated parking facility for loading and unloading of material should be provided in the factory premises. Unit should develop and implement good traffic management system for their incoming and outgoing vehicles to avoid congestion on the public road.
- x. All the commitment made regarding issues raised during the public hearing/ consultation meeting held on 30<sup>th</sup> August, 2012 shall be satisfactorily implemented.
- xi. At least 5 % of the total cost of the project should be earmarked towards the corporate social responsibility based on public hearing issues and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.
- xii. The Company shall submit within three months their policy towards Corporate Environment Responsibility which should inter-alia address (i) Standard operating process/procedure to bring into focus any infringement/deviation/violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.
- xiii. Green belt should be developed in 33 % of the plant area to mitigate the effects of fugitive emissions all around the plant as per CPCB guidelines in consultation with the local DFO. Thick green belt with suitable plant species should be developed around the proposed distillery to mitigate the odour problem.

### **3.6.0 Any Other Item**

- 3.6.1. Expansion of Granulates Single Super Phosphate (66,000 TPA to 1,00,000 TPA) and addition of Boronated SSP (25,000 TPA) and LABSA (20,000 TPA) at Plot no.

4807/11, Jhamarkotra Road, Village Umra, Tehsil Girwa, District Udaipur, Rajasthan by **M/s Rama Phosphates Ltd.** –Applied for revised TOR regarding.

Ministry vide letter no. J-11011/292/2011- IA II (I) dated 15<sup>th</sup> November, 2011 has awarded TOR for manufacturing of following proposed products:

S. N.	Products	Capacity (TPA)		
		Existing	Proposed	Total
1	SSP	1,81,000	--	1,81,000
2	GSSP	66,000	1,00,000	1,66,000
3	NPK	60,000	--	60,000
4	Boronated SSP	--	25,000	25,000
5	LABSA	--	20,000	20,000
		<b>3,07,000</b>	<b>1,35,000</b>	<b>4,42,000</b>

Now, project proponent desired following amendment in the product mix:

S.N.	Products	Capacity (TPA)		
		Existing	Proposed	Total
1	SSP	1,81,000	1,34,000	3,15,000
2	GSSP	66,000	2,34,000	3,00,000
3	NPK	60,000	--	60,000
4	Boronated SSP	--	25,000	25,000
5	LABSA	--	20,000	20,000

The Committee recommended the project for the amendment of product mix in the existing TOR.

3.6.2. Proposed organic chemicals at Dahej, District Bharuch, Gujarat by **M/s NOCIL Ltd- Extension of validity of EC.**

MoEF vide letter no. J-11011/355/2007-IA II (I) dated 22<sup>nd</sup> August, 2007 has accorded environmental clearance for Organic Chemical Plants. Now, project proponent has requested for extension of validity of environmental clearance due to following reasons:

- i) Project engineering work with UDHE India Ltd. in the year 2008. However, Project was kept on hold due to economic crisis in 2008-2009. NOCIL had started compound wall construction in April 2010 but had to be stopped due to interference from Gram Panchayat.
- ii) Building plan approvals were getting delayed at GIDC due to 20 m railway corridor for OPAL was proposed to be passing through the plot. Further, NOCIL replotted the layout and got approval in August, 2011.
- iii) Since then the project activities and construction is going on at full swing and at present nearly 800 workers are at the site.
- iv) Plants are being installed for those products which are in line with EC and no change in the process or raw materials. The main plant is this project will be completed and commissioned/trial run within 6 months.

After detailed deliberations, the Committee recommended the proposal for extension of the validity of the existing environmental clearance.

- 3.6.3. Modernization of Aluminum Smelter Plant, NALCO by technology up gradation from 180 KA to 220 kA (4,60,000 TPA to 5, 57,000 TPA) at P.O. Nalco, District Angul in Odisha by **M/s National Aluminium Co. Ltd. -Extension of validity of TOR**

Ministry vide letter no. J-11011/489/2010- IA II (I) dated 10<sup>th</sup> December, 2010 has awarded TOR for Modernization of Aluminum Smelter Plant. Now, project proponent has requested for extension of validity of TOR for the proposed project due to being public sector undertaking excess time consumed in tendering and finalizing the environmental consultant.

After detailed deliberations, the Committee recommended the proposal for extension of the validity of the existing TOR.

- 3.6.4. 60 KLPD Molasses based Distillery Plant at Plot no. 207/2, Village Tapri, District Saharanpur in Uttar Pradesh by **M/s Dayal Beverages limited- Environmental Clearance**

The proposal was placed before the EAC for extension of validity of TOR. During meeting project proponent and consultant informed that EIA/EMP report has been prepared based on the standard TORs and baseline data has been collected in March-May, 2012. The Committee agreed for the presentation of EIA/EMP report.

The project authorities and their consultant ( J M Environet Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 63<sup>rd</sup> Meeting of the Expert Appraisal Committee (Industry) held during 29<sup>th</sup> March, 2007 for preparation of EIA/EMP. All molasses and cane juice/non-molasses based distillery are listed at S.N. 5(g) (i) (ii) under category 'A' and appraised at Central level.

M/s Dayal Beverages limited has proposed for setting up of 60 KLPD Molasses based Distillery Plant at Plot no. 207/2, Village Tapri, District Saharanpur in Uttar Pradesh. Total land acquired is 11 acres. Total project cost is Rs. 80 Crore. Rs. 20 Crore and Rs. 1.0 Crore are earmarked towards capital cost and recurring cost per annum for pollution control measures. No. national parks/wildlife sanctuaries/biosphere reserves/reserve forests are located within 10 Km. River Hindan is flowing at a distance 0.5 Km from the project site. Molasses based distillery will be operated for 330 days. Molasses will be sourced from nearby sugar mills as raw materials.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during March-May, 2012 and submitted baseline data indicates range of PM<sub>10</sub> (46.56–85.3 ug/m<sup>3</sup>), PM<sub>2.5</sub> (22.89–37.44 ug/m<sup>3</sup>), SO<sub>2</sub> (6.81 – 14.06 ug/m<sup>3</sup>) and NO<sub>2</sub> (9.65-23.12 ug/m<sup>3</sup>). The results of the modeling study indicate that the maximum increase of GLCs due to the proposed project is 0.55 µg/m<sup>3</sup>, 1.0 µg/m<sup>3</sup> and 0.3 µg/m<sup>3</sup> for SPM, SO<sub>2</sub> and NO<sub>x</sub> respectively. The resultant GLCs are within the NAAQS.

Bagfilter alongwith stack of adequate height will be provided to the coal /spentwash fired boiler (23 TPH). Fresh water requirement from ground water source will be 833 m<sup>3</sup>/day. The Committee desired to restrict the water requirement to 10.5 KL per KL of alcohol. Spent wash from molasses will be evaporated in MEE and evaporated spent wash will be mixed with coal and incinerated in an incineration boiler. Fly ash will be sent to brick manufacturers.

Green belt will be developed in 3.63 acres of land. Total power requirement will be 1700 KW and sourced from Cogen power plant (2800 KW). DG sets (2 x550 KVA) will be installed. Coal (40 TPD) and spent wash (163 TPD) will be used as fuel.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the UP Pollution Control Board on 23<sup>rd</sup> July, 2012. The issues raised were regarding local employment, water pollution in the Hindon River, impact of pollution on agriculture activities etc. Many people have opposed the project due to anticipated water pollution in the River Hindon. In response, the Project proponent informed that the industry will be based on "Zero effluent discharge" and no wastewater will be discharge in the River Hindan. Unit will adopt adequate air pollution control system with suitable size. Greenbelt will be developed in 33 % of the plant area. Issues raised have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

After detailed deliberations, the Committee found the final EIA/EMP report adequate and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i. The project proponent shall follow guidelines and policies of the respective State Government w.r.t. the river regulation zone for conservation of river. State Pollution Control Board shall issue the consent to establish after complying the guidelines for the location of unit from river.
- ii. Distillery unit shall be based on molasses based only and no grain based distillery unit shall be operated.
- iii. As proposed, bag filter alongwith stack of adequate height should be provided to boiler to control particulate emission within 50 mg/Nm<sup>3</sup>.
- iv. Company shall follow good management practices viz. collection of waste yeast sludge from fermentation section in a closed system and proper disposal, reduced volume of effluent by adopting strategic approaches, closed drains carrying spent wash to the treatment units; minimization of fugitive emissions from anaerobic treatment; proper collection & handling of excess sludge generated from the anaerobic & aerobic treatment units; minimum retention of treated & untreated spent wash in the lagoons; effective composting of the spent wash by controlled effluent spraying through mechanical system to avoid spillages & over application, blending of sludge in correct proportion with press mud; and properly finished compost and green belt development with suitable plantation in and around the treatment units to mitigate odour from the distillery unit.
- v. Pucca approach road to project site should be constructed prior to commencing construction activity of the main distillery to avoid fugitive emissions.
- vi. Total fresh water requirement from ground water source should not exceed 10.5 KL/KL of alcohol (i.e. 630 m<sup>3</sup>/day) for distillery and cogeneration unit and prior permission for drawl of water should be obtained from the competent authorities.
- vii. Spent wash generation from molasses based distillery should not exceed 8 KI/KI of alcohol. Spent wash from molasses based distillery should be concentration and incinerated in the incineration boiler to achieve zero discharge. Spentlees, effluent from utilities and cogeneration unit should be treated in effluent treatment plant (ETP) and water quality of treated effluent should meet the norms prescribed by CPCB/SPCB and recycle/ reuse.

- viii. Spent wash for molasses should be stored in impervious lagoon with HDPE lining as per CPCB guidelines and should be kept in proper condition to prevent ground water pollution. Storage capacity of spent wash lagoon should be for 30 days.
  - ix. As proposed, no effluent from distillery and co-generation power plant should be discharged outside the premises and Zero discharge should be adopted.
  - x. Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area should be set up. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to SPCB and this Ministry. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and total dissolved solids should be monitored.
  - xi. Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust should be avoided. Bagasse ash and coal ash should be stored separately.
  - xii. Dedicated parking facility for loading and unloading of material should be provided in the factory premises. Unit should develop and implement good traffic management system for their incoming and outgoing vehicles to avoid congestion on the public road.
  - xiii. All the commitment made regarding issues raised during the public hearing/consultation meeting held on 23<sup>rd</sup> July, 2012 shall be satisfactorily implemented.
  - xiv. At least 5 % of the total cost of the project should be earmarked towards the Enterprise social responsibility based on public hearing issues and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.
  - xv. The Company shall submit within three months their policy towards Corporate Environment Responsibility which should inter-alia address (i) Standard operating process/procedure to being into focus any infringement/deviation/violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.
  - xvi. Green belt should be developed in 3.63 acres to mitigate the effects of fugitive emissions all around the plant as per CPCB guidelines in consultation with the local DFO. Thick green belt with suitable plant species should be developed around the proposed distillery to mitigate the odour problem.
- 3.6.5. Pellet plant (from 0.6 MTPA to 0.9 MTPA) and Captive Power Plant (From 20 MW to 44 MW) at village Jamgaon, District Raigarh in Chhattisgarh **by M/s MSP Steel and Power Ltd.-Amendment in EC**

Ministry vide letter no. J-11011/267/2007- IA II (I) dated 23<sup>rd</sup> August, 2012 has accorded change in configuration of Steel Melting Shop (SMS) and inclusion of 4.5

MW biomass based power plant, wherein following capacities are mentioned for SMS:

S.N.	Unit	Capacities
1	2x35 MT EAFs	3,66,660 TPA
2	3x15 MT Induction Furnaces	1,39,680 TPA
3	1x8 MT Induction Furnaces	24,832 TPA

Now, project proponent vide letter dated 18<sup>th</sup> September, 2012 has requested to include following :

S.N.	Unit	Capacities
1	2x35 MT EAFs	3,66,660 TPA
2	3x15 MT Induction Furnaces	1,39,680 TPA
3	1x8 MT Induction Furnaces	24,832 TPA
4	Existing capacity of Induction Furnaces	95,000 TPA
5	Consented Capacity of Induction Furnaces	6,72,172 TPA

After detailed deliberations, the Committee recommended the proposal for corrections in the existing amendment letter.

3.6.6. Residue Up-gradation and Distillate Yield Improvement Project with 11.0 MMTPA Crude Processing” at Mathura Refinery of by **M/s Indian Oil Corporation Ltd.- TOR reg.**

Project proposal was considered in the 34<sup>th</sup> Expert Appraisal Committee (Industry-2) meeting held during 13<sup>th</sup> -14<sup>th</sup> April 2012 and the Committee desired a sub-committee comprising members EAC and representative of the Ministry will visit the existing site to assess the existing environmental scenario.

M/s Indian Oil Corporation Ltd. have proposed for Residue Up-gradation and Distillate Yield Improvement Project with 11.0 MMTPA Crude Processing” at Mathura Refinery. The benefits from the project are facilitate crude processing from 8 MMTPA to 11 MMTPA; Processing of high sulfur crude will be maximized; Up-gradation of bottom of barrels to maximize distillate yield from HS crude; Production euro-IV MS and diesel will be maximized. New Process unit proposed under expansion project

S.N	Process units	Capacity
1	Crude Capacity (from 8 MMTPA to)	11 MMTPA
2	Resid Hydrocracking unit	2.3 MMTPA
3	Hydrocracker unit	2.0 MMTPA
4	Hydrogen unit	110 TMTPA
5	Sulphur Recovery Unit (SRU) with TGTU	3x300 TPD
6	VDU	2.5 MMTPA
7	DHDT revamp (from 1.8 to)	2.4 MMTPA
8	Sour Water Stripper (SWS)	50 TPH
9	Amine Regeneration unit	600 TPH
10	Nitrogen unit	1200 Nm <sup>3</sup> /hr

New Offsite Facilities proposed under Expansion project:

S.N.	Facility	Capacity
1	Gas Turbo Generator (GTG) Steam Turbine Generator	2x30 MW, 1x20 MW
2	Cooling Tower for process cooling water	5x4000 m3/hr
3	Air compressor and Drier	2x5000NM3/hr
4	RO Plant for DM water	1x200 m3/hr
5	RO Plant for ETP effluent	1x250 m3/hr
6	Storage tanks	4x30 TKL

Product Pattern after expansion are as given below:

Refinery Input	Basecase	M-11
BH	1,200	1,200
LS	2,800	0
HS	4,000	9,800
Total Crude	8,000	11,000
Natural Gas	450	1100
Refinery Output	Basecase	M-11
Propylene	200	200
LPG	430	675
NAPHTHA	525	1050
MS	1,150	1,150
SKO	400	400
ATF	560	1,200
HSD	2,750	4900
FO/PITCH	950	520/200
BITUMEN	750	750
SULFUR	53	205

SO<sub>2</sub> emissions will be maintained below the prescribed limit (450 Kg/hr.). Additional water requirement for the proposed project will be 500 m3/hr. Out of which, 250 m3/hr. will be met by fresh water and 200-250 m3/hr will be met through recycled. Additional power requirement will be 80 MW, which will be met from additional GTs of 30 MW each & one STG of 20 MW. Natural gas requirement will be 4.5 MMSCMD. Spent catalyst will be generated in tune of 2500 TPA. The Committee discussed the site visit report as well as the presentation by the project proponent.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of EIA/EMP:

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
2. Executive summary of the project.
3. Project Description and Project Benefits.
4. A separate chapter on environmental clearance accorded for all the existing plants alongwith point-wise compliance report.
5. Point-wise compliance report to the 'Consent to Establish' 'Consent to operate' and Authorization accorded by UP Pollution Control Board for all the existing units alongwith all the necessary annexure.
6. Existing data for the last 2 years for all the relevant parameters should be included.
7. Site details including satellite imagery for 5 km around the site.
8. A list of industries within 10 km radius of the project.

9. Details of facilities alongwith utilities to be provided for the proposed project.
10. Manufacturing process details alongwith the chemical reactions and process flow diagram.
11. List of products alongwith the production capacities and list of solvents and its recovery plan.
12. Detailed list of raw material required and source, mode of storage and transportation.
13. Details of the storage and technical specifications with safety aspects & standards.
14. Is there additional storage required for the proposed products mix.
15. Proposal for safety buffer zone around the proposed site with map.
16. Details indicating National Park/Wild life Sanctuary/Eco sensitive area/reserve forest within 10 Km.
17. Land use along with maps & cropping pattern, vegetation, ecology, flora & fauna
18. Demography & socio-economics of the area.
19. Baseline data collection for air, water and soil for the period of 3 months (except monsoon season) for :
  - i. Ambient air quality monitoring for PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO.
  - ii. Background levels of hydrocarbons (methane & non-methane HC) and VOCs.
  - iii. Soil sample analysis.
  - iv. Base line underground and surface water quality in the vicinity of project.
  - v. Climatology & meteorology including wind speed, wind direction, temperature, rainfall etc.
  - vi. Measurement of noise levels.
20. Give existing status of stack emission, raw water requirement, treated effluent quantity & quality data, noise pollution and solid waste management in the existing units.
21. Action plan to achieve smokeless flare should be included.
22. Details of Sulphur balance in the existing refinery unit. Additional SO<sub>2</sub> emissions due to the proposed product mix.
23. Unit-wise air pollution control devices to be installed.
24. Details of water consumption and source of water supply, waste water generation, treatment and utilization of treated water generated from the facilities and effluent disposal and measures for release of effluent in case of fire.
25. Details of existing and proposed effluent treatment plant alongwith water quality of inlet and outlet of ETP.
26. Action plan to reduce wastewater discharge from the all existing units.
27. Detailed solid waste generation, collection, segregation, its recycling and reuse, treatment and disposal.
28. Note on compliance to the recommendations mentioned in the CREP for oil refineries and petrochemical industries.
29. A note on implementation of new refinery standards for refineries.
30. Design details of existing incinerator and its performance in meeting the standards.
31. Quantification of oil sludge generation from the existing and proposed refinery including management of the oil sludge in the existing refinery. Details of temporary storage for the oil sludge.
32. Details of catalyst waste generated from the refinery along with temporary storage facility at site. Action plan for disposal of the catalyst solid waste.
33. Status of existing secured landfill sites. Design details as well as ground water monitoring around the project site.
34. Details of membership of TSDF for hazardous waste disposal.
35. Assessment of impact on air, water, soil, solid/hazardous waste and noise levels.
36. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
37. Details of proposed preventive measures for leakages and accident.
38. Details of Vapour Recovery System.
39. Earmarking of area for parking of Lorries at a remote location to avoid congestion.

40. Traffic management with adequate width of approach road to avoid congestion and to have safe exit in emergencies.
41. Type of seismic zone.
42. Full Quantitative Risk Assessment & Disaster Management Plan should include:
  - a. Identification of hazards
  - b. Consequence Analysis
  - c. Determination of Individual Risk and Societal Risk
  - d. List of last Major Refinery Incidents Globally in last 10 years
  - e. Proposed measures for risk reduction.
43. Occupational health:
  - e) Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
  - f) Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
  - g) Annual report of health status of workers with special reference to Occupational Health and Safety.
  - h) Plan and fund allocation to ensure the occupational health & safety of all contracts and sub-contract workers.
44. Details including existing green belt developed. Action plan for development of green belt in 33%.
45. Total capital cost and recurring cost/annum for environmental pollution control measures. Break up details should also be included.
46. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
47. Environmental monitoring programme including online stack monitoring system as well as continuous ambient air quality monitoring system. Method/System to be adopted to ensure correct calibration of automatic monitoring system.
48. Details of Corporate Social Responsibility (CSR) including sufficient budgetary provision for health improvement, education, water and electricity supply etc. in and around the project.
- 49. Corporate Environmental Responsibility**
  - (a) 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.
  - (b) Does the Environmental 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 report.
50. 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.
51. Does the company have a system of reporting of non compliance / 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.
52. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.

53. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.

54. A tabular chart indicating point-wise compliance of the TOR.

The following general points should be noted:

- i. All documents should be properly indexed, page numbered.
- ii. Period/date of data collection should be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final.

EIA-EMP Report.

- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
- vii. 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..
- viii. Certificate of Accreditation issued by the QCI to the environmental consultant should be included.

It was decided that TORs prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA/EMP report for the above mentioned project in addition to all the relevant information as per the Generic Structure of EIA given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report should be submitted to the UP State Pollution Control Board for conducting public hearing/consultation. The issues emerged and response to the issues raised during public hearing should be incorporated in the EIA/EMP report and submitted to the Ministry for obtaining environmental clearance.

3.6.7. **Greenfield Fertilizer Plant for production of 2200 MTPD Ammonia and 3850 MTPD of Urea alongwith CPP (33 MW) at Panagarh, Burdwan District, West Bengal by M/s Matix Fertilizers and Chemicals – Amendment in EC**

Ministry vide letter no. J-11011/440/2009- IA II (I) dated 22<sup>nd</sup> April, 2010 has accorded environmental clearance for Greenfield Fertilizer Plant for production of 2200 MTPD Ammonia and 3850 MTPD of Urea alongwith CPP (33 MW). Now, project proponent vide letter dated 22<sup>nd</sup> May, 2012 has requested for following amendments in the existing environmental clearance:

- i) To discharge treated effluent into water body after meeting the standards in consultation with WBPCB during non-monsoon season also.
- ii) Enhancement of CPP capacity from 33 MW to 54 MW.

Project proponent informed that in normal condition, there will no steam demand in ammonia plant rather ammonia plant produce 28 MTPH. To keep ammonia plant stable in case of emergency trip there will be requirement of about 85 MTPH of steam to reformer to protect catalyst. Thus during normal operation about 112 MTPH steam will be generated from the following sources. To efficiently use the

above steam, it will be directed towards STG for energy recovery and generation of 30 MW.

After deliberations, the Committee desired following additional information:

1. Effluent discharge point in river and dilution study in respect of important parameters of water quality to be conducted.
2. Air quality modelling for the GLC.

The proposal is deferred till the desired information is submitted. The above information shall be provided with the uploading of minutes on the website.

3.6.8. Molasses based Distillery Unit (30 KLPD) at Village Shreenatnagar Patethan, Tehsil Dauand, District Pune, Maharashtra by **M/s Shreenath Mhaskoba Sakhar Karkhana Ltd. (TOR)-reconsideration.**

Project proposal was considered in the 35<sup>th</sup> *Expert Appraisal Committee (Industry-2) meeting held during 11<sup>th</sup> -12<sup>th</sup> May 2012 and the Committee desired following information:*

1. Copy of consent to establish/operate issued by the MPCB for the sugar and CPP. Pointwise compliance report of the existing unit.
2. Availability of water with water balance for the proposed unit including water requirement for the existing sugar and CPP.
3. Effluent treatment scheme in the existing unit.
4. Type of fuel being used in the CPP. Air pollution control device installed in the existing CPP.
5. Justification for additional boiler in the proposed unit.
6. Source of molasses from outside.
7. Ground water quality in and around the unit.
8. Greenbelt development with photographs
9. Analytical report w.r.t. river water quality/water body.
10. Proposed spent wash generation and its treatment.

Project proponent vide letter dated 7<sup>th</sup> August, 2012 (Received in the Ministry on 7<sup>th</sup> November, 2012) submitted above mentioned additional information.

After detailed deliberations, the Committee found the additional information satisfactory and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance

After deliberations, the Committee prescribed the following TORs for the preparation of draft EIA/EMP:

1. Executive summary of the project.
2. Compliance of environmental conditions prescribed by the SPCB for the existing sugar unit and Cogeneration plant.
3. Detailed breakup of the land area along with latest photograph of the area.
4. Present land use based on satellite imagery.
5. Details of site and information related to environmental setting within 10 km radius of the project site.
6. Information regarding eco-sensitive area such as national park / wildlife sanctuary / biosphere reserves within 10 km radius of project area.

7. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forest.
8. List of existing distillery units in the study area alongwith their capacity.
9. Number of working days of the distillery unit.
10. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
11. Manufacturing process details of distillery plant alongwith process flow chart.
12. Details of raw materials and source of raw material molasses, bagasse etc.
13. Sources and quantity of fuel (coal etc.) for the boiler. Measures to take care of SO<sub>2</sub> emission. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted, in case coal is used.
14. Action plan prepared by the SPCB to control ambient air quality as per NAAQES Standards for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> as per GSR 826(E) dated 16<sup>th</sup> November, 2009.
15. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
16. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
17. An action plan to control and monitor secondary fugitive emissions from all the sources.
18. Details of boiler and its capacity. Details of the use of steam from the boiler.
19. Ground water quality around existing /proposed spent wash storage lagoon and the project area.
20. Details of water requirement, water balance chart for Molasses based Distillery. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
21. Water requirement should not exceed 10 KI/KI of alcohol for distillery and prior 'permission' for the drawl of total fresh water. Details of source of water supply.
22. Hydro-geological study of the area for availability of ground water.
23. Spentwash generation from molasses based should not exceed 8KI/KI of alcohol production.
24. Proposed effluent treatment system for molasses based distillery (spent wash and spent lees) and scheme for achieving 'zero' discharge.
25. Lagoon capacity for sugar unit and spent wash as well measures to be taken to control ground water contamination.
26. Details of solid waste management including management of boiler ash. Submit Ash management plan. MoU with cement plant for the use of fly ash.
27. Land available for bio-composting. Details of lining to be provided in the compost yard.
28. Green belt development as per the CPCB guidelines.
29. List of flora and fauna in the study area.
30. Noise levels monitoring at five locations within the study area.
31. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
32. EMP should also include the concept of waste-minimization, recycle/reuse/ recover techniques, Energy conservation, and natural resource conservation.
33. Details of bagasse storage. Details of press mud requirement.
34. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.

35. Alcohol storage and handling area and its fire fighting facility as per norms.
36. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
37. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
  - vii) Details of occupational health surveillance programme.
38. Details of socio-economic welfare activities to be provided.
39. Traffic study of the area for the proposed projects in respect of existing traffic, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
40. Action plan for post-project environmental monitoring.

#### **Corporate Environmental Responsibility**

41. (a) 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.
- (b) Does the Environmental 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 report.
42. 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.
43. Does the company have a system of reporting of non compliance / 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.
44. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
45. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
46. A tabular chart with index for point-wise compliance of above TORs.

The following general points should be noted:

- i. All documents should be properly indexed, page numbered.
- ii. Period/date of data collection should be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter and that raised in Public Hearing/consultation along with duly filled in Industry Sector questionnaire. The index of the final EIA-EMP report must indicate the specific

chapter and page no. of the EIA-EMP Report where the above issues and the issues raised in the Public hearing have been incorporated.

- vii. 'Certificate of accreditation' issued by QCI to the environmental consultant should be included.

The Committee decided that the proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns emerged during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

3.6.9. Amendment in EC for augmentation of Clinkerisation unit capacity (1.09 MTPA to 1.3 MTPA) at Babupur Village in Satna District in MP **by M/s Bhilai Jaypee Cement.**

MoEF vide letter no. J-11011/29/2008-IA II (I) dated 21<sup>st</sup> July, 2009 for setting up of Cement Plant (Clinker 1.09 MTPA), Cement Grinding Unit (0.6 MTPA) and Limestone Mining (2.1 MTPA) at Village Babupur, District Satna, MP by M/s Bhilai Jaypee Cement. BJCL has been operating integrated cement plant complex since 2010 comprising Clinker Plant (1.09 MTPA), Cement Plant (0.6 MTPA), Limestone Mines. Tamas River and Simarawal Nadi are flowing at a distance of 3.5 Km and 8.8 Km respectively. Jumani RF (4.6 Km) and Naro PF (9.5 Km) are located within 10 Km. No ecologically sensitive areas, defence installation, wildlife corridors, archeologically monuments are located within 15 Km. Total plant area is 87.45 ha and no additional land is required. Water requirement in the existing unit is 1200 m<sup>3</sup>/day. Power requirement is 22 MW and no additional power is required. Total project cost is Rs. 445 Crores and no additional cost is envisaged. No additional limestone will be required. Additional Laterite (0.01 MTPA) and Coal (0.03 MTPA) will be consumed. There is an increase of 0.06 ug/m<sup>3</sup> of SPM, 0.08 ug/m<sup>3</sup> of SO<sub>2</sub> and 0.25 ug/m<sup>3</sup> of SO<sub>2</sub> respectively due to augmentation in capacity.

After deliberations, the Committee desired following additional information:

1. Collect baseline environmental data including cropping pattern and crop yield.
2. As per circular dated 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided.

The proposal is deferred till the desired information is submitted. The above information shall be provided with the uploading of minutes on the website.

3.6.10. Manufacturing of Coal to Ammonia (1050 TPD; 3,46,500 TPA) alongwith Captive Power Plant (45 MW) at Village Paradeep, Tehsil Kujang, District Jagatsinghpur, Orissa by **M/s Bharath Coal Chemicals Limited.-additional TOR reg.**

Ministry vide letter no. J-11011/206/2011- IA II (I) dated 15<sup>th</sup> November, 2011 has awarded TOR for manufacturing of Coal to Ammonia (1050 TPD; 3,46,500 TPA) alongwith Captive Power Plant (45 MW). Now, project proponent vide letter no. BCCL/MoEF/TOR/2011/008 dated 19<sup>th</sup> October, 2012 has requested to add Urea manufacturing unit (1500 TPD).

The Committee recommended the project for the amendment of product mix in the existing TOR.

**3.6.11. Grain based Distillery (120 KLPD), Malt Spirit (5 KLPD) and Co-generation Power Plant (10 MW) at Village Sangat Kalan, Tehsil Bathinda, District Bathinda, Punjab by M/s Om Sons Marketing Pvt. Ltd.- TOR to EC regarding**

Project proposal was considered in the 35<sup>th</sup> Expert Appraisal Committee (Industry-2) meeting held during 11<sup>th</sup> – 12<sup>th</sup> May, 2012 and recommended the project proposal for grant of environmental clearance subject to submission of a map indicating location of school and Sawami Satsang Ghar for record and also provide thick greenbelt in the plant towards Satsang Ghar side.

Project proponent has submitted certificate from Tehsildar Sangat, District Bathinda that Government high school, Sangat and Deera Satsang is situated at a distance of 2.8 Km and 500 m respectively from the proposed project site. Project proponent informed that greenbelt will be developed in 3.7 acres (30 %) out of total plant area.

After deliberations, the Committee found addl. information satisfactory and recommended the project proposal for environmental clearance.

**5<sup>th</sup> December, 2012**

**3.7.0 Consideration of the Projects:**

**3.7.1. Grain based Distillery (ENA/RS 60 KLPD) and Expansion (ENA RS/60 KLPD to 120 KLPD) and Absolute Alcohol 30 KLPD) with Cogeneration Power Plant (3.5 MW) at Plot no.321, 323-325, 339-340, 362-363, 381, 392, 403 & 449, Village Manpur, Tehsil Namchi, District South Sikkim, Sikkim by M/s Esvee Breweries (P) Ltd. - regarding TORs**

The project authorities and their consultant gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All the Grain based Distillery Units (more than 30 KLPD) are listed at S.N. 5(g) under Category 'A'.

M/s Esveegee Breweries (P) Ltd. has proposed for grain based Distillery (ENA/RS 60 KLPD) and Expansion (ENA RS/60 KLPD to 120 KLPD) and Absolute Alcohol 30 KLPD) with Cogeneration Power Plant (3.5 MW) at Plot no.321, 323-325, 339-340, 362-363, 381, 392, 403 & 449, Village Manpur, Tehsil Namchi, District South Sikkim, Sikkim. Interstate boundary of Sikkim & West Bengal is located at a distance of 80 m. Plant area is 12 acres or 4.8562 ha. Total cost of existing project is Rs. 44.90 Crores and proposed expansion is Rs. 79.5 Crore. River Rangit is flowing adjacent to the site. Following will be manufactured:

S. N.	Product	Existing (KLPD)	Proposed (KLPD)	Total after expansion (KLPD)

1	Extra Neutral Alcohol/Rectified Spirit	60 KLPD	60 KLPD	120 KLPD
2	Absolute Alcohol	-	30 KLPD	30 KLPD
3	Co-Generation Power Plant	--	3.5 MW	3.5 MW

Grain (300 MT) will be sourced from Assam, Bihar, West Bengal and Uttar Pradesh. Wet scrubber and trima cyclone alongwith stack height of 45 m will be provided to coal fired Total fresh water requirement will be increased from 662 m<sup>3</sup>/day to 1298 m<sup>3</sup>/day. Wastewater will be treated in anaerobic digester and treated effluent quantity will be treated in centrifuge followed by MEE and dryers to achieve zero discharge. Spent/used oil will be sold to authorized recyclers. DDGS/DWGS will be used as cattle feed. Fly ash will be sold to brick manufacturers. DG set (860 KVA) will be installed. Power requirement will be increased from 1000 KW to 3.5 MW and sourced from State Electricity Board and Cogeneration Power Plant (3.5 MW). The project proposal has been considered in this meeting for appraisal as per the Ministry's O.M. dated 16<sup>th</sup> November, 2010 regarding consideration of proposals involving violation of the Environment (Protection) Act, 1986 or Environment Impact Assessment (EIA) Notification, 2006, which refers that such cases may be referred to respective EAC for consideration based on the merit of the proposal. Meanwhile, Ministry's O. M no. J-11013/41/2006-IA II (I) dated 12<sup>th</sup> December, 2012 came into force and same will be followed.

After deliberations, the Committee prescribed the following TORs for the preparation of draft EIA/EMP:

1. Executive summary of the project.
2. Detailed break-up of the land area alongwith latest photograph of the area.
3. Present land use based on satellite imagery and details of land availability for the project alongwith supporting document.
4. Details of site and information related to environmental setting within 10 km radius of the project site.
5. A copy of lease deed or allotment letter, if land is already acquired.
6. Information regarding eco-sensitive areas such as national park/wildlife sanctuary/ biosphere reserves within 10 km radius of project area.
7. List of existing distillery units in the study area alongwith their capacity and sourcing of raw material.
8. Details of proposed products alongwith manufacturing capacity.
9. Number of working days of the distillery unit.
10. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
11. Details of raw materials, its source & availability of all raw materials including cereal grains requirement.
12. Sources and quantity of fuel (coal etc.) for the boiler. Measures to take care of SO<sub>2</sub> emission. Stack height should be based on maximum sulphur content in the coal. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted.
13. Storage facility for raw materials, prepared alcohol, fuel and fly ash.

14. Action plan to control ambient air quality as per NAAQES Standards for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> as per GSR 826(E) dated 16<sup>th</sup> November, 2009.
15. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
16. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
17. An action plan to control and monitor secondary fugitive emissions from all the sources.
18. Details of the use of steam from the boiler.
19. Ground water quality around proposed spent wash storage lagoon and the project area.
20. Details of water requirement, water balance chart for grain based Distillery and co-generation plant. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
21. Fresh water requirement should be restricted upto 10 KI/KI of alcohol for grain based distillery
22. Permission of withdrawal of water from ground water Board.
23. Proposed effluent treatment system for grain based distillery (spent wash and spent lees) alongwith utility wastewater including CPP and scheme for achieving zero discharge.
24. Spent wash generation should not exceed 6 KL/KL of alcohol production. Details of the spent wash treatment for grain based distillery based distillery.
25. Capacity for spent wash holding tank and action plan to control ground water pollution.
26. Dryer shall be installed to dry DWGS.
27. Layout for storage of rice husk/biomass.
28. Details of solid waste management including management of boiler ash.
29. Green belt development as per the CPCB guidelines.
30. List of flora and fauna in the study area.
31. Noise levels monitoring at five locations within the study area.
32. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
33. EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
34. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
35. Alcohol storage and handling area fire fighting facility as per norms.
36. Provision of Foam System for fire fighting to control fire from the alcohol storage tank.
37. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
38. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.

- iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
  - vii) Details of occupational health surveillance programme.
39. Details of socio-economic welfare activities.
  40. Traffic study of the area for the proposed projects in respect of existing traffic, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
  41. Action plan for post-project environmental monitoring.
  42. Corporate Environmental Responsibility
    - (a) 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.
    - (b) Does the Environmental 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 report.
  43. 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.
  44. Does the company have a system of reporting of non compliance / 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.
  45. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
  46. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
  47. A tabular chart with index for point-wise compliance of above TORs.

The following general points should be noted:

- i. All documents should be properly indexed, page numbered.
- ii. Period/date of data collection should be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter and that raised in Public Hearing/consultation alongwith duly filled in Industry Sector questionnaire. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report where the above issues and the issues raised in the Public hearing have been incorporated.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

The Committee prescribed the above TORs for preparation of EIA/EMP reports. The proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns raised alongwith the replies during the Public Hearing/ Consultation should be

incorporated in the EIA/EMP Report and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

3.7.2. Expansion of Bulk Drug Manufacturing Unit at Sy. No. 93/2, 94/1 to 94/6, Village Kakinada Manal, East Godavari District, Andhra Pradesh by **M/s TYCHE Industries Ltd - regarding TORs**

The project authorities and their consultant (Pioneer Enviro Laboratories & Consultants Pvt. Ltd) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP report. All the Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s TYCHE Industries Ltd have proposed for expansion of Bulk Drug Manufacturing Unit at Sy. No. 93/2, 94/1 to 94/6, Village Kakinada Manal, East Godavari District, Andhra Pradesh. Total existing plant area is 22 acres and no additional land is required. No court case is pending against the project. Following products will be manufactured.

S.N.	Product	Existing (TPM)	Proposed (TPM)	Total after proposed expansion (TPM)
1	Glucosamine hydrochloride	30	15 (additional)	45
2	Di-Chloro Hydroxy Quinoline	10	--	10
3	Losartan potassium	2.0	--	2.0
4	2-chloro-n- (2-chloro 4-methyl)-3-pyridinyl)3-pyridine carboxamide (rap-5)	7.0	--	7.0
5	Venlafaxine hydrochloride	2.0	2.0 (dropping)	0.0
6	Tamsulosin hydrochloride	0.01	--	0.01
7	Amoldipine besylate	2.0	2.0(dropping)	0.0
8	1-(2-chloroethyl) piperdine hydrochloride (CPH)	2.50	--	2.50
9	Sertraline hydrochloride	2.0	--	2.0
	Total	57.51	11	68.51

Environment clearance of the existing unit was accorded by the Ministry's letter no. J-11011/678/2007-IA II (I) dated 13<sup>th</sup> March, 2008. In the existing unit Boiler 3 TPH and 5 TPH are already installed. Multicyclone separator and bagfilters are provided in the existing boilers. Hence no boiler will be required for the present proposal. Total water requirement from Samalkot Canal will be 8.2 m<sup>3</sup>/day for expansion. Effluent will be treated in the existing ETP of 100 KLD. Greenbelt will be developed in 7 acres. Solid waste will be sent to TSDF. The Committee noted that there is no increase in air emissions; reduction in water requirement; reduction in water pollution load; reduction in solid waste.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of EIA/EMP report:

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
2. Executive summary of the project

3. Justification of the project.
4. Promoters and their back ground.
5. Regulatory framework.
6. A map indicating location of the project and distance from severely polluted area.
7. Project location and plant layout.
8. Infrastructure facilities including power sources.
9. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
10. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
11. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the APPCB.
12. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
13. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
14. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
15. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
16. Details of the total land and break-up of the land use for green belt and other uses.
17. List of products alongwith the production capacities.
18. Detailed list of raw material required and source, mode of storage.
19. Manufacturing process details alongwith the chemical reactions and process flow chart.
20. Action plan for the transportation of raw material and products.
21. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
22. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
23. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
24. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
25. Name of all the solvents to be used in the process and details of solvent recovery system.
26. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
27. Details of water and air pollution and its mitigation plan
28. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
29. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
30. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
31. Permission from competent Authority for the drawl of water. Water balance chart for existing and expansion project including quantity of effluent generated recycled and reused and effluent discharge.
32. Attempt to be made for reduction for usage of water.

33. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
34. Zero discharge effluent concepts to be adopted.
35. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
36. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
37. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
38. Material Safety Data Sheet for all the Chemicals are being used/will be used.
39. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
40. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
41. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
42. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
47. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
43. Details of occupational health surveillance programme.
44. Socio-economic development activities shall be in place.
45. Note on compliance to the recommendations mentioned in the CREP guidelines.
46. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
47. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
48. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 49. Corporate Environmental Responsibility**
  - (a) 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.
  - (b) Does the Environmental 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 report.
50. 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.
51. Does the company have a system of reporting of non compliance / 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.
52. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
53. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

The Committee exempted the project from public hearing as per para 7 (ii) of EIA Notification, 2006 as there is no increase in air emissions, water pollution load, solid waste generation and plant area. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

- 3.7.3. Expansion of Phosphorus Penta Chloride (9 MTPM to 100 MTPM) Manufacturing Unit at Plot No. – 2811, GIDC, Sarigam – 396155, Taluka Umargam, District Valsad in Gujarat by **M/s Pharma Chemical Industries. - regarding TORs**

M/s Pharma Chemical Industries have proposed for expansion of Phosphorus Penta Chloride (9 MTPM to 100 MTPM) Manufacturing Unit at Plot No. – 2811, GIDC, Sarigam – 396155, Taluka Umargam, District Valsad in Gujarat. Project proponent has informed the Committee that Phosphorus Penta Chloride is inorganic compound and same is manufactured by reaction of Chlorine gas with Phosphorus tri-chloride. Phosphorus Penta Chloride is not used as pesticide. In this case, Gujarat Pollution Control Board has asked them to obtain prior environmental clearance.

After detailed deliberations, the Expert Appraisal Committee noted that the project proposal cannot be categorized under synthetic organic or pesticide activity and no environmental clearance is required. However other statutory clearances under the Air and Water Acts shall be obtained.

- 3.7.4. Grain Based Distillery (120 KLPD) along with 5 MW Co-generation Power Plant at Village Baharogora, District Singhbhoom (East), Jharkhand by M/s Globus Spirit Ltd- **regarding TORs.**

The project authorities and their consultant (M/s J M EnviroNet Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All the Grain based Distillery Units (more than 30 KLPD) are listed at S.N. 5(g) under Category 'A'.

M/s Globus Spirit Ltd have proposed for setting up of Grain based Distillery alongwith Co-generation power plant (5 MW) at Village Baharogora, District Singhbhoom (East), Jharkhand. Total plant area is 17.66 acres. No forest land is involved. No court case/litigation is pending against the project. Subarnarekha river is flowing at a distance of 6.5 Km. State boundaries of Jharkhand and West Bengal is located at 2.5 Km. Total project cost is Rs. 160 Crore. Rs. 15 crores and Rs. 1.0 crore are earmarked towards capital cost and recurring cost per annum for pollution control measures. No national park/wildlife sanctuary is located within 10 Km.

Total fresh water requirement from ground water source will be 1650 m<sup>3</sup>/day. Spent wash will be passed through decanter and thin slop will be concentrated in MEE to form DWGS to achieve zero discharge. Fly ash from the boiler will be utilized in brick manufacturing. DWGS will be used as cattle feed. Greenbelt will be developed in 3.04 ha (7.6 acres). Total power requirement is 3000 KW. DG set (1x1250 KVA and 1x 750 KVA) will be installed.

After deliberations, the Committee prescribed the following TORs for the preparation of draft EIA/EMP:

1. Executive summary of the project.
2. Detailed break-up of the land area alongwith latest photograph of the area.
3. Present land use based on satellite imagery and details of land availability for the project alongwith supporting document.
4. Details of site and information related to environmental setting within 10 km radius of the project site.
5. A copy of lease deed or allotment letter, if land is already acquired.
6. Information regarding eco-sensitive areas such as national park/wildlife sanctuary/ biosphere reserves within 10 km radius of project area.
7. List of existing distillery units in the study area alongwith their capacity and sourcing of raw material.
8. Details of proposed products alongwith manufacturing capacity.
9. Number of working days of the distillery unit.
10. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
11. Details of raw materials, its source & availability of all raw materials including cereal grains requirement.
12. Sources and quantity of fuel (rice husk/coal etc.) for the boiler. Measures to take care of SO<sub>2</sub> emission. Stack height should be based on maximum sulphur content in the coal. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted.
13. Storage facility for raw materials, prepared alcohol, fuel and fly ash.
14. Action plan to control ambient air quality as per NAAQES Standards for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> as per GSR 826(E) dated 16<sup>th</sup> November, 2009.
15. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
16. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
17. An action plan to control and monitor secondary fugitive emissions from all the sources.
18. Details of the use of steam from the boiler.
19. Ground water quality around proposed spent wash storage lagoon and the project area.

20. Details of water requirement, water balance chart for grain based Distillery and co-generation plant. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
21. Fresh water requirement should be restricted upto 10 KI/KI of alcohol for grain based distillery
22. Permission of withdrawal of water from ground water Board.
23. Proposed effluent treatment system for grain based distillery (spent wash and spent lees) alongwith utility wastewater including CPP and scheme for achieving zero discharge.
24. Spent wash generation should not exceed 6 KL/KL of alcohol production. Details of the spent wash treatment for grain based distillery based distillery.
25. Capacity for spent wash holding tank and action plan to control ground water pollution.
26. Dryer shall be installed to dry DWGS.
27. Layout for storage of rice husk/biomass.
28. Details of solid waste management including management of boiler ash.
29. Green belt development as per the CPCB guidelines.
30. List of flora and fauna in the study area.
31. Noise levels monitoring at five locations within the study area.
32. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
33. EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
34. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
35. Alcohol storage and handling area fire fighting facility as per norms.
36. Provision of Foam System for fire fighting to control fire from the alcohol storage tank.
37. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
38. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
  - vii) Details of occupational health surveillance programme.
39. Details of socio-economic welfare activities.
40. Traffic study of the area for the proposed projects in respect of existing traffic, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
41. Action plan for post-project environmental monitoring.
42. Corporate Environmental Responsibility
  - (a) 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.
  - (b) Does the Environmental 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 report.
43. 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.
  44. Does the company have a system of reporting of non-compliance / 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.
  45. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
  46. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
  47. A tabular chart with index for point-wise compliance of above TORs.

The following general points should be noted:

- i. All documents should be properly indexed, page numbered.
- ii. Period/date of data collection should be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter and that raised in Public Hearing/consultation alongwith duly filled in Industry Sector questionnaire. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report where the above issues and the issues raised in the Public hearing have been incorporated.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

The Committee prescribed the above TORs for preparation of EIA/EMP reports. The proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns raised alongwith the replies during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

- 3.7.5. Gold Ore processing plant of 2000 tonnes per day capacity at Village Ganajur, Haveri Taluq and District Karnataka by M/s Deccan Exploration Services Pvt. Ltd. - **regarding TORs**

The proponent did not attend the meeting. The Committee decided to consider the project as and when requested by the proponent.

- 3.7.6. Resin Manufacturing Unit (Phenol Formaldehyde Resin "50 MTPM" and Urea Formaldehyde Resin "50 MTPM") at Sy. No. 25/P, Village Sakarda, Tahsil & District Vadodra, Gujarat by M/s Krishna Industries. - **regarding TORs**

The project authorities and their consultant gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All the Synthetic Organic Chemical Units located outside industrial area/estate are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Krishna Industries have proposed for setting up of Resin Manufacturing Unit (Phenol Formaldehyde Resin "50 MTPM" and Urea Formaldehyde Resin "50 MTPM") at Sy. No. 25/P, Village Sakarda, Tahsil & District Vadodra, Gujarat.No deference installation/biosphere reserves / National Park/wildlife sanctuary /Ecologically sensitive area is located within 15 Km. Total plant area is 846 m<sup>2</sup>. Project cost is Rs. 17.50 Crores.

Bagfilter alongwith stack (10m) will be provided to biomass fired boiler. Water requirement from ground water source will be 3.75 m<sup>3</sup>/day. Industrial wastewater generation will be 2.0 m<sup>3</sup>/day. ETP sludge will be sent to TSDF. Used oil will be sent to recyclers/preprocessors. Biomass and HSD will be used as full. Power requirement will be met from MGVCCL.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of EIA/EMP:

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework
5. A map indicating location of the project and distance from severely polluted area
6. Project location and plant layout.
7. Infrastructure facilities including power sources.
8. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
9. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
10. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
11. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
12. Permission, if any, from the State Forest Department
13. Details of the total land and break-up of the land use for green belt and other uses.
14. List of products alongwith the production capacities.
15. Detailed list of raw materials required and source, mode of storage and transportation.
16. Manufacturing process details alongwith the chemical reactions and process flow chart.
17. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
18. Ambient air quality monitoring at 6 locations within the study area of 5 km. aerial coverage from project site as per NAAQES notified on 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
19. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.

20. Air pollution control measures viz. Multi-cyclone and bag filter etc. Shall be proposed for the effective control of gaseous emissions within permissible limits.
21. Control methanol emission from drying section.
22. Details of VOC monitoring system in the working zone environment, if any.
23. Name of all the solvents to be used in the process and details of solvent recovery system.
24. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
25. Details of water and air pollution and its mitigation plan.
26. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
27. An action plan to control and monitor secondary fugitive emissions from all the sources.
28. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
29. Permission for the drawl of 3.75 m<sup>3</sup>/day ground water from CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
30. Action plan for 'Zero' discharge of effluent shall be included.
31. Treatment of phenol in the effluent, if any.
32. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
33. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
34. Explore the possibility to use fuel other than wood.
35. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
36. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
37. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
38. A write up on "Safe Practice" followed for methanol handling, storage, transportation and unloading to be submitted.
39. A write up on "Treatment of workers affected by accidental spillage of methanol/phenol".
40. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
41. An action plan to develop green belt in 33 % area
42. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
48. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
43. Details of occupational health surveillance programme.
44. Socio-economic development activities shall be in place.

45. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
46. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
- 47. Corporate Environmental Responsibility**
  - (a) 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.
  - (b) Does the Environmental 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 report.
48. 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.
49. Does the company have a system of reporting of non compliance / 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.
50. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
51. Public hearing to be conducted and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
52. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
- vii. 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 shall also be followed.
- viii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

The Committee decided that the proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns emerged during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

3.7.7. Expansion of Synthetic Organics Chemicals at Survey no. 194/4, Lunej Road, Village Sokhada, Tehsil Khambhat, District Anand, Gujarat by M/s Ideal Cures Pvt. Ltd. - regarding TORs

The project authorities and their consultant (M/s Petrotech Laboratories) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP report. All the Synthetic Organic Chemical Units located outside industrial area/estate are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Ideal Cures Pvt. Ltd. have proposed for expansion of Synthetic Organics Chemicals at Survey no. 194/4, Lunej Road, Village Sokhada, Tehsil Khambhat, District Anand, Gujarat..No forest land is involved. No court case/litigation is pending against the project. Total plot area of the existing site is 2400 m<sup>2</sup> of which a total of 968.75 m<sup>2</sup> is allotted for green belt. No additional land will be required for proposed expansion. The total cost of proposed project will be Rs.11.50 Lakhs out of which Rs. 6.50 Lakhs will be allocated for EHS. A budgetary provision of Rs. 2.60 Lakhs per annum will be made for EHS expenses. Following products will be manufactured :

Sr. No.	Product	Existing Scenario (MT/M)	Proposed Scenario (MT/M)
1.	Methacrylic acid co-polymer L-55 (Ecopol L 100 - 55)	10.00	400.00
2.	Methacrylic acid co-polymer L-30 D (Ecopol L 30 D 55)		
3.	Methacrylic acid co-polymer L-100/S-100 (Ecopol L 100 & Ecopol S 100)		
	<b>TOTAL</b>	<b>10.00</b>	<b>400.0</b>

The utility emissions will be from existing Boiler (800 kg/Hr) and D.G. Set (113 kVA). No additional utilities are proposed. Water requirement from the private water supplier will be increased from 3 m<sup>3</sup>/day to 13.2 m<sup>3</sup>/day. Industrial effluent generation will be increased from 0.89 m<sup>3</sup>/day to 1.6 m<sup>3</sup>/day and treated in ETP. Treated effluent will be used for gardening. Used / Spent Oil is sold to CPCB registered recyclers, Discarded containers/ bags/ liners are reused/sold to GPCB approved after decontamination and ETP Sludge is Disposal to TSDF of M/s. NECL, Nandesari. Fly ash is sold to Brick manufactures. Existing power requirement of 97 kVA is sourced from MGVCCL (Madhya Gujarat Vij Company Ltd.). The total power requirement after the proposed expansion project will remain same which will be sourced from MGVCCL. Agro waste @ 40 Kg/Hr is used as primary fuel and this quantity will remain same after expansion. After Proposed expansion, HSD will be used @ 18 LPH.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of EIA/EMP report:

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
2. Executive summary of the project
3. Justification of the project.
4. Promoters and their back ground.
5. Regulatory framework.
6. A map indicating location of the project and distance from severely polluted area.

7. Project location and plant layout.
8. Infrastructure facilities including power sources.
9. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
10. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
11. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the GPCB.
12. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
13. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
14. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
15. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
16. Details of the total land and break-up of the land use for green belt and other uses.
17. List of products alongwith the production capacities.
18. Detailed list of raw material required and source, mode of storage.
19. Manufacturing process details alongwith the chemical reactions and process flow chart.
20. Action plan for the transportation of raw material and products.
21. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
22. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
23. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
24. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
25. Name of all the solvents to be used in the process and details of solvent recovery system.
26. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
27. Details of water and air pollution and its mitigation plan
28. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
29. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
30. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
31. Permission from competent authority for the drawl of 13.2 m<sup>3</sup>/day water. Water balance chart including quantity of effluent generated recycled and reused and effluent discharge.
32. Attempt to be made for reduction for usage of water.
33. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
34. Zero discharge effluent concepts to be adopted.

35. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
36. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
37. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
38. Material Safety Data Sheet for all the Chemicals are being used/will be used.
39. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
40. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
41. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
42. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
49. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Thresh Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
43. Details of occupational health surveillance programme.
44. Socio-economic development activities shall be in place.
45. Note on compliance to the recommendations mentioned in the CREP guidelines.
46. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
47. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
48. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 49. Corporate Environmental Responsibility**
  - (a) 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.
  - (b) Does the Environmental 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 report.
50. 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.
51. Does the company have a system of reporting of non compliance / 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.
52. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.

53. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
54. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

The Committee decided that the proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns emerged during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

- 3.7.8. Extraction of value added products (LPG, Naphtha and C2C3 ) from ONGC gas at Hazira Plant at Village Bhatpore, Tehsil Choriasi, District Surat, Gujarat by M/s ONGC. - **regarding TORs**

The proponent did not attend the meeting. The Committee decided to consider the project as and when requested by the proponent.

- 3.7.9. Expansion of Phenol Formaldehyde Resin, Melamine Formaldehyde Resin Plant at Survey No. 340, Village Bhimasar and Sy. No 16/1, Village Varsana, Taluka Anjar, District Kachchh, Gujarat by M/s Purbanchal Laminates Pvt. Ltd. - **regarding TORs**

The project authorities and their consultant gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All the Synthetic Organic Chemical Units located outside industrial area/estate are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Purbanchal Laminates Pvt. Ltd. have proposed for expansion of Phenol Formaldehyde Resin, Melamine Formaldehyde Resin Plant at Survey No. 340, Village Bhimasar and Sy. No 16/1, Village Varsana, Taluka Anjar, District Kachchh, Gujarat. Total plot area is 32375 m<sup>2</sup>. Project proponent confirmed that both the plots are connected and considered to be as single plot. Total cost of project is Rs. 148 Lakhs. No forest land is involved. No court case/litigation is pending against the project proposal. Following products will be manufactured :

S.N.	Product ( Resin)	Existing Capacity ( MTPM)	Proposed Capacity ( MTPM)	Total Capacity ( MTPM)
Phase – I				
1	Phenol Formaldehyde	180	360	540
2	Melamine Formaldehyde	75	150	225
Phase – II				
1	Phenol Formaldehyde	100		100
2	Urea Formaldehyde	10		10

Bagfilter alongwith stack will be provided to coal fired existing and proposed boiler and Thermic Fluid Heater. Water requirement from ground water source will be increased from 64.4 m<sup>3</sup>/day to 100.73 m<sup>3</sup>/day. Industrial wastewater generation will be increased to 9.3 m<sup>3</sup>/day after expansion and treated in ETP. ETP sludge will be sent to TSDF. Used oil will be sent to recyclers/preprocessors. Biomass and HSD will be used as fuel. Power requirement will be met from MGCVCL.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of EIA/EMP:

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
2. Executive summary of the project
3. Justification of the project.
4. Promoters and their back ground.
5. Regulatory framework
6. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the GPCB.
7. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
8. A map indicating location of the project and distance from severely polluted area
9. Project location and plant layout.
10. Infrastructure facilities including power sources.
11. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
12. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
13. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
14. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
15. Permission, if any, from the State Forest Department
16. Details of the total land and break-up of the land use for green belt and other uses.

17. List of products alongwith the production capacities.
18. Detailed list of raw materials required and source, mode of storage and transportation.
19. Manufacturing process details alongwith the chemical reactions and process flow chart.
20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
21. Ambient air quality monitoring at 6 locations within the study area of 5 km. aerial coverage from project site as per NAAQES notified on 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
22. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
23. Air pollution control measures viz. Multi-cyclone and bag filter etc. Shall be proposed for the effective control of gaseous emissions within permissible limits.
24. Control methanol emission from drying section.
25. Details of VOC monitoring system in the working zone environment, if any.
26. Name of all the solvents to be used in the process and details of solvent recovery system.
27. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
28. Details of water and air pollution and its mitigation plan.
29. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
30. An action plan to control and monitor secondary fugitive emissions from all the sources.
31. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
32. Permission for the drawl of 100.73 m<sup>3</sup>/dayground water from CGWA. Water balance chart for existing and expansion project including quantity of effluent generated recycled and reused and discharged.
33. Action plan for 'Zero' discharge of effluent shall be included.
34. Treatment of phenol in the effluent, if any..
35. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
36. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
37. Explore the possibility to use fuel other than wood.
38. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
39. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
40. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
41. A write up on "Safe Practice" followed for methanol handling, storage, transportation and unloading to be submitted.
42. A write up on "Treatment of workers affected by accidental spillage of methanol/phenol".
43. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
44. An action plan to develop green belt in 33 % area

45. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
50. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Thresh Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
46. Details of occupational health surveillance programme.
47. Socio-economic development activities shall be in place.
48. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
49. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
50. Corporate Environmental Responsibility
  - (a) 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.
  - (b) Does the Environmental 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 report.
51. 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.
52. Does the company have a system of reporting of non-compliance / 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.
53. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
54. Public hearing to be conducted and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
55. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.

- vii. 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 shall also be followed.
- viii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

The Committee decided that the proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns emerged during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

**3.7.10. Expansion of Bulk Drug Unit from 10.5 TPA to 20.1 TPA at at Plot No. A1/7 & A1/8, Phase 1, GIDC Estate, Vapi, District Valsad, Gujarat by Ms. Avik Pharmaceuticals Ltd. - regarding TORs**

The project authorities and their consultant (Petrotech Laboratories) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within interstate boundary, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

Ms. Avik Pharmaceuticals Ltd. have proposed for expansion of Bulk Drug Unit from 10.5 TPA to 20.1 TPA at at Plot No. A1/7 & A1/8, Phase 1, GIDC Estate, Vapi, District Valsad, Gujarat. Total plant area of existing site is 3392 m<sup>2</sup> out of which a total of 560 m<sup>2</sup> is allotted for green belt. No additional land will be required for proposed expansion. The total cost of proposed project will be 1.91 Crores out of which Rs.43.00 Lakhs allocated for EHS. A budgetary provision of Rs. 10.68 Lakhs per annum will be made for EHS expenses. No court case/litigation is pending against the project. Following products will be manufactured:

Sr. No.	Name of products, and intermediate products	Existing (TPA)	Total Quantity after Proposed Expansion (TPA)
<b>Existing Products</b>			
1	Ethisterone	10.5	20.1
2	Clobetasol 17 Propionate		
3	Betamethasone Dipropionate		
4	Betamethasone 17 Valerate		
5	Beclomethasone Dipropionate		
6	Betamethasone Sodium Phosphate		
7	Mometasone Furoate		
8	Prednisolone Sodium Phosphate		
9	Prednisolone Acetate		
10	Triamcinolone Acetonide		
11	Triamcinolone		
12	Methyl Prednisolone		
13	Methyl Prednisolone Acetate		
14	Methyl Prednisolone Hemisuccinate		

15	Methyl Prednisolone Sodium Succinate		
16	Clobetasone Butyrate		
17	Halobetasol Propionate		
18	Budesonide		
19	Flumethasone		
<b>Proposed Products</b>			
20	Vitamin D3 derivatives (Calcitriol/Calcipotriol/ $\alpha$ – Calcidol)	00	
21	Fluticasone Propionate		
22	Deflazacort		
23	Triamcinolone Hexaacetonide		
<b>Total</b>		<b>10.5</b>	<b>20.1</b>
<b>Note:</b> Methyl Prednisolone Sodium Succinate is manufactured through job work.			

Traces of Acid fumes are/will be generated during manufacturing of bulk drugs. These emissions will be scrubbed out through alkali scrubber. The utility emissions will be from existing Boiler (600 kg/Hr) and D.G. Set (125 kVA). No additional utilities are proposed. Total fresh water requirement from GIDC water supply will be increased from 27.5 m<sup>3</sup>/day to 29.4 m<sup>3</sup>/day. Industrial effluent generated @ 21.7 KLD is treated in the Effluent Treatment Plant and is finally disposed off to CETP inlet through GIDC underground drainage. After expansion the Industrial effluent will be generated @ 22.0 KLD and will be treated in the Effluent Treatment Plant and is finally disposed off to CETP inlet through GIDC underground drainage. ETP waste will be sent to the CSWD site of M/s. Vapi Waste & Effluent Management Co. Ltd., for final disposal. Recovered distillation solvents will be sold to actual user. Spent Carbon will be sent to Suarashtra Enviro Protections Pvt. Ltd., Kutch through Vapi Waste Management for incineration. Used oil is being sold to registered recycler. Total existing connected load is 225 KVA supplied by Dakshin Gujarat Vij Co. Ltd. (DGVCL). After proposed expansion connected load will increase by approx. 100 kVA which will be supplied by Dakshin Gujarat Vij Co. Ltd. (DGVCL). At present Furnace oil (FO) @ 40LPH and Diesel @ 22LPH are used as fuel. After Proposed expansion, Natural Gas @ 50 SCM/H and Diesel – 22 LPH will be used.

After detailed deliberations, the Expert Appraisal Committee prescribed the following ToRs for preparation of EIA/EMP:

1. Executive summary of the project
2. Justification of the project.
3. Project location and plant layout.
4. Promoters and their back ground.
5. Regulatory framework
6. A certified report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
7. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the GPCB.
8. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
9. A map indicating location of the project and distance from severely polluted area
10. A copy of Gazette Notification issued by the Govt. of Gujarat indicating location of the project in notified GIDC should be included necessarily.
11. Infrastructure facilities including power sources.

12. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
13. Project site location alongwith photographs of the project site and site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
14. Present land use based on satellite imagery for the study area of 10 km radius.
15. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
16. Details of the total land and break-up of the land use for green belt and other uses.
17. List of products alongwith the production capacities.
18. Detailed list of raw material required and source, mode of storage and transportation.
19. Manufacturing process details alongwith the chemical reactions and process flow chart.
20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
21. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
22. One month site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> including HC and VOCs should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
23. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
24. Name of all the solvents to be used in the process and details of solvent recovery system.
25. Design details of ETP, incinerator, if any along with control of Dioxin & Furan, boiler, scrubbers/bag filters etc.
26. Details of water and air pollution and its mitigation plan
27. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
28. An action plan to control and monitor secondary fugitive emissions from all the sources.
29. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
30. Permission for the drawl of 29.4 m<sup>3</sup>/day water from the concerned agency. Water balance chart including quantity of effluent generated recycled and reused and discharged.
31. Action plan for 'Zero' discharge of effluent should be included.
32. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
33. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste.
34. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
35. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilized all the organic solid waste generated.
36. A copy of 'Memorandum of Understanding' (MoU) signed with coal supplier for imported coal and brick manufacturers for management of fly ash.
37. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.

38. Risk assessment for storage for chemicals/solvents.
39. Material safety data sheet of chemicals to be submitted.
40. An action plan to develop green belt in 33 % area.
41. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
42. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
  - vii) Details of occupational health surveillance programme.
43. Socio-economic development activities should be in place.
44. Note on compliance to the recommendations mentioned in the CREP guidelines.
45. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
46. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
47. Corporate Environmental Responsibility
  - (a) 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.
  - (b) Does the Environmental 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 report.
48. 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.
49. Does the company have a system of reporting of non compliance / 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.
50. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
51. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.

- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

It was decided that TORs prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of detailed report for the above mentioned project in addition to all the relevant information as per the Generic Structure of EIA given in Appendix III and IIIA in the EIA Notification, 2006. After detailed deliberations, the Committee exempted the public hearing as per Section 7 (i), III Stage (3), Para (i) (b) of EIA Notification 2006, subject to submission of authentic document from the State Govt. indicating that the project is located in the notified industrial area. The final EIA/EMP report shall be submitted to the Ministry for obtaining environmental clearance.

**3.7.11. Chlor Alkali Plant & Synthetic Organic Plant along with CPP (15 MW) at Village Gulabgarh, Tehsil Derabassi, District Mohali, Punjab by M/s Kudos Agrohol Ltd. - regarding TORs.**

The project authorities and their consultant (Team Labs and Consultants) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of Reference for the preparation of EIA/EMP. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located outside the notified industrial area/estate are listed at S.N. 5(f) and Chlor-alkali plant (>300 TPD) located outside the notified industrial area/estate are listed at S.N. 4(d) under category 'A' and appraised by the Expert Appraisal Committee (Industry) in the Ministry.

M/s Kudos Agrohol Ltd. have proposed for setting up of Chlor Alkali and Synthetic Organic Unit along with CPP (15 MW) at Village Gulabgarh, Tehsil Derabassi, District Mohali, Punjab. Total plot area is 43.29 acres. Total cost of project is Rs. 180 Crore. Dangri Nadi and River Ghanghar are flowing at a distance of 7.2 Km and 6 Km respectively. Birpir Machhela RF is located at a distance of 7.5 Km. Inter-State boundary Punjab and Haryana is located at a distance of 4 Km. No forest land is involved. No court case/ litigation is pending against the project. Following products will be manufactured:

S.N.	Product	Capacity (TPA)
1	Chlor-Alkali Plant	
A	Caustic soda	33000
B	Chlorine	29370
C	Hydrogen	825
2	Cyano Acetic Acid	1000
3	Sodium Salt of Theophylline	6000
4	Bromine Recovery Plant	7500
5	Mono Chloro Acetic Acid	6000
6	Methyl/Ethyl Cyanoacetate	1200
7	Acetic Anhydride	7800
8	Acetic Acid	4200
9	PMPA	360
10	CDAM	600
11	CHX	600
12	PMPAA	720
	*2400 TPA Plant (One item at one time)	
13	Captive Power Plant	15 MW

ESP alongwith stack of adequate height will be provided to husk/coal fired boiler (100 TPH). Scrubber will be provided to incinerator. Stack of 8m will be provided to (8x1500 KVA) DG sets. Water requirement from ground water source will be 5848 m<sup>3</sup>/day. Effluent generation will be 2245.5 m<sup>3</sup>/day. Effluent will be treated in ETP comprising stripper, MEE, ATFD and biological ETP followed by RO. Treated water will be recycled/ reused for cooling tower makeup.

Greenbelt will be developed in 14.3 acres. Fly ash will be sent to nearby farmer/cement manufactures. Chemical sludge, inorganic salts, incinerator Ash and ETP sludge will be sent to TSDF. Waste oil and used batteries will be sent to authorized recyclers.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of EIA/EMP report:

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework.
5. A map indicating location of the project and distance from severely polluted area.
6. Project location and plant layout.
7. Infrastructure facilities including power sources.
8. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
9. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
10. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
11. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
12. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
13. Details of the total land and break-up of the land use for green belt and other uses.
14. List of products alongwith the production capacities.
15. Detailed list of raw material required and source, mode of storage.
16. Manufacturing process details alongwith the chemical reactions and process flow chart.
17. Commitment to use membrane cell technology for Chlor-Alkali Industry.
18. Action plan for the transportation of raw material and products.
19. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
20. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
21. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, Cl<sub>2</sub>, CO including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
22. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
23. Name of all the solvents to be used in the process and details of solvent recovery system.

24. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
25. Details of water and air pollution and its mitigation plan
26. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
27. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
28. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
29. Permission from CGWA/SGWA for the drawl of 5848 m<sup>3</sup>/dayground water. Water balance chart including quantity of effluent generated recycled and reused and effluent discharge.
30. Attempt to be made for reduction for usage of water.
31. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
32. Zero discharge effluent concepts to be adopted.
33. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
34. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
35. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
36. Material Safety Data Sheet for all the Chemicals are being used/will be used.
37. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
38. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
39. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
40. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
51. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
41. Details of occupational health surveillance programme.
42. Socio-economic development activities shall be in place.
43. Note on compliance to the recommendations mentioned in the CREP guidelines.
44. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
45. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.

46. Total capital cost and recurring cost/annum for environmental pollution control measures.

**47. Corporate Environmental Responsibility**

(a) 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.

(b) Does the Environmental 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 report.

48. 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.

49. Does the company have a system of reporting of non compliance / 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.

50. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.

51. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.

52. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

The Committee decided that the proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns emerged during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

**3.7.12. Drilling of Development Wells (4 Nos.) in Kanward field at Village Kanward, District Anand, Gujarat by M/s Heramec Ltd. - regarding TORs**

The project authorities and their consultant( Kadam Environmental Consultant) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All the Offshore and Onshore oil and gas exploration, development and production projects are listed at S.N. 1(b) under Category 'A' and appraised at the Central level.

M/s Heramec Ltd has proposed for drilling of development wells (4 Nos.) in Kanward field at Village Kanward, District Anand, Gujarat. The field was awarded to Hermec-GSPC Joint venture in year 2001. Two wells Kanawara #2 & Kanawra ( K #3) were existing at the time of awarding the field to Heramec. Basic EPS was established by ONGC at K# 2 in Jan 1990. At present Heramec produces about 10 m<sup>3</sup>/day of crude oil and 10,000 m<sup>3</sup>/day of natural gas. However, by drilling four wells, oil production may exceed 120 m<sup>3</sup>/day. Total area of field is 6.3 Km<sup>2</sup>. Target depth is 1650 m. No national park/wildlife sanctuary is located within 10 Km. Sabarmati River is flowing at a distance of 6.6 Km. Adequate state height will be provided to DG Set. Water requirement from ground water source will be 45 m<sup>3</sup>/day/well. Wastewater generation will be 25 m<sup>3</sup>/day/well. Wastewater will be collected in HDPE lined collection pits and allowed to evaporate. Drill cutting (130 MT/well) will be generated. Waste oil generation will be 100 Lt/well. HSD consumption will be 150 Lph. Acoustic enclosure will be provided to DG Set.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of EIA/EMP report:

1. A certified report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
2. Executive summary of the project
3. Project description, project objectives and project benefits.
4. Site details within 1 km of the each proposed well, any habitation, any other installation/activity, flora and fauna, approachability to site, other activities including agriculture/land, satellite imagery for 10 km area.
5. Details of forest land involved in the proposed project. A copy of forest clearance letter, if applicable.
6. Permission from the State Forest Department considering the impact of the proposed plant on the surrounding National Park/Wild life Sanctuary/Reserve Forest/Eco sensitive area, if any. Approval obtained from the State/Central Government under Forest (Conservation Act, 1980 for the forestland should be submitted.
7. Distance from nearby critically/severely polluted area as per Notification dated 13<sup>th</sup> January, 2010, if applicable.
8. Does proposal involves rehabilitation and resettlement? If yes, details thereof.
9. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
10. Detailed break up of project cost including recurring cost.
11. Environmental considerations adopted in the selection of the drilling locations for which environmental clearance is being sought. Any analysis suggested for minimizing the foot print giving details of drilling and development options considered.

12. Details of all the facilities including CGS, GGS, OCS, EPS, produced water treatment etc to be installed. If existing facilities, give details.
13. Baseline data collection for air, water and soil for one season leaving the monsoon season in an area of 10 km radius with centre of Oil Field as its centre covering the area of all proposed drilling wells. It includes;
  - (i) Topography of the project site.
  - (ii) Ambient Air Quality monitoring at 8 locations for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, VOCs, Methane and non-methane HC.
  - (iii) Soil sample analysis (physical and chemical properties) at the areas located at 5 locations.
  - (iv) Ground and surface water quality in the vicinity of the proposed wells site.
  - (v) Climatology and Meteorology including wind speed, wind direction, temperature rainfall relative humidity etc.
  - (vi) Measurement of Noise levels ( day and night both) within 1 km radius of the proposed wells.
  - (vii)Vegetation and land use; Animal resources
14. IncrementalGLC as a result of DG set operation.
15. Potential environmental impact envisages during various stages of project activities such as site activation, development, operation/ maintenance and decommissioning.
16. Actual source of water and 'Permission' for the drawl of water from the Competent Authority. Detailed water balance, wastewater generation, recycling and its final discharge.
17. Noise control and measures to minimize disturbance due to light and visual intrusions in case coastally located areas.
18. Treatment and disposal of wastewater.
19. Details of generation, treatment and management of solid waste.
20. Management of spent oil and loose material.
21. Storage of chemicals and diesel at site.
22. Commitment for the use of WBM only
23. Mud make up and mud and cutting disposal – all options considered should be listed with selective option.
24. Hazardous material usage, generation, storage accounting and disposal.
25. Disposal of packaging waste from site.
26. Oil spill control and emergency plans in respect of recovery/ reclamation.
27. H<sub>2</sub>S emissions control.
28. Produced oil handling and storage.

29. Details of scheme for oil collection system alongwith process flow diagram and its capacity.
30. Details of control of air, water and noise pollution in oil collection system.
31. Disposal of produced/formation water.
32. Whether any burn pits being utilized for well test operations.
33. Restoration and decommissioning plans which should include mud pits and wastage restoration also and documentation and monitoring of site recovery.
34. Measures to protect ground water and shallow aquifers from contamination along with its monitoring plan. Action Plan should also include storm water runoff during rainy season and measures to prevent runoff which may be contaminated with oil.
35. Risk assessment and mitigation measures along with disaster management plan and prevention of blow out.
  
36. Safety plan to be included for the Tea worker in the nearby areas.
37. Environmental management plan.
  
38. Documentary proof of membership of common disposal facilities, if any.
39. Details of environmental and safety related documentation within the company including documentation and proposed occupational health and safety Surveillance Safety Programme for all personnel at site. This should also include monitoring programme for the environment. Risk mitigation measures should cover for all phases of the site activity including for developing road access, drilling of wells, operation and maintenance, waste management, decommissioning etc.
40. Total capital and recurring cost for environmental control measures.
41. A copy of Corporate Environment Policy of the as per the Ministry's O.M. No. J-11013/41/2006-IA.II(I) dated 26<sup>th</sup> April, 2011 available on the Ministry's website.
42. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
43. Any litigation pending against the project and or any direction/order passed by any court of law against the project. If so details thereof.
44. A tabular chart with index for point-wise compliance of above TORs.

The following general points should be noted:

- (i) All documents should be properly indexed, page numbered.
- (ii) Period/date of data collection should be clearly indicated.
- (iii) Authenticated English translation of all material provided in Regional languages.
- (iv) The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.

- (v) A copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- (vi) The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report where the above issues have been incorporated.
- (vii) 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.
- (viii) 'Certificate of Accreditation' issued by the QCI to the environmental consultant should be included.

It was decided that TORs together with Public Hearing prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA/EMP report for the above mentioned project in addition to all the relevant information as per the Generic Structure of EIA given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report should be submitted to the Gujarat Pollution Control Board for public hearing to be conducted. The issues emerged and response to the issues raised during public hearing should be incorporated in the EIA report.

3.7.13. POL Terminal at Village Haludpukar, Tehsil Ghatsila Circle-Potka, District East Singhbhum, Jharkhand by M/s IOT Infrastructure & Energy Services Ltd. - **regarding TORs**

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All the Isolated Storage & Handling of Hazardous Chemicals are listed at S.N. 6(b) under Category 'B' and appraised at the Central level due to non-existent of the SEIAA/SEAC in Jharkhand.

M/s IOT Infrastructure & Energy Services Ltd. have proposed for setting up of POL Terminal at Village Haludpukar, Tehsil Ghatsila Circle-Potka, District East Singhbhum, Jharkhand. HPCL and BPCL have 2 oil petroleum oil storage depots in congested areas of city of Tatanagar. There is no space in these depots for expansion of facilities. In view of the constraints and on safety consideration, IOT has been entrusted by BPCL & HPCL to develop a common user POL terminal at Haludpukar. Total land requirement is 37 acres. No sensitive area like national park/wildlife sanctuary is located within 15 Km from the project site. POL terminal will be engaged primarily in receipt, storage and filling of tank trucks of HPCL and BPCL for distribution of essential petroleum products in the region. Following will be storage capacities :

S.N.	Product	Quantity
1	Motor Spirit	5830 KI
2	High Speed Diesel	12650 KI
3	Superior Kerosene (SKO)	2770 kl

4	Ethanol	400 KI
	Total	21650 KI Total thruput = 4,22,592 kpa.

Adequate stack height will be provided to DG set. Vapour recovery system is envisaged for volatile products. Total water requirement will be 18 m<sup>3</sup>/day and met from ground water source. Effluent will be passed through oil water separator (OWS) Tank bottom sludge will be disposed off through authorized recyclers. Power requirement will be 540 kVA from JSEB.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of EIA/EMP:

1. Executive summary of the project.
2. Project description and Project benefits.
3. Land use details of the site based on satellite imagery.
4. Process details and design details of all the tanks.
5. A list of industries within 10 km radius of the project.
6. List of villages and population within 5 Km.
7. Layout plan with provision of trucks parking area. Earmarking of area for parking of Lorries at a remote location to avoid congestion.
8. Details of the storage and technical specifications with safety aspects & standards
9. Site details including satellite imagery for 5 km around the site.
10. Land use along with maps & cropping pattern, vegetation, ecology, flora & fauna
11. Demography & socio-economics of the area.
12. Baseline data collection for air, water and soil for:
  - i. Ambient air quality monitoring for PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>.
  - ii. Background levels of hydrocarbons (methane & non-methane HC) and VOCs.
  - iii. Soil sample analysis.
  - iv. Base line underground and surface water quality in the vicinity of project.
  - v. Climatology & meteorology including wind speed, wind direction, temperature, rainfall etc.
  - vi. Measurement of noise levels
14. Details of water consumption and source of water supply, waste water generation, treatment and utilization of treated water generated from the facilities and effluent disposal and measures for release of effluent in case of fire.
15. Storm water system should have provision to prevent any unintended oil in the drain to flow out with storm water and should take care of the highest rainfall care. Details of oil water separator.
16. Detailed solid waste generation, collection, segregation, its recycling and reuse, treatment and disposal.
17. Assessment of impact on air, water, soil, solid/hazardous waste and noise levels.
18. Details of proposed preventive measures for leakages and accident.
19. Details of Vapour Recovery System for the storage tanks and lorries.
20. Adequate width of approach road to avoid congestion and to have safe exit in emergencies.
21. Type of seismic zone.
22. Environmental Management Plan
23. Risk Assessment & Disaster Management Plan
  - i. Identification of hazards

- ii. Consequence Analysis
  - iii. Preventive measures.
  - iv. Risk assessment should also include leakages during storage, handling, transportation and proposed measures for risk reduction.
  - v. Fire and explosion hazard.
24. Risk Assessment should also include follow up/compliance to safety & hazardous material management facilities; possibility of fire and explosion accident; Risk assessment for accidents at site and its impact on adjoining area, risk mitigation measures, disaster management plan; on-site & off-site emergency plan.
25. Details of fire fighting facilities.
52. Details of occupational health programme.

- i) To which chemicals, workers are exposed directly or indirectly.
- ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
- iii) What measures company have taken to keep these chemicals within PEL/TLV.
- iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
- v) What are onsite and offsite emergency plan during chemical disaster.
- vi) Liver function tests (LFT) during pre-placement and periodical examination.

26. Environmental Monitoring programme.

**27. Corporate Environmental Responsibility**

- (a) 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.
  - (b) Does the Environmental 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 report.
28. 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.
29. Does the company have a system of reporting of non compliance / 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.
30. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
31. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
32. A tabular chart with index for point wise compliance of above TORs.

The following general points should be noted:

- (i). All documents should be properly indexed, page numbered.
- (ii) Period/date of data collection should be clearly indicated.
- (iii) Authenticated English translation of all material provided in Regional languages.
- (iv) The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
- (v) A copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- (vi) The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report where the above issues have been incorporated.

- (ix) 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.
- (x) Certificate of Accreditation' issued by the QCI to the environmental consultant should be included.

It was decided that TORs prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the Generic Structure of EIA given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report should be submitted to the Jharkhand Pollution Control Board for public hearing. The issues emerged and response to the issues raised during should be incorporated in the EIA report. The final EIA/EMP Report alongwith Certificate of Accreditation issued by the QCI should be submitted to the Ministry for obtaining environmental clearance.

**3.7.14. Expansion of Synthetic Organic Chemical Manufacturing Unit at Plot Nos. C-1-B/2805 & 2806, GIDC, Sarigam, District Valsad, Gujarat by M/s OM Titanates. - regarding TORs**

The project authorities and their Consultant (Petri Tech Laboratories) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within interstate boundary, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s OM Titanates has proposed for expansion of Titanates & Di-Isopropyl Ethyl Amine (DIPEA) Manufacturing Unit at Plot Nos. C-1-B/2805 & 2806, GIDC, Sarigam, District Valsad, Gujarat. Total plot area is 1406 m<sup>2</sup>. Total cost of project is Rs. 81.85 Lakhs. No court case is pending against the project. Following products will be manufactured:-

S.N.	Name of Product	Quantity (TPM)	
		Existing Scenario	Proposed Scenario
<b>Main Products</b>			
1	Tetra Butyl Titanate	} 50	} 100
2	Tetra Iso Propyl Titanate		
3	TPT-20 B		
4	Tetra2-Ethyl Hexyl Titanate		
5	Titanium Acetyl Acetate		
6	Ethyl Titanate		
7	Di-isopropyl ethyl amine	Nil	15
8	Ammonium Chloride	47	94
9	Sodium/potassium Ethyl Sulphate	Nil	22
	<b>Total</b>	<b>50</b>	<b>231</b>

Traces of Ammonia & HCl generated from the manufacturing of TBT, TIPT & ET are scrubbed in scrubber. Total fresh water requirement from GIDC water supply will be increased from 4 m<sup>3</sup>/day to 13.5 m<sup>3</sup>/day. Cooling tower blow down will be generated as industrial effluent. The domestic waste water generated will be disposed through Soak pit / Septic tank. Used oil will be sold to registered recycler. Ammonium chloride is currently sent to other Industries through manifest system. After proposed expansion project, Ammonium chloride will be added as product in product list & will be sold as product.

After detailed deliberations, the Expert Appraisal Committee prescribed the following ToRs for preparation of EIA/EMP:

1. Executive summary of the project
2. Justification of the project.
3. Project location and plant layout.
4. Promoters and their back ground.
5. Regulatory framework
6. A certified report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
7. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the GPCB.
8. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
9. A map indicating location of the project and distance from severely polluted area
10. A copy of Gazette Notification issued by the Govt. of Gujarat indicating location of the project in notified GIDC should be included necessarily.
11. Infrastructure facilities including power sources.
12. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
13. Project site location alongwith photographs of the project site and site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
14. Present land use based on satellite imagery for the study area of 10 km radius.
15. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
16. Details of the total land and break-up of the land use for green belt and other uses.
17. List of products alongwith the production capacities.
18. Detailed list of raw material required and source, mode of storage and transportation.
19. Manufacturing process details alongwith the chemical reactions and process flow chart.
20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
21. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
22. One month site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> including HC and VOCs should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
23. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.

24. Name of all the solvents to be used in the process and details of solvent recovery system.
25. Design details of ETP, incinerator, if any along with control of Dioxin & Furan, boiler, scrubbers/bag filters etc.
26. Details of water and air pollution and its mitigation plan
27. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
28. An action plan to control and monitor secondary fugitive emissions from all the sources.
29. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
30. Permission for the drawl of 13.5 m<sup>3</sup>/day water from the concerned agency. Water balance chart including quantity of effluent generated recycled and reused and discharged.
31. Action plan for 'Zero' discharge of effluent should be included.
32. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
33. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste.
34. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
35. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilize all the organic solid waste generated.
36. A copy of 'Memorandum of Understanding' (MoU) signed with coal supplier for imported coal and brick manufacturers for management of fly ash.
37. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
38. Risk assessment for storage for chemicals/solvents.
39. Material safety data sheet of chemicals to be submitted.
40. An action plan to develop green belt in 33 % area.
41. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
42. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
  - vii) Details of occupational health surveillance programme.
43. Socio-economic development activities should be in place.
44. Note on compliance to the recommendations mentioned in the CREP guidelines.
45. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.

46. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
47. Corporate Environmental Responsibility
  - (a) 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.
  - (b) Does the Environmental 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 report.
48. 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.
49. Does the company have a system of reporting of non compliance / 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.
50. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
51. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

It was decided that TORs prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of detailed report for the above mentioned project in addition to all the relevant information as per the Generic Structure of EIA given in Appendix III and IIIA in the EIA Notification, 2006. After detailed deliberations, the Committee exempted the public hearing as per Section 7 (i), III Stage (3), Para (i) (b) of EIA Notification 2006, subject to submission of authentic document from the State Govt. indicating that the project is located in the notified industrial area. The final EIA/EMP report shall be submitted to the Ministry for obtaining environmental clearance.

3.7.15. Expansion for manufacturing of Phosphorus Trichloride (200 MTPM to 600 MTPM) and Phosphorus Oxychloride (100 MTPM to 400 MTPM) at Plot No.- 2808, 2809 & 2810, GIDC , Sarigam - 396155, Taluka Umargam, District Valsad in Gujarat by **M/s Sandhya Industrial Chemicals. - regarding TORs**

The project authorities and their consultant( Unistar Environment & Research Labs Pvt. Ltd.) gave a detailed presentation on the salient features of the project. M/s Sandhya Industrial Chemicals haveproposed for expansion of manufacturing of Phosphorus Trichloride (200 MTPM to 600 MTPM) and Phosphorus Oxychloride (100 MTPM to 400 MTPM) at Plot No.- 2808, 2809 & 2810, GIDC , Sarigam - 396155, Taluka Umargam, District

Valsad in Gujarat. Project proponent has informed the Committee that Phosphorus Trichloride and Phosphorus Oxychloride is inorganic compound. This chemicals are used to manufacture various other chemicals like derivatives, various synthesis to manufacture Organo Phosphorus compounds. Compounds are not used as pesticide. In this case, Gujarat Pollution Control Board has asked them to obtain prior environmental clearance.

Therefore, this project proposal cannot be categorized under synthetic organic or pesticide activity and no environmental clearance is required. However other statutory clearances under the Air and Water Acts shall be obtained.

### 3.7.16. Exploratory Drilling (8 Wells) in NELP-VI Block KG-OSN-2004/1 in Offshore KG basin in Andhra Pradesh by M/s ONGC Ltd. - **regarding TORs**

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All the projects related to offshore and onshore Oil and Gas exploration, development and production are listed in para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at central level.

M/s ONGC Ltd. has proposed for Exploratory Drilling (8 Wells) in NELP-VI Block KG-OSN-2004/1 in Offshore KG basin in Andhra Pradesh. Ministry vide letter no. J-11011/541/2007-IA II (I) dated 3<sup>rd</sup> June, 2009 has accorded environmental clearance for 7 wells. Proposal does not falls under CRZ notification. Project Cost is Rs. 600 Crore. Following wells will be drilled:

Name of the prospects	Target Depth (m)	Water Depth (m)	Approximate Distance from Coast (Km)
Prospect 1 (P-I)	1930	149	28
Prospect 2 (P-II)	2600	322	28
Prospect 3 (P-II)	2540	60	19
Prospect 4 (P-IV)	2540	212	22
Prospect 5 (P-V)	2300	70	19
Prospect 6 (P-VI)	2300	125	19.3
Prospect 7 (P-VII)	2170	112	17
Prospect 8 (P-VIII)	2600	200	20

Duration of Drilling / Well will be 90-120 days. Quantity of drilling fluid /well generation will be 700-900 M3 per well. Qty. of cuttings generation will be 350-500 M3 for well. Test flaring, duration will be 2-3 days flare booms with the rig.

After deliberations, the Committee prescribed the following TORs for the preparation of EIA/EMP report:

1. A certified report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
2. Executive summary of the project.
3. Project Description and Project Benefits;
4. Distance from coast line.
5. Details of sensitive areas such as coral reef, marine water park, sanctuary and any other eco-sensitive area.

6. CRZ clearance as per CRZ Notification dated 6<sup>th</sup> January, 2011, if applicable.
7. Clearance from the Ministry of Defense/Home Affairs or any other department, as applicable.
8. Climatology and meteorology including wind speed, wave and currents, rainfall etc.
9. Base line data collection for surface water for one season leaving the monsoon season within 1 km for each exploratory wells, particularly in respect of oil content.
10. Actual source of water and 'Permission' for the drawl of water from the Competent Authority. Detailed water balance, waste water generation and discharge.
11. Noise abatement measures and measures to minimize disturbance due to light and visual intrusions in case coastally located.
12. Procedure for handling oily water discharges from deck washing, drainage systems, bilges etc.
13. Procedure for preventing spills and spill contingency plans.
14. Procedure for treatment and disposal of produced water.
15. Procedure for sewage treatment and disposal and also for kitchen waste disposal.
16. Procedure for handling solid waste and any waste segregation at source for organic, inorganic and industrial waste.
17. Storage of chemicals on site.
18. Commitment for the use of WBM and synthetic oil based mud in special case.
19. Risk assessment and mitigation measures including whether any independent reviews of well design, construction and proper cementing and casing practices have been followed.
20. Handling of spent oils.
21. Handling of oil from well test operations.
22. Mud make up and mud and cuttings disposal procedures.
23. H<sub>2</sub>S emissions control plans, if required.
24. Details of all environment and safety related documentation within the company in the form of guidelines, manuals, monitoring programmes including Occupational Health Surveillance Programme etc.
25. Restoration plans and measures to be taken for decommissioning of the rig and restoration of on-shore support facilities on land.
26. A note on the precautions to be taken during operation and emergency. Emergency Plan in case of any eventuality should also be included.

27. Documentary proof for membership of common disposal facilities, if required.
28. Any litigation pending against the project or any directions/order passed by any Court of Law against the project. If so, details thereof.
29. Total capital and recurring cost for environmental pollution control measures.
30. A tabular chart with index for point-wise compliance of above TOR.

The following general points should be noted:

The following general points should be noted:

- (i) All documents should be properly indexed, page numbered.
- (ii) Period/date of data collection should be clearly indicated.
- (iii) Authenticated English translation of all material provided in Regional languages.
- (iv) The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
- (v) A copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- (vi) The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report where the above issues have been incorporated.
- (vii) 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.
- (viii) 'Certificate of Accreditation' issued by the QCI to the environmental consultant should be included.

The Committee decided that the proponent should prepare EIA/EMP Report based on the above TORs. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The final EIA/EMP alongwith 'Certificate of Accreditation' issued by the QCI should be submitted to the Ministry for obtaining environmental clearance. The Committee noted that public hearing is not required as project site is located in off-shore.

3.7.17. Modernization cum Expansion of Molasses based Distillery (from 30 KLPD to 60 KLPD), Cogeneration Power Plant (from 16 MW to 42 MW) and Sugar (2500 TCD to 5000 TCD) at Arvindnagar, Post Keshegaon, Taluka & District Osmanabad, Maharashtra by **M/s Dr. Baba Sahib Ambedkar Sahakari Sakhar Karkhana Ltd. - regarding TORs**

The project authorities and their consultant (Vasantdada Sugar Institute) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All molasses based distillery and non molasses based distillery (>30 KLD) are listed at S.N. 5(g) under category 'A' and appraised at Central level.

M/s Dr. Baba Sahib ambedkar sahakari sakhar karkhana Ltd.has proposed for Modernization cum expansion of molasses based distillery (from 30 KLPD to 60 KLPD), Cogeneration plant (from 16 MW to 42 MW) and Sugar (2500 TCD to 5000 TCD) at

Arvindnagar, Post Keshegaon, Taluka & District Osmanabad, Maharashtra. Total plot area is 10.65 acres. Total project cost for expansion is Rs. 93.00 Crore. Rs. 19.55 Crore is earmarked towards capital cost for pollution control measures. Distillery, cogeneration power plant and sugar units will be operated for 270 days, 300 days and 210 days.

ESP will be provided to bagasse fired boiler. Water requirement will be 410 m<sup>3</sup>/day for distillery unit. Spent wash will be bio-methanization followed by evaporation in MEE and bio composting to achieve zero effluent discharge. Greenbelt will be developed in 2.65 acres of land. Biogas and bagasse will be used as fuel.

After deliberations, the Committee prescribed the following TORs for undertaking detailed EIA study:

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
2. Executive summary of the project.
3. Detailed breakup of the land area alongwith latest photograph of the area.
4. Present land use based on satellite imagery.
5. Details of site alongwith photographs and information related to environmental setting within 10 km radius of the project site.
6. Regulatory framework.
7. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
8. Information regarding eco-sensitive area such as national park/wildlife sanctuary/ biosphere reserves within 10 km radius of project area.
9. List of existing distillery units in the area alongwith their capacity.
10. Number of working days of the distillery unit, cogeneration plant and sugar unit.
11. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
12. Details of raw material and source of raw material including cereal grains. Availability of molasses and calculation for the molasses requirement in the proposed manufacturing unit.
13. Manufacturing process details of sugar plant, distillery plant and CPP alongwith process flow chart.
14. Sources and quantity of fuel for the boiler. Management of bagasse during the lean season. Details of bagasse storage facility.
15. Action plan to control ambient air quality as per NAAQES Standards for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> as per GSR 826(E) dated 16<sup>th</sup> November, 2009.
16. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub> and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
17. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
18. An action plan to control and monitor secondary fugitive emissions from all the sources.
19. Details of the use of steam from the boiler.
20. Ground water quality around proposed spent wash storage lagoon and the project area. HDPE-lined lagoon should not have more than 30 days storage capacity.

21. Details of water requirement, wastewater generation, water balance chart for sugar, distillery and co-generation plant. Measures for water conservation by recycling and reuse to minimize the fresh water requirement.
22. Source of water supply and 'Permission' from concerned Department/Authority for the drawl of water. Impact of drawl of water on other user should be assessed and included.
23. Measures for conservation and reuse of water should be maximized so as to keep net water consumption to a minimum. Recycle & reuse treated water in cooling tower
24. Hydro-geological study of the area for availability of ground water.
25. Proposed effluent treatment system for sugar, distillery and co-generation plant. Scheme for achieving 'zero' discharge for distillery effluent and 100 m<sup>3</sup>/Ton of sugar regarding water discharge.
26. Details of solid waste management including management plan of disposal of boiler ash.
27. Sufficient land should be earmarked for bio-composting activity and details of bio-composting lining as per CPCB guidelines.
28. Odour management plan should be prepared to control odour from molasses based distillery.
29. Green belt development as per the CPCB guidelines. Layout of greenbelt plant to be submitted.
30. List of flora and fauna in the study area.
31. Noise levels monitoring at five locations within the study area.
32. Traffic study of the area for the proposed projects in respect of existing traffic, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
33. Detailed Environment Management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
34. Details of TOC analyzer to be installed to monitor TOC in the treated effluent.
35. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
36. Alcohol storage and handling area with fire fighting facility as per norms.
37. Provision of foam system for fire fighting to control fire from the alcohol storage tank.
38. Action plan for rainwater harvesting measures at plant site to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
39. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
  - vii) Details of occupational health surveillance programme.
40. Socio-economic development activities should be in place.
41. Note on compliance to the recommendations mentioned in the CREP guidelines.
42. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
43. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
44. Corporate Environmental Responsibility

- (a) 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.
- (b) Does the Environmental 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 report.
45. 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.
46. Does the company have a system of reporting of non compliance / 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.
47. Action plan for post-project environmental monitoring.
48. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
49. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
50. A tabular chart with index for point-wise compliance of above TORs.

The following general points should be noted:

- i. All documents should be properly indexed, page numbered.
- ii. Period/date of data collection should be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter and that raised in Public Hearing/consultation alongwith duly filled in Industry Sector questionnaire. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report where the above issues and the issues raised in the Public hearing have been incorporated.
- vii. 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.

The Committee decided that the project proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the Maharashtra Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns emerged during the Public Hearing/Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP report should be submitted to the Ministry for obtaining environmental clearance.

### 3.7.18. Drilling exploratory & Development wells in Cachar Forward Base, Silchar (PEL & PML blocks) at Gujarat by M/s ONGC Ltd. - **regarding TORs**

Project proponent has informed that the above project proposal has been dropped. The Committee advised them to update the MoEF in writing.

3.7.19. Chlorinated Organic Products Manufacturing Unit at Sy. No. 69, Village Dhanot, Taluka Kalol, District Gandhinagar Gujarat by **M/s Deedy Chemical Pvt. Ltd - regarding TORs**

The project authorities and their consultant gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Deedy Chemical Pvt. Ltd. have proposed for settingup of Chlorinated Organic Products Manufacturing Unit at Sy. No. 69, Village Dhanot, Taluka Kalol, District Gandhinagar Gujarat. Total cost of project is Rs. 8.0 Crore. No ecologically sensitive area, Wildlife sanctuary and historical places located within 10 Km. Total plot area is 15985 m<sup>2</sup>. No court case is pending against the project. No forest land is involved. Following products will be manufactured.:-

S.N.	Products	Quantity (MTPM)
1	Chloro Acetyl Chloride (CAC)	400
2	Tri Chloro Acetyl Chloride (TCAC)	100
3	Tri Chloride Acetic Acid (TCAC)	40
4	Mon Chloro Acetic Acid (MCA)	200
5	Sodium Mono Chloro Acetate (SMCA)	100
6	Mono Chloride	220
7	Acid Chlorides like a) Chloro Benzoyl Chloride b) Propionyl Chloride c) Octenyl Chloride d) Iso Phthaloyl Chloride e) Isobutyryl Chloride f) Valeryl Chloride g) Pivaloyl chloride h) 3 Chloro Propionyl Chloride i) 2 Chloro Propionyl Chloride j) 4 Chloro butyryl chloride k) Chloro Pivaloyl Chloride	200
8	Chlorinated Paraffin Wax (50 %- 70%)	200
<b>Total</b>		<b>1460</b>
S.N.	Name of Products	Quantity (MTPM)
<b>By product</b>		
1	Mother Liquor of MCA	40
2	Hydrochloric Acid (30%)	2400
3	Sodium bi Sulphite (20-30%)	900
4	Total by product	3340

Cyclone followed by Bagfilter alongwith stack of 30m height will be provided to biofuel fired steam boiler (2x1000 Kg/hr) and Thermic fluid heater(2 Nos. x 400000 Kcal). 3 stage water scrubber followed by 2 stage alkali scrubber will be provided to vent of reaction vessels (MCA) to control process emissions viz Cl<sub>2</sub>, HCl and SO<sub>2</sub>. Total fresh water requirement will be 134 m<sup>3</sup>/day and met from ground water source. Total effluent generation

will be 6.5 m<sup>3</sup>/day and treated in ETP. Treated effluent will be recycled / reused for scrubbing. Process waste will be sent to TSDF. Distillation residue will be sent to common incineration facility. Used oil will be sent to registered recyclers.

After detailed deliberations, the Expert Appraisal Committee prescribed the following ToRs for preparation of EIA/EMP:

1. Executive summary of the project
2. Justification of the project.
3. Project location and plant layout.
4. Promoters and their back ground.
5. Regulatory framework
6. A map indicating location of the project and distance from severely polluted area
7. Infrastructure facilities including power sources.
8. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
9. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
10. Present land use based on satellite imagery for the study area of 10 km radius.
11. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
12. Details of the total land and break-up of the land use for green belt and other uses.
13. List of products alongwith the production capacities.
14. Detailed list of raw material required and source, mode of storage and transportation.
15. Manufacturing process details alongwith the chemical reactions and process flow chart.
16. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
17. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
18. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> including HC and VOCs should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
19. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
20. Name of all the solvents to be used in the process and details of solvent recovery system.
21. Design details of ETP, incinerator, if any along with control of Dioxin & Furan, boiler, scrubbers/bag filters etc.
22. Details of water and air pollution and its mitigation plan
23. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
24. An action plan to control and monitor secondary fugitive emissions from all the sources.
25. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
26. Source and permission for the drawl of 134 m<sup>3</sup>/day water from the competent authority. Water balance chart including quantity of effluent generated recycled and reused and discharged.

27. Action plan for 'Zero' discharge of effluent should be included.
28. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
29. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste.
30. Action plan for the management of fly ash generated from boiler should be included. Tie-up or agreement with brick manufacturer to be provided.
31. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
32. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilize all the organic solid waste generated.
33. A copy of 'Memorandum of Understanding' (MoU) signed with coal supplier for imported coal and brick manufacturers for management of fly ash.
34. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
35. Risk assessment for storage for chemicals/solvents.
36. Material safety data sheet of chemicals to be submitted.
37. An action plan to develop green belt in 33 % area.
38. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
39. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
  - vii) Details of occupational health surveillance programme.
40. Socio-economic development activities should be in place.
41. Note on compliance to the recommendations mentioned in the CREP guidelines.
42. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
43. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
44. Corporate Environmental Responsibility
  - (a) 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.
  - (b) Does the Environmental 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 report.
45. 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.
46. Does the company have a system of reporting of non compliance / 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.

47. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
48. Public hearing to be conducted and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
49. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

The Committee prescribed the above ToRs for preparation of EIA/EMP reports. The proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns raised alongwith the replies during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

### 3.7.20. Development of North Karanpura CBM Block NK-CBM-2001/1 at Jharkhand by M/s ONGC Ltd. - regarding TORs

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All the projects related to offshore and onshore Oil and Gas exploration, development and production are listed in para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at central level.

M/s ONGC Ltd. has proposed for development of North Karanpura CBM Block NK-CBM-2001/1 at Jharkhand. Block has been awarded in January, 2002 to Consortium of ONGC (80%) IOC (20%) operator ONGC. Total block area is 340 sq. km. No forest land is involved. Total no. of Wells to be drilled is 74, which includes development wells (68 Nos.) and Assessment Wells (6 Nos.). Peak gas production from one production hub( Sub-sector -1) will be 1.146 LCMD. Water production will be 60 m<sup>3</sup>/day/well. Peak gas production from one production hub (Sub-sector -2) will be 2.273 LCMD. Water production will be 50 m<sup>3</sup>/day/well. Water generated will be collected in the water gathering system and will be taken to the ponds. Major part of the produced water will be used for further drilling of wells.

After deliberations, the Committee prescribed the following TORs for the preparation of EIA/EMP report :

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
2. Executive summary of the project.
3. Details of existing land use pattern within the proposed CBM block. (Cropping pattern, forest, agriculture land, wasteland etc, flora and fauna etc.)
4. Details of land acquisition w.r.t. private land, Govt. land, agriculture land, mode of compensation for land losers due to land acquisition and R & R etc.
5. Information regarding eco-sensitive area such as national park/wildlife sanctuary/ biosphere reserves within 10 km radius of project area.
6. Details of forest land involved in the proposed project. A copy of forest clearance letter, if applicable.
7. Permission from the State Forest Department regarding the impact of the proposed drilling on the surrounding reserve forests, if applicable.
8. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the JSPCB.
9. Confirmation with documentary support indicating allocation of the Block solely to M/s ONGC.
10. Is the block allocated for mining also? If yes, name of the company.
11. Comprehensive proposal covering surface facilities, pipeline/gas collection system, utilities etc.
12. Design details of all the facilities including CGS, GGS, pipe network, utilities and technology to be used for CBM project.
13. Location of core holes outside the forest area. The well sites shall be selected at more than 1.5 km away from the habitation. Forest and revenue land shall be avoided as far as possible.
14. Baseline data collection for air, water and soil for one season leaving the monsoon season in an area of 10 km radius with centre of CBM Field as its centre covering the area of all proposed drilling wells. It includes;
  - (i) Topography of the project site.
  - (ii) Ambient Air Quality monitoring at 10 locations for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, VOCs, Methane and non-methane HC.
  - (iii) Soil sample analysis (physical and chemical properties) at the areas located at 5 locations.
  - (iv) Ground and surface water quality in the vicinity of the proposed wells site.

- (v) Climatology and Meteorology including wind speed, wind direction, temperature rainfall relative humidity etc.
  - (vi) Measurement of Noise levels ( day and night both) within 1 km radius of the proposed wells.
  - (vii)Vegetation and land use; Animal resources
15. Action plan to control ambient air quality as per NAAQES Standards for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, CO and NO<sub>x</sub> as per GSR 826(E) dated 16<sup>th</sup> November, 2009.
  16. Actual source and 'Permission' for the drawl of water from the concerned authority.
  17. Action plan for management of produced water.
  18. Details of wastewater treatment method should be included.
  19. Reuse of produced water for drinking after treatment / pisciculture / ground water recharge / irrigation / coal washing/power generation etc.
  20. Extent and duration of flaring of methane gas during exploration.
  21. Analysis of gas w.r.t. H<sub>2</sub>S.
  22. Noise monitoring should be carried out at the nearest villages.
  23. Measures to control noise pollution.
  24. Assessment of generation of solid and hazardous waste and its characteristics from the operator.
  25. Proposed measures for treatment and disposal of solid and hazardous waste.
  26. Storage of chemicals at the site, proposed preventive measures for spillage and accidents.
  27. Developing emergency response plan and disaster management plan.
  28. Capping of core holes in case of emergency.
  29. Statistical data of accident occurred so far during CBM exploration.
  30. Identification of hazard prone operations and asses the damage.
  31. The post project closures plan, if the project is not economically viable.
  32. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
  33. Details of occupational health surveillance programme.
  34. Social impact assessment should be carried out.
  35. Action plan for post-project environmental monitoring.

### **36. Corporate Environmental Responsibility**

(a) 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.

(b) Does the Environmental 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 report.

37. 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.

38. Does the company have a system of reporting of non compliance / 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.

39. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.

40. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.

The following general points should be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

It was decided that TORs prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the Generic Structure of EIA given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report should be submitted to the Jharkhand State Pollution Control Board for public hearing in all the districts. The issues emerged and response to the issues raised during should be incorporated in the EIA report. The final EIA/EMP alongwith Certificate of Accreditation issued by the QCI should be submitted to the Ministry for obtaining environmental clearance.

3.7.21. Grain based Distillery (45 KLPD) at Gat No. 990/1, Village Beradwadi, Tehsil Gadhinglaj, District Kolhapur, Maharashtra by **M/s Gadhinglaj Agro Alcochem Ltd.**  
**- regarding TORs**

The project authorities and their consultant (Saitech Research &Development Organisation) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of

References for the preparation of EIA/EMP. All the non molasses based Distillery Units (more than 30 KLPD) are listed at S.N. 5(g) under Category 'A'.

M/s Gadhinglaj Agro Alcochem Ltd has proposed for setting up of grain based distillery (45 KLPD) at Gat No. 990/1, Village Beradwadi, Tehsil Gadhinglaj, District Kolhapur, Maharashtra. Total plot area is 3.00 ha. Total project cost is Rs. 48.27 crores. No forest land is involved. No court case/litigation is pending against the project. Following products will be manufactured:

S.N.	Name of the Product	Quantity
1	Rectified Spirit (RS)	45 KL/D
2	Extra Neutral Alcohol (ENA)	40 KL/D

By products

S.N.	Name of the By- Product	Quantity
1	Distiller's Wet Grains with Solubles (DWGS)	117 MT/D
2	Disillery's Dry Grains with Solubles (DDGS)	40 MT/D
3	Fusel Oil	93 LIT/D

Rice, sorghum, Maiza & Bajra will be used as raw materials. Bagfilter alongwith stack height of 50 m will be provided to coal/biomass fired boiler. Stack ht. of 5 m will be provided to DG Sets (2X600 KVA). Total fresh water requirement will be 610 m<sup>3</sup>/day and met from River Hiranyakehi. Spent wash will be evaporated in MEE to form DWGS and to achieve zero discharge. Fly ash will be sent to brick manufactures. Used oil will be sent to authorized recyclers/ preprocessors. Greenbelt will be developed in 0.76 ha. Coal (75 TPD) /Bagasse (150 TPD) will be used as fuel.

After deliberations, the Committee prescribed the following TORs for the preparation of draft EIA/EMP:

1. Executive summary of the project.
2. Detailed break-up of the land area alongwith latest photograph of the area.
3. Present land use based on satellite imagery and details of land availability for the project alongwith supporting document.
4. Details of site and information related to environmental setting within 10 km radius of the project site.
5. A copy of lease deed or allotment letter, if land is already acquired.
6. Information regarding eco-sensitive areas such as national park/wildlife sanctuary/ biosphere reserves within 10 km radius of project area.
7. List of existing distillery units in the study area alongwith their capacity and sourcing of raw material.
8. Details of proposed products alongwith manufacturing capacity.
9. Number of working days of the distillery unit.
10. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
11. Details of raw materials, its source & availability of all raw materials including cereal grains requirement.
12. Sources and quantity of fuel (rice husk/coal etc.) for the boiler. Measures to take care of SO<sub>2</sub> emission. Stack height should be based on maximum sulphur content in the coal. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted.

13. Storage facility for raw materials, prepared alcohol, fuel and fly ash.
14. Action plan to control ambient air quality as per NAAQES Standards for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> as per GSR 826(E) dated 16<sup>th</sup> November, 2009.
15. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
16. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
17. An action plan to control and monitor secondary fugitive emissions from all the sources.
18. Details of the use of steam from the boiler.
19. Ground water quality around proposed spent wash storage lagoon and the project area.
20. Details of water requirement, water balance chart for grain based Distillery and co-generation plant. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
21. Fresh water requirement should be restricted upto 10 KI/KI of alcohol for grain based distillery
22. Permission of withdrawal of water from ground water Board.
23. Proposed effluent treatment system for grain based distillery (spent wash and spent lees) alongwith utility wastewater including CPP and scheme for achieving zero discharge.
24. Spent wash generation should not exceed 6 KL/KL of alcohol production. Details of the spent wash treatment for grain based distillery based distillery.
25. Capacity for spent wash holding tank and action plan to control ground water pollution.
26. Dryer shall be installed to dry DWGS.
27. Layout for storage of rice husk/biomass.
28. Details of solid waste management including management of boiler ash.
29. Green belt development as per the CPCB guidelines.
30. List of flora and fauna in the study area.
31. Noise levels monitoring at five locations within the study area.
32. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
33. EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
34. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
35. Alcohol storage and handling area fire fighting facility as per norms.
36. Provision of Foam System for fire fighting to control fire from the alcohol storage tank.
37. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
38. Details of occupational health surveillance programme.
39. Details of socio-economic welfare activities.
40. Traffic study of the area for the proposed projects in respect of existing traffic, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
41. Action plan for post-project environmental monitoring.

42. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
43. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
44. A tabular chart with index for point-wise compliance of above TORs.

The following general points should be noted:

- i. All documents should be properly indexed, page numbered.
- ii. Period/date of data collection should be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter and that raised in Public Hearing/consultation alongwith duly filled in Industry Sector questionnaire. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report where the above issues and the issues raised in the Public hearing have been incorporated.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

The Committee prescribed the above TORs for preparation of EIA/EMP reports. The proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns raised alongwith the replies during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

### 3.7.22. Manufacturing of Particle Boards (4000 m<sup>3</sup>/month) with Captive Resin Unit (Urea formaldehyde Resin 475 MTPM) at Sy. No. 160/P1/P2, Village Lalpur, Taluka Morbi, District Rajkot, Gujarat by M/s Rainbow Laminate Pvt. Ltd.- **regarding TORs**

The project authorities and their consultant gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All the Synthetic Organic Chemical Units located outside industrial area/estate are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Rainbow Laminate Pvt. Ltd. has proposed for Manufacturing of Particle Boards (4000 m<sup>3</sup>/month) with captive resin unit (Urea formaldehyde Resin 475 MTPM) at Sy. No. 160/P1/P2, Village Lalpur, Taluka Morbi, District Rajkot, Gujarat. Total plant area is 10411 m<sup>2</sup>. Project cost is Rs 4.5 Crore and cost of pollution control measures will be around 0.5 Crore. No ecologically sensitive area wildlife sanctuary exist within 10 Km of the project site.

Multicyclone will be provided to liquate / coal fired boiler. Total fresh water consumption from the ground water source will be 11.5 m<sup>3</sup>/day. Industrial effluent generation will be 6m<sup>3</sup>/day, which will be treated in ETP and evaporated into evaporator. No effluent will be discharged outside the factory premises and unit will achieve zero discharge. ETP

sludgewill be sent to TSDf. Used lubricating oil will be sent to registered recycler. Power requirement will be 800 KVA and sourced from state Electricity Grid. Lignite/ coal (28.8 TPD) will be consumed.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of EIA/EMP:

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework
5. A map indicating location of the project and distance from severely polluted area
6. Project location and plant layout.
7. Infrastructure facilities including power sources.
8. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
9. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
10. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
11. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
12. Permission, if any, from the State Forest Department
13. Details of the total land and break-up of the land use for green belt and other uses.
14. List of products alongwith the production capacities.
15. Detailed list of raw materials required and source, mode of storage and transportation.
16. Manufacturing process details alongwith the chemical reactions and process flow chart.
17. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
18. Ambient air quality monitoring at 6 locations within the study area of 5 km. aerial coverage from project site as per NAAQES notified on 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
19. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
20. Air pollution control measures viz. Multi-cyclone and bag filter etc. Shall be proposed for the effective control of gaseous emissions within permissible limits.
21. Control methanol emission from drying section.
22. Details of VOC monitoring system in the working zone environment, if any.
23. Name of all the solvents to be used in the process and details of solvent recovery system.
24. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
25. Details of water and air pollution and its mitigation plan.
26. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
27. An action plan to control and monitor secondary fugitive emissions from all the sources.
28. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.

29. Permission for the drawl of 11.5 m<sup>3</sup>/day ground water from CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
30. Action plan for 'Zero' discharge of effluent shall be included.
31. Treatment of phenol in the effluent, if any..
32. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
33. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
34. Explore the possibility to use fuel other than wood.
35. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
36. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
37. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
38. A write up on "Safe Practice" followed for methanol handling, storage, transportation and unloading to be submitted.
39. A write up on "Treatment of workers affected by accidental spillage of methanol/ phenol".
40. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
41. An action plan to develop green belt in 33 % area
42. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
43. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Thresh Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
44. Details of occupational health surveillance programme.
45. Socio-economic development activities shall be in place.
46. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
47. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
48. Corporate Environmental Responsibility
  - (a) 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.
  - (b) Does the Environmental 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 report.
49. 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.

50. Does the company have a system of reporting of non compliance / 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.
51. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
52. Public hearing to be conducted and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
53. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
- vii. 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 shall also be followed.
- viii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

The Committee decided that the proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns emerged during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

3.7.23. Grain based Distillery (60 KLPD) alongwith Cogeneration Power Plant (3.0 MW) at Village Mahanad, Block Polba-Dadpur, Polba, District Hoogly, West Bengal **by M/s Alpine Distilleries Pvt. Ltd.**

The project authorities and their consultant (Ace Engineers and Consultants) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All the non-molasses based Distillery Units (more than 30 KLPD) are listed at S.N. 5(g) under Category 'A'.

M/s Alpine Distilleries Pvt. Ltd have proposed for setting up of grain based distillery(60 KLPD) alongwith Cogeneration Power Plant (3.0 MW) at Village Mahanad, Block Polba-Dadpur, Polba, District Hoogly, West Bengal. Total plot area is 4.5 ha. Total project cost is Rs. 602 crores. Rs. 10 crores is earmarked towards capital cost for pollution control measures. No eco-sensitive area such as national park/wild life sanctuary / biosphere

reserve /reserve forest is located within 10Km. No court case/litigation is pending against the project.

ESP will be provided to Coal/rice husk fired boiler to control particulate emissions. Total fresh water requirement from ground water source will be 655 m<sup>3</sup>/day spent wash will be centrifuged in decanter. Thin slop will be evaporated in MEE and concentrated will be mixed with wet cake to form DWGS. Spentlees and MEE condensate will be treated in ETP comprising UASBR followed by aerobic treatment and tertiary treatment. No effluent will be discharged outside the factory premises. flyash will be sent to brick manufacturers/used oil will be sent to authorized recyclers.Greenbelt will be developed in 1.5 ha land.

After deliberations, the Committee prescribed the following TORs for the preparation of draft EIA/EMP:

1. Executive summary of the project.
2. Detailed break-up of the land area alongwith latest photograph of the area.
3. Present land use based on satellite imagery and details of land availability for the project alongwith supporting document.
4. Details of site and information related to environmental setting within 10 km radius of the project site.
5. A copy of lease deed or allotment letter, if land is already acquired.
6. Information regarding eco-sensitive areas such as national park/wildlife sanctuary/ biosphere reserves within 10 km radius of project area.
7. List of existing distillery units in the study area alongwith their capacity and sourcing of raw material.
8. Details of proposed products alongwith manufacturing capacity.
9. Number of working days of the distillery unit.
10. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
11. Details of raw materials, its source & availability of all raw materials including cereal grains requirement.
12. Sources and quantity of fuel (rice husk/coal etc.) for the boiler. Measures to take care of SO<sub>2</sub> emission. Stack height should be based on maximum sulphur content in the coal. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted.
13. Storage facility for raw materials, prepared alcohol, fuel and fly ash.
14. Action plan to control ambient air quality as per NAAQES Standards for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> as per GSR 826(E) dated 16<sup>th</sup> November, 2009.
15. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
16. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
17. An action plan to control and monitor secondary fugitive emissions from all the sources.
18. Details of the use of steam from the boiler.
19. Ground water quality around proposed spent wash storage lagoon and the project area.
20. Details of water requirement, water balance chart for grain based Distillery and co-generation plant. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.

21. Fresh water requirement should be restricted upto 10 KI/KI of alcohol for grain based distillery
22. Permission of withdrawal of water from Central Ground Water Authority.
23. Proposed effluent treatment system for grain based distillery (spent wash and spent lees) alongwith utility wastewater including CPP and scheme for achieving zero discharge.
24. Spent wash generation should not exceed 6 KL/KL of alcohol production. Details of the spent wash treatment for grain based distillery based distillery.
25. Capacity for spent wash holding tank and action plan to control ground water pollution.
26. Dryer shall be installed to dry DWGS.
27. Layout for storage of rice husk/biomass.
28. Details of solid waste management including management of boiler ash.
29. Green belt development as per the CPCB guidelines.
30. List of flora and fauna in the study area.
31. Noise levels monitoring at five locations within the study area.
32. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
33. EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
34. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
35. Alcohol storage and handling area fire fighting facility as per norms.
36. Provision of Foam System for fire fighting to control fire from the alcohol storage tank.
37. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
38. Details of occupational health surveillance programme.
39. Details of socio-economic welfare activities.
40. Traffic study of the area for the proposed projects in respect of existing traffic, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
41. Action plan for post-project environmental monitoring.
42. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
43. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
44. A tabular chart with index for point-wise compliance of above TORs.

The following general points should be noted:

- i. All documents should be properly indexed, page numbered.
- ii. Period/date of data collection should be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter and that raised in Public Hearing/consultation alongwith duly filled in Industry Sector questionnaire. The index of the final EIA-EMP report must

indicate the specific chapter and page no. of the EIA-EMP Report where the above issues and the issues raised in the Public hearing have been incorporated.

- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

The Committee prescribed the above TORs for preparation of EIA/EMP reports. The proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns raised alongwith the replies during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

3.7.24. Fertilizer unit at Pulgaon, Village Gunjkheda, District Wardha of Maharashtra by M/s BEC Fertilizers (Pulgaon Unit). - **regarding TORs**

The proponent did not attend the meeting. The Committee decided to consider the project as and when requested by the proponent.

3.7.25. Greenfield Soda Ash Plant (1500 TPD) alongwith Captive Power Plant (50 MW) at Village Kuranga, Taluka Dwraka, District Jamnagar, Gujarat by **M/s RSPL Ltd - regarding TORs**

The project authorities and their consultant( NEERI ) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All the Soda Ash Industries are listed at S.N. 4(e) under Category 'A' and appraised at the Central level.

M/s RSPL Ltd has proposed for setting up of greenfield soda ash plant (1500 TPD) alongwith CPP (50 MW) at Village Kuranga, Taluka Dheraka, District Jamnagar, Gujarat. Gaga wildlife sanctuary located at a distance of 5.5 Km. kuranga lake is located at a distance of 3.5 Km. No forest land is involved. Reserve forest is located at a distance of 500 m. this site was finalized after carrying out comparative study of 4 sites. Proposed site was found most suitable sites for the proposed project due to availability of sufficient land, no forest land within the indetified project area and no mangroves eco-system. Arabian sea is located at 1.0 Km from the project site. CRZ demarcation has been carried out by M/s institute of Remote sensing, Anna University, Chennai, which indicates that project boundary is outside the CRZ area. Plot boundary is located well beyond 500 m of the HTL. About 800 acres land is required for the proposed project. Total project cost is Rs. 1800.00 Crores. No litigation is pending against the project. Following products will be manufactured:-

S.N.	Plant	Capacity
1	Soda Ash plant	Light soda Ash 1500 TPD Dense soda ash 770 TPD
2	CPP	50 MW 50 MW
3	DG Set	6MW

Limestone (2700 TPD) from captive limestone mines, salt from captive salt works, coal from open market, ammonia and sodium sulphide will be used as raw materials. Coal/lignite from GMDC & imported coal will be used in CPP will be used as raw materials.

Scrubber & ESP in lime kilns, scrubber in Ammonia recovery system, Bag filter in lime grinding system, scrubber in calcinations/ filtration units and densification units will be provided to control particulate and gas emissions. ESP will be provided in coal/lignite fired boiler. The water requirement will be met from sea water and other nearby sweet water source. The total sea water requirement for the project is about 6,00,000 m<sup>3</sup>/day as well as required for cooling purpose as well as for desalination purpose. Effluent will be diluted with sea water and then disposed into the Arabian sea at a designated point as recommended by the Competent Authorities and study conducted by NIO. Sewage will be treated in STP. ETP sludge will be sent to TSD site. Used oil will be sold to authorized recyclers. Fly ash will be sent to cement manufacturing unit /brick manufacturing unit.

After detailed deliberations, the Expert Appraisal Committee (Industry) prescribed following Terms of reference for undertaking detailed EIA/EMP study:

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework
5. Project location and plant layout.
6. Infrastructure facilities including power sources.
7. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
8. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
9. Present land use based on satellite imagery for the study area of 10 km radius.
10. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
11. Recommendation alongwith map authenticated by Chief Wildlife Warden indicating Gaga Wildlife Sanctuary. A copy of application submitted to National Wildlife Board for wildlife clearance.
12. Forest Clearance in case the forest land is involved.
13. CRZ clearance, if applicable.
14. Details of the total land and break-up of the land use for green belt and other uses.
15. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
16. List of products alongwith the production capacities and list of solvents and its recovery plan.

17. Detailed list of raw material required and source, mode of storage and transportation.
18. Manufacturing process details of all the plants including power plant, chemical reactions and mass balance.
19. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
20. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> including HC and VOCs should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests/wild life sanctuary. Data for water and noise monitoring should also be included.
21. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
22. Design details of ETP, incinerator, if any, alongwith control of Dioxin & Furan, boiler, scrubbers/bag filters etc.
23. Details of water and air pollution and its mitigation plan
24. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
25. An action plan to control and monitor secondary fugitive emissions from all the sources.
26. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
27. Permission from the State Government for drawl of 6,00,000 m<sup>3</sup>/daysea water from the competent authority. Water balance chart including quantity of effluent generated recycled and reused and discharged. Action plan for Zero discharge of effluent as proposed should be included.
- 28 Marine EIA and EMP for sea water intake and effluent disposal.
29. Ground water monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
30. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler should be included.
31. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
32. Details of captive land fill alongwith design details as per CPCB guidelines, if any.
33. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF.

34. Risk Assessment; Maximum Credible Accident ( MCA) Analysis; Risk Mitigation Measures and Disaster Management Plan.
35. An action plan to develop green belt in 33 % area
36. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
37. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Thresh Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
  - vii) Details of occupational health surveillance programme.
38. Socio-economic development activities should be in place.
39. Note on compliance to the recommendations mentioned in the CREP guidelines.
40. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
41. EMP should include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
42. Total capital cost and recurring cost/annum for environmental pollution control measures.

### **43 Corporate Environmental Responsibility**

- (a) 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.
- (b) Does the Environmental 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 report.
- 44 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.
- 45 Does the company have a system of reporting of non compliance / 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.
46. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.

47. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
48. A tabular chart with index for point wise compliance of above TORs.

The following general points should be noted:

- i. All documents should be properly indexed, page numbered.
- ii. Period/date of data collection should be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter and that raised in Public Hearing/consultation alongwith duly filled in Industry Sector questionnaire. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report where the above issues and the issues raised in the Public hearing have been incorporated.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the Generic Structure of EIA given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report should be submitted to the Gujarat Pollution Control Board for public hearing. The issues emerged and response to the issues raised during should be incorporated in the EIA report. The final EIA/EMP alongwith Certificate of Accreditation issued by the QCI should be submitted to the Ministry for obtaining environmental clearance.

### 3.7.26. Expansion of Bulk Drug Manufacturing Unit at Village Keshwana Rajpoot, Tehsil Kotputli, District Jaipur, Rajasthan by M/s Otsuka Chemicals (India) Pvt. Ltd.- **regarding TORs**

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, project site is located within 10 Km of interstate boundary and treated as category 'A' project due to applicability of general condition and appraised at Central level.

M/s Otsuka Chemicals (India) Pvt. Ltd. have proposed for expansion of bulk drug manufacturing unit at Village Keshwana Rajpoot, Tehsil Kotputli, District Jaipur, Rajasthan. Interstate boundary (Haryana) is located within 10 Km. Total plot area is 88000 m<sup>2</sup>.

Expansion will be done within existing plot area and no additional land is required. No court case is pending against the project. Expansion will be done in following two phases.

Phase I:

- GCLE: Production increase from existing 200 MTPa to 450 MTPA through (R&D based) yield improvement, reducing losses etc.
- IOHEXOL (new product): 250 MTPA

Phase II:

- GCKE: Production increased from 450 MTPA to 700 MTPA through installation of new equipments like reactors, centrifuges, dryers, distillation system and also reducing batch time cycle etc.

Scrubber will be provided to process vents to control process emissions. Emissions will be created from DG Sets (4 X 1500 KVA), Incinerator (Oil fired), 2 Coal fired boilers. Existing water consumption is 255 m<sup>3</sup>/day and met from ground water source. Water requirement for phase-I will be 100 m<sup>3</sup>/day. Water requirement for Phase II will be assessed. Effluent will be treated in ETP. Incinerator ash and chemical sludge will be sent to TSDF. Used / spent oil will be sent to registered recyclers.

Power requirement will be increased from 2150 KVA to 4100 KVA after expansion. Coal boiler (2 Nos) will be installed. Additional DG Set (1 No) will be installed.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of EIA/EMP report:

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
2. Recommendation on project proposal from Gujarat Pollution Control Board to be submitted alongwith the EI report.
3. Executive summary of the project
4. Justification of the project.
5. Promoters and their back ground.
6. Regulatory framework.
7. A map indicating location of the project and distance from severely polluted area.
8. Project location and plant layout.
9. Infrastructure facilities including power sources.
10. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
11. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
12. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the GPCB.
13. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.

14. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
15. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
16. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
17. Details of the total land and break-up of the land use for green belt and other uses.
18. List of products alongwith the production capacities.
19. Detailed list of raw material required and source, mode of storage.
20. Manufacturing process details alongwith the chemical reactions and process flow chart.
21. Action plan for the transportation of raw material and products.
22. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
23. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
24. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, NH<sub>3</sub> including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
25. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
26. Name of all the solvents to be used in the process and details of solvent recovery system.
27. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
28. Details of water and air pollution and its mitigation plan
29. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
30. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
31. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
32. Permission from CGWA/SGWA for the drawl of ground water. Water balance chart for existing and proposed project including quantity of effluent generated recycled and reused and effluent discharge.
33. Attempt to be made for reduction for usage of water.
34. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
35. Zero discharge effluent concepts to be adopted.
36. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
37. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
38. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
39. Material Safety Data Sheet for all the Chemicals are being used/will be used.
40. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.

41. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
42. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
43. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
53. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Thresh Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
44. Details of occupational health surveillance programme.
45. Socio-economic development activities shall be in place.
46. Note on compliance to the recommendations mentioned in the CREP guidelines.
47. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
48. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
49. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 50. Corporate Environmental Responsibility**
  - (a) 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.
  - (b) Does the Environmental 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 report.
51. 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.
52. Does the company have a system of reporting of non compliance / 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.
53. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
54. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.

- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

It was decided that TORs prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of detailed report for the above mentioned project in addition to all the relevant information as per the Generic Structure of EIA given in Appendix III and IIIA in the EIA Notification, 2006. After detailed deliberations, the Committee exempted the public hearing as per Section 7 (i), III Stage (3), Para (i) (b) of EIA Notification 2006, subject to submission of authentic document from the State Govt. indicating that the project is located in the notified industrial area. The final EIA/EMP report shall be submitted to the Ministry for obtaining environmental clearance.

3.7.27. Expansion of Iron Ore Pelletization, Sinter Plant, SMS/MS Billet, Seamless pipe, MS bars/Rods, Oxygen Gas in the Existing Plant at Village Marakuta, Tehsil & District Jharsuguda, Odisha by M/s MSP Metallics Limited- **regarding TORs.**

The project authorities and their consultant( Pioneer Enviro Laboratories and Consultant) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. The steel plants are listed at S.No. 3(a) in primary metallurgical industry under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s MSP Metallics Limited has proposed for expansion of Iron Ore Pelletization, Sinter Plant, SMS/MS Billet, Seamless pipe, MS bars/Rods, Oxygen Gas in the Existing Plant at Village Marakuta, Tehsil & District Jharsuguda, Odisha. Total land acquired is 250 acres. No additional land is envisage. No forest land is involved. No court case/litigation is pending against the project. MoEF vide letter no. J-11011/494/2007-Ia II (I) dated 13<sup>th</sup> July, 2009 has accorded environmental clearance for the existing project. Environment Following will be manufactured:-

S.N.	Plant/Product	EC Obtained	Existing Set up (in LTPA)	NOC of SPCB obtained (in LTPA)	Remaining part of EC (in LTPA)	Facilities Proposed for Surrender (in LTPA)	Additional of Facilities (in LTPA)	After present proposal (LTPA)
1	Sponge Iron	9.94	2.40 8X 100 TPD	0.90 1x300 TPD	6.64 4X550 TPD	4.22 1x300 TPD 2x550 TPD	---	5.72 (8X100 TPD 1x300 TPD 2x550 TPD)
2	Iron ore Pellet	6.00	6.00	--	-		6.00	12.0
3	Iron ore Sinter	4.60	4.60 (40 sq.mt)	--	--	--	4.60	9.20
4	MBF/Pig Iron	10.60	1.88 1x225 CM	2.50 1X300 CM	6.22 2x380 CM	--	--	10.60
5	SMS/M.S.Billet	10.50	2.60 2X30	--	7.90	--	4.5	14.50

			MT/IF					
6	Seamless Pipe	--	--	--	--	--	3.00	3.00
7	TMT bars & Rod	--	--	--	--	--	2.40	2.40
8	Coal Washery	15.00	7.00	--	8.00	8.00	--	7.00
9	Coke Ovan	6.00	0.24	2.40 (1.2 x2)	3.36	1.00	--	5.00
10	CPP / Power	85 MW	24 MW	25 MW	36 MW	--	--	60 MW
			8 MW-WHRB	17 MW-WHRB	35MW-WHRB	20 MW (WHRB)	--	35 MW
			16 MW-FBC	1 MW-FBC	1 MW-FBC	--	--	25 MW
11	Oxygen gas	--	--	--	--	--	465.7 Lakh NM3 (~6000 M3/hr)	465.7 Lakh NM3 (~6000 M3/hr)

Bagfilter, ESP and dust suppression system will be provided to Pelletization plant. Bagfilter, multicyclone and dust suppression system will be provided to Sinter Plant. Bag filter will be provide to coke oven. Integrateddust extraction system using bagfilter will be provided to SMS. Total water requirement will be 401520 m3/day after expansion. No additional waster will be required. Total power requirement will be 38.99 MW after expansion, which will be sourced from CPP (24 MW) and public supply.

After detailed deliberations, the Committee prescribed following TORs for undertaking detailed EIA/EMP study:

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
2. Executive summary of the project
3. Photographs of the proposed plant area.
4. A line diagram/flow sheet for the process and EMP
5. Coal linkage documents
6. A copy of the mutual agreement for land acquisition signed with land oustees.
7. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. A photograph of the site should also be included.
8. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
9. Topography of the area should be given clearly indicating whether the site requires any filling. If so, details of filling, quantity of fill material required, its source, transportation etc. should be given.
10. Location of national parks/wildlife sanctuary/reserve forests within 10 km. radius should specifically be mentioned. A map showing land use/land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.

11. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
12. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates of the plant site as well as ash pond with topo sheet should also be included.
13. Details and classification of total land (identified and acquired) should be included.
14. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
15. Permission from the tribals, if tribal land has also to be acquired along with details of the compensation plan.
16. Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department. .
17. A list of industries containing name and type in 25 km radius should be incorporated.
18. Residential colony should be located in upwind direction.
19. List of raw material required, analysis of all the raw materials and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
20. Petrological and Chemical analysis and other chemical properties of raw materials used (with GPS location of source of raw material) i.e. ores, minerals, rock, soil, coal, iron, dolomite quartz etc. using high definition and precision instruments mentioning their detection range and methodology such Digital Analyzers, AAS with Graphite furnace, ICPMS, MICRO-WDXRF, EPMA, XRD, Nano studies or at least as per ISO-10500 and WHO norms. These analysis should include trace element and metal studies like Cr (vi) Ni, Fe, As, Pb, Zn, Hg, Se, S etc. Presence of radioactive elements (U, Th etc.), if applicable, should also be included..
21. Petrography, grain size analysis and Major element analysis of raw material and soil from project site and raw material should be done on the same parameters along with analysis for SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, MgO, MnO, K<sub>2</sub>O, CaO, FeO, Fe<sub>2</sub>O<sub>3</sub>, P<sub>2</sub>O<sub>5</sub>, H<sub>2</sub>O, CO<sub>2</sub>.
22. If the rocks, ores, raw material has trace elements their petrography, ore microscopy, XRD, elemental mapping EPMA, XRF is required to quantify the amount present in it and hence future risk involved while using it and management plan.
23. Action plan for excavation and muck disposal during construction phase.
24. Studies for fly ash, muck, slurry, sludge material disposal and solid waste generated, if the raw materials used has trace elements and a management plan should also be included.
25. Manufacturing process details for all the plants should be included.
26. Mass balance for the raw material and products should be included.
27. Energy balance data for all the components of steel plant including proposed power plant should be incorporated.
28. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
29. Data generated in the last three years i.e. air, water, raw material properties and analysis (major, trace and heavy metals), ground water table, seismic history, flood hazard history etc.
30. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
31. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.

32. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
33. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
34. Air quality modelling for steel plant for specific pollutants needs to be done. APCS for the control of emissions from the kiln and WHRB should also be included to control emissions within 50 mg/Nm<sup>3</sup>.
35. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be included.
36. Ambient air quality monitoring modelling along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
  - xii) Emissions (g/second) with and without the air pollution control measures
  - xiii) Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height) on hourly basis
  - xiv) Model input options for terrain, plume rise, deposition etc.
  - xv) Print-out of model input and output on hourly and daily average basis
  - xvi) A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
  - xvii) Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
  - xviii) Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
  - xix) No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
  - xx) Graphs of monthly average daily concentration with down-wind distance
  - xxi) Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
  - xxii) Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
37. A plan for the utilization of waste/fuel gases in the WHRB for generating power have to be set out.
38. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided. The alternate method of raw material and end product transportation should also be studied and details included.
39. One season data for gaseous emissions other than monsoon season is necessary.
40. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> May, 2008.
41. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
42. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included. Information regarding surface hydrology and water regime should be included.
43. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.

44. Ground water modelling showing the pathways of the pollutants should be included
45. Column leachate study for all types of stockpiles or waste disposal sites at 20°C-50°C should be conducted and included.
46. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
47. Permission for the drawl of water from the State Irrigation Department or concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
48. A note on the impact of drawl of water on the nearby River during lean season.
49. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
50. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean River discharge as well as flood occurrence frequency.
51. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
52. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
53. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
54. Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from any other source should be included.
55. The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, and lakes), sub-surface and ground water with a monitoring and management plans.
56. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
57. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly slag from all the sources, char and fly ash. Copies of MOU regarding utilization of ash should also be included.
58. Details of evacuation of ash, details regarding ash pond impermeability and whether it would be lined, if so details of the lining etc. need to be addressed.
59. A note on the treatment, storage and disposal of all type of slag should be included. Identification and details of land to be used for SMS slag disposal should be included. Details of secured land fill as per CPCB guidelines should also be included.
60. End use of solid waste and its composition should be covered. Toxic metal content in the waste material and its composition should also be incorporated particularly of slag.
61. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
62. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. should be included. The green belt should be around the project

- boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
63. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
  64. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
  65. Occupational health:
    - f) Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
    - g) Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
    - h) Annual report of health status of workers with special reference to Occupational Health and Safety.
    - i) Plan and fund allocation to ensure the occupational health & safety of all contracts and sub-contract workers.
  66. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
  67. Impact of the project on local infrastructure of the area such as road network and whether any additional infrastructure needs to be constructed and the agency responsible for the same with time frame.
  68. Environment Management Plan (EMP) to mitigate the adverse impacts due to the project along with item wise cost of its implementation. Total capital cost and recurring cost/annum for environmental pollution control measures should be included.
  69. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines must be prepared.
  70. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on public hearing issues and item-wise details along with time bound action plan should be included. Socio-economic development activities need to be elaborated upon.
  71. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart.
  72. A note on identification and implementation of Carbon Credit project should be included.
  73. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof should also be included.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee-1 (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation should be provided. The draft EIA/EMP report shall be submitted to the Odisha State Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

The TORs prescribed shall be valid for a period of two years for submission of the EIA/EMP reports along with Public Hearing Proceedings

3.7.28. Synthetic Organic Chemicals (low Volume API) Manufacturing Unit at Village Maan, Tehsil Mulshi, District Pune, Maharashtra by M/s Pegasus Lab Pvt. Ltd.. - **regarding TORs**

The project authorities and their consultant gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Pegasus Lab Pvt. Ltd. have proposed for setting up of Synthetic Organic Chemicals (low Volume API) Manufacturing Unit at Village Maan, Tehsil Mulshi, District Pune, Maharashtra. Total plot area is 4960 m<sup>2</sup>. River Mula is flowing at a distance of 6 Km. No heritage point/biosphere reserve/ national park/ wildlife sanctuary are located within 10 Km from the project site. No forest land is involved. No court case/litigation is pending against the project. Following products will be manufactured:

S.N.	Name	Kg/yr	Therapeutic Use
1	Misoprostol	25.00	<ul style="list-style-type: none"> <li>• Prevention of gastric ulcer</li> <li>• Induction of Labour</li> <li>• Medical termination of pregnancy</li> <li>• Post partum Hemorrhage. (Life saving)</li> </ul>
2	Travoprost	4.00	<ul style="list-style-type: none"> <li>• Anti Glaucoma agent</li> </ul>
3	Latanoprost	1.50	
4	Bimatoprost	1.00	
5	Unoprostone	1.00	
6	Carboprost	1.00	
7	Dinoprostone	0.50	
8	Dinoprost	0.40	<ul style="list-style-type: none"> <li>• Labour Induction</li> <li>• Medical Termination of pregnancy</li> </ul>
9	Alprostadiol	0.40	<ul style="list-style-type: none"> <li>• Congenital heart disease</li> <li>• Vascular diseases.</li> <li>• Erectile dysfunction</li> </ul>
10	Lubiprostone	0.20	<ul style="list-style-type: none"> <li>• For Chronic Sprue and Irritable bowel syndrome.</li> <li>• Chronic Constipation in the elderly.</li> </ul>

Scrubber will be provided to all vents to control process emissions. Total water requirement from Grampanchayat will be 6.75 m<sup>3</sup>/day. Effluent will be segregated into sewer and pollution effluent streams. Effluent will be treated, no effluent will be discharged outside the factory premises. Spent silica gel (3.5 Kg/day), inorganic salts, evaporation salt and spent catalyst will be sent to TSD. Power requirement will be 150 KW and sourced from MSEDC. HSD will be used as fuel.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of EIA/EMP report:

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework.
5. A map indicating location of the project and distance from severely polluted area.
6. Project location and plant layout.
7. Infrastructure facilities including power sources.
8. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
9. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
10. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
11. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
12. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
13. Details of the total land and break-up of the land use for green belt and other uses.
14. List of products alongwith the production capacities.
15. Detailed list of raw material required and source, mode of storage.
16. Manufacturing process details alongwith the chemical reactions and process flow chart.
17. Action plan for the transportation of raw material and products.
18. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
19. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
20. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, NH<sub>3</sub> including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
21. Details of water and air pollution and its mitigation plan
22. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
23. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
24. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
25. Name of all the solvents to be used in the process and details of solvent recovery system.
26. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
27. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
28. Permission from CGWA/SGWA for the drawl of 54.1 m<sup>3</sup>/day ground water. Water balance chart including quantity of effluent generated recycled and reused and effluent discharge.
29. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.

30. Zero discharge effluent concepts to be adopted.
31. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
32. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
33. Material Safety Data Sheet for all the Chemicals are being used/will be used.
34. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
35. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
36. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
37. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
38. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
  - vii) Details of occupational health surveillance programme.
39. Socio-economic development activities shall be in place.
40. Note on compliance to the recommendations mentioned in the CREP guidelines.
41. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
42. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
43. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 44. Corporate Environmental Responsibility**
  - (a) 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.
  - (b) Does the Environmental 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 report.
45. 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.
46. Does the company have a system of reporting of non-compliance / 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.
47. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.

48. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
49. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

The Committee decided that the proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns emerged during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

### 3.7.29. Development Drilling of 30 Wells and laying of Associated Flowlines in Agartala Dome-Konaban-BaramuraManikyanagar-kunjaban-sonamura-Sundulbari-Gojalia fields in Tripura including construction of one 0.6 MMSCMD GCS at Gojalia and laying of 12" pipeline by **M/s ONGC Ltd. - regarding TORs**

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All the projects related to offshore and onshore Oil and Gas exploration, development and production are listed in para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at central level.

M/s ONGC Ltd. has proposed for development Drilling of 30 Wells and laying of Associated Flowlines in Agartala Dome-Konaban-BaramuraManikyanagar-kunjaban-sonamura-Sundulbari-Gojalia fields in Tripura including construction of one 0.6 MMSCMD GCS at Gojalia and laying of 12" pipeline.

Block area include Agartala Dome (AD-4), Agartala Dome, Agartala Dome Extension-II Block, Rokhia (Konaban), Konaban Extention-II, Konaban Extention-III, Gojalia, Kunjaban Gas Field, Rokhia (RO-2), Rokhia (RO-19), Rokhia (RO-15) Manikyanagar-Sonamura Extension-I, Baramura (BRM-I), Baramura (BRM-10), Baramura (BRM-11), Baramura (BRM-12), Baramura Extension-IV. Total area of Blocks is 1102 sq. Km. Land to be acquired for drilling is 3.5-4.0 acres per well and 44.96 acres for GCS. Cost of the Project isRs. 868 Crores. Capital and recurring cost towards environment protection measures are given below:

- HDPE Lining – 15-20 Lakh/well
- Site Restoration -15-20 Lakh/well

- Acoustic Enclosure – 16 lakh/DG set
- Effluent Treatment plant – 7.5 lakh / well (running cost)
- For GCS ETP at an estimated cost of 10 Crore is planned.

Approximate depth of the well will be 3000 mtrs.No forest land of Sensitive are is involved. Water requirement will be 25 m<sup>3</sup>/day/well and 95 m<sup>3</sup>/day/(GCS). Diesel consumption will be 6 kL/day/well. Waste water Generation will be 15 m<sup>3</sup>/day/well, 80 m<sup>3</sup>/dau (max.) GCS. Spent Oil will be sent to authorized recyclers. Drill Cuttings generation will be 250-300 m<sup>3</sup>/well (to be confined in waste pit).

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of EIA/EMP:

1. A certified report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
2. Executive summary of a project
3. Project description, project objectives and project benefits.
4. Site details within 1 km of the each proposed well, any habitation, any other installation/activity, flora and fauna, approachability to site, other activities including agriculture/land, satellite imagery for 10 km area.
5. Details of forest land involved in the proposed project. A copy of forest clearance letter, if applicable.
6. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding National Park/Wild life Sanctuary /Reserve Forest/Eco sensitive area, if any. Approval obtained from the State/Central Government under Forest (Conservation Act, 1980 for the forestland should be submitted.
7. Distance from nearby critically/severely polluted area as per Notification dated 13<sup>th</sup> January, 2010, if applicable.
8. Does proposal involves rehabilitation and resettlement? If yes, details thereof.
9. Details of project cost.
10. Details of all the facilities including CGS, GGS, OCS, produced water treatment etc to be installed. If existing facilities, give details.
11. Environmental considerations in the selection of the drilling locations for which environmental clearance is being sought. Present any analysis suggested for minimizing the foot print giving details of drilling and development options considered.
12. Baseline data collection for air, water and soil for one season leaving the monsoon season in an area of 10 km radius with centre of Oil Field as its centre covering the area of all proposed drilling wells.
  - (i) Topography of the project site.

- (ii) Ambient Air Quality monitoring at 8 locations for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, VOCs, Methane and non-methane HC.
- (iii) Soil sample analysis (physical and chemical properties) at the areas located at 5 locations.
- (iv) Ground and surface water quality in the vicinity of the proposed wells site.
- (v) Climatology and Meteorology including wind speed, wind direction, temperature rainfall relative humidity etc.
- (vi) Measurement of Noise levels within 1 km radius of the proposed wells.
- (vii) Vegetation and land use; Animal resources

13. Incremental GLC as a result of DG set operation.
14. Potential environmental impact envisages during various stages of project activities such as site activation, development, operation/ maintenance and decommissioning.
15. Actual source of water and 'Permission' for the drawl of water from the Competent Authority. Detailed water balance, waster water generation and discharge.
16. Noise abatement measures and measures to minimize disturbance due to light and visual intrusions in case coastally located.
17. Treatment and disposal of waste water.
18. Treatment and disposal of solid waste generation.
19. Disposal of spent oil and loose materials.
20. Storage of chemicals and diesel at site.
21. Commitment for the use of WBM only
22. Mud make up and mud and cutting disposal – all options considered should be listed with selective option.
23. Hazardous material usage, storage accounting and disposal.
24. Disposal of packaging waste from site.
25. Oil spill emergency plans in respect of recovery/ reclamation.
26. H<sub>2</sub>S emissions control.
27. Produced oil handling and storage.
28. Details of scheme for oil collection system alongwith process flow diagram and its capacity.
29. Details of control of air, water and noise pollution in oil collection system.
30. Disposal of produced/formation water.
31. Whether any burn pits being utilized for well test operations.
32. Restoration and decommissioning plans which should include mud pits and wastage restoration also and documentation and monitoring of site recovery.

33. Measures to protect ground water and shallow aquifers from contamination.
34. Risk assessment and disaster management plan for independent reviews of well designed construction etc. for prevention of blow out.
35. Environmental management plan.
36. Documentary proof of membership of common disposal facilities, if any.
37. Details of environmental and safety related documentation within the company including documentation and proposed occupational health and safety Surveillance Safety Programme for all personnel at site. This should also include monitoring programme for the environmental.
38. Total capital and recurring cost for environmental control measures.
39. A copy of Corporate Environment Policy of the ONGC as per the Ministry's O.M. No. J-11013/41/2006-IA.II(I) dated 26<sup>th</sup> April, 2011 available on the Ministry's website.
40. Any litigation pending against the project and or any direction/order passed by any court of law against the project. If so details thereof.
41. A tabular chart with index for point-wise compliance of above TORs.

The following general points should be noted:

- (i) All documents should be properly indexed, page numbered.
- (ii) Period/date of data collection should be clearly indicated.
- (iii) Authenticated English translation of all material provided in Regional languages.
- (iv) The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
- (v) A copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- (vi) The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report where the above issues have been incorporated.
- (vii) 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.
- (viii) 'Certificate of Accreditation' issued by the QCI to the environmental consultant should be included.

It was decided that TORs prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA/EMP report for the above mentioned project in addition to all the relevant information as per the Generic Structure of EIA given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report should be submitted to the Tripura State Pollution Control Board for separate public hearing to be conducted for all Districts. The issues emerged and response to the issues raised during public hearing should be incorporated in the EIA report.

3.7.30. Bulk Drug unit at Sy. No 93, Rahimkhanpet Village Atmakur Mandal, District Nalgonda, Andhra Pradesh by **M/s Prassanthee Laboratories Pvt. Ltd. - regarding TORs**

Project proponent has informed that environmental clearance was granted by the Ministry vide their letter no. J-11011/523/2007-IA.II (I) dated 26<sup>th</sup> December, 2007 for Bulk Drug unit at Sy. No 93, Rahimkhanpet Village Atmakur Mandal, District Nalgonda, Andhra Pradesh by **M/s Prassanthee Laboratories Pvt. Ltd.**

Consent to establish was obtained from APPCB vide letter no. 258/PCB/CFE/RO-NLG/HO/20118 dated 24<sup>th</sup> October, 2011. Meanwhile APPCB imposed a moratorium on Nalgonda District, Andhra Pradesh for new Industries.

Now project proponent has informed that the existing environmental clearance was valid upto 25<sup>th</sup> December, 2012 and requested for extend the validity for another 5 years.

The Committee recommended the project proposal to extend the validity of environmental clearance for another 5 years subject to following additional specific condition:

- i. Products and production capacity shall remain same.
- ii. Bag-filter shall be provided to the boiler.
- iii. No effluent shall be discharged outside the factory premises and Zero discharge concept shall be adopted.
- iv. Trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD shall be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream shall be treated in ETP and then passed through RO system. Condensate and recover water shall be recycled/reused within factory premises.
- v. Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.

3.7.31. Grain based Distillery (90 KLPD) alongwith Cogeneration Power Plant (4 MW) at Village Paschim Mateshpur District Uttar Dinajpur, West Bengal by M/s Tantia Agrochemicals Pvt. Ltd. - **regarding TORs**

The project authorities and their consultant (Ultra-Tech.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All the non-molasses based Distillery Units (more than 30 KLPD) are listed at S.N. 5(g) under Category 'A'.

M/s Tantia Agrochemicals Pvt. Ltd. has proposed for setting up of Grain based Distillery (90 KLPD) alongwith Cogeneration Power Plant (4 MW) at Village Paschim Mateshpur District Uttar Dinajpur, West Bengal. Total plot area is 28000 m<sup>2</sup>. Total cost of project is Rs. 11.6.85 Crores. No forest land is involved. No court case/litigation is pending against the project. River Mahananda is flowing at a distance of 6.5 Km. No national park/wildlife sanctuary is located within 10 Km.

ESP/Bagfilter will be provided to ricehusk/coal fired boiler (30 TPH). Fresh water requirement from ground water source will be 864 m<sup>3</sup>/day. Spent wash will be centrifuged in decanter. Thin slop will be evaporated in MEE and concentrated will be mixed with wet cake to form DWGS. Total power requirement will be 1800 KW and sourced from WBEDCL and own CPP. Rice husk (210 MTPD) /coal 31.5 TPD will be used as fuels.

After deliberations, the Committee prescribed the following TORs for the preparation of draft EIA/EMP:

1. Executive summary of the project.
2. Detailed break-up of the land area alongwith latest photograph of the area.
3. Present land use based on satellite imagery and details of land availability for the project alongwith supporting document.
4. Details of site and information related to environmental setting within 10 km radius of the project site.
5. A copy of lease deed or allotment letter, if land is already acquired.
6. Information regarding eco-sensitive areas such as national park/wildlife sanctuary/ biosphere reserves within 10 km radius of project area.
7. List of existing distillery units in the study area alongwith their capacity and sourcing of raw material.
8. Details of proposed products alongwith manufacturing capacity.
9. Number of working days of the distillery unit.
10. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
11. Details of raw materials, its source & availability of all raw materials including cereal grains requirement.
12. Sources and quantity of fuel (rice husk/coal etc.) for the boiler. Measures to take care of SO<sub>2</sub> emission. Stack height should be based on maximum sulphur content in the coal. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted.
13. Storage facility for raw materials, prepared alcohol, fuel and fly ash.
14. Action plan to control ambient air quality as per NAAQES Standards for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> as per GSR 826(E) dated 16<sup>th</sup> November, 2009.
15. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
16. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
17. An action plan to control and monitor secondary fugitive emissions from all the sources.
18. Details of the use of steam from the boiler.
19. Ground water quality around proposed spent wash storage lagoon and the project area.
20. Details of water requirement, water balance chart for grain based Distillery and co-generation plant. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.

21. Fresh water requirement should be restricted upto 10 KI/KI of alcohol for grain based distillery
22. Permission of withdrawal of water from Central Ground Water Authority.
23. Proposed effluent treatment system for grain based distillery (spent wash and spent lees) alongwith utility wastewater including CPP and scheme for achieving zero discharge.
24. Spent wash generation should not exceed 6 KL/KL of alcohol production. Details of the spent wash treatment for grain based distillery based distillery.
25. Capacity for spent wash holding tank and action plan to control ground water pollution.
26. Dryer shall be installed to dry DWGS.
27. Layout for storage of rice husk/biomass.
28. Details of solid waste management including management of boiler ash.
29. Green belt development as per the CPCB guidelines.
30. List of flora and fauna in the study area.
31. Noise levels monitoring at five locations within the study area.
32. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
33. EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
34. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
35. Alcohol storage and handling area fire fighting facility as per norms.
36. Provision of Foam System for fire fighting to control fire from the alcohol storage tank.
37. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
38. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
39. Details of occupational health surveillance programme.
40. Details of socio-economic welfare activities.
41. Traffic study of the area for the proposed projects in respect of existing traffic, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
42. Action plan for post-project environmental monitoring.
- 43. Corporate Environmental Responsibility**
  - (a) 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.
  - (b) Does the Environmental 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 report.

44. 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.
45. Does the company have a system of reporting of non compliance / 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.
46. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
47. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
48. A tabular chart with index for point-wise compliance of above TORs.

The following general points should be noted:

- i. All documents should be properly indexed, page numbered.
- ii. Period/date of data collection should be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter and that raised in Public Hearing/consultation alongwith duly filled in Industry Sector questionnaire. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report where the above issues and the issues raised in the Public hearing have been incorporated.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

The Committee prescribed the above TORs for preparation of EIA/EMP reports. The proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns raised alongwith the replies during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

### 3.7.32. Grain based Distillery Plant (120 KLPD) alongwith Cogeneration Power Plant ( 5 MW) at Village Rekulakunta, Mandal Bukkarayasamudram, District Anantpur, and Andhra Pradesh by M/s RJC Agros Ltd. - **regarding TORs**

The project authorities and their consultant ( Pioneer Enviro Laboratories & Consultant Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All the non-molasses based Distillery Units (more than 30 KLPD) are listed at S.N. 5(g) under Category 'A'.

M/s RJC Agros Ltd. Have proposed for setting up of based Distillery Plant (120 KLPD) alongwith Cogeneration Power Plant ( 5 MW) at Village Rekulakunta, Mandal

Bukkarayasamudram, District Anantpur, and Andhra Pradesh. Total plot area is 20.92 acres. Total cost of project is Rs. 145.4 Crore. Mid penner south canal, Thandakal Eru and Erra vanka are flowing at a distance of 1.7 Km, 7.6 Km and 4.6 Km respectively. Durgam RF is situated at a distance of 8.0 Km. No National park/wild life sanctuaries are located within 10 Km. No forest land is involved. No court case/litigation is pending against the project.

Grain (330 TPD), Indian Coal (230 TPD) will be used as raw materials. ESP will be provided to imported coal / Indian coal /biomass fired boiler (50 TPH). Total fresh water requirement from ground water source will be 1000 m<sup>3</sup>/day. Spent wash generation will be 6 KL/KL of alcohol. Spent wash will be centrifuged in decanter to form wet cake and thin slop. Thin slop will be evaporated in MEE and concentrated solids will be mixed with wet cake to form DWGS to achieve zero discharge. DDGS will be sold as cattle feed. Fly ash will be sent to brick manufactures/ cement plant.

After deliberations, the Committee prescribed the following TORs for the preparation of draft EIA/EMP:

1. Executive summary of the project.
2. Detailed break-up of the land area alongwith latest photograph of the area.
3. Present land use based on satellite imagery and details of land availability for the project alongwith supporting document.
4. Details of site and information related to environmental setting within 10 km radius of the project site.
5. A copy of lease deed or allotment letter, if land is already acquired.
6. Information regarding eco-sensitive areas such as national park/wildlife sanctuary/ biosphere reserves within 10 km radius of project area.
7. List of existing distillery units in the study area alongwith their capacity and sourcing of raw material.
8. Details of proposed products alongwith manufacturing capacity.
9. Number of working days of the distillery unit.
10. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
11. Details of raw materials, its source & availability of all raw materials including cereal grains requirement.
12. Sources and quantity of fuel (rice husk/coal etc.) for the boiler. Measures to take care of SO<sub>2</sub> emission. Stack height should be based on maximum sulphur content in the coal. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted.
13. Storage facility for raw materials, prepared alcohol, fuel and fly ash.
14. Action plan to control ambient air quality as per NAAQES Standards for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> as per GSR 826(E) dated 16<sup>th</sup> November, 2009.
15. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
16. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
17. An action plan to control and monitor secondary fugitive emissions from all the sources.
18. Details of the use of steam from the boiler.
19. Ground water quality around proposed spent wash storage lagoon and the project area.

20. Details of water requirement, water balance chart for grain based Distillery and co-generation plant. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
21. Fresh water requirement should be restricted upto 10 KI/KI of alcohol for grain based distillery
22. Permission of withdrawal of water from Central Ground Water Authority.
23. Proposed effluent treatment system for grain based distillery (spent wash and spent lees) alongwith utility wastewater including CPP and scheme for achieving zero discharge.
24. Spent wash generation should not exceed 6 KL/KL of alcohol production. Details of the spent wash treatment for grain based distillery based distillery.
25. Capacity for spent wash holding tank and action plan to control ground water pollution.
26. Dryer shall be installed to dry DWGS.
27. Layout for storage of rice husk/biomass.
28. Details of solid waste management including management of boiler ash.
29. Green belt development as per the CPCB guidelines.
30. List of flora and fauna in the study area.
31. Noise levels monitoring at five locations within the study area.
32. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
33. EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
34. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
35. Alcohol storage and handling area fire fighting facility as per norms.
36. Provision of Foam System for fire fighting to control fire from the alcohol storage tank.
37. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
38. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
39. Details of occupational health surveillance programme.
40. Details of socio-economic welfare activities.
49. Traffic study of the area for the proposed projects in respect of existing traffic, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
50. Action plan for post-project environmental monitoring.
- 41. Corporate Environmental Responsibility**
  - (a) 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.

- (b) Does the Environmental 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 report.
42. 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.
  43. Does the company have a system of reporting of non compliance / 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.
  44. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
  45. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
  46. A tabular chart with index for point-wise compliance of above TORs. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
  47. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
  48. A tabular chart with index for point-wise compliance of above TORs.

The following general points should be noted:

- i. All documents should be properly indexed, page numbered.
- ii. Period/date of data collection should be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter and that raised in Public Hearing/consultation alongwith duly filled in Industry Sector questionnaire. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report where the above issues and the issues raised in the Public hearing have been incorporated.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

The Committee prescribed the above TORs for preparation of EIA/EMP reports. The proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns raised alongwith the replies during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

3.7.33. Grain based Distillery Plant (60 KLPD) alongwith CPP (2.5 MW) at Village Machia (Rainarsingpur Gram Panchayat), Tehsil Kamakhya Nagar, District Dhenkanal, Odisha **by M/s Fortune Spirit Ltd. - regarding TORs**

The project authorities and their consultant( Pioneer Enviro Laboratories & Consultant Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All the non-molasses based Distillery Units (more than 30 KLPD) are listed at S.N. 5(g) under Category 'A'.

M/s Fortune Spirit Ltd has proposed for setting up of grain based Distillery Plant (60 KLPD) alongwith CPP (2.5 MW) at Village Machia (Rainarsingpur Gram Panchayat), Tehsil Kamakhya Nagar, District Dhenkanal, Odisha. Total land acquired is 21.5 acres. Cost of project is Rs. 55.95 Crore. Brahmani River is flowing at a distance of 2.5 Kms. Machhia, Sunajhari, Anlaberani, Sunajheri, Rufrabalia RFs are located within 10 KM from the project site. No National Parks/Wildlife sanctuaries are located within 10 Km. No forest land is involved. No court case is pending against the project.

Bagfilter will be provided to coal/biomass fired boiler to control particulate emissions within 50 mg/Nm<sup>3</sup>. Total fresh water requirement from Brahmani River will be 720 m<sup>3</sup>/day. Spent wash generation will be 6 KL/KL of alcohol. Spent wash will be centrifuged in decanter to form wet cake and thin slop. Thin slop will be evaporated in MEE and concentrated solids will be mixed with wet cake to form DWGS to achieve zero discharge. DDGS will be sold as cattle feed. Fly ash will be sent to brick manufactures/ cement plant.

After deliberations, the Committee prescribed the following TORs for the preparation of draft EIA/EMP:

1. Executive summary of the project.
2. Detailed break-up of the land area alongwith latest photograph of the area.
3. Present land use based on satellite imagery and details of land availability for the project alongwith supporting document.
4. Details of site and information related to environmental setting within 10 km radius of the project site.
5. A copy of lease deed or allotment letter, if land is already acquired.
6. Information regarding eco-sensitive areas such as national park/wildlife sanctuary/ biosphere reserves within 10 km radius of project area.
7. List of existing distillery units in the study area alongwith their capacity and sourcing of raw material.
8. Details of proposed products alongwith manufacturing capacity.
9. Number of working days of the distillery unit.
10. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
11. Details of raw materials, its source & availability of all raw materials including cereal grains requirement.
12. Sources and quantity of fuel (rice husk/coal etc.) for the boiler. Measures to take care of SO<sub>2</sub> emission. Stack height should be based on maximum sulphur content in the coal. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted.
13. Storage facility for raw materials, prepared alcohol, fuel and fly ash.
14. Action plan to control ambient air quality as per NAAQES Standards for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> as per GSR 826(E) dated 16<sup>th</sup> November, 2009.
15. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.

16. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
17. An action plan to control and monitor secondary fugitive emissions from all the sources.
18. Details of the use of steam from the boiler.
19. Ground water quality around proposed spent wash storage lagoon and the project area.
20. Details of water requirement, water balance chart for grain based Distillery and co-generation plant. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
21. Fresh water requirement should be restricted upto 10 KI/KI of alcohol for grain based distillery
22. Permission of withdrawal of water from Central Ground Water Authority.
23. Proposed effluent treatment system for grain based distillery (spent wash and spent lees) alongwith utility wastewater including CPP and scheme for achieving zero discharge.
24. Spent wash generation should not exceed 6 KL/KL of alcohol production. Details of the spent wash treatment for grain based distillery based distillery.
25. Capacity for spent wash holding tank and action plan to control ground water pollution.
26. Dryer shall be installed to dry DWGS.
27. Layout for storage of rice husk/biomass.
28. Details of solid waste management including management of boiler ash.
29. Green belt development as per the CPCB guidelines.
30. List of flora and fauna in the study area.
31. Noise levels monitoring at five locations within the study area.
32. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
33. EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
34. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
35. Alcohol storage and handling area fire fighting facility as per norms.
36. Provision of Foam System for fire fighting to control fire from the alcohol storage tank.
37. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
38. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
39. Details of occupational health surveillance programme.
40. Details of socio-economic welfare activities.

41. Traffic study of the area for the proposed projects in respect of existing traffic, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
42. Action plan for post-project environmental monitoring.
- 43. Corporate Environmental Responsibility**
  - (a) 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.
  - (b) Does the Environmental 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 report.
44. 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.
45. Does the company have a system of reporting of non compliance / 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.
46. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
47. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
48. A tabular chart with index for point-wise compliance of above TORs. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
49. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
50. A tabular chart with index for point-wise compliance of above TORs.

The following general points should be noted:

- i. All documents should be properly indexed, page numbered.
- ii. Period/date of data collection should be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter and that raised in Public Hearing/consultation alongwith duly filled in Industry Sector questionnaire. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report where the above issues and the issues raised in the Public hearing have been incorporated.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

The Committee prescribed the above TORs for preparation of EIA/EMP reports. The proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns raised alongwith the replies during the Public Hearing/

Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

3.7.34. Bulk Drug Manufacturing Unit at Sy.NO. 94, Rahimkhanpet Village, District Nalgonda, Andhra Pradesh by M/s Tejashri Laboratories Pvt. Ltd. - **regarding TORs**

Project proponent has informed that environmental clearance was granted by the Ministry vide their letter no. J-11011/515/2007-IA.II (I) dated 23<sup>rd</sup> October, 2007 for bulk drug manufacturing unit at Sy.NO. 94, Rahimkhanpet Village, District Nalgonda, Andhra Pradesh by M/s Tejashri Laboratories Pvt. Ltd.

Consent to establish was obtained from APPCB vide letter no. 267/PCB/CFE/RO-NLG/HO/2011/2269 dated 24<sup>th</sup> October, 2011. Meanwhile APPCB imposed a moratorium on Nalgonda District, Andhra Pradesh for new Industries.

Now project proponent has informed that the existing environmental clearance was valid upto 22<sup>nd</sup> October, 2012 and requested for extend the validity for another 5 years.

The Committee recommended the project proposal to extend the validity of environmental clearance for another 5 years subject to following additional specific condition:

- i. Products and production capacity shall remain same.
- ii. Bag-filter shall be provided to the boiler.
- iii. No effluent shall be discharged outside the factory premises and Zero discharge concept shall be adopted.
- iv. Trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD shall be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream shall be treated in ETP and then passed through RO system. Condensate and recover water shall be recycled/reused within factory premises.
- v. Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.

3.7.35. Expansion of Sugar Plant (from 2500 TCD to 5000 TCD) and Cogeneration Power Plant (from 13 MW to 19.7 MW) at Village Kundal, Taluka Palus, District Sangli, Maharashtra by M/s Kranti Sahakari Sakhar Kharkhana Ltd. - **regarding TORs**

The project authorities and their consultant gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP.

**M/s Kranti Sahakari Sakhar Kharkhana Ltd have proposed for** Expansion of Sugar Plant (from 2500 TCD to 5000 TCD) and Cogeneration Power Plant (from 13 MW to 19.7 MW) at Village Kundal, Taluka Palus, District Sangli, Maharashtra. Total plot area is 50.59 ha. Cost of project is Rs. 146.49 Crore. Sugar plant will be operated for 160 days in season and 75 days in off season. No forest land is involved. No court case is pending against the project.

Wet scrubber and Multicyclone fly ash arrestor will be provided to the boiler control particulate emissions. Fresh water requirement will be 579 m<sup>3</sup>/day. Effluent will be treated in ETP. Ash generation will be 700 MTPM. Ash will be mixed with press mud for boi-

composting. The collected ash will be given/sold to cement industries & brick making. Power requirement will be increased from 6.7 MW to 19.7 MW. Molasses generation will be increased from 3000 MTPM to 6000 MTPM.

After deliberations, the Committee prescribed the following TORs for the preparation of draft EIA/EMP:

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
2. Executive summary of the project.
3. Compliance of environmental conditions prescribed by the SPCB for the existing sugar unit
4. Detailed breakup of the land area along with latest photograph of the area.
5. Present land use based on satellite imagery.
6. Details of site and information related to environmental setting within 10 km radius of the project site.
7. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
8. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forest.
9. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the GPCB.
10. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
11. List of existing distillery units in the study area alongwith their capacity.
12. Number of working days of the distillery unit and CPP.
13. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
14. Manufacturing process details of sugar plant and CPP alongwith process flow chart.
15. Details of raw materials and source of raw material molasses, bagasse etc.
16. Sources and quantity of fuel (coal etc.) for the boiler. Measures to take care of SO<sub>2</sub> emission. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted, in case coal is used.
17. Action plan prepared by the SPCB to control ambient air quality as per NAAQES Standards for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> as per GSR 826(E) dated 16<sup>th</sup> November, 2009.
18. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
19. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
20. An action plan to control and monitor secondary fugitive emissions from all the sources.
21. Details of boiler and its capacity. Details of the use of steam from the boiler.
22. Ground water quality around existing /proposed spent wash storage lagoon and the project area.
23. Details of water requirement, water balance chart for Sugar and Co-generation plant. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.

24. Prior 'permission' for the drawl of total fresh water. Details of source of water supply.
25. Hydro-geological study of the area for availability of ground water.
26. Proposed effluent treatment system for sugar unit as well as CPP and scheme for achieving 'zero' discharge.
27. Lagoon capacity for sugar unit and spent wash as well measures to be taken to control ground water contamination.
28. Details of solid waste management including management of boiler ash. Submit Ash management plan. MoU with cement plant for the use of fly ash.
29. Land available for bio-composting. Details of lining to be provided in the compost yard.
30. Green belt development as per the CPCB guidelines.
31. List of flora and fauna in the study area.
32. Noise levels monitoring at five locations within the study area.
33. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
34. EMP should also include the concept of waste-minimization, recycle/reuse/ recover techniques, Energy conservation, and natural resource conservation.
35. Details of bagasse storage. Details of press mud requirement.
36. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
37. Alcohol storage and handling area and its fire fighting facility as per norms.
38. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
39. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
  - vii) Details of occupational health surveillance programme.
40. Details of socio-economic welfare activities to be provided.
41. Traffic study of the area for the proposed projects in respect of existing traffic, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
42. Action plan for post-project environmental monitoring.

### **Corporate Environmental Responsibility**

43. (a) 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.
- (b) Does the Environmental 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 report.
44. 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.
45. Does the company have a system of reporting of non compliance / 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.

46. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
47. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
48. A tabular chart with index for point-wise compliance of above TORs.

The following general points should be noted:

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- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter and that raised in Public Hearing/consultation along with duly filled in Industry Sector questionnaire. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report where the above issues and the issues raised in the Public hearing have been incorporated.
- vii. 'Certificate of accreditation' issued by QCI to the environmental consultant should be included.

The Committee decided that the proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns emerged during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

### **LIST OF PARTICIPANTS**

<b>Expert Appraisal Committee (Industry) :</b>			
1.	Shri M. Raman	Chairman	P
2.	Shri R.K. Garg	Vice-Chairman	P
3.	Shri. Shibana Raina	Member	A
4.	Prof. R.C. Gupta	Member	P
5.	Dr. Prem Shankar Dubey	Member	P
6.	Dr. R.M. Mathur	Member	P
7.	Dr. S. K. Dave	Member	P
8.	Dr. B.Sengupta	Member	P
9.	Shri Rajat Roy Choudhary	Member	A
10.	Dr. S.D. Attri	Member	P
11.	Dr. Antony Gnanamuthu	Member	A
12.	Prof. C. S. Dubey	Member	P
13.	Shri Niranjana Raghunath Raje	Member	A
<b>MOEF Officials :</b>			
14.	Dr. P.L. Ahujarai	Member Secretary	
15.	Shri A.N. Singh	Scientist 'C'	

16.	Shri Ramesh Motipalli	Scientist 'C'
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