

**MINUTES OF 2ND RECONSTITUTED EXPERT APPRAISAL COMMITTEE
(INDUSTRY) HELD DURING 29TH – 31ST OCTOBER, 2012**

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

TIME 10.00 A.M.

2.0 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.

2.1 Confirmation of the Minutes of the 1st reconstituted expert appraisal committee (industry) to be held during 24th -25th September, 2012.

The minutes of the 1st Reconstituted Expert Appraisal Committee (REAC) (I) meeting held during 24th -25th September, 2012 were confirmed.

While confirming the minutes it was observed that in item no. 1.2.2. ("Conversion of Feed Stock from Naphtha to NG/RLNG in the Fertilizer Plant and Fuel from Furnace Oil to NG/RLNG in Steam Generating Boilers and Captive Power Plant and Enhancement in the production of Ammonia, Urea and Ammonium bicarbonate at Parambur, Mangalore, Dakshin Kannada, Karnataka by M/s Mangalore Chemicals and Fertilizers Ltd"), an factual error was there regarding the norms for particulate in the condition stipulated in the proposal as the existing urea plant was installed and commissioned in 1976. Accordingly the following sentence may be replaced:

For: "In Urea Plant, particulate emissions shall not exceed 50 mg/Nm³"

Read: "In Urea Plant, particulate emissions shall not exceed 150 mg/Nm³"

For: "Ammonia plant process condensate (APC) shall be stripped with steam followed by activated carbon and demineralization"

Read: "Ammonia plant process condensate (APC) shall be stripped with steam "

For: "Fire fighting system shall be as per the OISD 117 norms."

Read: "Fire fighting system shall be as per the applicable norms."

29th October, 2012

2.2.0 Consideration of the Projects:

2.2.1. Expansion of Ferro Alloy Plant by installation of SAF (16.5 MVA) for production of Fe-Mn- 29,500 TPA/ Si-Mn- 26,645 TPA/ Fe-Si-11,400 TPA at Plot No. Z-1, IDCO IID Centre, Village Somnathpur, District Balasore in Orissa by **M/s Stork Ferro and Mineral Industries Pvt. Limited- regarding EC.**

The project authorities and their consultant, M/s 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 Terms of Reference (TORs) awarded during the 16th Meeting of the Expert Appraisal Committee (Industry-1) held during 22.11.2010 to 24.11.2010 for preparation of EIA/EMP report. 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 Stork Ferro and Mineral Industries Pvt. Limited have proposed for expansion of its Ferro Alloys Plant by installing a 16.5 MVA Submerged Arc Furnace (SAF) in addition to existing 16.5 MVA SAF at Plot No. Z-1, IDCO IID Centre, Village Somnathpur, District Balasore in Odisha. The total project area is 60.63 acres which was allotted by IDCO. There is no national park/wild life sanctuary within 10 km radius of the project site. River Sona and River Budhabalanga flow at a distance of 6 km and 8.5 km respectively from the project site. The cost of the proposed expansion project is about Rs. 27.7 Crores. Rs. 1.5 Crores and Rs. 15 Lacs per annum are earmarked towards capital cost and recurring cost for environmental pollution control measures. Rs. 1.35 Crores is earmarked for CSR activities.

The proponent informed that Fe-Cr was not envisaged as one of the product at the time of obtaining ToRs due to the market scenario. However, based on the current scenario, it is proposed to include Fe-Cr in the product mix. An addendum to the EIA/EMP report in this regard has already been submitted. The Committee acceded to the request for inclusion of Fe-Cr in the product mix. The existing and proposed project configuration is given below:

Facility	Existing	Proposed
Ferro-Alloy Plant	1 x 16.5 MVA SAF	1 x 16.5 MVA SAF
	26,645 TPA Si-Mn	26,645 TPA Si-Mn / 29,500 TPA Fe-Mn / 11,400 TPA FeSi / 25,000 TPA Fe-Cr

Environmental clearance to the existing Ferro alloy plant was accorded by MoEF vide letter no. J-11011/22/2008-IA II (I) dated 17.7.2008. RO, Bhubaneswar had monitored the project on 18.4.2012 and the proponent was asked to comply with installation of online continuous monitoring facilities, AAQ monitoring as per the November 2009 standards, fugitive emission monitoring, plan for rain water harvesting and green belt development and TCLP test for Ferro alloy. The proponent vide letter dt. 31.8.2012 submitted the compliance of above to RO.

A copy of the purchase order for online dust monitor is submitted. The committee found the compliance of EC conditions to be satisfactory.

Transportation of raw materials and products will be done in covered manner so as to prevent any fugitive emissions. The emissions during handling of raw materials and products will be controlled by dust suppression system. Preventive measures will be

taken for storage of raw materials on concrete floors with bund under cover shed so as to avoid any leaching during rainy season. The flue gas from the production process will be passed through Spark Arrester-cum-Heat Exchanger followed by Gas Cleaning Plant (consisting of Bag filters) and then the clean gas will be released through stack of 45 m height. The PM level will be maintained below 100 mg/Nm³. Base line data of ambient air quality monitored at eight locations indicates that concentrations of PM₁₀, PM_{2.5}, SO₂ and NO_x are varying from 42.1 µg/m³ to 74.3 µg/m³, 34.2 µg/m³ to 49.7 µg/m³, 6.5 µg/m³ to 11.6 µg/m³ and 7.7 µg/m³ to 13.5 µg/m³ respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 0.07743 µg/m³, 0.13448 µg/m³ and 0.40530 µg/m³ with respect to PM₁₀, SO₂ and NO_x respectively. The resultant concentrations are within the NAAQS.

Total water requirement will be 287 m³/d (for existing 148 m³/d + for expansion 139 m³/d) which will be sourced from ground water. CGWA accorded NOC for drawl of ground water. Rain water harvesting is also proposed. The cooling tower blow down, back wash of soft water plant and effluent from QC lab will be treated in settling tank and used for slag cooling, dust suppression and green belt development. The effluent from canteen will be treated in an ETP using anaerobic treatment and used for green belt development. The sewage will be treated in septic tank and discharged to soak pit. The plant will operate on zero discharge basis. The flue dust from smelting furnace will be reused in form of briquette. The Fe-Mn slag will be used for the production of Si-Mn. The Si-Mn slag will be utilized for brick making and laying of roads, the Fe-Si slag will be sold to cast iron foundries and the Fe-Cr slag will be subjected to TCLP test and accordingly its handling, management and utilization for building material, brick making etc. will be done. The used oil/lubricants will be sold to authorized reprocessors. The quantity of resin waste is very less and will be stored in the closed drums. The domestic solid waste would be vermi composted.

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

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/Nm³.
3. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th 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 total water requirement for proposed expansion shall not exceed 139 m³/day. '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). The Fe-Si and Si-Mn slag shall be used in the preparation of building materials.
9. All the Ferro chrome slag shall be used for land filling inside the plant or used as building material only after passing through Toxic Chemical Leach ability Potential (TCLP) test. Otherwise, hazardous substances shall be recovered from the slag and output waste and be disposed in secured landfill as per CPCB guidelines.
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. 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.

2.2.2. Cement Grinding Unit (600 TPD) at Village Debendra Nagar, Tehsil Badarpurghat, District Karimganj in Assam by **M/s. Barak Valley Cement Ltd-regarding EC.**

The Committee noted that, while according ToRs, the proposal was categorized as B category considering it as a stand alone clinker grinding unit. Public hearing was also exempted as per Para 7(i) III Stage (3) (i) (e) of the EIA Notification, 2006 categorizing as 'B-2' category. However, the proposal in actuality is not a stand alone clinker grinding unit and is an expansion of a cement plant. Hence, the Committee

recommended that the proposal shall be considered after submission of final EIA/EMP report along with public hearing proceedings and its commitments.

The Committee also prescribed the following additional TORs for preparation of revised EIA/EMP report:

1. Photographs of the existing and proposed plant area.
2. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
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. Geo-technical data by a bore hole of upto 40 m. in every One sq. km area such as ground water level, SPTN values, soil fineness, geology, shear wave velocity etc. for liquefaction studies and to assess future Seismic Hazard and Earthquake Risk Management in the area and impacts due to land slides.
7. 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.
8. Occupational Health & Safety:
 - i. 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,
 - ii. 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.
 - iii. Annual report of health status of workers with special reference to Occupational Health and Safety.
 - iv. Plan and fund allocation to ensure the occupational health & safety of all contracts and sub-contract workers.

The revised draft EIA/EMP report shall be submitted to the Assam 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. Since the validity of original TORs dated 16.8.2010 had expired on 15.8.2012, the committee recommended to extend the validity by one year for submission of the final EIA/EMP report after public consultation.

2.2.3. Expansion of Aluminum alloy ingots production capacity from 9,900 TPA to 24,750 TPA and Aluminum extrusions from 2,310 TPA to 10,230 TPA at village Devarapally, Mandal Hindupur, District Ananthapur, Andhra Pradesh by **M/s Vakkal Impex Pvt. Ltd. regarding EC.**

The project authorities and their consultant, M/s Pragathi Labs and Consultants Pvt. Ltd., Secunderabad 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 14th Meeting of the Expert Appraisal Committee (Industry-1) held during 23.9.2010 to 25.9.2010 for preparation of EIA/EMP report. The project falls under secondary metallurgical industry in category 'B' of the Schedule of EIA Notification, 2006 and its amendment dated 1.12.2009. Due to the location of interstate boundary within 10 km of the project site and applicability of General Condition, the proposal is appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s. Vakkal Impex Pvt. Ltd. have proposed to expand Aluminium alloy ingots production capacity from 9,900 TPA to 24,750 TPA and Aluminium extrusions from 2,310 TPA to 10,230 TPA at Sy. No. 78, Adjacent to IDA, APIIC, Devarapally village, Hindupur Mandal, Ananthapur District, Andhra Pradesh. Total project area is 16.95 acres and greenbelt of 5.57 acres will be developed. No National park/wildlife sanctuary is located within 10 km radius of the project. The nearest human habitation is Devarapally village which is at a distance of 1.2 km. River Penna and Jaimangal flow at a distance of 1.2 km and 5.8 km respectively from the project site. The capital cost and running cost of the proposed expansion project would be Rs. 19.13 Crores and 22.2 Crores/annum respectively. The capital cost of pollution control measures is around 36.85 Lakhs with a running cost of 52.0 Lakhs/annum.

It was informed that the existing unit was accorded CTE in 2005 and did not require EC. Compliance to the conditions stipulated in the CTO, which was valid till 30.9.2012 is submitted and found by the Committee to be satisfactory. Aluminium alloy ingots and aluminium extrusions are manufactured by oil fired reverberatory furnace for melting of the aluminium scrap and silicon powder, fluxes & other alloying material and casting in CI moulds. The aluminium extrusions are manufactured by heating the aluminium scrap to molten state and cast into billets. Aluminium scrap, fluxes and silicon powder are the raw materials that are used. The total power requirement is 0.875 MVA and drawn from APTRANSCO. DG set of 500 KVA will be installed. The furnace oil requirement for melting the aluminium scrap in reverberatory furnace is about 8.54 m³/d.

Air pollution control will be by fume extraction through hood by induced draft fan and treated in packed bed scrubbers and finally treated gas will be discharged into the atmosphere through a stack. The scrubbed water will be treated by lime coagulation both for pH correction and precipitation of metallic constituents. The sludge generated is hazardous in nature and is stored after solar dried in plastic bags and sent to TSDF at

Hyderabad. Fugitive emissions will be controlled by sprinkling water at loading and unloading and provision of non-leaking of pipe connections, valves, fan, compressor etc. Base line data of ambient air quality monitored at eight locations indicates that concentrations of RSPM, SO₂ and NO_x are varying from 35 µg/m³ to 62 µg/m³, 8 µg/m³ to 15.2 µg/m³ and 10 µg/m³ to 18 µg/m³ respectively. AAQ modeling study indicates that the maximum incremental GLCs after the proposed expansion would be 1.2 µg/m³, 6 µg/m³ and 10 µg/m³ with respect to RSPM, SO₂ and NO_x respectively. The resultant concentrations are within the NAAQS.

The total quality of water required is 0.065 MLD for process (cooling and scrubbing water for pollution control), drinking and sanitation purpose. The water is drawn from the bore well located within the plant premises. The cooling water and scrubber water are recycled and blow downs are utilized for dust suppression and greenbelt development. Sewage is treated by septic tank and finally discharged into the soak pit. No effluent will be discharged outside the factory premises. The dross is leached by alkali - additions to recover aluminium. The treated dross is stored after drain in plastic bags and sent to TSDF at Hyderabad. Waste oil and used batteries will be sold to authorized recyclers/reprocessors.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Andhra Pradesh Pollution Control Board on 20th September, 2011. The issues raised in the public hearing were regarding more job opportunities in the expansion project, to clarify the budget allocation for the socio economic development like education, medical, infrastructure, to increase the workers salary 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 subject to submission of the CTE of the existing unit:

- i. The company shall install wet scrubber and bag filters etc. to control the particulate emissions below 50 mg/Nm³.
- ii. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th 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 vide G.S.R. 414(E) dated 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB should be followed.
- iv. 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.
- v. The total water requirement shall not exceed 0.065 MLD. No effluent shall be discharged and 'zero' discharge shall be adopted.

- vi. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office at Bangalore, APPCB and CPCB within 3 months of issue of environment clearance letter.
- vii. As proposed, green belt shall be developed in 33 % of the plant area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- viii. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 20th September, 2011 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bangalore.
- ix. At least 5 % of the total cost of the project shall 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 submitted to the Ministry's Regional Office at Bangalore. Implementation of such program should be ensured accordingly in a time bound manner.

2.2.4. Ferro Alloy Plant (1x6 MVA Submerged Arc Furnace; 7,500 TPA of Fe-Mn & Si-Mn) at Jamuria Industrial Estate, Mouza Ikra, District Burdwan in West Bengal by **M/s Gajanan Iron Private Limited - regarding EC.**

The project authorities and their consultant, M/s Global Experts, 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 25th Meeting of the Expert Appraisal Committee (Industry-1) held during 29.6.2011 – 30.6.2011 for preparation of EIA/EMP report. All 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 Gajanan Iron Pvt. Ltd. have proposed for 1x6 MVA Submerged Electric Arc Furnace Ferro Alloy Plant for producing 7,500 TPA of Ferro Manganese and Silico Manganese at Jamuria Industrial Estate, Mouza-Ikra, District Burdwan, West Bengal. Total project area is 3.83 acres, which is allocated in the Jamuria Industrial Estate setup by ADDA (Asansol-Durgapur Development Authority) and green belt will be developed in 1.28 acres. No National park/wildlife sanctuary is located within 10 km radius of the project. The total project cost is Rs. 9.06 Crores and Rs. 36.20 lakhs & Rs. 1.81 lakhs has been allocated towards Capital Cost and recurring cost/annum for pollution control measures. Expenditure on CSR will be Rs. 45.3 Lakhs (5 % of the total project cost in 5 years). It was confirmed that no litigation/court case is pending against the project.

Manganese Ore Lumps (16,500 TPA), Metallurgical Coke (4,600 TPA), Dolomite (2,500 TPA), Quartzite (1,900 TPA) and Electrode Paste (150 TPA) are the raw materials that will be used. Total power requirement of the unit will be 6.5 MW, which will be drawn from Damodar Valley Corporation. Ferro-alloys are manufactured in electric operated submerged arc furnace. The manufacturing process of ferro-manganese & silico-manganese is similar. The blending of raw materials is done by

mixing Manganese Ore, metallurgical Coke, Dolomite, Quartz etc. in requisite proportion to production of Fe-Mn or Si-Mn. Fe-Mn slag & quartz are added as raw material for silico-manganese production. The blended raw materials are charged to the furnace with the help of conveyors and charging chutes. In the furnace, carbon electrodes are partially submerged in the charge, operated by hydraulic cylinder. The liquid metal alloy is tapped at regular intervals. Tap holes are provided at the bottom of the furnace for tapping both molten alloys and slag. The tap hole is opened by oxygen lancing pipe and after tapping is completed, it is closed by clay plugs. Slag is collected in the slag dish and it is shifted with the help of EOT. After the product is cooled, it is off loaded from the casting bed for breaking, cleaning and packing.

The PM from SAF will be controlled by the installation of bag house with ID fan and stack. Fully covered conveyor belt with dry fog system will be used for conveying the raw material dust. Water sprinklers will be used for dust suppression. Base line data of ambient air quality monitored at eight locations indicates that concentrations of PM₁₀, PM_{2.5}, SO₂ and NO_x are varying from 32.1 µg/m³ to 50.1 µg/m³, 10.2 µg/m³ to 19.6 µg/m³, 7.2 µg/m³ to 10.9 µg/m³ and 3.4 µg/m³ to 9.7 µg/m³ respectively. AAQ modelling study indicates that the maximum incremental GLCs after the proposed project would be 14.09 µg/m³, 5.58 µg/m³ and 1.18 µg/m³ with respect to PM₁₀, SO₂ and NO_x respectively. The resultant concentrations are within the NAAQS.

Total make up water requirement will be 30 m³/d and will be sourced from ADDA supply. Rain water harvesting is also proposed. The wastewater generated will be collected and after treatment in units like settling ponds & clarifier, will be used for dust suppression and greenbelt development. Domestic effluent will be treated in septic tank followed by soak pit. No effluent will be discharged out side premises and zero discharge norms will be adopted. The Fe-Mn Slag will be fully utilized in Si-Mn production and Si-Mn slag will be sold to glass manufacturers. The fines and dust from raw material handling will be used in the furnace. The used batteries/used oil/lubricants are sold to hazardous waste authorized dealers.

The Committee noted that no public hearing / consultation is required due to project being located in notified industrial estate as per stage Section 7 (i), III Stage (3), Para (i)(b) of EIA Notification 2006. Environmental clearance was accorded to Jamuria Industrial Estate on 6.11.2006.

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:

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/Nm³.
3. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th 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.
 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. Leachate 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 total water requirement shall not exceed 30 m³/day. The water requirement shall be met from ADDA and not ground water. '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). The Si-Mn 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. An action plan for control of Cr and As in air and water should be prepared and submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB within 3 months of issue of environment clearance letter.
 11. Risk and Disaster Management Plan along with the mitigation measures should be prepared and submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB within 3 months of issue of environment clearance letter.
 12. 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.
 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.
- 2.2.5. Expansion of Ferro alloys capacity from 0.1 MTPA to 0.1725 MTPA by installation of 1X45 MVA Submerged Electric Arc Furnace & 4 MW Gas based Power Plant at MEL Chandrapur in Maharashtra by **M/s Maharashtra Elektros melt Limited - regarding EC.**

The project authorities and their consultant, M/s Anacon Laboratories Pvt. Ltd., Nagpur 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 18th Meeting of the Expert Appraisal Committee (Industry-1) held during 24.1.2011 – 25.1.2011 for preparation of EIA/EMP. All 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. The project doesn't fall under the critically polluted area of Chandrapur.

M/s Maharashtra Elektros melt Limited have proposed for expansion of Ferro alloys capacity from 0.1 MTPA to 0.1725 MTPA by installation of 1X45 MVA Submerged Electric Arc Furnace & 4 MW Furnace Gas based Power Plant at MEL Chandrapur in Maharashtra. Total project area is 212.69 ha and the expansion will be done within the existing plant area. Total plantation at the premises of MEL is spread over an area of 75 ha, which is about 35% of the total area. It is proposed to give 2,000 tree saplings every year to nearby villages. Tadoba Tiger Reserve and Tadoba Andhari national Park are adjacent to project site in NE direction. Notified archaeological sites like Achaleshwar Temple, Mahadev Temple, Mahakali Temple are at a distance of 3 km (approx.) from the project. Some trees shall be planted along road in proposed project area. The total project cost is Rs. 221.42 Crores and Rs. 12 Crores is allocated towards the pollution control measures.

It was informed that the existing unit was commissioned in 1977 and did not require EC at that time. Compliance to the conditions stipulated in the CTO is submitted and found to be satisfactory. The existing and proposed project configuration is given below:

S.N	Facilities/Products	Existing	Proposed	Total
1	Submerged Arc Furnace (MVA)	2 x 33	1 x 45	111
2	Furnace Gas based Power Plant (MW)	1 x 4.2	1 x 4	8.2
	Production			
a)	Ferro manganese (HCFE-Mn) (TPA)	59,160	37,500	96,660
b)	Silico manganese (Si-Mn) (TPA)	45,540	35,000	80,540
	Total (TPA)	1,04,700	72,500	1,77,200

There will not be any emissions from the process except PM emissions from the furnaces. The PM will be effectively collected through Gas Cleaning System. The furnace gas cleaning system consists of Wet Scrubber Type GCP and Effluent Treatment Plant. Adequate Stack Height (45 - 55 m from ground level) will be provided for the furnace & power plant. Dry fog dust suppression system will be provided at all transfer points of Raw Material charging system for dust suppression. For preventing spreading of emissions during hot metal tapping, high efficiency bag filters will be provided. Raw material handling section would be provided with dust suppression/dust collection systems. Covered conveyor belts will be used to prevent fugitive emissions. Online stack monitors shall be provided for Furnace & Power Plant Stacks. Base line data of ambient air quality monitored at 12 locations indicates that concentrations of PM₁₀, PM_{2.5}, SO₂ and NO_x are varying from 12.1 µg/m³ to 51.2 µg/m³, 5.1 µg/m³ to 15.3

$\mu\text{g}/\text{m}^3$, $6 \mu\text{g}/\text{m}^3$ to $21.3 \mu\text{g}/\text{m}^3$ and $8.2 \mu\text{g}/\text{m}^3$ to $31.3 \mu\text{g}/\text{m}^3$ respectively. AAQ modeling study indicates that the maximum incremental GLCs after the proposed expansion would be $1.63 \mu\text{g}/\text{m}^3$ and $5.2 \mu\text{g}/\text{m}^3$ with respect to PM and NO_x respectively. The resultant concentrations are within the NAAQS.

The total water requirement for proposed expansion will be $4,080 \text{ m}^3/\text{d}$ and will be sourced from ground water. Rainwater harvesting scheme is already in operation to recharge groundwater aquifers. Further, all the buildings of proposed project will be provided with suitable rainwater harvesting system. The water requirement for the SAF is only for cooling purpose and for cleaning of waste furnace gases. There would be no discharge outside the project area. Slurry from the Gas Cleaning Plant (GCP) will be treated in the Effluent Treatment Plant and Clarified water shall be recycled to the GCP. The effluent treatment plant shall be designed so as to maintain zero discharge. The Fe-Mn Slag will be used for Si-Mn production and Si-Mn slag will be supplied to WCL for mine stowing. The GCP sludge will be used in the existing Sinter Plant. The used/spent oil be sold to authorized reusers/ recyclers registered with CPCB/ MoEF.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Maharashtra Pollution Control Board on 21st April, 2012. The issues raised in the public hearing were regarding tree plantation, pollution control measures, CSR activities like health, infrastructure, orphanages, permission from CGWB for withdrawal of ground water etc. which were addressed in the EIA/EMP report.

After detailed deliberations, the Committee sought the following information for reconsideration:

- Documents regarding change in the name of the company.
- Authenticated map showing the location of the plant and Tadoba Tiger Reserve along with comments from Chief Wildlife Warden. A copy of application submitted to NBWL.
- Permission/NOC from the Archaeological Survey of India as a number of temples are located within 10 km distance
- Confirmation on the total production capacity as 0.1725 TPA or 0.1772 TPA
- Revised layout plan incorporating the rain water harvesting and revised green belt.
- Rechecked data on AAQ.
- Copy of the original Public Hearing proceedings

2.2.6. Installation of 300 TPD Deinked Pulp Line (DPL) and up-gradation of Captive Co-generation Plant (CCP) at Kagithapuram, District Karur in Tamil Nadu by **M/s Tamil Nadu Newsprint and Papers Limited - regarding EC.**

The project authorities and their consultant, M/s Vimta Labs Ltd., Hyderabad 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 32nd Meeting of the Expert Appraisal Committee (Industry-1) held during 27.1.2012 – 28.1.2012 for preparation of EIA/EMP report. Since the proposed project activity is an expansion/modification of the existing category 'A' project, the proposal is appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s Tamil Nadu Newsprint and Papers Limited have proposed to install a De-Inking Plant (DIP) of 300 TPD and upgrade the Co-Generation Plant (CCP) in the existing premises of the pulp and paper plant at Kagithapuram, District Karur in Tamil Nadu. Existing plant area is 375 acres and the total area including township etc. is 778 acres. Proposed project requires an area of 6 acres and will be located within the existing plant premises. The green cover developed by TNPL at its mill site, housing complex and surrounding area is about 263.75 acres out of a total area of 778 acres (34%). There are no ecologically sensitive areas/reserve/protected forests within 10 km radius study area from the plant. The total project cost is estimated at Rs.310 Crores. Of this, pollution control equipment and pollution control measures account for Rs.39 Crores. MoEF RO, Bangalore monitored the existing project on 18.7.2012 and 19.7.2012. A copy of the certified compliance report from the RO is submitted. The compliance to the conditions stipulated in the environmental clearance is satisfactory except the submission of action plan for the disposal of Reverse Osmosis rejects and development of 33% green belt.

The DIP will have the state-of-the-art line with three loops and two dispersers to manufacture printing and writing (P&W) grade of deinked pulp (first of its kind in the Country). The DIP will replace costlier and frequently scarce imported wood pulp. There will not be any increase in the paper production beyond 400,000 TPA as approved under earlier Environmental Clearance. The Co-Generation Power Plant will be upgraded by installing one 125 tph, 105 ata high pressure CFBC multi-fuel boiler with one 41 MW double extraction-condensing turbo generator. The power generation will increase from 81.12 MW to 103.62 MW as part of this up-gradation. The objective of up-gradation of co-generation plant is to replace the three aged low pressure boilers with one high pressure Circulating Fluidized Bed Combustion (CFBC) multi-fuel boiler. This also involves de-rate one aged low pressure turbo-generator and replace two aged low pressure turbo-generators with one high pressure double extraction-condensing turbo-generator. The CFBC boiler will maximize the use of bio-mass fuels. No additional fresh water will be required. The new 41 MW turbo generator will deploy an air-cooled condenser, instead of conventional water cooled condenser, which is a water conservation initiative. There will not be any additional wastewater discharge.

Base line data of ambient air quality monitored at 10 locations indicates that concentrations of PM₁₀, PM_{2.5}, SO₂ and NO_x are varying from 40.6 µg/m³ to 72.5 µg/m³, 14.7 µg/m³ to 23.5 µg/m³, 10.7 µg/m³ to 22.4 µg/m³ and 15.2 µg/m³ to 28.8 µg/m³ respectively. AAQ modeling study indicates that the maximum incremental GLCs after the proposed expansion would be 0.2 µg/m³, 6.27 µg/m³ and 0.21 µg/m³ with respect to PM, SO₂ and NO_x respectively. The resultant concentrations are within the NAAQS. The existing water requirement is 53,800 m³/day which will be reduced to 52,800 m³/day. Post project water requirement will be reduced by 1000 m³/day, owing to installation of air cooled condenser in place of water cooled condenser. The process water requirement of DIP will be met by back water from paper machines. The Mill holds

permission for drawl of 16 MGD of water. The wastewater generation will remain at 37,715 m³/day. The existing wastewater treatment plant has a capacity to treat 85,000 m³/day while the wastewater generation will be less than 38,000 m³/day. The boiler ash generation will increase from 140 tpd to 150 tpd during post project. This will be used in TNPL's cement plant. The sludge from the DIP will be about 90 tpd and this will be used as feed stock in TNPL's cement plant.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Tamil Nadu Pollution Control Board on 18th May, 2012. The issues raised in the public hearing were regarding compliance to the promises made earlier, falling of coal dust and lime dust in the houses, pollution of ground water, provision of Cauveri water for drinking, laying of pipelines for supply of drinking water, employment to land losers, roads etc. which were addressed in the EIA/EMP report.

The Committee had sought the action plan for the disposal of RO rejects and development of 33% area under green belt, details of OHS of the workers, comparison of AAQ data pre and post Mill expansion of existing unit at common locations, commitments made during public hearing and CSR activities carried out by TNPL in the last 5 years. The above sought information was submitted by the proponent and found to be satisfactory.

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) Compliance to all the specific and general conditions stipulated for the existing plant by the Central/State Government shall be ensured and regular reports submitted to the Ministry and its Regional Office at Bangalore.
- (ii) The project authority shall install multi cyclones, wet scrubbers with the boilers to achieve the particulate emission below 50 mg/Nm³. The emissions from chemical recovery section shall be controlled through primary and secondary venturi scrubbers.
- (iii) Data on ambient air, stack and fugitive emissions shall be regularly submitted online to Ministry's Regional office at Bangalore, SPCB and CPCB as well as hard copy once in six months and display data on RSPM, SO₂ and NO_x outside the premises at the appropriate place for the general public.
- (iv) In case of treatment process disturbances/failure of pollution control equipment adopted by the unit, the respective unit shall be shut down and shall not be restarted until the control measures are rectified to achieve the desired efficiency.
- (v) The total water requirement (including existing) shall not exceed 52,800 m³/day. The industry shall ensure the compliance of the standards for discharge of the treated effluent from the unit as stipulated under the EPA rules or SPCB whichever is more stringent. The company shall make efforts to limit the water consumption upto 75 m³/tonne of product. Adequate steps including use of modern RO/UF based technologies should be used to increase recycling and reduce water consumption.

- (vi) Adequate number of influent and effluent quality monitoring stations shall be set up in consultation with the State Pollution Control Board and regular monitoring shall be carried out for all relevant parameters to maintain the effluent treatment efficiency. Online flow meter, pH meter, conductivity meter etc. shall be installed. The report shall be submitted to Ministry's Regional Office at Bangalore, SPCB and CPCB.
- (vii) Ground water quality study in and around the project area shall be conducted and report submitted to Ministry's Regional Office at Bangalore, SPCB and CPCB.
- (viii) The company shall install Oxygen Delignification (ODL) Plant and shall maintain AOX below 1 kg/tonne of paper production.
- (ix) ECF technology shall be used and lime kiln shall be installed to manage lime sludge
- (x) The company shall submit the comprehensive water management plan along with monitoring plan for the ground water quality and the level, within three months from date of issue of this letter.
- (xi) The ash generated from the plant shall be disposed of in accordance with the provisions of the Fly Ash Notification, 2009.
- (xii) The project authority shall dispose of hazardous waste as per the provision of Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008.
- (xiii) The company shall develop green belt in 33% of the total land as per the CPCB guidelines to mitigate the effect of fugitive emissions.
- (xiv) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- (xv) The company shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling.
- (xvi) All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the pulp and paper sector shall be strictly implemented.
- (xvii) All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 18th May,2012 shall be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bangalore.
- (xviii) At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues 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.

- (xix) Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

2.2.7. Cement Plant (Clinker-2 MTPA; Cement-3.0 MTPA) and CPP (50 MW) at Villages Itgi & Digaon and Captive limestone Mines at Itga & Mogla Villages, Taluk Chittapur, District Gulbarga in Karnataka by **M/s Orient Cement (A unit of Orient paper & Industries Limited) - regarding EC.**

The project authorities and their consultant, M/s. B.S Envitech (P) Ltd., Hyderabad, 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 26th Meeting of the Expert Appraisal Committee (Industry-1) held during 22.7.2011 – 23.7.2011 for preparation of EIA/EMP report. The ToRs for limestone mining were obtained. All the Cement Plants (≥ 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 Orient Cement have proposed for Cement Plant (Clinker-2 MTPA; Cement-3.0 MTPA) and CPP (50 MW) at Villages Itgi & Digaon and Captive limestone Mines (602.054 Ha area to produce required Limestone of 3.0 MTPA) at Itgi & Mogla Villages, Taluk Chittapur, District Gulbarga in Karnataka. The project area is 266 ha and green belt will be developed in 85 ha. of area. There is no National Park/Wildlife Sanctuary/Biosphere Reserve within 10 km radius of the project site. River Kagna flows at a distance of 6.2 km in NW. The total project cost is Rs.1,500 Crores. The capital cost towards EMP will be about Rs 135 Crores and the recurring cost will be about Rs 8 crores annually.

Limestone, Bauxite/laterite, Iron Ore, Gypsum, Coal and fly ash are the raw materials that will be used. Coal required for the cement plant and power plant is envisaged to be sourced from coal fields of Singareni Collieries Company Limited (SCCL) and through E-auction. Proof of e-auction purchase for coal by the company for the unit in A.P is submitted. All the raw materials will be stored in closed sheds. Clinker and Cement will be stored in silos. The limestone produced from the mine will be transported by dumpers to crusher in mining lease area and from crusher to Cement plant site by covered belt conveyor. The manufacturing process involves raw materials grinding, blending of raw materials, coal grinding and fine coal handling, Preheating of raw meal in the six stage precalciner string, pyro processing and calcination in the kiln, Clinker cooling and storage, and finally Cement grinding & packing

It is proposed to install Bag house for raw mill/ Kiln, ESP for Cooler, Bag filter for Coal Mill and Cement Mill. The pollution control equipment will have efficiency of 99.9% and the outlet emission will be restricted to less than 50 mg/Nm³. Stack of 95m height is proposed for the power plant. Base line data of ambient air quality monitored at 8 locations indicate that concentration of PM₁₀, PM_{2.5}, SO₂ and NO_x are varying from 59

$\mu\text{g}/\text{m}^3$ to $69 \mu\text{g}/\text{m}^3$, $29 \mu\text{g}/\text{m}^3$ to $37 \mu\text{g}/\text{m}^3$, $9.7 \mu\text{g}/\text{m}^3$ to $11.1 \mu\text{g}/\text{m}^3$ and $11.5 \mu\text{g}/\text{m}^3$ to $12.6 \mu\text{g}/\text{m}^3$ respectively. AAQ modeling study indicates that the maximum incremental GLCs after the proposed project would be $10.77 \mu\text{g}/\text{m}^3$, $1.7 \mu\text{g}/\text{m}^3$, $22.6 \mu\text{g}/\text{m}^3$ and $23.9 \mu\text{g}/\text{m}^3$ with respect to PM_{10} , $\text{PM}_{2.5}$, SO_2 and NO_x respectively. The resultant concentrations are within the NAAQS.

The total fresh water requirement of $3,500 \text{ m}^3/\text{day}$ will be sourced from Kagna River. The total wastewater generated will be about $1,058 \text{ m}^3/\text{day}$. Rain water harvesting is also proposed. The cooling tower blow down, boiler feed, filter backwash and service water will be diluted in common basin and used in cement plant, dust suppression and workshop. The DM plant water will also be used similarly after neutralization. The wastewater from workshop will be used for greenbelt development after the removal of oil and grease. Sewage will be treated in STP and used for greenbelt development.

The solid waste in the form of dust collected in the air pollution control equipment in the cement plant will be recycled back to the process. Refractory are one of the solid wastes generated from the kiln section and will be disposed to outside agencies due to high recycling value. Solid waste generated from colony and sewage treatment plant will be disposed after segregating the waste into bio-degradable and non-degradable. Bio degradable waste will be composted and non-degradable waste will be land filled at identified areas. Fly ash generated in the power plant will be consumed in the cement plant totally.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Karnataka State Pollution Control Board on 18th July, 2012. The issues raised in the public hearing were regarding payment of more compensation for the land per acre and employment to the local farmers or people, to take measures for the controlled blasting at minimum vibration, to provide health care facilities, education & infrastructure facilities, electricity to the villagers, water supply, precautions for prevention of pollution 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 alongwith other environmental conditions while considering for accord of environmental clearance for the Cement Plant and CPP:

- 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 $50 \text{ mg}/\text{Nm}^3$ 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_x burners should be provided to control NO_x 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 Bangalore 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 16th 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. As and Hg shall be monitored in emissions, ambient air and water.
- vi. The coal yard shall be lined and covered.
- vii. 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.
- viii. Total fresh water requirement for cement and captive power plant shall not exceed 3,500 m³/day. 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.
- ix. 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.
- x. 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 Bangalore, SPCB and CPCB.
- xi. 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.
- xii. 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).
- xiii. Efforts shall be made to use low-grade lime, more fly ash and solid waste in the cement manufacturing.
- xiv. An effort shall be made to use of high calorific hazardous waste in the cement kiln and necessary provision should be made accordingly.
- xv. 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.

- xvi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants should be implemented.
- xvii. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 18th 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 Bangalore.
- xviii. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing Issues 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.

2.2.8. Proposed Phase -IV Expansion of Coal beneficiation Plant, Iron ore beneficiation plant, Iron ore pelletisation plant at Village Chadri Hariharpur, Tehsil Panposh, block Kuarmunda, District Sundargarh in Orissa by **M/s Adhunik Metaliks Limited. - regarding EC.**

The Committee noted that EIA/EMP report has been prepared by M/s Environmental Research and Services (India) Pvt. Ltd., Bhubaneswar, who is a non-accredited consultant as on date and also listed in list 'C' 'application not approved /withdrawn/ineligible applications' as the Ministry's O.M dated 30th September, 2011. Therefore, Committee advised that EIA/EMP report shall be validated 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 consultants submitted.

2.2.9. Expansion of Bulk Drug Unit (2551.5 MTPA to 3322.0 MTPA) at Sejavta, Ratlam, M.P. by M/s Ipca Laboratories Ltd. **(TOR to EC)**

The Committee noted that the Ministry vide letter no.J-11011/850/2007-IA(II) dated 12th May, 2008 has accorded environmental clearance for the existing unit. As per circular dated 30th 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. However, a certified report by RO, MoEF on status of compliance of conditions on existing unit is not yet received. Therefore, the proposal was deferred till certified compliance report by RO, MoEF is submitted.

2.2.10. Leather Finishing Unit at 524 D & E, HSIDC Industrial Estate, Barhi, Phase- II by **M/s Supreme Fashions. - regarding EC.**

The project authorities and their consultant, M/s Mantec Consultants Pvt. Ltd., New 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 26th Meeting of the Expert Appraisal Committee (Industry-1) held during 22.7.2011– 23.7.2011 for preparation of

EIA/EMP. Leather/skin/hide processing industry is listed at Item 4(f) of the schedule of EIA Notification, 2006 and categorized as A or B depending on the location of the unit in notified industrial area. Since the project site falls within 10 km radius of Delhi-Haryana Interstate Boundary, as per the General Condition of EIA Notification 2006 the proposal has been appraised by the EAC (Industry) of MoEF.

M/s Supreme Fashions have proposed to set up a new leather finishing unit at Plot No. 524 D & E, HSIIDC, I.E.Barhi, Phase -II, District Sonipat in Haryana. The total project area is 2,025 sq. m. and green belt is proposed on approx. 40% of the covered area. There is no National Park/Wildlife Sanctuary within 10 km radius of the project site. The total cost of project is about Rs. 2.35 Crores and the cost for environment management is Rs. 0.25 Crore.

The proposed leather finishing unit shall involve only finishing of leather and no tanning of raw hides/skins would be involved. The capacity of the plant is about 25,000 sq. ft. of finished leather per day for which about 5,000 pieces of wet blue hides and skins (Semi Finished /Tanned Leather) will be required daily along with chemicals for Finishing Operations. No chromium based dye will be used in the process. The raw material used will be only tanned leather (wet blue skins and hides / semi finished leather along with finishing chemicals like Fat Liquors, Pigments, Binders, Feel Modifiers, Syntans and Dyes. The main stages in Finishing Operations are Sammying, Splitting, Shaving & Trimming, Neutralization, Dyeing, Fat Liquoring, Spraying and Finishing of leather. Total power requirement of 250 KW will be sourced from the state grid supply. Provision has been made for power backup for 200 KVA DG SET.

Base line data on ambient air quality monitored at 8 locations indicates that maximum concentrations of PM₁₀, PM_{2.5}, SO₂ and NO_x at different locations within the study area are 145.7 µg/m³, 64.3 µg/m³, 12.5 µg/m³ and 34 µg/m³. The values of SO₂ and NO_x are within the NAAQS, whereas those of PM₁₀ and PM_{2.5} are exceeding the NAAQS due to the proximity from Highway and Industrial area. There is no source of air pollution except DG sets, for which stack height will be provided as per the CPCB norms. The water requirement will be 25 m³/d, which will be provided by HSIIDC, Barhi. Effluent will be generated from dyeing and fat liquoring operations only and the same will be treated in the own ETP and subsequently it will be sent through existing pipeline to CETP maintained by HSIIDC, Barhi. Wet blue shaving waste (Puff) -15 MT/month will be sold to vendors like cardboard manufacturers. ETP sludge (0.5 MT/month) will be dried & stored in leak proof storage pits and will be dispatched to Haryana Environmental Management Society, Gurgaon, Haryana authorized for management of HW.

Public Hearing/Public Consultation was not required if a Gazette Notification for the Industrial Area is submitted. After the issuance of ToRs, the proponent submitted a copy of the Notification No. 2/6/6-1 IBII-97 dated 4.11.2003 issued under Section 6 of the Land Acquisition Act for Industrial Estate, Barhi, Phase- II, Sonipat. The EIA report was submitted without conducting PH. The Committee decided that, MoEF shall write to Director (Industries) of the State Govt. for clarification regarding Notified Industrial Area.

After detailed deliberation, the Committee recommended the project for environmental clearance. However, the proposal shall be placed before the Committee after having clarity on exemption of Public Hearing/Public Consultation.

2.2.11. Expansion of Organic Pigment Manufacturing Unit (45.5 TPM to 272.5 TPM) at Plot No. 1703/B, 3rd Phase, GIDC Vapi, District Valsad, Gujarat **by M/s Sona Inter Chem Pvt. Ltd. (TOR to EC)**

The project authorities and their consultant (Eco-Chem Sales & Services, Surat) 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 22nd Meeting of the Expert Appraisal Committee (Industry) held during 29th– 30th April, 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. No public hearing/consultation is required due to project being located in notified GIDC as per stage Section 7 (i), III Stage (3), Para (i)(b) of EIA Notification 2006. A copy of Gazette Notification dated 31st August, 2005 issued by Industries and Mines Department, Govt. of Gujarat is submitted.

M/s Sona Inter Chem Pvt. Ltd. has proposed for expansion of Organic Pigment Manufacturing Unit (45.5 TPM to 272.5 TPM) at Plot No. 1703/B, 3rd Phase, GIDC Vapi, District Valsad, Gujarat. Total plot area is 5,000 m². Interstate boundary (Daman) is located within 10 Km. proposed expansion will be with existing premises. Total project cost is Rs. 410 Lakhs. Rs. 40 Lakh and Rs. 10 lakhs are earmarked toward capital cost and recurring cost per annum for pollution control measures. River Damanganga is flowing at 3 Km. Arabian sea is at 15 Km. No national park/wildlife sanctuary/reserve forest is located within 10 Km. A copy of valid consent to operate issued by the GPCB vide consent order no. 9561 dated 10th October, 2007 and its compliance report is submitted. Following products will be manufactured:

S. N.	Product	Existing (MTPM)	Proposed (MTPM)	Total After Expansion (MTPM)
1	Pigment Beta Blue	10.0	50.0	60.0
2	Pigment Violet Lake 772 (Pigment violet 3)	0.5	0	0.5
3	Pigment Violet Lake 777 (Pigment violet 27)	0.5	4.5	5.0
4	Pigment Prussian Blue (Pigment violet 27)	7.0	0	7.0
5	Organic Pigment (Yellow, Red, Orange, Red F ₄ R, Rubine Tonner)	0	30.0	30.0
6	CPC Blue	0	50.0	50.0
7	CPC Green	0	15.0	15.0
8	Methyl Violet (Basic Violet 1)	0	20.0	20.0
9	Chromo cyanine green (Only mixing)	2.5	7.5	10.0
10	Lead chrome pigment (Only grinding & Mixing)	0	50.0	50.0
11	Cement Colour (Only blending)	25.0	0	25.0
	Total	45.5	227.0	272.5

By-products				
1	HCl	0	16.95	16.95
2	Ammonium Carbonate Solution (25-28%) from CPC Blue	0	148.5	148.5

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during January, 2011 – May, 2011 and submitted data indicates PM₁₀ (53.78-90.28 ug/m³), SO₂ (17.26-35.84 ug/m³), NO_x (17.26-23.00 ug/m³) and VOC (0.5-1.9 ug/m³). Incremental concentration due to proposed project was estimated to be PM10 (0.004 ug/m³), SO₂ (0.128 ug/m³) and NO_x (0.002 ug/m³).

Stack (11m) is provided to existing FO/LDO fired boiler-I & II and Thermopack. Stack (11m) will be provided to proposed FO/NG fired boiler III, Thermopac and hot air dryer. Cyclone followed by bagfilter alongwith stack (11 m) will be provided to pulveriser. Water followed by alkali scrubber will be provided to control HCl less than 10 mg/Nm³/Cl₂ less than 5 mg/Nm³. Water followed by acid scrubber will be provided to control NH₃ less than 175 mg/Nm³. Solvent (Xylene/Butanol) will be recovered and recycled in the process. Total water requirement from GIDC water supply will be increased from 83.0 m³/day to 222.82 m³/day after expansion. Effluent generation will be increased from 70.0 m³/day to 208.42 m³/day after expansion. Domestic effluent will be disposed off through septic tank/soak pit. In the existing unit process effluent is treated in ETP comprising primary and secondary. Treated effluent is further sent to CETP for treatment. In the proposed expansion, effluent will be treated in ETP comprising primary, secondary and tertiary treatment and treated effluent will be discharged into CETP for further treatment. Final treated effluent from CETP is disposed off into the Arabian sea. ETP Sludge will be Sent to TSDF, Vapi. Used Oil will be Sent to authorized recycler/re-processor. Discarded Containers will be sold to authorized recycler.

Green belt will be developed in 1100 m² out of total plant area. Power requirement will be increased from 250 HP to 350 HP. LDO/FO will be consumed 450 Kg/day as a fuel. Natural gas will be consumed around 3600 SCM/day. DG set (63 KVA) will be installed.

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/gas fired boiler/thermopack.
- ii) The levels of PM₁₀, SO₂, NO_x, CO, NH₃, HCl, Cl₂ and VOC should be monitored in ambient air.
- iii) Adequate scrubbing system shall be provided to process vents to control HCl, Cl₂ and SO₂. The scrubbing media should be sent to effluent treatment plant (ETP) for treatment. Cyclone followed by bag filter shall be provided to pulveriser. 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 GIDC water supply should not exceed 208.42 m³/day and prior permission should be obtained from the concerned Authority. No ground water should be used.
- vi) Total effluent generation should not exceed 208 m³/day. Effluent should be should be treated in ETP. Treated effluent should be discharged to CETP after conforming to the standards prescribed for norms for the effluent discharge and obtaining permission from the GPCB regarding. No process effluent shall be discharged in and around the project site. Efforts shall be made to treat ammonical nitrogen in the effluent.
- vii) Treated effluent should be passed through guard pond. Online pH meter, flow meter and TOC analyzer should be installed.
- viii) All the solvent storage tanks should be connected with vent condensers with chilled brine circulation.
- 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 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.
- x) Green belt should be developed in in 1100 m² out of total plant area.
- xi) All the recommendations made in the risk assessment report should be satisfactorily implemented.
- xii) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

2.2.12. Proposed Bulk drugs unit at plot no. 632, 633, Village Varsola, Mahemdabad - Nadiad Highway, Taluk Mahemdabad, District Kheda, Gujarat by **M/s Swana Pharmaceuticals Pvt. Ltd. (TOR to EC)**.

The Committee noted that EIA/EMP report has been prepared by M/s Akshar Consultants, Gujarat, who is a non-accredited consultant as on date and M/s Eco Chem Sales & Services came for presentation. Therefore, Committee advised that EIA/EMP report shall be validated 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.

2.2.13. Membrane Cell based Caustic Soda (400 TPD) and Membrane Cell Based Caustic Potash Plant (100 TPD) at Sy. No. 1-4, 7-8 &11, Village Balabhadrapauram, Mandal Bikkavolu, District East Godavari, Andhra Pradesh

by **M/s K. P. R. Industries (India) Ltd. (Formerly Known as M/s K.P.R. Chemicals Ltd.) - (TOR to 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 23rd Meeting of the Expert Appraisal Committee (Industry) held during 30th – 31st May, 2011 for preparation of EIA/EMP. All the Membrane, cell based Caustic Soda & Caustic Potash plants (≥ 300 TPD) are listed at S.N. 4(d) under Category 'A' and appraised at the Central level. Project proponent informed that proposed activities have been transferred in the name of M/s K. P. R. Industries (India) Ltd. registered under corporate ID: U24233AP2011PLC076877 from M/s K.P.R. Chemicals Ltd.

M/s K. P. R. Industries (India) Ltd. have proposed for setting up of Membrane Cell base Caustic Soda (400 TPD) and Membrane Cell based Caustic Potash Plant (100 TPD) at Sy. No. 1-4, 7-8 & 11, Village Balabhadrapauram, Mandal Bikkavolu, District East Godavari, Andhra Pradesh. Total acquired land is 178.35 acres. No national park/wildlife sanctuary/reserve forest is located within 10 Km. No rehabilitation and resettlement is involved. Total cost of the project is Rs. 600.00 Crores. Rs 600 lakhs and Rs. 300.00 Lakhs are earmarked towards capital cost and recurring cost per annum for pollution control measures. Following products will be manufactured:

S.N.	Products	Capacity (TPD)	Annual Capacity (TPA)
1.	Caustic Soda Lye (100%)	400	1,32,000
2.	Caustic Soda Flakes	120	40,000
3	Caustic Potash Lye (100%)	100	33,000
4	Caustic Potash Flakes	60	20,000
5	Hydrogen Gas (Filled)	2	660
6	Liquid Chlorine	200	66,000
7	Hydrochloric Acid (32%)	600	2,00,000
8	Sodium Hypochlorite (15% Cl ₂)	120	40,000
9	Calcium Hypochlorite (65 % Cl ₂)	30	10,000
10	Chlorinated Paraffin Wax	30	10,000
11	Mono Chloro Acetic Acid	20	6,600
12	Poly Aluminum Chloride	90	30,000
13	Stable Bleaching Powder	50	16,500
14	Hydrogen Peroxide (100%)	30	10,000

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 9 locations during September, 2011 – November 2011 and submitted data indicates PM₁₀ (26.1-37.2ug/m³), PM_{2.5} (14.3-18.9 ug/m³), SO₂ (7.8-11.9 ug/m³), NO_x (9.2- 13.5 ug/m³), Cl₂ (BDL), VOC (BDL) and HC (BDL). Incremental concentration due to proposed project was estimated to be PM₁₀ (1.2 ug/m³), SO₂ (2.5 ug/m³) and NO_x (2.3 ug/m³). Bag filters alongwith stack height (50 m) will be provided to rice husk/coal fired boilers to control particulate emission within 50 mg/m³. Scrubbers with NaOH (18%) will be provided to control Cl₂ emissions less than 15 mg/Nm³. Scrubbers will be provided to control HCl emissions less than 35 mg/Nm³. Online Chlorine analyser alongwith alarm indicator will be installed in the chlorine stack with a minimum reading of 1 ppm and will

be connected to the DCS control room. Fresh water requirement will be 3800 m³/day, which will be sourced from Godavari River. Industrial effluent generation will be 620 m³/day and treated in ETP. Treated effluent after ensuring compliance with norms of APPCB/CPCB will be used for dust suppression, ash conditioning & for greenbelt development. Sewage will be treated in STP. No effluent will be discharged outside the plant premises and zero discharge concepts will be followed. Process sludge will be disposed off through secured landfill. ETP sludge will be sent to TSDF. The Committee advised the project proponent to follow site selection criteria for captive landfill site prescribed by the CPCB/MoEF and prior necessary permission shall be obtained from APPCB/CPCB. A copy of membership certificate no CWMP/EGD/KPR/129 issued by M/s Coastal Waste Management Project for managing hazardous waste to TSDF is submitted. Green belt will be developed in 60 acres of land out of total land 178.35 acres.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the AP Pollution Control Board on 15th February, 2011. The issues raised were employment, anticipated pollution problems, pollution control measures, budget for greenbelt, and socio-economic development programme under CSR. In response, project proponent confirmed that installation of bag filter will bring down the particulate emission less than 50 mg/m³. Greenbelt will be developed in 60 acres of land and 0.6 crore is earmarked exclusively for greenbelt. NOC obtained from Balabhadrapuram gram panchayat for the setting up of Caustic soda and other plants as per their resolution no. 1/2012 dated 13.01.2012. Wastewater will be treated in the ETP and no effluent will be discharge outside the factory premises 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 along with other environmental conditions while considering for accord of environmental clearance:

- i) Bag filter alongwith adequate stack should be provided to rice husk/coal fired boilers boiler to control particulate emissions within 50 mg/Nm³. The waste gasses shall be discharged into atmosphere through stack of adequate height as per CPCB/APPCB guidelines.
- ii) As proposed adequate scrubbing system shall be provided to control Cl₂ emissions less than 15 mg/Nm³ and control HCl emissions less than 35 mg/Nm³ respectively. Online Chlorine analyser alongwith alarm indicator shall be installed in the chlorine stack with a minimum reading of 1 ppm and will be connected to the DCS control room. The scrubbing media shall be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. At no time, the emission levels shall go beyond the prescribed standards.
- iii) The gaseous emissions (SO₂, NO_x, Cl₂, HCl) and particulate matter from boiler and process stack shall conform to the norms prescribed by the CPCB/ APPCB from time to time. At no time, the emission levels shall go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Stack emissions shall be monitored regularly.

- iv) Proper hood alongwith suction facility and scrubbing arrangement should be provided in the chlorine storage area. Alarm for chlorine leakage if any in the liquid chlorine storage area shall be provided alongwith automatic start of the scrubbing system.
- v) 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 APPCB.
- vi) Total fresh water requirement from Godavari River should not exceed 3800 m³/day and prior permission should be obtained from the concerned Authority.
- vii) Industrial effluent generation shall not exceed 620 m³/day and treated in ETP. Treated effluent shall be recycled/reused within the factory premises. Treated effluent shall be collected in the guard pond. Regular water quality monitoring of guard pond shall be carried out and Water quality of treated effluent shall meet the norms prescribed by CPCB/APPCB.
- viii) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through dedicated guard pond.
- 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 APPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for firefighting facilities in case of emergency.
- x) Selection of captive TSDF site location as per CPCB/MoEF guidelines shall be strictly followed. Prior permission shall be obtained from SPCB/CPCB for captive TSDF.
- xi) As proposed, green belt shall be developed in 60 acres 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 15th February, 2011 shall be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bangalore.
- xiv) At least 5 % of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program should be ensured accordingly in a time bound manner.

2.2.14. Grain based Distillery Plant (60 KLPD) alongwith Captive Power Plant (2.5 MW) at parts of 526, 532, 534, 536, 538, 556 & 557, Village Peddavaram, Mandal Nandigama, District Krishna, Andhra Pradesh by **M/s Sudheer Bio Products Pvt. Ltd. (TOR to 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 25th Meeting of the Expert Appraisal Committee (Industry) held during 28th-30th July, 2011 for preparation of EIA/EMP. All grain based distilleries (\geq 30 KLPD) are listed at S.N. 5(g) (ii) under category 'A' and appraised at Central level.

M/s Sudheer Bio Products Pvt.Ltd. have proposed for setting up of grain based Distillery Plant (60 KLPD) alongwith Captive Power Plant (2.5 MW) at parts of 526, 532, 534, 536, 538, 556 & 557, Village Peddavaram, Mandal Nandigama, District Krishna, Andhra Pradesh. Total plot area is 27 acres. No national parks/sanctuaries/biosphere reserves are located within 10 km. Jaggayyapeta RF, Venkataya Palem RF, Gingupalle RF, Kuntimaddi RF and Gudimetla RF are located within 10 radius. Krishna River is flowing at 1.1 Km. Total cost of the project is Rs. 63.71 Crores. Rs. 18.00 Crores and Rs. 2.00 Crore are earmarked towards capital cost and recurring cost/annum for pollution control measures. No forest land is involved.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during October, 2011 – December 2011 and submitted data indicates PM₁₀ (15.3-27.2 ug/m³), SO₂ (5.8-7.6 ug/m³) and NO_x (6.2-8.5 ug/m³). The Concentration of HC (methane and non methane) in ambient air was found to be BDL. The Committee advised the Consultant to improve their monitoring mechanism in respect of HC because HC (methane) cannot be BDL. Incremental concentration due to proposed project was estimated to be PM₁₀ (0.7 ug/m³), SO₂ (6.6 ug/m³) and NO_x (0.7 ug/m³). Bag filters alongwith stack height (47m) will be provided to coal/biomass fired boiler (29 TPH) to bring down the particulate matter to less than 50 mg/Nm³. Total water requirement from Krishna River/Ground water source will be 650 m³/day. Spent wash will be passed through decanter and then the thin slop from Decanter will be dried in Multi Effect Evaporators (MEE) followed by Dryer upto 90% solids w/w to form as DDGS and sold to outside parties as cattle feed. 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. DDGS will be sold as cattle feed. Waste oil will be sold to authorized recyclers / re-processors. Fly ash from coal will be sent to brick manufacturers/cement plant. Fly ash from biomass fuel will sent to brick manufacturers. Out of 27 acres, 9 acres will be developed as green belt.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the AP Pollution Control Board on 22nd March, 2012. The issues raised during public hearing were socio-economic development, employment, water scarcity and ground water depletion, zero effluent discharge, pollution caused by the other unit etc. In response, project proponent committed to implement air pollution control measures, adopt zero effluent discharge concept and obtain permission from concerned Authorities for water drawl. Employment will be provided to the local people. Rain water harvesting system will be installed and sufficient water storage capacity will be created to use rain water in the process 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 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/Nm³.
- 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 ground water source/Krishna River should not exceed 10.83 KL/KL of alcohol (i.e. 650 m³/day)for distillery and cogeneration unit (2.5 MW).
- v. Prior permission for drawl of water should be obtained from the concerned authorities.
- vi. Water consumption should be reduced by adopting 3 R's (reduce, reuse and recycle) concept in the process.
- vii. Spent wash generation should not exceed 6 Kl/Kl 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.
- viii. 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.
- ix. No effluent from distillery and co-generation power plant should be discharged outside the premises and Zero effluent discharge concept 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. 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.
- xii. Biomass storage should be done in such a way that it does not get air borne or fly around due to wind.
- xiii. 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.

- xiv. 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.
 - xv. 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.
 - xvi. 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.
 - xvii. As proposed, thick green belt will be developed in 9 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.
- 2.2.15. Drilling of Additional 14 Appraisal cum Development Wells in Lohar Oil & Gas field Block, Cambay Basin (On-shore) at Village Daran Morva, Lohar Manipur, Kesanpura Meda, Taluka Kadi, District Mehsana, Gujarat by **M/s Selan Exploration Technology Ltd. (TOR to EC).**

The project authorities and their consultant(Kadam Environment Consultants) 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 21stMeeting of the Expert Appraisal Committee (Industry) held during 23rd-24th March, 2011 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 Selan Exploration Technology Limited have proposed for the drilling of additional 14 Appraisal cum Development Wells in Lohar Oil & Gas field Block, Cambay Basin (On-shore), District-Mehsana, Gujarat. The Lohar oil & gas field block was awarded to SELAN Exploration Technology Ltd. for development & production of Oil & Gas by Govt. Of India and Production Sharing Contract (PSC) signed on 13.3.1995. Environmental clearance has been accorded by the Ministry for drilling 5-8 wells in Lohar Oil & Gas field Block vide Ministry's letter No.J-11011/441/2007-IA-(ii)-I dated 26th October, 2007. Till date, 4 wells in Lohar field are drilled. 14 wells will be drilled during proposed programme upto 2000 m depth below the ground level in the existing Lohar field in village Daran Morva, Lohar Manipur, Kesanpura, Meda, Tehsil Kadi, District Mehsana. Total project area is 5 sq.km. Total cost of the project is Rs 73 Crores. Thol lake bird sanctuary is located within 10 Km from the block boundary. However, no well has been proposed within 10 Km from Thol lake bird sanctuary. The nearest well location is 10.56 Km. the Coordinates of the Lohar oil and gas field Block are as follows:

S.N.	Name of the Field	Area (Sq. Km.)	Block Coordinates
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			Points	Latitude	Longitude
1	Lohar	5	A	23°12'52"	72°18'15"
			B	23°11'30"	72°18'15"
			C	23°11'30"	72°19'26"
			D	23°12'52"	72°19'26"

Proposed Well Locations Coordinates of Lohar Field are as follows:

S.N	Name of Location	Latitude			Longitude		
		Deg	Min	Sec.	Deg	Min	Sec
1	LH- 10 # 1	23	12	46.80	72	18	45.18
2	LH- 10 # 2	23	12	23.80	72	18	42.72
3	LH- 10 # 3	23	12	39.55	72	18	35.15
4	LH- 10 # 4	23	12	18.93	72	19	0.79
5	LH- 10 # 5	23	12	30.85	72	18	58.14
6	LH- 10 # 6	23	12	13.36	72	18	38.38
7	LH- 10 # 7	23	12	8.31	72	18	31.82
8	LH- 10 # 8	23	12	46.49	72	19	4.68
9	LH- 10 # 9	23	12	18.87	72	18	24.88
10	LH- 10 # 10	23	12	39.40	72	18	26.33
11	LH- 10 # 11	23	12	19.03	72	18	33.73
12	LH- 10 # 12	23	12	46.64	72	19	13.45
13	LH- 10 # 13	23	12	38.38	72	19	4.83
14	LH- 10 # 14	23	12	10.75	72	18	25.03

Depth of well drilling will be in the ranging 1500 to 1600 m. In the event that economic quantities of hydrocarbon are found, the well will be completed with a well head in place at surface along x-mass tree and casing and tubing inside the hole down to the desired reservoir depth. In the event that no economic quantities of hydrocarbons are found, the site would be restored to its original form and the well will be abandoned as per standard practices.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 8 locations during summer season, 2011 and submitted data indicates as PM10 (22–83 ug/m3), SO2 (8.0 – 16 ug/m3) and NOx (10-24.4 ug/m3). 1000-1500 m³/day associated gas/well will be burnt through rigs equipment in safe manner for 7-10 days. The flare stack height will be approximately 9 m above the ground level. Total water requirement from surface water source will be 20 m³/day per well. Effluent generation will be 5 m³/day and stored in HDPE lined pit. Service water will be passed through oil separator to remove oil content in the effluent. Domestic effluent will be treated in septic tank followed by soak pit. No effluent will be discharged outside the premises and 'Zero' discharge concept will be adopted. Drilling well will generate drill cutting (50 MT) and drilling mud (500 MT) and discharged in HDPE lined pit. Disposal of drill cuttings and drill mud will be carried out in accordance with the GSR 546 (E) dated 30th August, 2005. Used oil will be sold to authorized recyclers. Acoustic enclosures will be provided to D.G. sets to reduce noise levels. HSD (170 l/hr) will be used in 2 DG sets

during drilling operation. Blow-out-preventer (BOP) will be provided to prevent fluid from the formation gas gushing to the surface. Fire fighting equipments and safety measures will be as per Oil Mines Regulation, 1984.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 3rd February, 2012. The issues raised during public hearing were plantation of eucalyptus, inadequate cross drainage, local employment, road condition, development activities, compensation against damage etc. In response, project proponent committed for providing proper cross drainage during construction of roads to avoid flooding. Proper crop and land compensation considering highest crop productivity and highest market rates. Priorities will be given for local employment. Company will earmark the adequate fund for socio-economic development of the village. Issues 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. As proposed, no well will be developed within 10 Km from Thol lake bird sanctuary.
- ii. Ambient air quality should be monitored at the nearest human settlements as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for PM₁₀, PM_{2.5}, SO₂, NO_x, CO, CH₄, HC, Non-methane HC etc.
- iii. Mercury should be analyzed in air, water and drill cuttings twice during drilling period.
- iv. Approach road should be made pucca to mitigate generation of suspended dust.
- v. The company should make the arrangement for control of noise from the drilling activity. Acoustic enclosure should be provided to DG sets and proper stack height should be provided as per CPCB guidelines.
- vi. Total water requirement should not exceed 20 m³/day/well and prior permission should be obtained from the concerned agency.
- vii. The company should construct the garland drain all around the drilling site to prevent runoff of any oil containing waste into the nearby water bodies. Separate drainage system should be created for oil contaminated and non-oil contaminated. Effluent should be properly treated and treated wastewater should conform to CPCB standards.
- viii. Drilling wastewater including drill cuttings wash water should be collected in disposal pit lined with HDPE lining evaporated or treated and should comply with the notified standards for on-shore disposal. The membership of common TSDF should be obtained for the disposal of drill cuttings and hazardous waste. Otherwise, secured land fill should be created at the site as per the design approved by the CPCB and obtain authorization from the SPCB. Copy of

authorization or membership of TSDF should be submitted to Ministry's Regional Office at Bhopal.

- ix. Good sanitation facility should be provided at the drilling site. Domestic sewage should be disposed off through septic tank/ soak pit.
- x. Oil spillage prevention scheme should be prepared. In case of oil spillage/contamination, action plan should be prepared to clean the site by adopting proven technology. The recyclable waste (oily sludge) and spent oil should be disposed of to the authorized recyclers.
- xi. The company should comply with the guidelines for disposal of solid waste, drill cutting and drilling fluids for onshore drilling operation notified vide GSR.546(E) dated 30th August, 2005.
- xii. The Company should take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. Possibility of using ground flare should be explored. At the place of ground flaring, the overhead flaring stack with knockout drums should be installed to minimize gaseous emissions during operation.
- xiii. The company should develop a contingency plan for H₂S release including all necessary aspects from evacuation to resumption of normal operations. The workers should be provided with personal H₂S detectors in locations of high risk of exposure along with self containing breathing apparatus.
- xiv. The Company should carry out long term subsidence study by collecting base line data before initiating drilling operation till the project lasts. The data so collected should be submitted six monthly to the Ministry and its Regional Office at Bhopal.
- xv. Blow Out Preventer (BOP) system should be installed to prevent well blowouts during drilling operations. BOP measures during drilling should focus on maintaining well bore hydrostatic pressure by proper pre-well planning and drilling fluid logging etc.
- xvi. Emergency Response Plan (ERP) should be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- xvii. The company should take measures after completion of drilling process by well plugging and secured enclosures, decommissioning of rig upon abandonment of the well and drilling site should be restored to the original condition. In the event that no economic quantity of hydrocarbon is found a full abandonment plan should be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations.
- xviii. Occupational health surveillance of the workers should be carried out as per the prevailing Acts and Rules.
- xix. In case the commercial viability of the project is established, the Company should prepare a detailed plan for development of oil and gas fields and obtain fresh environmental clearance from the Ministry.

- xx. Restoration of the project site should be carried out satisfactorily and report should be sent to the Ministry's Regional Office at Bhopal.
- xxi. Oil content in the drill cuttings should be monitored by some Authorized agency and report should be sent to the Ministry's Regional Office at Bhopal.
- xxii. Under Corporate Social Responsibility (CSR), sufficient budgetary provision should be made for health improvement, education, water and electricity supply etc. in and around the project.
- xxiii. Company should have own Environment Management Cell having qualified persons with proper background.
- xxiv. Company should prepare and circulate the environmental policy.
- xxv. Company should prepare operating manual in respect of all activities. It should cover all safety & environment related issues and system. Measures to be taken for protection. One set of environmental manual should be made available at the drilling site/ project site. Awareness should be created at each level of the management. All the schedules and results of environmental monitoring should be available at the project site office.

2.2.16. Integrated Steel Plant (2.0 MTPA) alongwith Coal based Power Plant (2 x250 MW) at Village Hijalgarh, Mouja, PS Jamuria, District Burdwan, West Bengal **by M/s Rashmi Cement Ltd. - regarding EC**

The Committee noted that the proposal is incomplete for want of coal linkage, iron ore linkage etc. and deferred the proposal.

2.2.17. Expansion of Integrated Cement Plant (Clinker 3.6 to 7.2 MTPA; Cement 5.0 to 10.0 MTPA) by installation of Line -II at Village Bharauli and Itahara, Tehsil Maihar, District Satna in Madhya Pradesh **by M/s Reliance Cementation Pvt. Limited- regarding TORs**

The project authorities and their consultant, M/s Vimta Labs, Hyderabad 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. All the Cement Plants (≥ 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 Reliance Cement Company Private Limited have proposed for expansion of Integrated Cement Plant (Clinker 3.6 to 7.2 MTPA; Cement from 5.0 to 10.0 MTPA) by installation of Line-II at Village Bharauli and Itahara, Tehsil Maihar, District Satna in Madhya Pradesh. Total project area is 166 ha. And expansion would be done within the existing plant premises. Greenbelt will be developed in an area of 55 Ha (i.e. 33 %). There is no National Park/Wildlife Sanctuary/Biosphere Reserve within 10 km radius of the project site and River Tamas flows at a distance of 0.6 km. The total project cost of

proposed expansion is Rs.1, 663 Crores. The capital cost towards EMP will be about Rs 135 Crores and the recurring cost will be about Rs 5 crores annually.

The existing and proposed project configuration is given below:

Category	Granted capacity (Line - I)	Proposed Capacity (Line - II)	Capacity after Installation of Line II
Clinker	3.6 MTPA	3.6 MTPA	7.2 MTPA
Cement	5.0 MTPA	5.0 MTPA	10.0 MTPA
CPP	75 MW	Nil	75 MW
Sadhera Limestone Mine (ML Area: 539.561Ha)	3.5 MTPA	Nil	3.5 MTPA

Limestone, fly ash, Coal, Gypsum and Laterite are the raw materials that will be used. The additional power requirement of 60 MW will be sourced from the MPSEB. All major sources of air pollution (Kiln, Raw mill, Coal mill, Cement Grinding and transportation) of proposed Line II will be provided with Bag Houses, Bag filters, ESPs to maintain the PM emission level within the prescribed limits. Water requirement for the proposed Line II will be 1,350 KLD and will be sourced from ground water. Permission for ground water withdrawal was obtained from Central Ground Water Authority (CGWA) vide their letter no.21-4 (53)/NCR/CGWA/2009-692 dated 23.09.09. No industrial wastewater will be generated from the Cement Plant. Domestic wastewater generated from Cement plant / Colony will be treated in STP and treated water will be used for green belt development / Horticulture activities. Rain water harvesting will be practiced at plant and colony area. No solid waste will be generated from the cement manufacturing process. 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 within the plant premises.

The committee noted that environmental clearance for the existing integrated cement plant was accorded on 23.3.2011 and the plant is yet to be commissioned. The proponent shall submit one month data of the existing operated unit at the time of obtaining environmental clearance for the proposed expansion.

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. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
4. 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.

5. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
6. 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)
7. A line diagram/flow sheet for the process and EMP
8. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
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. Break up of small, medium and large farmers from whom the land is being acquired. If small farmers are involved, a detailed R&R plan.
12. 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.
13. 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.
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. 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 I30-10500 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.).
22. 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 SiO₂, Al₂O₃, MgO, MnO, K₂O, CaO, FeO, Fe₂O₃, P₂O₅, H₂O, CO₂.
 23. 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.
 24. 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.
 25. Manufacturing process details for all the cement plant, captive power plant and mine should be included.
 26. Possibility of installation of WHRB will be explored and details included
 27. Mass balance for the raw material and products should be included.
 28. Energy balance data for all the components including proposed power plant should be incorporated.
 29. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
 30. 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.
 31. 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 30th May, 2008.
 32. Vehicular pollution control and its management plan should be submitted.
 33. 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.
 34. 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.
 35. 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.
 36. 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.
 37. Air quality modelling for all the plants proposed including mine for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm³ should be included. Cumulative impacts of cement plant, Captive Power Plant and mines located at a distance of 2.0 km on the ambient air quality shall be assessed.
 38. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be included.
 39. Ambient air quality monitoring 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.
40. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
 41. One season data for gaseous emissions other than monsoon season is necessary.
 42. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
 43. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used along with a Piper and Piper Duro-V diagram. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.
 44. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
 45. Ground water modelling showing the pathways of the pollutants should be included
 46. Column leachate study for all types of stockpiles or waste disposal sites, at 20 °C-50 °C should be conducted and included.
 47. 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.
 48. 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.

49. A note on the impact of drawl of water on the nearby River during lean season.
50. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
51. 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.
52. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
53. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
54. 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.
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. 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.
58. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
59. 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.
60. 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.
61. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
62. 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.
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 & damage control needs to be addressed and included. Landslide hazard map and mitigation plan, Earthquake history and management plan should be submitted.
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) Action plan for the implementation of OHS standards as per OSHAS/USEPA.
 - e) Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
66. Plan for the implementation of the recommendations made for the cement plant in the CREP guidelines must be prepared.
67. Corporate Environment Policy
- i. 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.
 - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
 - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
 - iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
68. 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.
69. A note on identification and implementation of Carbon Credit project should be included.
70. Total capital cost and recurring cost/annum for environmental pollution control measures.
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 with financial budget for complying with the commitments made.
72. 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-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 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 along with one month data generation on AAQ for kiln-I after its operation.

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

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

The proponent requested to defer the proposal for next meeting and was agreed by the Committee.

2.2.19. Integrated Steel Plant (0.6 MTPA) & 130 MW Power Plant near Hampaptnam Village Hagaribommana Halli Taluk, Bellary District, by M/s RBSSN Ferrous Industries 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. 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 RBSSN Ferrous Industries Pvt. Ltd. have proposed for Integrated Steel Plant (0.6 MTPA) & CPP (130 MW) near Hampapatnam Village Hagaribommanahalli Taluk, Bellary District, Karnataka. The total project area is 531.22 acres of which 175.96 acres is acquired and greenbelt will be developed in 175.4 acres. No national park/wild life sanctuary/ecologically sensitive area is located within 10 km radius. Nandi Banda RF is at one corner adjacent to SE boundary of the project site. Tungabhadra Reservoir is at a distance of 3.5 km from the project site. Total cost of the project is Rs. 1,664 Crores. Rs. 130 crores and Rs. 13 crores are earmarked towards capital cost and recurring cost per annum against pollution control measures.

The proposed facilities and production capacities are as follows:

Unit	Capacity
Iron Ore Beneficiation Plant	1.20 MTPA
Iron Ore Pellet Plant	1.20 MTPA
DRI Plant	0.5 MTPA
Electric Steel melting Billet Cast	0.6 MTPA

WHRB	30 MW
CFBC 2x 50 MW	100MW
Total	130 MW

Low grade Iron ore Fines, Non Coking Coal for Steel Plant (Indian Coal), Coal for Power Plant (Imported Indonesian coal), Bentonite, Dolomite, Lime & Calcined Dolomite and Steel scrap are the raw materials that will be used. Air Pollution Control Systems like ESP with 99.5 % SPM removal efficiency and Bag Filters as per CPCB / KSPCB norms will be provided for control of PM. Chimney of required height as per CPCB norms will be attached to Pellet Plant, DRI Kilns, Electric Steel making, Power Plant, Emission from DG sets: 2 x 2000 KVA, at various emission exhaust points. Fugitive emission control as per CPCB guidelines will be implemented in handling (storage and transportation) materials

The total water requirement of 18 MLD will be sourced from Tungabhadra River. "Zero Discharge Principle" will be strictly followed. Effluent from DM Plant will be Neutralized and lead to Guard Pond. Maximum "COC" will be adopted to reduce fresh water use. Boiler Blow Down and Cooling Tower Blow Down will be collected in Guard Pond. Domestic effluent will be treated in ETP and reused for gardening. Treated Trade waste water will be used for green belt development. Industrial wastewater after treatment will be collected in Guard Pond and used for green belt development. Coal Ash from CFBC boiler, will be off loaded to cement manufacturing units. MOU will be entered into with cement manufacturers. All hazardous waste will be disposed to authorized dealers as per authorization under Hazardous Waste Management Rules.

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 use/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. 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.
11. 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.
12. Details and classification of total land (identified and acquired) should be included.
13. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
14. Permission from the tribals, if tribal land has also to be acquired along with details of the compensation plan.
15. Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department. .
16. A list of industries containing name and type in 25 km radius should be incorporated.
17. Residential colony should be located in upwind direction.
18. 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".
19. 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..
20. 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 SiO₂, Al₂O₃, MgO, MnO, K₂O, CaO, FeO, Fe₂O₃, P₂O₅, H₂O, CO₂.
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. Action plan for excavation and muck disposal during construction phase.
23. 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.
24. Manufacturing process details for all the plants should be included.
25. Mass balance for the raw material and products should be included.
26. Energy balance data for all the components of steel plant 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. 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.
29. 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.
30. 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.
31. 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.
32. 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.
33. 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/Nm³.
34. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be included.
35. Ambient air quality monitoring modelling 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.
36. A plan for the utilization of waste/fuel gases in the WHRB for generating power have to be set out.

37. 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.
38. One season data for gaseous emissions other than monsoon season is necessary.
39. 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 30th May, 2008.
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. Information regarding surface hydrology and water regime should 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 modelling 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 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.
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. Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from any other source should be included.

54. 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.
55. 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.
56. 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.
57. 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.
58. 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.
59. 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.
60. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
61. 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.
62. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
63. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
64. 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.
65. 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.

66. 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.
67. 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.
68. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines must be prepared.
69. 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.
70. 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.
71. A note on identification and implementation of Carbon Credit project should be included.
72. 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 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.

2.2.20. Cement manufacturing unit of capacity: 500 TPD (Clinker: 250 TPD & Cement: 250 TPD) at village Gauripur, Assam by M/s Maa Durga Steel – **regarding TORs**

The Committee noted that the consultant engaged by the proponent is not accredited by QCI/NABET and deferred the proposal.

2.2.21. Proposed expansion of manufacturing of Asbestos Cement Sheets and Accessories from existing capacity of 78000 TPA to 1,20,000 TPA at Village Velemala, RC Puram Mandal, Medak District, Andhra Pradesh by M/s Visaka Industries Limited – **regarding TORs**

The Committee noted that the consultant engaged by the proponent is not accredited by QCI/NABET and deferred the proposal.

2.2.22. Expansion of Integrated Cement Project-clinker, Cement, CTPP, D.G. Set & WHRB at Villages Sangaria, Borakherid, Peearkhera and Rasulpura, Tehsil Nimbahera, District: Chittorgarh, Rajasthan by M/s Wonder Cement Ltd. - **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. All the Cement Plants (≥ 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. Wonder Cement Ltd. has proposed for expansion of Integrated Cement Plant – Clinker (from 2.0 to 6.0 MTPA), Cement (from 3.25 to 8.0 MTPA), CPP (from 40 to 80 MW), D.G. Set (from 2.0 to 7.0 MW) & WHRB (2X9 MW) at Villages: Sangaria, Borakherid, Peearkhera and Rasulpura, Tehsil: Nimbahera, District: Chittorgarh, Rajasthan. Total Plant area including colony and approach road is 191.064 ha. and the proposed expansion will be carried within the existing plant premises. Out of the total plant and colony area of 191.064 Ha, 71.31 ha (i.e. 37 %) has been proposed to be developed under green belt / plantation. 22.33 ha area has already been covered under green belt / plantation. No National Park, Wildlife Sanctuary, Biosphere Reserve falls within 10 km radius of the project site. Three Protected Forests and one Reserved Forest fall within 10 km radius of the project site. Murliya Dam, Nimbahera River, Kadmali River, Gambhiri Reservoir, Uncha Talav and Gambhiri River are within 10 km radius of the project site. Total cost of the project is Rs. 2,625 Crores. Capital cost for Environmental Protection Measures is Rs. 210 Crores and Recurring Cost is Rs. 2.1 Crores/annum. The existing and proposed project configuration is given below:

Units	Existing Capacity (Line I)	Proposed Expansion Capacity		Total Capacity after Expansion
		Enhancement in capacity (Line I-Existing Line)	New Line II	
Clinker (MTPA)	2.0	1.0	3.0	6.0
Cement (MTPA)	3.25	0.75	4.0	8.0
Captive Thermal Power Plant (MW)	40.0	--	40.0	80.0
WHRB (MW)	--	1X9	1X9	18.0
D.G. Set (MW)	2.0	--	5.0	7.0

The cement plant will be based on the dry process technology for cement manufacturing with pre-heating and pre-calciner technology. Limestone, Red Ochre, Laterite, Gypsum, Fly ash and Coal are the raw materials that will be used. Limestone will be sourced from the captive limestone mine located in adjoining villages Bhatkotri, Phalwa, Lasrawan, Rasulpur. Gypsum and fly ash will be sourced Nagpur/Bikaner (Rajasthan) and own CPP/Kota TPP/nearby TPP respectively. Existing Power requirement is 37.09 MW and additional power required for the proposed expansion

project will be 56.51 MW, which will be sourced from the Captive Power Plant (40 MW), WHRB (2X9 MW) and AVVNL (Ajmer Vidyut Vitran Nigam Ltd.). Additional D.G Set of 5 MW is proposed for emergency.

All major sources of air pollution of cement plant will be provided with Bag Houses/Bag filters, ESPs to maintain the PM emission level below 50 mg/Nm³. Particulate emissions of CPP (WHRB) will be controlled with ESPs to maintain the PM emission level below 100 mg/Nm³. All material transfer points will be provided with bag filters to entrap the emissions at the source itself. Clinker & fly ash will be stored in silo and gypsum in covered yard. Total fresh water requirement is 6,244 KLD (Existing 2,571 KLD & Additional 3,673 KLD), which will be met from the ground water, mine sump water & Gambhiri Reservoir. No industrial wastewater will be generated in the Cement Plant. Domestic wastewater generated from Cement Plant/Colony will be treated in the existing STP. The treated water will be utilized for greenbelt development/horticulture activities. Rain water harvesting is also proposed. No solid waste will be generated in cement manufacturing process. Fly ash from CPP will be utilized for manufacture of cement. 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 within the plant premises.

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. Copies of coal linkage documents
4. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
5. 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.
6. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
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. A line diagram/flow sheet for the process and EMP
9. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
10. 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.
11. 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.
12. Break up of small, medium and large farmers from whom the land is being acquired. If small farmers are involved, a detailed R&R plan.

13. 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.
14. 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.
15. Details and classification of total land (identified and acquired) should be included.
16. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
17. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
18. 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.
19. A list of industries containing name and type in 10 km radius shall be incorporated.
20. Residential colony should be located in upwind direction.
21. 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".
22. 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.).
23. 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 SiO₂, Al₂O₃, MgO, MnO, K₂O, CaO, FeO, Fe₂O₃, P₂O₅, H₂O, CO₂.
24. 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.
25. 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.
26. Manufacturing process details for all the cement plant, captive power plant and mine should be included.
27. Possibility of installation of WHRB will be explored and details included
28. Mass balance for the raw material and products should be included.
29. Energy balance data for all the components including proposed power plant should be incorporated.
30. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.

31. 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.
32. 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 30th May, 2008.
33. Vehicular pollution control and its management plan should be submitted.
34. 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.
35. 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.
36. 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.
37. 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.
38. 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/Nm³ should be included. Cumulative impacts of cement plant, Captive Power Plant and mines located at a distance of 2.0 km on the ambient air quality shall be assessed.
39. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be included.
40. Ambient air quality monitoring 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.
41. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.

42. One season data for gaseous emissions other than monsoon season is necessary.
43. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
44. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used along with a Piper and Piper Duro-V diagram. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.
45. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
46. Ground water modelling showing the pathways of the pollutants should be included
47. Column leachate study for all types of stockpiles or waste disposal sites, at 20 °C-50 °C should be conducted and included.
48. 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.
49. 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.
50. A note on the impact of drawl of water on the nearby River during lean season.
51. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
52. 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.
53. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
54. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
55. 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.
56. 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.
57. 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.
58. 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.

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 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. 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.
62. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
63. 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.
64. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
65. 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.
66. 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) Action plan for the implementation of OHS standards as per OSHAS/USEPA.
 - e) Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
67. Plan for the implementation of the recommendations made for the cement plant in the CREP guidelines must be prepared.
68. Corporate Environment Policy
 - i. 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.
 - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
 - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
 - iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or

- shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
69. 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.
 70. A note on identification and implementation of Carbon Credit project should be included.
 71. Total capital cost and recurring cost/annum for environmental pollution control measures.
 72. 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.
 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.

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 Rajasthan 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.

2.3.0 Reconsideration

- 2.3.1. Ferro Alloy Plant of 21,859 TPA by installing 6 MVA (Phase-I) and 9 MVA (Phase-II) submerged arc furnace at Village Ghutgoria, P.S: Barjora, District Bankura in West Bengal by **M/s Samarpan Steel Pvt. Limited- regarding reconsideration for EC.**

The above proposal was considered in the 37th Meeting of the Expert Appraisal Committee (Industry-1) held during 14th&15thJune, 2012.The Committee after detailed deliberations sought the following information for reconsideration without calling the project proponent:

- Impact of raw materials transportation and management plan to minimize the same
- Colored satellite image of the project site
- Break up of small, medium and large farmers from whom the land was acquired. If small farmers are involved, a detailed R&R plan.
- Source of coal and chemical & trace element analysis

- Grain size analysis of quartzite
- Revised OHS plan
- Certificate from local DFO regarding the elephant corridor
- Trace element management plan

The above information was submitted by the proponent to MoEF and all the Committee members. The Committee found the information submitted to be adequate and suggested to stipulate following specific conditions alongwith 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/Nm³.
3. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th 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.
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. Leachate 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 total water requirement shall not exceed 80 m³/day. '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). The Si-Mn 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 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 17th April, 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 shall be earmarked towards the Enterprise Social Commitment based on Public Hearing Issues and item-wise details along with time bound action plan shall 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.
- 2.3.2. Setting up of 0.3 MTPA Non-recovery Coke Oven Plant along with 25 MW waste heat recovery Captive Power Plant at Blast Furnace Unit, Plot No. 456 & 457, Baikampady Industrial Area, Panambur, District Mangalore, Karnataka State by **M/s KIOCL Limited – regarding reconsideration for EC.**

The above proposal was considered in the 34th Meeting of the Expert Appraisal Committee (Industry-1) held during 29th & 30th March, 2012. The Committee after detailed deliberations deferred the proposal and sought the following information for reconsideration:

- Details regarding Coal linkage documents
- Chemical and Trace element analysis of Raw Materials
- Revised layout plan to scale using AutoCAD
- Data on ground water and surface water quality.
- Revised rain water harvesting plan with increased storage capacity of the reservoir.

The above information was submitted by the proponent to MoEF and all the Committee members. The project proponent and their consultant, M/s KRS Enterprises, Bangalore also gave a presentation before the Committee. The Committee found the information submitted to be adequate and suggested to stipulate following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

1. Measures shall be taken to mitigate PM levels in the ambient air. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks shall be provided.
2. Adequate air pollution control systems viz. dust catchers or cyclones, Multi stage scrubber, bag filters etc. to control particulate emissions within the prescribed limits from coke oven shall be provided. Carbon mono-oxide (CO) shall also be monitored along with other parameters and standards notified under E (P) Act shall be followed. The reports shall be submitted to the Ministry's Regional Office at the Bangalore, CPCB and SPCB.
3. Multi stage scrubber shall be installed to control gaseous and dust emission from the coke oven stack. Measures shall be taken to prevent leakages from the coke oven plant.
4. The prescribed emission standards for coke oven plants, as notified vide notification no. GSR 46 (E) dated 3rd February, 2006 and subsequently amended shall be complied with.
5. In-plant control measures like bag filters, de-dusting and dust suppression system shall be provided to control fugitive emissions from all the vulnerable sources. Dust extraction and suppression system shall be provided at all the transfer points, coal handling plant and coke sorting plant of coke oven plant. Bag filters shall be provided to hoods and dust collectors to coal and coke handling to control dust emissions. Water sprinkling system shall be provided to control secondary fugitive dust emissions generated during screening, loading, unloading, handling and storage of raw materials etc.
6. Secondary fugitive emissions shall be controlled within the prescribed limits, regularly monitored and records maintained. Guidelines / Code of Practice issued by the CPCB in this regard shall be followed.
7. Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product. Efforts shall also 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 shall be transported in the closed containers only and shall not be overloaded. Vehicular emissions shall be regularly monitored and records kept.
8. Total requirement of the water shall not exceed 193 m³/hr. All the treated wastewater shall be recycled for dust suppression and green belt development. Domestic wastewater shall be treated in septic tank followed by soak pit and used for green belt development. Zero effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises.
9. 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.

10. Waste from the hard coke unit, shall be provided to the briquette manufacturing units. Coal and coke fines shall be recycled and reused in the process. The bag filter dust shall be used for land filling. The waste oil shall be properly disposed off as per the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008.
11. As proposed, green belt shall be developed in 33% of plant area within and around the project site to mitigate the impact of fugitive emissions as per the CPCB guidelines in consultation with local DFO.
12. The recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Coke Oven Plants shall be implemented.
13. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office at Bangalore, SPCB and CPCB within 3 months of issue of environment clearance letter.
14. 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 Bangalore. Implementation of such program should be ensured accordingly in a time bound manner.

The company shall provide housing for construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

- 2.3.3. Expansion of Ferro Alloy Plant from 27 TPD to 54 TPD by installation of 1X6 MVA Submerged Arc Furnace at Sarandi Industrial Growth Centre, Tehsil Waraseoni, District Balaghat in Madhya Pradesh by **M/s Ramnik Power & Alloys (P) Limited - regarding reconsideration for EC.**

The proposal for expansion of Ferro Alloy Plant from 27 TPD to 54 TPD by installation of 1X6 MVA Submerged Arc Furnace at Sarandi Industrial Growth Centre, Tehsil Waraseoni, District Balaghat in Madhya Pradesh by M/s Ramnik Power & Alloys (P) Limited was recommended for environmental clearance by the EAC (Industry-1) in its 35th meeting held during 26th & 27th April, 2012 subject to stipulation of environmental safeguards. The committee at that time noted that, SPCB has issued closure notice to the unit for operating without environmental clearance and the Hon'ble High Court of M.P has stayed the said notice in the WP No. 20579/2011.

MoEF issued a show cause notice on 16.7.2012 to the unit for operating the existing 27 TPD Ferro alloy plant without environmental clearance. In response to the said notice, the proponent replied that due to lack of knowledge, application was made directly to MPPCB for Consent for the Ferro alloy unit (existing), which happened unknowingly and MPPCB has issued CTE and CTO for the existing unit considering the capacity of furnace as less than 5 TPH (item no. 5 (k) of EIA Notification, 2006, which was deleted subsequently). Consent to Operate (CTO) was issued on 22.4.2009. EC for 6 MW biomass based power plant was accorded by the SEIAA on 1.5.2009 under the EIA Notification, 2006 which shows the company's lawful intention.

On 17.6.2010, application was submitted to MPPCB for capacity expansion of the Ferro alloy unit from 27 TPD to 54 TPD. On 13.1.2011, MPPCB intimated regarding the requirement of environmental clearance for the existing and the proposed project. Accordingly, on 22.2.2011, application was submitted to MoEF for environmental clearance including existing and proposed quantities and it was presumed that, single application will suffice the requirement for environmental clearance to both existing and proposed capacities. The details of existing as well as proposed project were given in the EIA report, ToR and final presentation. All the conditions stipulated by MPPCB for the existing Ferro alloy unit have been implemented effectively. A resolution passed by the Board of Directors was submitted expressing their apology for the violation, undertaking that no violations will be committed in the future and it is the responsibility of Directors to follow all the applicable rules for environment protection. MoEF has decided that the matter be placed before EAC to consider the proposal for environmental clearance to existing as well as the proposed expansion units.

The project authorities and their environmental consultant, M/s Creative Enviro Services, Bhopal gave a detailed presentation on the salient features of the project and existing & proposed environmental protection measures. Following are the existing units:

SI. No.	UNIT	CAPACITY
1	Ferro Alloys Plant 1x6 MVA SAF	27 TPD of Ferro Manganese and Silico Manganese
2	Captive Power plant Biomass Based	6 MW

Following units will be installed:

SI. No.	UNIT	CAPACITY
1	Ferro Alloys Plant 1x6 MVA SAF	27 TPD of Ferro Manganese and Silico Manganese

The total project area is 10 acres of which the existing project is in an area is 6.05 acres and the proposed expansion will be carried out in remaining 3.95 acres. The existing green belt area is 1 acre and an additional green belt of 2.5 acres will be developed in the proposed expansion. The project site falls under Seismic Zone III. No National Park / Wildlife Sanctuary is located within 10 km radius of the project site. One reserve forest, G F Sonawani is located at 6 km away from the project site. Chandan River is flowing at around 0.2 km from the project site. Waraseoni town is around 5 km from the project site. Total cost of the project is Rs 48.83 Crores of which the existing ferro alloy unit cost is Rs. 36.83 Crores and the cost of proposed expansion is Rs. 12 Crores. The cost of pollution control equipment of the existing Ferro alloy unit is Rs. 2.5 Crores and for the proposed expansion is Rs. 1.07 Crores.

Manganese ore, Dolomite, Pet coke and Carbon paste are used as the raw materials. The total power requirement for the ferro alloy units is 12 MW, of which 5.2 MW will be sourced through captive power plant and 4.2 MW will be sourced from the Madhya Pradesh State Electricity Board. Raw materials and products will be transported

in covered trucks. There will be emissions during handling of raw materials and products, which 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 of 30 m. Ambient air quality monitoring was carried within the study area for PM₁₀, PM_{2.5}, SO₂ and NO_x. The maximum values of these parameters are 92.0 µg/m³, 18.4 µg/m³, 8.2 µg/m³ and 13.2 µg/m³ respectively. The predicted maximum incremental ground level concentrations (GLCs) due to the proposed expansion project are 2.2 µg/m³, 9.87 µg/m³ and 22.62 µg/m³ for PM, SO₂ and NO_x respectively. The resultant concentrations of these parameters are within the prescribed NAAQS.

Total water requirement for the existing and proposed ferro alloys plant including domestic requirement is 74 m³/d, which will be met through ground water source. The required permission has been obtained from CGWB. Closed circuit cooling system has been installed in the existing ferro alloy unit and similar unit is proposed in the expansion unit. Hence, there will be no effluent generation from the process & cooling. Sewage will be treated in septic tank followed by soak pit. Fe-Mn slag is used in the manufacture of Si-Mn. Si-Mn slag has been used for filling low lying areas and for roads. It is proposed to use the Si-Mn slag for boundary wall construction, roads and as filler material for fly ash bricks. Waste oil shall be given to recyclers authorized by the SPCB.

The public hearing was exempted for the proposed project as per Para 7(i) III Stage (3) of EIA Notification 2006 due to the location of the project in Notified Sarandi Industrial Growth Centre as certified by Directorate of Industries, Govt. of Madhya Pradesh .

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 for the existing and proposed ferro alloys plant:

1. The environmental clearance is subject to the outcome of Writ Petition No. 20579 of 2011 in the matter of M/s Ramnik Power & Alloys (P) Ltd. vs. Union of India & Ors. in the Hon'ble High Court of Madhya Pradesh.
2. No charcoal shall be used as fuel. Pet coke shall be used as fuel instead of charcoal from unknown sources.
3. 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/Nm³.
4. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
5. 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.

6. 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. Leachate study for the effluent generated and analysis should also be regularly carried out and report submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB.
 7. The total water requirement shall not exceed 74 m³/day. 'Zero' effluent discharge shall be strictly followed and no wastewater should be discharged outside the premises.
 8. 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.
 9. Slag produced in Ferro Manganese (Fe-Mn) production shall be used in manufacture of Silico Manganese (Si-Mn). The Si-Mn slag shall be used in the preparation of building materials.
 10. No Ferro Chrome shall be manufactured without prior approval from the Ministry of Environment & Forests.
 11. Risk and Disaster Management Plan along with the mitigation measures should 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.
 12. 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.
 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 Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.
- 2.3.4. Integrated Aluminium Complex (Aluminium Smelter, 0.175 MTPA) and Captive Power Plant (4x120 MW) at Villages Markata, Kadua, Mahupal, Bhagirathpur Sajan, Samatangi, Manjakana, Malapura, Balabhadrapurpatna, Analabareni, Tehsil Kamakhyanagar, District Dhenkanal in Orissa **by M/s RSB MetalTech Pvt. Limited - regarding reconsideration for EC.**

The above proposal was considered in the 35th Meeting of the Expert Appraisal Committee (Industry-1) held during 26th & 27th April, 2012. The Committee recommended the project for environmental clearance subject to submission of revised layout plan and land requirement after excluding the downstream facilities since the downstream facilities are going to be part of SEZ, R & R plan submitted to the State Govt., Management plan for SO_x and NO_x reduction and the stipulation of specific conditions along with other environmental conditions.

The above information was submitted by the proponent to MoEF and all the Committee members. The Committee found the information submitted to be adequate and suggested to stipulate the same specific conditions as stipulated by the EAC (Industry-1) in its 35th meeting alongwith other environmental conditions while considering for accord of environmental clearance.

2.3.5. Manufacturing of Industrial Coating Chemicals, Ethyl Acetate and Butyl Acetate at Plot no.(Focal Point) Plot no.D-24, Village & Tehsil Derabassi, District Mohali, Punjab by **M/s Varindera Organics Pvt. Ltd. (TOR to EC).**

Project proposal was considered in the 36th *Expert Appraisal Committee (Industry-2) meeting held during 11th – 12th June, 2012* and the Committee desired following information:

1. Distance of reserve forest from the project site.
2. Process emissions details to be submitted.
3. Quantity of industrial effluent generation including process effluent and mode of treatment.
4. Details of hazardous waste generation.
5. Conduct ambient air quality monitoring including VOCs for one month.
6. Construction status of the unit from Regional Office of MoEF.

Ministry's regional office vide letter dated 13th August, 2012 has confirmed that unit has initiated construction and submitted the supporting photographs. Therefore unit has violated the EIA Notification, 2006. The project proposal has been considered in this meeting for appraisal as per the Ministry's O.M. dated 16th 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.

Project proponent vide letter dated 8th September, 2012 submitted above mentioned additional information. Bir Pir reserve forest, Kholhai Raitan reserve forest and Dariya reserve forest are located at 4 Km, 9 Km and 8.5 Km respectively from the project site. Effluent generation will be 8 m³/day and treated in ETP based on SAFF reactor followed by dual media and activated carbon filters. Process spent and spent activated carbon will be sent to TSDF site. Waste oil will be sent to authorized recycler/re-processor.

Public hearing/consultation was exempted as project being located in notified industrial focal point at Dera Bassi as per Section 7 (i), III Stage (3), Para (i)(b) of EIA Notification 2006

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

1. Permission and recommendations of the State Forest Department shall be obtained regarding likely impact of the proposed plant on the surrounding reserved forests viz. Bir Pir reserve forest, Kholhai Raitan reserve forest and Dariya reserve forest and implemented.

2. Bag filter alongwith stack of adequate height should be provided to saw dust/pet coke fired boiler.
3. In plant, control measures for checking fugitive emissions from all the vulnerable sources should be provided. Fugitive emissions should be controlled by providing closed storage, closed handling & conveyance of chemicals/materials, multi cyclone separator and water sprinkling system. Dust suppression system including water sprinkling system should be provided at loading and unloading areas to control dust emissions. Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored and records should be maintained. The emissions should conform to the limits imposed by PPCB.
4. Total water requirement from small industries & export corporation Ltd. water supply should not exceed 12 m³/day and prior permission should be obtained from the concerned Authority.
5. As proposed, industrial wastewater should be treated in ETP based on SAFF reactor followed by dual media and activated carbon filters. Treated water should be recycled/reused within factory premises.
6. Solvent management should be as follows :
 - i. Reactor should be connected to chilled brine condenser system
 - ii. Reactor and solvent handling pump should have mechanical seals to prevent leakages.
 - iii. The condensers should be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
 - iv. Solvents should be stored in a separate space specified with all safety measures.
 - v. Proper earthing should be provided in all the electrical equipment wherever solvent handling is done.
 - vi. Entire plant should be flame proof. The solvent storage tanks should be provided with breather valve to prevent losses.
7. Hazardous chemicals should be stored in tanks in tank farms, drums, carboys etc. Flame arresters should be provided on tank farm. Solvent transfer should be by pumps.
8. Training should be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees should be undertaken on regular basis. Training to all employees on handling of chemicals should be imparted. Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
9. Green belt should be developed in 33 % of the plant area. Selection of plant species should be as per the CPCB guidelines.
10. The unit shall carry out risk assessment within three months and report submitted to the Ministry's regional office. The company should comply with the recommendations made in the risk assessment report.

2.3.6. Bulk Drug unit (360 MTPA) at Village Anantraram, Mandal Jinnaram, District Medak, Andhra Pradesh **by M/s SKR Chemicals (TOR to EC).**

Project proposal was considered in the 31st *Expert Appraisal Committee (Industry-2) meeting held during 12th–13th January, 2012* and the Committee desired following information:

- i) Risk assessment to be comprehensive covering scenario as :
 - Vapour cloud explosion with acetone.
 - Transportation, storage & handling of MDC.

Project proponent vide letter dated 8th March, 2012 and received in the Ministry on 26th April, 2012 submitted above mentioned additional information.

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

- i) Multi-cyclone followed by bag filter should be provided to the boilers to control particulate emissions within permissible limit. The gaseous emissions should be dispersed through stack of adequate height as per CPCB/APPCB guidelines.
- ii) The levels of PM₁₀, SO₂, NO_x, VOC, NH₃ and HCl should be monitored in ambient air.
- iii) Two stage chilled water/caustic scrubber should be provided to process vents to control HCl. Two stage scrubbers with caustic lye media solution should be provided to process vents to control SO₂. Two stage scrubbers with chilled water media shall be provided to process vents to control NH₃. 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 APPCB.
- v) Total fresh water requirement from ground water source should not exceed 86 m³/day and prior permission should be obtained from the CGWA/SGWA.
- vi) Trade effluent should be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD should be passed through stripper followed by MEE. Low TDS effluent stream should be treated in ETP and then passed through RO system. '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 should be sent to cement industries. ETP sludge, process inorganic & evaporation salt should be disposed off to the TSDF. The fly 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 APPCB 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) 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.
- 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.
- xiii) Green belt should be developed in 2693 m² out of total land 7611 m².
- xiv) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

2.3.7. Expansion of Specialty Chemicals Manufacturing Unit at Plot No. 166/1-3,171/1, 172, 167, 168, Village Padana, Gandhidham, District Kutch, Gujarat **by M/s Kutch Chemicals (TOR to EC).**

Project proposal was considered in the 25th *Expert Appraisal Committee (Industry-2) meeting held during 28th–30th July, 2011* and the Committee desired following information:

1. A copy of 'environmental clearance', 'consent to establish and operate' and 'authorization' for the existing unit indicating various products being manufactured.
2. Details of show cause notice issued by the GPCB alongwith compliance report.
3. Source of raw materials.
4. Material safety data sheet for each chemical to be used in manufacturing process.
5. A note and commitment for following the published CPCB guidelines for vinyl Sulphone Industry.

Project proponent vide letter dated 2nd August, 2012 submitted the above mentioned additional information. Project proponent informed that the unit is engaged in manufacturing of organic /inorganic chemicals and established in 2004, which was prior to EIA Notification, 2006 came into force. Show cause notices issued by the GPCB on 18.10.2007, 04.09.2008, 19.09.2008, 11.12.2008 and 13.08.2010. Project proponent informed the committee about the corrective actions taken against the show cause notices. Unit has recently obtained CTE for additional inorganic products vide GPCB letter no. GPCB/CCA-Kutch-237(3)/GPCB ID 17979/93532 dated 23rd September, 2011, which is valid upto 07.04.2015. Unit will follow the CPCB guidelines for vinyl sulphone industry.

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

- i) Multi-cyclone followed by bag filter should be provided to the coal fired boiler to control particulate emissions within permissible limit. The gaseous emissions should be dispersed through stack of adequate height as per CPCB/GPCB guidelines.
- ii) The levels of PM₁₀, SO₂, NO_x, VOC, HCl and CO should 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 SO₂. Two stage scrubber with chilled water media shall be provided to process vents to control NH₃. 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 Gujarat Water Infrastructure Limited should not exceed 1520 m³/day and prior permission should be obtained from the concerned Authority.
- vi) Industrial effluent shall not exceed 336 m³/day. As proposed, Process effluent from vinyl sulphone after recovery of sodium sulphate shall be sent to incinerator. High TDS effluent stream should be passed through stripper followed by MEE. Condensate and low COD/Low TDS effluent stream should be treated in ETP. Treated water shall 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, high calorific value waste should be sent to cement industries. ETP sludge, process inorganic, evaporation salt and incinerator salt should be disposed off to the TSDF. The fly ash from boiler should be sold to brick manufacturers/cement industry.
- ix) Incinerator alongwith its pollution control device shall be designed as per CPCB guidelines.
- x) 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.
- 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.
- xv) As proposed, green belt should be developed in 33% of the total plant area.
- xvi) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- xvii) All the commitments made to the public during public hearing/public consultation meeting held on 1st February, 2011 should be satisfactorily implemented and adequate budget provision should be made accordingly.

2.3.8. Pesticide Manufacturing Unit at K-2/1/1, Additional MIDC, Taluka Mahal, District Raigad, Maharashtra **by M/s Astec Life Science Ltd. (TOR to EC).**

Project proposal was considered in the 36th *Expert Appraisal Committee (Industry-2) meeting held during 11th – 12th June, 2012* and the Committee desired following information:

1. VOC in the ambient air to be monitored.
2. Odour control scheme to be provided.
3. Effluent treatment scheme based on segregation of effluent into high TDS, high COD and low COD/TDS effluent streams.
4. Reassess hazardous waste generation and its management.
5. Details of incinerator.

Project proponent vide letter dated 29th August, 2012 submitted above mentioned additional information.

After detailed deliberations, the Committee found the submitted additional Information satisfactory and suggested to stipulate following specific conditions alongwith 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 3rd February, 2006 and amended time to time shall be followed by the unit.
- ii. Bag filter alongwith adequate stack height shall be provided to coal fired boiler to control the particulate matter emissions within 50 mg/m³.
- iii. Two stage scrubbing system shall be provided to process vent to control HCN emissions. The scrubbed water shall 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 shall be interlocked with the pollution control equipments so that in case of any increase in pollutants beyond permissible limits, plant shall be automatically stopped. Stack monitoring shall be done regularly and report shall be submitted to Maharashtra Pollution Control Board (MPCB) and the Ministry's regional office at Bhopal.
- iv. For further control of fugitive emissions, following steps shall be followed :
 1. Closed handling system shall be provided for chemicals.
 2. Reflux condenser shall be provided over reactor.
 3. System of leak detection and repair of pump/pipeline based on preventive maintenance.
 4. The acids shall be taken from storage tanks to reactors through closed pipeline. Storage tanks shall be vented through trap receiver and condenser operated on chilled water.

5. Cathodic protection shall be provided to the underground solvent storage tanks.
- v. A proper Leak Detection And Repair (LDAR) Program for pesticide industry shall be prepared and implemented as per CPCB guidelines. Focus shall be given for prevention of fugitive emissions for which preventive maintenance of pumps, valves, pipelines etc are required. Proper maintenance of mechanical seals of pumps and valves shall be given. A preventive maintenance schedule for each unit shall be prepared and adhered to.
- vi. Chilled brine circulation system shall be provided to condensate solvent vapors and reduce solvent losses. It shall be ensured that solvent recovery should not be less than 95%.
- vii. Total water requirement from MIDC water supply shall not exceed 134 m³/day and prior permission shall be obtained from the concerned Authority. No ground water shall be used.
- viii. As proposed, industrial effluent generation shall not exceed 137 m³/day. Effluent shall be segregated into High TDS and low COD/TDS effluent streams. High TDS effluent stream shall be treated through stripper followed by MEE. Condensate will be treated in secondary and tertiary treatment. Low COD/TDS effluent shall be treated in ETP (Physico-chemical treatment). Treated water shall be recycled/reused within the factory premises. 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 MPCB.
- ix. No effluent shall be discharged outside the premises and 'Zero' discharge concept shall be adopted.
- x. Fly ash shall be sent to brick manufacturers and tie-up to be made with brick-manufacturer.
- xi. ETP sludge, process waste & residues shall be sent to CHWTSDF.
- xii. Green belt shall be developed at least in 33 % of the plant area as per the CPCB guidelines in consultation with DFO. Thick greenbelt with suitable plant species shall be developed around the proposed pesticide unit to mitigate the odour problem. Selection of plant species shall be as per the CPCB guidelines.

2.4.0 Any Other

- 2.4.1. 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.

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.

2.4.2. Captive Power Plant (270 MW) at Hazira, District Surat, Gujarat by **M/s Essar Power (Hazira) Ltd (EPHL) - regarding amendment in EC.**

The above proposal was accorded environmental clearance by MoEF vide letter no. J-11011/714-B/2008-IA II (I), dated 5.7.2010. EPHL has informed MoEF that the CPP area was reduced from 25 ha to 12.9 ha. EPHL has proposed to construct the CPP in an area of 25 ha within the existing Essar Steel Complex. However, in order to conserve the resources and judicious use of the steel plant facilities (existing), the raw water will be sourced from reservoir of Essar Steel, installation of Gas Insulated Switch Yard instead of normal Air Insulated Switch Yard and proportionate reduction of green belt. Accordingly, the total project area for CPP is reduced from 25 ha to 12.9 ha.

The Committee recommended for the above reduction in project area of CPP.

2.4.3. Environmental clearance for setting up of 3,00,000 TPA non recovery type coke oven plant and cogeneration power plant of 22.5 MW in Sy. No. 212 A/z, 264 A/1, 265 and 271 in Kudithini Village, Bellary Tq. and District to **M/s Sathavahana Ispat Ltd. - regarding amendment in EC.**

The project authorities and their consultant, M/s Pragathi Labs and Consultants Pvt. Ltd., Secunderabad gave a detailed presentation on the salient features of the proposed enhancement of production capacity of Coke Oven Plant (non recovery type) from 0.3 MTPA to 0.4 MTPA and WHRB from 22.5 MW to 30 MW at Sy. No. 212 A/2z, 264 A/1, 265 and 271, Kudithini Village, Bellary Taluq and District, Karnataka. The proponent requested the proposed enhancement as an amendment to the EC given by the Govt. of Karnataka for the existing project on 6.8.2005. The Committee noted that the pollution clearance certificate given by the Govt. of Karnataka on 6.8.2005 cannot be equated to the environmental clearance accorded by MoEF/SEIAAs. Since, the proponent submitted Form-1 and a study report on the proposed enhancement/expansion, the Committee decided to prescribe ToRs for preparation of EIA/EMP report.

Coke oven plants ($\geq 2, 50,000$ TPA) are listed at S.No. 4(b) under category 'A' of the Schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF. The production capacity will be increased from 0.3 MTPA to 0.4 MTPA using the existing project facilities (6 batteries of 15 ovens) without any additional ovens and equipments. This will be achieved by efficient operation by reducing the cycle time for coking by more pushings per day and thereby increasing the coke production capacity. The power generation from WHRB will increase from 22.5 MW to 30 MW. Environmental clearance for a 77.5 MW imported coal based CPP was accorded by

SEIAA, Karnataka on 5.7.2011 after following the procedure laid in the EIA Notification, 2006 including the Public Hearing.

The total project area is 154 acres and there is no requirement of additional land for the proposed expansion. The project cost is Rs. 365 crores and no additional investment is required. Due to the increase in the power generation through WHRB from 22.5 MW to 30 MW, the power generation from coal based CPP would decrease from 77.5 MW to 70 MW. The additional quantity of coal required will also be imported. The existing water requirement is 5,290 KLD and an additional 300 KLD is required, which will also be sourced from River Tungabhadra. Govt. of Karnataka has accorded permission for drawl of 15.4 MGD. The plant will operate on zero discharge basis. There would be a decrease in the quantity of fly ash and bottom ash generation. The additional quantity of coke fines generated will be used in the power plant.

The proponent requested for exemption of Public Hearing since PH was held for the 77.5 MW CPP on 9.9.2010 under the EIA Notification, 2006 and the public were informed that the company is having coke oven plant of 0.3 MTPA and CPP of 22.5 MW. The Committee noted that, PH cannot be exempted as per MoEF OM dated 24.8.2009. However, the Committee permitted to use the baseline data of the existing unit in the preparation of EIA/EMP report.

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 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 16th 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 30th 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 contracts 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-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 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, after public consultation.

2.4.4. Pellet Plant (10 MTPA) and Producer Gas Plant (1,80,000 m³/hr) at Barbil Deoghar, Keonjhar, Orissa by **M/s Jindal Steel & Power Limited - regarding amendment in EC.**

The above proposal was accorded environmental clearance by MoEF vide letter no. J-11011/78/2007-IA II (I), dated 1.8.2008. It was informed that, the EIA was based on dry grinding process. However, there is no mention of grinding process in the said environmental clearance. The first phase of 5 MTPA Iron Ore Pelletisation Plant for production of iron ore pellets based on dry grinding process and Producer Gas Plant are in operation since 2009. It is proposed to install the second phase of 5 MTPA Iron Ore Pelletisation Plant for production of iron ore pellets based on wet grinding in view of the advantages of wet grinding such as less fuel consumption, no change in water consumption, less maintenance cost, zero discharge and significant improvement in air pollution control.

After detailed deliberations, the Committee recommended the amendment in above EC for production of iron ore pellets based on wet grinding.

2.4.5. Expansion of Integrated Steel Plant to 0.6 MTPA at Gurupali, Rengali, Sambalpur, Orissa by **M/s Viraj Steel & Energy Ltd. - regarding amendment in EC.**

The above proposal was accorded environmental clearance by MoEF vide letter no. J-11011/87/2007-IA II (I), dated 4.10.2007. The proponent requested for permission to use coal in addition to coal middlings & rejects in boiler and extend the validity of above EC since the project could not be implemented as envisaged due to non allotment of land by IDCO/Govt. of Odisha and various administrative delays. The proponent informed that they have deposited the requisite amount to IDCO for the land requirement. The project proponent and their consultant, M/s J.M. Environet Pvt. Ltd., Gurgaon also made a presentation before the Committee.

As per the specific condition III of EC, "middlings and rejects shall be used in FB boilers". No coal block was allotted by the Govt. of Odisha as promised in the MoU. In the absence of coal washery, there is no generation of coal middlings. Dolochar generated from the DRI kilns cannot be used as the sole fuel to FB boiler and coal is required for its operation. The company has obtained coal linkage for 12 MW CPP and has also applied for its extension. It is proposed to use coal in addition to the coal middlings and dolochar from DRI kiln. The Committee also noted that coal to be used in the boiler was mentioned in the boiler was mentioned in the EC letter, however, while stipulating the EC condition, coal requirement was not mentioned. It was noted that proponent have completed 60% of work regarding installation of furnace and out of 94 MW of power requirement, 28 MW of capacity is in operation.

After detailed deliberations, the Committee recommended the amendment in above EC for usage of coal in addition to coal middlings & rejects in boiler and for extension of validity of the above EC by a period of five years w.e.f 4.10.2012 subject to the specific and general environmental conditions.

- 2.4.6. Expansion of cement production capacity from 2.5 MTPA to 3.25 MTPA by addition of fly ash only at villages Bhatkotri, Lasravan, Phalwa and Rasulpura, Tehsil-Nimbahera, District-Chittorgarh in Rajasthan by **M/s Wonder Cement Limited- regarding amendment in EC.**

The above proposal was accorded environmental clearance by MoEF vide letter no. J-11011/437/2011-IA II (I), dated 19.6.2012. As per the specific condition II of EC, a feasibility report reg. proper and full utilization gases generated from the kiln in WHRB shall be submitted to MOEF. Since the said feasibility report could not be submitted within the stipulated time period of 3 months, the proponent has requested for amendment in above EC by removing the restriction of time period from specific condition no. (ii). Now the proponent has explored the possibility of installation of WHRB and included the proposal of installation of WHRB in their proposed expansion of plant for which ToRs are recommend by the EAC in this meeting.

After detailed deliberations, the Committee recommended to waive the restriction of 3 months in the specific condition no. (ii) of above EC while asking the proponent to submit the same to MoEF and its RO at the earliest.

- 2.4.7. Environmental clearance to Phase-II Expansion of Cement Plant from 2.6 MTPA to 8.6 MTA at Sanghipuram, Kutch, Gujarat by **M/s Sanghi Industries Ltd. - regarding extension of the validity of EC**

Environmental clearance to the above proposal was accorded by MoEF vide letter no. J-11011/337/2006-IA II (I) dated 5.4.2007. The PP vide letter dated 14.2.2012 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 by the proponent that, due to unfavorable market conditions and delay in financial tie-ups, there is delay in completion of the project. The basic design engineering has been completed and the project is in advanced stage. M/s Design Tribe India Pvt. Ltd., Hyderabad has been appointed for EPC. Plant and machinery has been finalized with M/s FLS, Denmark & Loesche (India) Ltd. and equipment worth Rs. 50 crores has been imported. Indigenous plant and machinery is in progress (30%). Conversion of Railway line from meter gauge to broad gauge from Bhuj to Naliya and further extension to Sanghiuram has been approved by the Ministry of Railways & plans for the execution of the same is being worked out to meet the transportation requirement of raw materials of the project. Till date an amount of Rs. 200 Crores has been spent on the project. Consent to Establish has been obtained from GPCB for mines and cement plant. The progress of project including compliance to EC conditions are being submitted to MoEF's Regional Office.

After detailed deliberations, the committee recommended for the extension of validity of environmental clearance by a period of five years w.e.f 5.4.2012 subject to the specific and general environmental conditions.

- 2.4.8. Proposed Integrated Cement Project (Clinker- 2.2 MTPA, Cement - 3.3 MTPA) along with installation of Captive Power Plant (30 MW), WHRB (5 MW) and DG Set (6 MW) at Villages Tunkara & Balara, Tehsil Jaitaran, District Pali in Rajasthan by **M/s UltraTech Cement Limited - regarding amendment in TORs**

The above proposal was accorded ToRs for preparation of EIA/EMP report on 14.2.2012. The project area proposed was 210 ha. One of the ToR was to maintain a minimum distance of 100 m from the project site and the drainage/stream. In order to comply with the said ToR it is proposed to revise the project area from 210 ha. to 248 ha. with proportionate increase of green belt. The existing and revised layouts were submitted.

The committee recommended for the revision of project area from 210 ha. to 248 ha. with the same ToRs dated 14.2.2012.

30th October, 2012

2.5.0 Consideration of the Projects:

- 2.5.1. Manufacture of Resins (5,520 TPA) at J.L. No. 01, Village Tulsiberia, R.S. Dag No. 2188 to 2194, 2196, 2297 to 2299, District Howrah, West Bengal by **M/s Almega Paints Pvt. Ltd. - regarding EC.**

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 as per Terms of Reference (TORs) awarded during the 23rd Meeting of the Expert Appraisal Committee (Industry-2) held during 30.5.2011 – 31.5.2011 for preparation of EIA/EMP. 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 Almega Paints Pvt. Ltd. have proposed to manufacture Resins (5,520 TPA) at J.L. No.01, Village Tulsiberia, R.S. Dag No.2188 to 2194, 2196,2297 to 2299, District Howrah, West Bengal. Water based (1,980 TPM) and solvent based paint (1,980 TPM) blending & mixing units already exist, which did not require EC. 'Consent to Establish' and 'Consent to Operate' have been accorded by the West Bengal Pollution Control Board for the existing water and solvent based paint units. The proposed project will be installed within the existing plant having total acquired land of 8.71 acres and green belt will be developed in 33% of the total area. No national park/ wild life sanctuary is located within 10 Km distance. Total project cost is Rs. 4.5 Crores.

Castor oil, Rawlinseed oil, phthalic anhydride, mixed xylene, resin, sorbitol (70%) etc. will be used as raw materials. The power requirement for the proposed project is about 200 KVA, which will be sourced from West Bengal State Electricity Distribution Company Limited. There will be no process emissions during the plant operation. The only emission through Chimney will be due to the burning of fuel (High Speed Diesel) in 3 nos. Thermic Fluid Heaters for heating Thermo Pack, which will result in the negligible

emissions of SO₂ & NO_x. A stack of 15 m. height will be provided for the dispersal of the pollutants. Base line data on ambient air quality monitored at eight locations indicates that concentrations of PM₁₀, PM_{2.5}, SO₂ and NO_x are varying from 37 µg/m³ to 112 µg/m³, 13 µg/m³ to 47 µg/m³, 4 µg/m³ to 7 µg/m³ and 10 µg/m³ to 47 µg/m³ respectively. AAQ modeling study indicates that the maximum incremental GLCs after the proposed expansion would be 2.22 µg/m³ and 1.78 µg/m³ with respect to SO₂ and NO_x respectively. The resultant concentrations are within the NAAQS.

No water will be required in the process. However, a small quantity i.e., 2.5 m³/dof water will be required for cleaning & miscellaneous purpose. Besides, 1 m³/dof water will be required for domestic purpose. Hence, total 3.5 m³/d water will be required for the proposed project, which will be sourced from ground water. The necessary permission for sinking of the new well has been obtained from Ground Water Resource Department. Rain water harvesting is also proposed. Around 1 m³/dof wastewater will be generated in the reactor. Besides, 0.5 m³/d wastewater shall be generated from cleaning & miscellaneous uses. The entire wastewater will undergo necessary treatment in the existing Effluent Treatment Plant. Apart from this, about 0.8 m³/dof domestic wastewater will be generated, which will be treated in the septic tank/soak pit system. The treated wastewater will be reused for toilet flushing, gardening purpose, dust suppression etc. The Sludge generated in the ETP will be finally sent to West Bengal Waste Management Ltd., Haldia.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the West Bengal Pollution Control Board on 27th April, 2012. The issues raised in the public hearing were regarding education, infrastructure development and needs of the local people, greater employment to the local people, CSR activities etc. which were addressed in the EIA/EMP report.

The Committee has sought revised layout with uniform green belt of minimum 10 m width and the details of ETP. The above sought information was submitted by the proponent and found to be satisfactory.

After detailed deliberations, the Committee found the EIA/EMP report adequate and suggested to stipulate following specific conditions alongwith 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 16th 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 fresh water requirement should not exceed 3.5 m³/day 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.

2.5.2. Expansion of Dye Intermediate (125 TPM to 750 TPM) at Plot No. 2806 & 2807/1, GIDC Vapi, Taluka Pardi, District Valsad, Gujarat by **M/s Apurva Chemicals (TOR to 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 27th Meeting of the Expert Appraisal Committee (Industry) held during 21st – 22nd September, 2011 for preparation of EIA/EMP. All Synthetic Organic Chemicals Industry (Dyes & Intermediates) 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 Apurva Chemicals has proposed for expansion of Dye Intermediates (125 TPM to 750 TPM) at plot No. 2806 & 2807/1, GIDC Vapi, Taluka Pardi, District Valsad, Gujarat. Total existing plot area is 5,239 m². No additional land is required. Project cost is Rs. 318.02 lakhs. Interstate boundary (i.e. Daman) is located within 10 km. Damage

river is flowing at 3 km. No national park/wildlife sanctuary/reserve forest is located within 10 Km. Following products will be manufacturing:

S.N.	Product	Quantity (TPM)		
		Existing	Proposed	Total
1.	Resist salt	75	525	600
2.	Metanilic Acid(Liquid)	20	40	60
3.	Metanilic Acid (Powder)	30	60	90
Total		125	625	750
By-products				
4.	3,3' DDS (Di Nitro Di Phenyl Sulphone)	4.80	19.98	24.06

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during October, 2010 – December 2010 and submitted 98 tile data indicates PM₁₀ (54.56-86.00 ug/m³), SO₂ (16.52-37.00 ug/m³), NO_x (12.50-26.00 ug/m³) and VOC (0.5-2.2 ppm). Incremental concentration due to proposed project was estimated to be PM₁₀ (1.895 ug/m³), SO₂ (3.383ug/m³) and NO_x (2.374ug/m³). Multi-cyclone followed by bagfilter alongwith stack (30m) is provided to existing thermopak (25 Lacs) and proposed Thermopak boiler(10 lacs). Acid followed by alkali scrubber alongwith adequate stack ht. (11 m) is provided to sulphonator & oleum storage tank (existing and proposed). Alkali scrubber will be provided to drawing vessels.

Fresh water requirement from GIDC water supply will be increased from 14.4 m³/day to 61 m³/day after expansion. Wastewater generation will be increased from 8.4 m³/day to 49.5 m³/day. Out of which, 42m³/day of effluent will be recycled back in the process. Net effluent generation will be 2.5 m³/day. Industrial effluent will be treated in ETP comprising primary, secondary and tertiary treatment facilities. Treatment effluent will be discharged into CETP Vapi for further treatment

Iron waste from the process of metanilic acid powder (90 MTPM) and Iron waste from metanilic Liquid 12.52 MTPM) will be sold to cement manufacturing industries. Gypsum waste (737.3 MTPM) will be sold to cement industries. Used oil (0.04 MTPM) will be sold to registered recycler. ETP sludge will be sold to cement manufacturing industry or disposed off to TSDF Vapi.

Green belt is developed in 325 m² out of total land 5239 m². All precautionary measures like acoustic enclosure, anti vibration pad/foundation for equipment will be used to control noise pollution. Power requirement offer expansion will be 300 KVA from DGVCL. Coal (600 kg/hr) will be required as fuel. Diesel (30 Lt/hr) will be required.

Project proponent informed that unit was established before the EIA Notification, 2006 came into force. At that period, EC was not required for the existing products. Consent order no. 32073 dated 25th March, 2009 is accorded by GPCB under Air & Water Acts is submitted. The Committee deliberated upon the compliance report submitted by the project proponent for the existing unit. The Committee noted that no public hearing / consultation is required due to project being located in notified GIDC Vapi 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 alongwith other environmental conditions while considering for accord of environmental clearance:

- i) Multi-cyclone followed by bagfilter alongwith stack of adequate height will be provided to the coal fired Thermopak boiler.
- ii) The levels of PM₁₀, SO₂, NO_x, CO and VOC should be monitored in ambient air.
- iii) Adequate scrubbing system shall be provided to sulphonator & oleum storage tank (existing and proposed) to control SO₂ and SO₃ emissions. 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 GIDC water supply should not exceed 61 m³/day and prior permission should be obtained from the concerned Authority. No ground water should be used.
- vi) Net effluent generation should not exceed 2.5 m³/day. Effluent should be treated in ETP. Treated effluent should be discharged to CETP after conforming to the standards prescribed for norms for the effluent discharge and obtaining permission from the GPCB regarding. No process effluent shall be discharged in and around the project site. Efforts shall be made to treat ammonical nitrogen in the effluent.
- vii) Treated effluent should be passed through guard pond. Online pH meter, flow meter and TOC analyzer should be installed.
- viii) All the solvent storage tanks should be connected with vent condensers with chilled brine circulation.
- 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 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.
- x) Green belt should be developed in 33% of the total plant area.
- xi) All the recommendations made in the risk assessment report should be satisfactorily implemented.

- xii) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

2.5.3. Expansion of Dyes & Dye Intermediates at Sy. No. 73, Behind GEB Sub Station, Village Karkhadi, Tehsil Padra, District Vadodara, Gujarat by **M/s Philoden Agrochem Pvt. Ltd (TOR to 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 18th Meeting of the Expert Appraisal Committee (Industry) held during 20th-21st January, 2011 for preparation of EIA/EMP. All the Synthetic Organic Chemical located outside notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Philoden Agrochem Pvt. Ltd. have proposed for expansion of Dyes & Dye Intermediates at Sy. No. 73, Behind GEB Sub Station, Village Karkhadi, Tehsil Padra, District Vadodara, Gujarat. Mahi river is located at 7 km. A copy of consent order no. 36215 accorded by GPCB vide letter dated 2nd February, 2010 and valid upto 13th December, 2014 for existing unit is submitted. Total plot area is 7,670 m². Total project cost is Rs. 315 Lakhs. Rs. 85 Lakhs and Rs. 15 Lakhs are earmarked towards capital cost and recurring cost per annum for pollution control measures. No reserve forest/national park/ wildlife sanctuary are located within 10 km. Following are the existing and proposed products:

S.N.	Product	Quantity (MTPM)		
		Existing	Proposed	Total after expansion
Existing :				
1	Benzathrone	3.1	--	3.1
2	Pigment-Red-"GB"	3.55	--	3.55
3	Pigment-yellow-"GB"	8.35	--	8.35
4	Pigment-Orange-"G"	01	--	01
5	Pigment-Brown RM/Dark Brown-R	0.5	--	0.5
6	Pigment-Violet BA/Cadbourey Violet R	01	--	01
7	Pigment-Green BP	01	--	01
8	Pigment- Black RE	1.5	--	1.5
Proposed :				
9	Solvent Dyes	--	40	40
	Solvent Blue 35			
	Solvent Blue 104			
	Solvent Blue 122			
	Solvent Green 3			
	Solvent Orange 60			
	Solvent Orange 30			
	Solvent red 52			

	Solvent red 135			
	Solvent red168			
	Solvent red 195			
	Solvent red 207			
	Solvent violet 13			
	Solvent violet 14			
	Solvent yellow 14			
	Solvent yellow 33			
	Solvent yellow157			
	Solvent yellow 163			
10	Solvent Dyes	--	40	40
	Solvent black 27			
	Solvent orange 58			
	Solvent Red 127			
	Solvent red 160			
	Solvent yellow 82			
	Solvent yellow 21			
11	Solvent dyes			
	Solvent Blue 98	--	50	50
	Solvent green 128			
	Solvent Green 33			
	Solvent red 19 E			
	Solvent red 24			
	Solvent yellow 107			
	Solvent yellow 124			
12	Pigment			
	Pigment blue 60	--	40	40
	Pigment orange 43			
	Pigment yellow 155			
	Pigment yellow 180			
	Pigment yellow 188			
	Pigment yellow 196			
	Pigment red 122	--	20	20
	Pigment red 168			
	Pigment red 170			
	Pigment red 202			
	Pigment violet 19			
	Pigment yellow 147			
13	Optical Brighteners			
	Optical BR. 184	--	15	15
	Optical BR.199			
	Optical BR.351			
	Total	20	205	225

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 8 locations during March, 2011 – May 2011 and submitted data indicates PM₁₀ (55-105ug/m³), PM_{2.5} (15-61ug/m³), SO₂ (7-41ug/m³) and NO_x (16-55 ug/m³). Incremental concentration due to proposed project was estimated to be PM

(0.04695ug/m³), SO₂ (0.01485ug/m³) and NO_x (0.02731ug/m³). Cyclone separator followed by bagfilter alongwith stack (30m) will be provided to proposed agro waste fired boiler. Scrubbing arrangement will be provided to Incinerator. Solvent will be recovered.

Total fresh water requirement will be increased from 16 m³/day to 176 m³/day after expansion and met from ground water. The total wastewater generation will be increased from 5.7 m³/day to 121m³/day and out of which, industrial wastewater generation will be increased from 3.8 m³/day to 121 m³/day. Industrial effluent will be segregated into high COD, high TDS and low COD/TDS effluent streams. High COD effluent stream will be incinerated. High TDS effluent will be treated through RO. Low COD/TDS effluent will be treated in ETP. Committee advised them that high TDS effluent should be treated with steam stripper before sending through the RO. Rejects from RO should be evaporated in MEE. Treated effluent will be recycled and reused with factory premises. No additional treated effluent will be sent to CETP of M/s ECPL. However, effluent (3.8 m³/day) generated from the existing unit will be sent to CETP of M/s EICL, Umaraya. Sewage will be treated through septic tank and soak pit.

ETP sludge will be sent to TSDF, NECL. Spent solvent and process waste will be sent for incineration of CHWI, NECL. Used oil will be sold to registered re-processor. Discarded containers will be sold to GPCB authorized dealer after decontamination. A copy of membership of TSDF operated by M/s Nandesari Environmental Control Ltd. is submitted. Green belt will be developed in 2,460 m², out of 7,670 m² total land. Power requirement (100 KW) will be met from GEB. Agro waste consumption will be increased from 0.7 TPD to 2.8 TPD. DG set (125 KVA) will be installed as standby.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 2nd March, 2012. The issues raised during public hearing were water consumption and its source, use of rainwater harvesting, fire station, use surface water instead of Narmada water, ETP capacity, local employment, proper chemical storage etc. In response, project proponent informed that ETP of capacity 113 m³/day will be installed to cater additional effluent load. Treated water will be recycled/ reused. Air pollution control device will be installed. Employment would be mostly given to locals as in the existing unit and training would be provided for the same and 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. Recommendation on project proposal from Gujarat Pollution Control Board to be submitted.
2. Revised effluent treatment scheme considering entire plant zero discharge.
3. Detailed specification of incinerator.

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

- 2.5.4. Single Super Phosphate (Powder & Granular, 1500 MTPD), N₂SiF₆, 130 MTPD), NPK Fertilizer (Powder & Granular, 500 MTPD), LABASA (500 MTPD), Benzene Sulphonyl Chloride (20 MTPD), Sulphone (1.26 MTPD) at Sy. No. 525, 532, 554-

556, 560, 561/1, Village Dudhwada, Tehsil Padra, District Vadodara, Gujarat **by M/s Bodal Agrotech Ltd (TOR to EC).**

EIA/EMP report was prepared by M/s Ramans Enviro Services Pvt. Ltd and EQMS India Pvt. Ltd. While presenting their case before the Committee, representative of M/s EQMS India Pvt. Ltd informed that he has not gone through the EIA/EMP report.

After deliberations, the Committee desired following:

1. To revalidate the entire EIA/EMP report by the QCI/NABET accredited and sector specific Consultants.
2. Recommendation on project proposal from Gujarat Pollution Control Board to be submitted.

The proposal is deferred till the desired information is submitted.

2.5.5. Exploratory Drilling of Oil and Gas in 13 Wells in Onshore Block CB-ONN-2009/8 (136 sq.km), at Dholka and Khambhat, District Ahmedabad and Anand, Gujarat by **M/s Jay Polychem (India) Ltd. (TOR to EC).**

The project authorities and their consultant (Kadam Environmental Consultants) 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 23rd Meeting of the Expert Appraisal Committee (Industry) held during 30th– 31st May, 2011 for preparation of EIA/EMP. All the Offshore and Onshore Drilling projects are listed at S.N. 15(b) under Category 'A' and appraised at the Central level.

M/s Jay Polychem (India) Ltd. have proposed for the Exploratory Drilling of Oil and Gas in 13 Wells in Onshore Block CB-ONN-2009/8 (136 sq.km), at Dholka and Khambhat, District Ahmedabad and Anand, Gujarat. Exploration contract was awarded was signed on 30th June, 2010. Petroleum Exploration License (PEL) awarded by the Government of India to start exploration activities to M/s Jay Polychem (India) Ltd on 22nd October, 2010. 13 exploratory wells are proposed for drilling. Total project area of 13 Blocks is 136 sq. km. Nearest town is Dholka (5.5 km) and Ahmedabad (35.5 km). Sabarmati River is passing through the block area, which is 0.5 Km and 1.7 Km away from B well and Kheda well respectively. Vatrake River is at 6 km. Project cost is USD 13 Million (for 13 wells). Rs. 58.50 Lakhs/well is earmarked for expenditure on environmental matters. No national park/ wildlife sanctuary/eco sensitive area is located within 10 km. Sabarmati river passes through the SE edge of the block. Exploration work in the block was originally carried out by the ONGC and subsequently by GSPCL. Co-ordinates of the blocks are:

Point	Longitude			Latitude		
	Deg.	Min.	Sec.	Deg.	Min.	Sec.
A.	72	20	13.82	22	40	30.35
B	72	24	47.22	22	40	30.35
C	72	29	16.38	22	40	34.6
D	72	29	12.5	22	39	14.9
D	72	27	41.0	22	39	13

F	72	27	36.3	22	36	16.6
G	72	29	5.02	22	36	16.86
H	72	29	1.83	22	35	0.0
I	72	20	54.0	22	35	0.0
A	72	20	13.82	22	40	30.35

Exploratory wells will be drilled upto 2,500m. Location of proposed wells are as given below:

Point	Longitude			Latitude		
	Deg.	Min.	Sec.	Deg.	Min.	Sec.
1	72	20	53.42	22	39	52.10
2	72	22	3.67	22	39	14.54
3	72	20	28.24	22	39	6.55
4	72	22	3.03	22	37	17.7
5	72	21	51.72	22	36.5	5.29
6	72	24	28.99	22	36	2.21
7	72	26	18.68	22	35	3.09
8	72	26	18.68	22	35	30.70
9	72	26	40.96	22	36	24.86
10	72	27	3.0	22	36	49.49
11	72	28	48.24	22	36	9.43
12	72	29	1.01	22	35	19.73
13	72	27	12.24	22	40	5.62

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 8 locations during Post Monsoon Season 2011 and submitted data indicates PM₁₀ (31-93 ug/m³), SO₂ (8.20-15.2 ug/m³) and NO_x (10.00- 14.00 ug/m³). Incremental concentration due to proposed project was estimated to be SPM (0.26 ug/m³), SO₂ (12.15 ug/m³) and NO_x (6.39 ug/m³). Air emissions from D.G. sets will be dispersed by providing adequate stack height. Fresh water requirement from surface water source will be 20 m³/day. Water based mud (WBM) and Synthetic based mud will be used. Wastewater generation during drilling operation will be 5 m³/day. Effluent will be treated in effluent treatment plant (ETP) comprising equalization, chemical coagulation, flocculation and clarification by settling and residual unusable mud will be collected in lined pits and solar evaporated. Drill cutting (DC) will be separated from water based mud (WBM) and washed properly and unusable drilling fluids (DF) will be disposed off in well designed lined pit with impervious liner for solar drying. Disposal of drill cuttings and drill mud will be carried out in accordance with the GSR 546 (E) dated 30th August, 2005. Used oil will be sent to authorized recyclers.

HSD (150-300 l/h) will be used as fuel in rig and D.G. sets during drilling period. Number of blow out prevention techniques will be part of drilling rig unit. Blow out preventers (BOP) will be installed to control fluid from the formation gushing to the surface. Safety measures and fire fighting equipments will be provided at drilling site in accordance with Oil Mines Regulation, 1984.

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

22nd March, 2012 for Anand district and 5th April, 2012 for Ahmedabad district. The issues raised during public hearing were area of block, movement of heavy vehicles, land acquisition, facilities for development of village etc. In response, project proponent that total block area is 136 Km². Company will prepare metal road for movement heavy vehicles to carry drilling equipments as required. As per prevailing Government rules, compensation will be paid to the farmer. If no hydrocarbon is discovered than the land would be given back to farmers after restoring it to its original condition. If hydrocarbon is discovered, then with the suggestions of the villagers the company would work for the development of the village. The 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. Ambient air quality should be monitored at the nearest human settlements as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for PM₁₀, PM_{2.5}, SO₂, NO_x, CO, CH₄, HC, Non-methane HC etc.
- ii. Mercury should be analyzed in air, water and drill cuttings twice during drilling period.
- iii. Approach road should be made pucca to mitigate generation of suspended dust.
- iv. The company should make the arrangement for control of noise from the drilling activity. Acoustic enclosure should be provided to DG sets and proper stack height should be provided as per CPCB guidelines.
- v. Total fresh water requirement should not exceed 20 m³/day/well and prior permission should be obtained from the concerned agency.
- vi. The company should construct the garland drain all around the drilling site to prevent runoff of any oil containing waste into the nearby water bodies. Separate drainage system should be created for oil contaminated and non-oil contaminated. Effluent should be properly treated and treated wastewater should conform to CPCB standards.
- vii. Drilling wastewater including drill cuttings wash water should be collected in disposal pit lined with HDPE lining evaporated or treated and should comply with the notified standards for on-shore disposal. The membership of common TSDF should be obtained for the disposal of drill cuttings and hazardous waste. Otherwise, secured land fill should be created at the site as per the design approved by the CPCB and obtain authorization from the SPCB. Copy of authorization or membership of TSDF should be submitted to Ministry's Regional Office at Bhopal.

- viii. Good sanitation facility should be provided at the drilling site. Domestic sewage should be disposed off through septic tank/ soak pit.
- ix. Oil spillage prevention scheme should be prepared. In case of oil spillage/contamination, action plan should be prepared to clean the site by adopting proven technology. The recyclable waste (oily sludge) and spent oil should be disposed of to the authorized recyclers.
- x. The company should comply with the guidelines for disposal of solid waste, drill cutting and drilling fluids for onshore drilling operation notified vide GSR.546(E) dated 30th August, 2005.
- xi. The Company should take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. Possibility of using ground flare should be explored. At the place of ground flaring, the overhead flaring stack with knockout drums should be installed to minimize gaseous emissions during operation.
- xii. The company should develop a contingency plan for H₂S release including all necessary aspects from evacuation to resumption of normal operations. The workers should be provided with personal H₂S detectors in locations of high risk of exposure along with self containing breathing apparatus.
- xiii. The Company should carry out long term subsidence study by collecting base line data before initiating drilling operation till the project lasts. The data so collected should be submitted six monthly to the Ministry and its Regional Office at Bhopal.
- xiv. Blow Out Preventer (BOP) system should be installed to prevent well blowouts during drilling operations. BOP measures during drilling should focus on maintaining well bore hydrostatic pressure by proper pre-well planning and drilling fluid logging etc.
- xv. Emergency Response Plan (ERP) should be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- xvi. The company should take measures after completion of drilling process by well plugging and secured enclosures, decommissioning of rig upon abandonment of the well and drilling site should be restored to the original condition. In the event that no economic quantity of hydrocarbon is found a full abandonment plan should be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations.
- xvii. Occupational health surveillance of the workers should be carried out as per the prevailing Acts and Rules.

- xviii. In case the commercial viability of the project is established, the Company should prepare a detailed plan for development of oil and gas fields and obtain fresh environmental clearance from the Ministry.
 - xix. Restoration of the project site should be carried out satisfactorily and report should be sent to the Ministry's Regional Office at Bhopal.
 - xx. Oil content in the drill cuttings should be monitored by some Authorized agency and report should be sent to the Ministry's Regional Office at Bhopal.
 - xxi. Under Corporate Social Responsibility (CSR), sufficient budgetary provision should be made for health improvement, education, water and electricity supply etc. in and around the project.
 - xxii. Company should have own Environment Management Cell having qualified persons with proper background.
 - xxiii. Company should prepare and circulate the environmental policy.
 - xxiv. Company should prepare operating manual in respect of all activities. It should cover all safety & environment related issues and system. Measures to be taken for protection. One set of environmental manual should be made available at the drilling site/ project site. Awareness should be created at each level of the management. All the schedules and results of environmental monitoring should be available at the project site office.
- 2.5.6. Development & Production of wells alongwith Surface Facilities, Phase-III of CBM Block RG(E)-CBM-2001/1, Raniganj CBM Block, West Bengal **by M/s Essar Oil Limited (E&P Division) (TOR to EC)**

The project authorities and their consultant (SENES Consultants India 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 30th Meeting of the Expert Appraisal Committee (Industry) held during 15th-16th December, 2011 for preparation of EIA/EMP. All the oil and gas production projects are listed at S.N. 1(b) under under Category 'A' and appraised at the Central level.

M/s Essar Oil Limited (E&P Division) have proposed for the Development & Production of wells alongwith Surface Facilities, Phase-III of CBM Block RG(E)-CBM-2001/1, Raniganj CBM Block, West Bengal. Essar Oil Ltd & Govt. of India signed a contract for exploration and production of coal bed methane (CBM) from block RG (East) – CBM-2001/1 on 26th July, 2002. Block is located in Raniganj Coal Field, West Bengal at latitude 23°21'45"N & 23°41'12"N and longitude 87°14'40E & 87°28'46E. Total block area is 500 Km² & spread in

Burdwan, Birbhum and Bankura districts of West Bengal. Following are the Block Co-ordinates:

S.N.	Latitude (N)			Longitude (E)		
A	23°	41'	12"	87°	25'	02"
B	23°	40'	38"	87°	26'	45"
C	23°	40'	00"	87°	27'	16"
D	23°	39'	05"	87°	27'	09"
E	23°	38'	50"	87°	25'	52"
F	23°	37'	14"	87°	25'	33"
G	23°	34'	47"	87°	26'	17"
H	23°	32'	51"	87°	28'	46"
I	23°	31'	45"	87°	28'	46"
J	23°	30'	00"	87°	27'	35"
K	23°	29'	15"	87°	26'	45"
L	23°	27'	35"	87°	27'	25"
M	23°	26'	35"	87°	27'	25"
N	23°	23'	00"	87°	26'	10"
O	23°	22'	10"	87°	26'	00"
P	23°	21'	45"	87°	25'	00"
Q	23°	24'	15"	87°	20'	00"
R	23°	27'	30"	87°	16'	30"
S	23°	30'	00"	87°	14'	40"
T	23°	32'	10"	87°	15'	45"
U	23°	35'	10"	87°	18'	00"
V	23°	37'	00"	87°	20'	00"
W	23°	39'	45"	87°	25'	20"

Out of 500 Km² block area, phase –III project is proposed in 190.3 Km² block area. Out of 180.5 Km² area falls within the existing CBM block in Burdwan district, WB with an additional 9.8 Km² area located outside the block abutting the western boundary. No national park/sanctuary is located within 10 Km radius of the block. No diversion of forest land is involved. River Damodar and River Ajay are flowing in the block. Total project cost is Rs. 2866 Crores. Following activities are proposed:

- i Total no. of wells-650 (each well pad will have one vertical and several directional wells, optimized for the location and geology of the well pad) with the target depth of ~2000 m (618 wells in 180.5 Km² of block area and 32 wells in 9.8 Km² of additional area). Out of the total 650 wells, 107 wells falling within the Durgapur Municipal Corporation Boundary.
- ii 8 Nos. of GGS with the capacity 0.45 MMSCMD each and 1 No. of main compressor station (MCS) with capacity 3.0 MMSCMD.
- iii Interconnecting and transportation pipeline network with a diameter range of 4"-80".
- iv Total estimated production of CBM from the proposed project is 5 million m³/day. Each well is estimated to generate a peak production of 15,000 m³/day.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 10 locations during November, 2011-January 2012 and submitted data indicates PM₁₀ (69.5-101.6ug/m³), PM_{2.5} (33.1-50.1 ug/m³), SO₂ (8.9-12.8ug/m³) and NO_x (21.1-28.4ug/m³). Incremental concentration due to proposed project was estimated to be

SPM ($0.0308\text{ug}/\text{m}^3$), HC ($8.87\text{ug}/\text{m}^3$) and NOx ($0.39306\text{ug}/\text{m}^3$). Air emissions from D.G. sets will be dispersed by providing adequate stack height. Flaring will be done as per the CPCB guidelines for Oil Drilling and gas extraction industry as notified dated GSR 176 € April, 1996. Fresh water requirement will be $125\text{ m}^3/\text{well}$. Water based mud (WBM) and Synthetic based mud will be used. Effluent comprising mud will be treated in compact effluent treatment plant (ETP) comprising equalization, chemical coagulation, flocculation and clarification by settling and residual unusable mud will be collected in lined pits and solar evaporated. Remaining mud will be reused in the drilling process. Drill cutting (DC) will be separated from water based mud (WBM) and washed properly and unusable drilling fluids (DF) will be disposed off in well designed lined pit with impervious liner for solar drying. Disposal of drill cuttings and drill mud will be carried out in accordance with the GSR 546 (E) dated 30th August, 2005. Used oil will be sent to authorized recyclers. Produced water will be generated around $50\text{ m}^3/\text{day}$. Produced water will be treated through reverse osmosis and related techniques prior for agriculture, domestic purposes, preparation of mud.

DG sets (40 KVA, 50 KVA, 125 KVA, 180 KVA and 950 KVA) will be installed for drilling operation and CGS and MCS. HSD (5.5 KLD) will be consumed as fuel.

The committee deliberated upon the issues raised in the certified compliance monitoring report issued by the Ministry's regional office at Bhubaneswar. The Project proponent briefed the compliance report to the issues raised by the Regional Office, which include Essar foundation will work in these two villages with local stakeholder to develop suitable solution for safe drinking water. Action plan will be developed to treat produced water and maximize the recycling of treated water within the project. Project proponent also clarified that since hydrocarbon pipeline is not passing through national park/sanctuaries/coral reefs/ecologically sensitive areas, pipeline network does not attract prior environmental clearance as per category 6 (a) of EIA Notification, 2006. Project proponent also confirmed that unit has prepared separate environmental policy and same will be followed. The Committee satisfied with the response of the project proponent. The Committee noted that PIL pending in the High Court of Calcutta relates to laying CNG gas pipeline and it is not related to the production of CBM.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the West Bengal State Pollution Control Board on 24th May, 2012. The issues raised during public hearing were restoration of land which was damaged due to overflow of the existing well, compensation for the spoiled crops due to drain out water entering into his land, repairing works approached to school, people received appropriate compensation toward land, CSR activities done by Essar to improve education in the area, created employment for the locals, CSR for handicapped people etc. In response, project proponent, informed that produced water will be treated by RO and treated water will be reused in drilling operation and excess water will be discharged into stream after conforming discharged standards. Ground water level will be monitored to know the ground water table. Company will continue to take up CSR activities by engaging local communities. Adequate compensations paid to land owners whose crop affected by the drain out water. All the 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. As proposed, no forest land shall be used for the proposed facilities.
- ii. Compensation for the land acquisition to the land oustees, if any, and also for standing crop shall be paid as per the National Resettlement and Rehabilitation Policy (NRRP) 2007 or State Government norms. It may be ensured that compensation provided shall not be less than the norms of the NRRP, 2007.
- iii. Ambient air quality shall be monitored near the closest human settlements as per the National Ambient Air Quality Emission Standards (NAAQES) issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for PM₁₀, PM_{2.5}, SO₂, NO_x, CO, CH₄, VOCs, HC, Non-methane HC etc. Efforts shall be made to improve the ambient air quality of the area.
- iv. Mercury shall also be analyzed in air, water and drill cuttings twice during drilling period.
- v. The flare system shall be designed as per good oil field practices and Oil Industry Safety Directorate (OISD) guidelines. The company shall take necessary measures to prevent fire hazards and soil remediation as needed. At the place of ground flaring, the flare pit shall be lined with refractory bricks and efficient burning system. In case of overhead flare stacks, the stack height shall be provided as per the regulatory requirements and emissions from stacks shall meet the MOEF/CPCB guidelines.
- vi. The company shall make the arrangement for control of noise from the drilling activity, compressor station and DG sets by providing necessary mitigation measures such as proper acoustic enclosures to DG sets and meet the norms notified by the MoEF. Height of all the stacks/vents shall be as per the CPCB guidelines.
- vii. The company shall comply with the guidelines for disposal of solid waste, drill cutting and drilling fluids for onshore drilling operation notified vide GSR. 546(E) dated 30th August, 2005.
- viii. Total fresh water requirement should not exceed 120 m³ for each well during drilling phase and prior permission shall be obtained from the concerned Authority and a copy submitted to the Ministry's Regional Office at Bhubaneswar.
- ix. During well drilling, wastewater should be segregated into waste drilling fluid and drill cuttings. Drill cutting should be stored onsite impervious HDPE lined pit for solar evaporation and drying. Effluent should be properly treated and treated effluent should conform to CPCB standards. As proposed, produced water should be treated by reverse osmosis and reuse in drilling of new wells, fire hydrant system and other

beneficial purposes. Domestic effluent should be disposed off through septic tank followed by soak pit.

- x. Ground water quality monitoring should be done to assess if produced water storage or disposal has any effect.
- xi. Drilling wastewater including drill cuttings, wash water shall be collected in disposal pit lined with HDPE lining, evaporated or treated and shall comply with the notified standards for on-shore disposal on land. Proper toxicological analysis shall be done to ensure there is no hazardous material. Copy of toxicological analysis shall be submitted to Ministry's Regional Office at Bhubaneswar.
- xii. Water based drilling mud or synthetic based mud shall be used.
- xiii. The Company shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. At place of ground flaring, the overhead flaring stack with knockout drums shall be installed to minimize gaseous emissions during operation.
- xiv. The company shall take necessary measures to prevent fire hazards and soil remediation as needed. The stacks of adequate height shall be provided to flare the gas, if required, to minimize gaseous emissions and heat load during flaring.
- xv. To prevent underground coal fire, preventive measures shall be taken for ingress of ambient air during withdrawal inside the coal seams by adopting technologies including vacuum suction. Gas detectors for the detection of CH₄ and H₂S shall be provided.
- xvi. The design, material of construction, assembly, inspection, testing and safety aspects of operation and maintenance of pipeline and transporting the natural gas/oil shall be governed by ASME/ANSI B 31.8/B31.4 and OISD standard 141. Pipeline wall thickness and minimum depth of burial at river crossing and casings at rails, major road crossings should be in conformity with ANSI/ASME requirements.
- xvii. The company shall develop a contingency plan for H₂S release including all necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal H₂S detectors in locations of high risk of exposure along with self containing breathing apparatus.
- xviii. Adequate well protection system shall be provided like Blow Out Preventer (BOP) or diverter systems as required based on the geological formation of the blocks.
- xix. The top soil removed shall be stacked separately for reuse during restoration process.
- xx. Emergency Response Plan shall be based on the guidelines prepared by OISD, DGMS and Govt. of India. Recommendations mentioned in the Risk Assessment & Consequence Analysis and Disaster Management Plan shall be strictly followed.

- xxi. Project proponent shall comply with the environment protection measures and safeguards recommended in the EIA/EMP/risk analysis report/disaster management plan.
- xxii. The company shall take measures after completion of drilling process by well plugging and secured enclosures, decommissioning of rig upon abandonment of the well and drilling site shall be restored in original condition. In the event that no economic quantity of hydrocarbon is found a full abandonment plan shall be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations.
- xxiii. Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.
- xxiv. Company shall adopt Corporate Environment Policy as per the Ministry's O.M. No. J-11013/41/2006-IA.II(I) dated 26th April, 2011 and implemented.
- xxv. All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 24th May, 2012 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhubaneswar.
- xxvi. At least 5 % of the total cost of the project should be earmarked towards the enterprise social commitment 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.

2.5.7. Grain based Distillery Unit (30 KLD) at Gat No 105/1/1B, Village Sadgaon, Taluka & District Dhule, Maharashtra by **M/s Megi Agro Chem Ltd. (TOR to EC)**.

The Committee noted that EIA/EMP report was prepared by M/s Equinox Environment (I) Pvt. Ltd, Kolhapur, 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.

2.5.8. Distillery Unit (Grain based, 120 KLPD) and Co-generation Power Plant (3.5 MW) at Village Chandrao, Tehsil Indri, District Karnal, Haryana by **M/sRSL Distilleries Pvt. Ltd. (TOR to EC)**

The project authorities and their consultant (CPTL Envirotech) 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 24th Meeting of the Expert Appraisal Committee (Industry) held during 22nd-23rd June, 2011 for preparation of EIA/EMP. All the non-molasses based

Distillery Units are listed at S.N. 5(g) (ii) under Category 'A' and appraised at the Central level.

M/s RSL Distilleries Pvt. Ltd. have proposed for the Distillery Unit (Grain based, 120 KLPD) and Co-generation Power Plant (3.5 MW) at Village Chandrao, Tehsil Indri, District Karnal, Haryana. Total plot area is 22.5 acres and land is already purchased. No National Park/Reserve Forest/Wildlife sanctuary is located within 10 Km. No forest land is involved in the project. Yamuna River is at 5 km. (East). Total cost of the project is Rs. 100.00 Crores. Distillery will be operated for 330 days in a year.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 8 locations during April, 2011 – June 2011 and submitted data indicates PM_{10} (38-72 $\mu g/m^3$), $PM_{2.5}$ (22.7-42.2 $\mu g/m^3$), SO_2 (4.8-9.3 $\mu g/m^3$) and NO_x (9.4-16.2 $\mu g/m^3$). Incremental concentration due to proposed project was estimated to be SPM (1.25 $\mu g/m^3$), SO_2 (11.26 $\mu g/m^3$) and NO_x (1.519 $\mu g/m^3$) bag filters alongwith stack (50 m) will be provided coal/rice husk fired boiler to control emissions.

Total fresh water requirement from groundwater source will be 1380 m^3/day . Spent wash will be passed through decanter and concentrated in Multi-effect evaporator (MEE). Thick syrup and wet cake will be mixed together to form Distiller's Wet Grains with Soluble (DWGS) to achieve 'zero' discharge. Spentlees, MEE condensate and Utilities wastewater will be treated in the effluent treatment plant (ETP) and treated effluent will be recycled/reused within the factory premises. No effluent will be discharged outside the factory premises and 'zero' discharge concept will be maintained. Sewage water will be treated in septic tank followed by soak pit and used for horticulture and green belt.

Wet cake and tick syrup (291 TPD) will be sold as cattle feed. ETP sludge, yeast sludge and DWGS cake (406 TPD) will be generated. Boiler ash (42.6 TPD from 100% rice husk or 69.2 TPD from 100% coal) will be sent to brick manufacturers. Waste oil and used batteries will be sold to authorized recyclers / re-processors.

Out of 22.5 acres, 7 acres land is earmarked for the green belt development. Acoustic enclosures will be provided to control noise. Power (438 KW) will be met from proposed co-gen Power Plant (3.5 MW). Coal (173 TPD) and rice husk (284 TPD) will be used as main fuel. D.G. sets (2x1250 KVA) will be installed. HSD will be used as fuel. The Committee noted that a court case Civil Writ No. 11033 of 2012 in the matter of Shyam Murari Sharma & Ors. Vs. State of Haryana etc is pending in the Hon'ble High Court of Punjab and Haryana at Chandigarh.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Punjab Pollution Control Board on 1st March, 2011. The issues raised during public hearing were water pollution, local employment, amount earmarked for environmental protection, steps taken to control air & water pollution, measures to control dust emissions, water depletion, arrangement to avoid obstruction to the flow of flood etc. In response, project proponent informed that proposed project is based on zero effluent discharge concept. During construction of the project, about 250 local workers will be engaged and during commencement of project, around 450 persons will be employed. Around Rs. 11 Crores will be spent on air pollution control measures. Fly ash will be sent to brick manufacturers. Issues raised during public hearing 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 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/Nm³.
- 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 ground water source should not exceed 11 KL/KL of alcohol (i.e. 1320 m³/day) for distillery&cogeneration unit (3.5 MW).
- v. Prior permission for drawl of water should be obtained from the concerned authorities.
- vi. Water consumption should be reduced by adopting 3 R's (reduce, reuse and recycle) concept in the process.
- vii. Spent wash generation should not exceed 6 Kl/Kl of alcohol. Spent wash should be treated through decanter and concentrated in multi-effect evaporator (MEE) to form DWGS. 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.
- viii. 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.
- ix. 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. 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.
- xii. Biomass storage should be done in such a way that it does not get air borne or fly around due to wind.
- xiii. 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.

- xiv. As proposed, fly ash will be transferred in the covered truck. Ash shall be transferred to the brick manufacturing. A tie-up should be made with brick manufacturer.
 - xv. 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.
 - xvi. 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.
 - xvii. As proposed, thick green belt in 33 % will be developed all round the plant boundary to act as noise attenuator 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.
 - xviii. All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 1st March, 2011 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Chandigarh.
 - xix. At least 5 % of the total cost of the project should be earmarked towards the corporate social responsibility 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.
- 2.5.9. Distillery (Grain based, 60 KLPD, ENA), CPP (2 MW) and Fish Feed Plant (144 TPD) at Sy. No. 37, Village Thummalapalli, Tehsil Nandivada, District Krishna, Andhra Pradesh by **M/s HRUDAI Bio Tech Pvt. Ltd.(TOR to 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 21st Meeting of the Expert Appraisal Committee (Industry) held during 23rd-24th March, 2011 for preparation of EIA/EMP. All cane juice/non-molasses based distillery (>30 KLD) are listed at S.N. 5(g) (ii) under category 'A' and appraised at Central level.

M/s HRUDAI Bio Tech Pvt. Ltd. have proposed for setting up of grain based Distillery (60 KLPD, ENA), CPP (2 MW) and Fish feed Plant (144 TPD) at Sy. No. 37, Village Thummalapalli, Tehsil Nandivada, District Krishna, Andhra Pradesh. Total plot area is 4.85 ha. No national park/ wildlife sanctuary/ reserve forest are located within 10 Km. Total project cost is Rs. 70 Crores. Rs. 9.0 Crores and Rs. 40 Lakhs are earmarked

towards capital cost and recurring cost per annum for pollution control measures. Distillery unit will be operated for 300 days.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 10 locations during January, 2012 – March 2012 and submitted data indicates PM_{10} (25-55 $\mu\text{g}/\text{m}^3$), $PM_{2.5}$ (14 – 30 $\mu\text{g}/\text{m}^3$), SO_2 (7.0-15.0 $\mu\text{g}/\text{m}^3$) and NO_x (10-24 $\mu\text{g}/\text{m}^3$). Incremental concentration due to proposed project was estimated to be SPM (2.5 $\mu\text{g}/\text{m}^3$), SO_2 (5.8 $\mu\text{g}/\text{m}^3$) and NO_x (18.3 $\mu\text{g}/\text{m}^3$). Bagfilter alongwith stack of adequate height will be provided to coal/biomass fired boilers (1x20 TPH + 1x 8 TPH). Total fresh water requirement from Aripirala canal/Dosapadu canal will be 690 m^3/day . During presentation, project proponent informed that water requirement has been revised from 390 m^3/day to 690 m^3/day . Spent wash will be passed through decanter and concentrated in Multi-effect evaporator (MEE). Thick syrup and wet cake will be mixed together to form Distiller's Wet Grains with Soluble (DWGS). DWGS will be dried in dryer to form DDGS to achieve 'zero' discharge. Spentlees, evaporation condensate, various blowdown & washings will be given anaerobic treatment followed by aeration and tertiary treatment. Treated water will be recycled for various purposes like cooling tower make up, equipment cleaning & washing. The biogas generated will be utilized as fuel in the boiler of ENA plant. Domestic effluent (5 m^3/day) will be treated in septic tank followed by anaerobic filter and treated effluent used for gardening.

DDGS (1440) will be used for fish feed. Fly ash (170) will be used for brick manufacturers. Green belt will be developed in 1.7 ha. out of total land 4.85 ha. Silencer pads, enclosure will be provided. Power requirement will be 1.496 MW/day, which will be met from CPP (2 MW). DG set (2 x 525 kW) will be installed. Poultry litter and rice husk will be used as fuel in boiler (20 TPH and 8 TPH) for 300 days.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Karnataka State Pollution Control Board on 17th March, 2012. The issues raised during public hearing were source of water supply for project, industry draw huge quantity of water, stack height, local employment, drawl of water from canal, doubt on efficacy of pollution control measures, water shortage for agriculture activity etc. Most of the people in the public hearing were not satisfied with the project proposal and asked the project proponent to clarify the issues such as source of water supply and environmental concerns. In response, project proponent informed that grain (damaged rice) required for manufacturing of distillery is available in the area and project viability was estimated on this basis only. In this project pollution issues have been addressed. Bagfilter alongwith adequate stack height will be provided to boiler. Distillery is designed for zero effluent discharge concept. It was proposed to construct a seepage proof water storage tank in 10 acres having a depth of 3.5 m and water will be drawn when there is sufficient water available in Canal. Water will be drawl after getting permission from the respective Authority. Green belt will be developed in the proposed plant. Direct employment and indirect employment generation will be 200 persons and 400 persons. All the issues 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 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 boilers to control particulate emission within 50 mg/Nm³.
- 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 Aripirala canal/Dosapadu canal and rain water harvesting storage tank should not exceed 11 KL/KL of alcohol (i.e. 660 m³/day) for distillery&cogeneration unit (2 MW).
- v. Prior permission for drawl of water should be obtained from the concerned authorities.
- vi. Water consumption should be reduced by adopting 3 R's (reduce, reuse and recycle) concept in the process.
- vii. 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) to form DWGS. DWGS shall be dried in dryer to form DDGS to achieve 'zero' discharge. Spentlees, evaporation condensate, various blowdown & washings shall be given anaerobic treatment followed by aeration and tertiary treatment and water quality of treated effluent should meet the norms prescribed by CPCB/SPCB and recycle/reuse. Treated water will be recycled for various purposes like cooling tower make up, equipment cleaning & washing.
- viii. 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.
- ix. No effluent from distillery and co-generation power plant should be discharged outside the plant 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. 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.
- xii. Biomass storage should be done in such a way that it does not get air borne or fly around due to wind.
- xiii. 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.

- xiv. As proposed, fly ash will be transferred in the covered truck. Ash shall be transferred to the brick manufacturing. A tie-up should be made with brick manufacturer.
- xv. 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.
- xvi. 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.
- xvii. As proposed, thick green belt in 1.7 ha. out of total land 4.85 ha will be developed all round the plant boundary to act as noise attenuator 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.
- xviii. All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 17th March, 2012 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bangalore.
- xix. At least 5 % of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program should be ensured accordingly in a time bound manner.

2.5.10. Expansion of Bulk Drugs Unit (166.62 to 393.381 MTPM) at Plot No. E-9, MIDC Industrial Area, Village Chikalthana, Tehsil & District Aurangabad, Maharashtra by **M/s Harman Finochem Ltd. (TOR to EC).**

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

2.5.11. Bulk Drug Unit (1575 TPA) at Sy. Nos. 595, 596 & 597, Village Talamadla, District Nizamabad, A.P by **M/s Posh Chemicals Pvt. Ltd. (TOR to EC).**

The project authorities and their consultant (Pragthi 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 25th Meeting of the Expert Appraisal Committee (Industry) held during **28th-30th July, 2011** for 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 Posh Chemicals Pvt. Ltd. has proposed for setting up of Bulk Drugs Manufacturing Unit at Sy. No. 595, 596 & 597, Talamadla (V), Tehsil/Mandal Bikanoor, District Nizamabad, Andhra Pradesh. Total acquired land area is 107 acres and 35.8 guntas. Out of which, proposed unit will be located in 25 acres of land. No forest, national parks, sanctuaries are located within 10 Km. Reserve forest is located within 10 Km. Total cost of the project is Rs. 77.37 Crores. Following products will be manufactured:

S. N.	Products	Production Capacity			Product usage
		KPD	TPM	TPA	
1	Sulfamethizole	135	4.05	48.60	Bulk Drug
2	Sulfapyridine	1,100	33.00	396	Bulk Drug
3	Sulfa Salazine	275	8.25	99	Bulk Drug
4	Cyclopropylamine	390	11.70	140.40	Bulk Drug
5	Ciprofloxacin	251	7.53	90.36	Bulk Drug
6	Fluconazole	110	3.30	39.60	Bulk Drug
7	Valacyclovir	275	8.25	99	Bulk Drug
8	Acetyl Sulfonyl Chloride	1,500	45.00	540	Bulk Drug
9	Imatinib	65	1.95	23.40	Bulk Drug
10	Zidovudine	165	4.95	59.40	Bulk Drug
11	Geftinib	67.35	2.02	24.24	Bulk Drug
12	Trichlorofon	8.33	0.25	3	Fine Chemical
13	Piractone olamine	8.33	0.25	3	Fine Chemical
14	Isoamy Methyl Cinnamate	8.33	0.25	3	Cosmetics
15	Octyl Methyl Cinnamate	8.33	0.25	3	Cosmetics
16	Octocrylene	8.33	0.25	3	Cosmetics
	Total	4,375	131.25	1575	

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during October, 2011 to December, 2011 and submitted data indicates as PM₁₀ (28.9–58.9 ug/m³), PM_{2.5} (13.8 – 28.4 ug/m³), SO₂(4.1 – 5.9 ug/m³), NO_x (10.9-15.9 ug/m³) and VOC (BDL). Incremental ground level concentration due to proposed project is PM₁₀ (0.09 ug/m³), SO₂ (0.38 ug/m³) and NO_x (0.42 ug/m³). Multicyclone followed by bagfilter alongwith stack (32 m) will be provided to coal fired boiler (5.0 TPH). Scrubbers will be provided for process emissions. Condensers using chilled solution and CT water to control fugitive emissions. Fresh water requirement from ground water source will be 194 m³/day. Total wastewater generation will be 103 m³/day, out of which industrial effluent generation will be 88 m³/day. Effluent 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). No effluent will be discharged outside the factory premises. The distillate bottom organic residue, process organic waste, ETP sludge and incinerable hazardous waste will be sent to cement industry. ATFD and FE salt will be sent to either onsite proposed secured landfill. The Committee advised the project proponent to follow site selection criteria for captive landfill site prescribed by the CPCB/MoEF and prior necessary permission shall be obtained from APPCB/CPCB. Mixed and spent solvent,

lead acid batteries and waste oil will be sent to authorized recyclers/re-processor. Fly ash will be sent to bricks manufacturers /cement manufacturers.

Green belt will be developed in 10 acres out of 25 acres total land. Power requirement will be 1000 KVA, which will be met from APTRANSCO. Coal (40 TPD) will be consumed. Thermic Fluid Boiler (4 Lakhs K cal/hr) is proposed. DG set (3 x 300 KVA) will be installed.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Andhra Pradesh Pollution Control Board on 28th March, 2012. The issues raised during public hearing were impact of pollution on nearby fields and surrounding habitation, ground water extraction, water scarcity in the area, health hazards, impact of air pollution on health of surrounding people, rain water harvesting etc. In response, project proponent informed that nearest water body is located at 1 Km. Regarding ground water extraction, prior permission will be obtained from the State Ground water authority. Extensive rain water harvesting system will be installed. Besides, project proponent also agreed to earmark 5 % of the total cost of the project towards the corporate social responsibility. In addition treated water will be recycled. Greenbelt will be developed in 10 acres of land. All the issues 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 satisfactory and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i) Multi-cyclone followed by bag filter should be provided to the boilers to control particulate emissions within permissible limit. The gaseous emissions should be dispersed through stack of adequate height as per CPCB/APPCB guidelines.
- ii) The levels of PM₁₀, SO₂, NO_x and VOC should be monitored in ambient air.
- iii) Adequate scrubbing system should be provided to process vents to control process emissions. 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 APPCB.
- v) Total fresh water requirement from ground water source and rain water reservoir should not exceed 194 m³/day and prior permission should be obtained from the CGWA/SGWA. As proposed, adequate capacity of rain water reservoir shall be created.

- vi) Trade effluent should be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD should be passed through stripper followed by MEE. Low TDS effluent stream should be treated in ETP. Treated effluent 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 should be sent to cement industries. Process inorganic & evaporation salt should be disposed off to the TSDF/secured landfill. The fly ash from boiler should be sold to brick manufacturers/cement industry.
- ix) Selection of captive TSDF site location as per CPCB/MoEF guidelines shall be strictly followed. Prior permission shall be obtained from SPCB/CPCB for captive TSDF.
- x) 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 APPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire-fighting facilities in case of emergency.
- 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.
- xii) 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.

- xviii) Green belt should be developed in 10 acres out of 25 acres total land.
- xix) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- xx) All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 28th March, 2012 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bangalore.
- xxi) At least 5 % of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program should be ensured accordingly in a time bound manner.

2.5.12. Nicotine/Derivative Manufacturing unit (35 MTPM) at Sy. No. 304, Village Rakhial, Taluka Thasra, District Kheda, Gujarat by **M/s NTA Phrama Pvt. Ltd.(TOR to EC).**

The project authorities and their consultant (Kadam Environmental Consultants) 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 22nd Meeting of the Expert Appraisal Committee (Industry) held during 29th– 30th April, 2011 for preparation of EIA/EMP. All the Synthetic Organics including Nicotine plants located outside notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s NTA Phrama Pvt. Ltd. have proposed for the Nicotine/Derivative Manufacturing unit (35 MTPM) at Block No. 304, Village Rakhial, Taluka Thasra, District Kheda, Gujarat by M/s NTA Phrama Pvt. Ltd. Total plot area is 2140 sq.m. Shedhi & Mahi sagar river is at 0.59 km and 10.17 km respectively. Narmada canal is at 3.75 km. Dakar temple is at 1.32 km. Total cost of the project is Rs. 1 Crores. Rs. 7.77 lakhs and Rs. 1.17 lakh are earmarked towards capital cost and recurring cost per annum. Following Nicotine and its derivatives (35 MTPM as 1000%) will be manufactured:

S.N.	Products
1.	Nicotine Alkaloid
2.	Nicotine-Sulphate
3.	Nicotine Tartrate
4.	Nicotine Polacryrex Resin
5.	Other Nicotine Derivatives

Additionally, PAs informed to the Committee that ambient air quality monitoring was carried out at 7 locations during May-June, 2011 and submitted data indicates as

PM₁₀ (29 – 141 ug/m³), NO_x (10 – 64.7 ug/m³) and SO₂ (8–43 ug/m³). Solvent will be recovered through single stage condenser using cool water for circulation.

Total fresh water requirement from ground water source will be 20 m³/day. Industrial effluent generation will be 40 m³/day. Effluent (28 m³/day) will be recirculated in the process. Remaining effluent will be treated in effluent treatment plant and treated water will be recycled/reused within the factory premises. Domestic effluent (0.8 m³/day) will be treated in septic tank followed by soak pit. No effluent will be discharged outside the premises and 'Zero' discharge will be adopted. Waste/used oil (25 l/yr) will be sold to authorized recyclers / re-processors. Process solid waste will be neutralized and used for manure. Power (100 KVA/MT of product) will be sourced from MGVCL.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 28th February, 2012. The issues raised during public hearing were local employment, solid waste 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 satisfactory and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i) The levels of PM₁₀, SO₂, NO_x and VOC should be monitored in ambient air.
- ii) 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.
- iii) Total fresh water requirement from ground water source should not exceed 20 m³/day and prior permission should be obtained from the CGWA/SGWA.
- iv) Industrial effluent generation shall not exceed 40 m³/day. Effluent (28 m³/day) shall be recirculated in the process. Remaining effluent will be treated in effluent treatment plant and treated water will be recycled/reused within the factory premises. 'Zero' effluent discharge should be adopted and no effluent will be discharged outside the premises.
- v) All the solvent storage tanks should be connected with vent condensers with chilled brine circulation.
- vi) Green belt should be developed in 33 % of the total plant area.
- vii) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

- viii) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- ix) All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 28th February, 2012 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhopal.
- x) At least 5 % of the total cost of the project should be earmarked towards the corporate social responsibility 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.

2.5.13. Exploratory Drilling in Offshore NELP Block KG-OSN-2004/1, KG Basin in AP by M/s ONGC Ltd.-regarding amendment in environmental clearance.

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken. 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 Oil and Natural Gas Corporation Ltd. have proposed for the expansion of exploratory drilling in Offshore NELP Block KG-OSN-2004/1, KG Basin. Now, project proponent intends to add five wells. Environmental clearance was granted by the MoEF vide letter no J-11011/541/2007-IA II (I) dated 3rd June, 2009 for drilling of 7 wells. Drilling of 2 wells completed and hydrocarbons were discovered in these wells. Drilling of 3 wells are in progress. Balance 2 wells will be drilled as per schedule. Application is submitted for additional 5 wells but M/s ONGC has informed that there is commitment to drill atleast one additional well in extension of existing environmental clearance. Following are the details of proposed wells:

Name of prospects	Target Depth (m)	Water Depth (m)	Distnce from Coast (Km)
Prospect 1	1970	12	11
Prospect 2	2200	14	10
Prospect 3	2600	13	10
Prospect 4	2400	12	10.5
Prospect 5	2200	19	12.8

EIA report for the existing project was prepared by the NEERI in January, 2009. Area of block is 1131 Km². Water based mud will be used for drilling. Water requirement will be 25-30 m³/day. Quantity of drill cuttings will be generated around 300-400 m³ for each well. 8-12 KL/day of diesel will be consumed. DG sets (5x 1500 KVA) will be installed.

After detailed deliberations, the Committee found the information satisfactory and recommended the proposal for drilling of 1 additional well in Offshore subject to the compliance of the following Specific and General Conditions:

- i. In case the commercial viability of the project is established, the Company shall prepare a detailed plan for development of oil and gas fields and obtain fresh environmental clearance from the Ministry.
- ii. Total water requirement should not exceed 30 m³/day.
- iii. Water based mud shall be used.
- iv. Water based drilling mud should be discharged to the sea after proper dilution as per E(P) Rules vide G.S.R 546(E) dated 30th August, 2005.
- v. The Company should ensure that there should be no impact on flora fauna due to drilling of wells in the offshore sea. The company should monitor the petroleum hydrocarbons and heavy metals concentration in the marine fish species regularly and submit report to the Ministry.
- vi. Only high efficiency DG set with adequate stack height and modern emission control equipment and low sulphur clean diesel should be used. Acoustic enclosure should be provided to the DG sets to mitigate the noise pollution.
- vii. Treated wastewater (produced water or formation water) should comply with the marine disposal standards notified under the Environment (Protection) Act, 1986. Sewage treatment on board of the rig as per MARPOL regulation. Residual chlorine should not exceed 1 mg/l before disposal.
- viii. The drill cutting (DC) wash water should be treated to conform to limits notified under the Environment (Protection) Act, 1986, before disposal into sea. The treated effluent should be monitored regularly.
- ix. All the guidelines should be followed for the disposal of solid waste, drill cutting and drilling fluids for onshore and offshore drilling operation notified vide GSR.546(E) dated 30th August, 2005.
- x. All the hazardous waste generated at the rig/offshore facility should be properly treated, transported to on shore and disposed of in accordance with the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008. No waste oil should be disposed off into sea. Waste/Used oil should be brought on-shore and sold to MoEF/CPCB authorized recyclers/reprocessors only.
- xi. The company should undertake conservation measures to protect the marine animals/biota in the region.
- xii. The International 'Good Practices' adopted by the Petroleum Industry viz International norms to safeguard the coastal and marine biodiversity should be implemented by the company.
- xiii. Requisite infrastructure facilities should be provided near the offshore installations so that booms and skimmers/chemical dispersants could be deployed immediately in case of oil leakage from the installations. Efforts should be made to curtail the oil slick within 500 meters of the installation and accordingly, action plan and facilities to check the oil slick beyond 500 meters should be provided.
- xiv. Approval from DG Shipping under the Merchant Shipping Act prior to commencement of the drilling operations should be obtained. At least 30 days prior to the commencement of drilling, the exact location should be intimated to the Director General of Shipping and the Company should abide by any direction he may issue regarding ensuring the safety of navigation in the area.

- xv. The Company should take necessary measures to reduce noise levels such as proper casing at the drill site and meet DG set norms notified by the MoEF. Height of all the stacks/vents should be provided as per the CPCB guidelines.
- xvi. Gas produced during testing should be flared with appropriate flaring booms.
- xvii. The flare system should be designed as per good oil field practices and oil industry Safety Directorate (OISD) guidelines. The stack height should be provided as per the regulatory requirements and emissions from stacks will meet the MOEF/CPCB guidelines.
- xviii. The design, material of construction, assembly, inspection, testing and safety aspects of operation and maintenance of pipeline and transporting the natural gas/oil should be governed by ASME/ANSI B 31.8/B31.4 and OISD standard 141.
- xix. The project authorities should install SCADA system with dedicated optical fibre based telecommunication link for safe operation of pipeline and Leak Detection System. Intelligent pigging facility should be provided for the entire pipeline system for internal corrosion monitoring. Coating and impressed current cathodic protection system should be provided to prevent external corrosion.
- xx. The project proponent should also comply with the environmental protection measures and safeguards recommended in the EIA /EMP /RA/NIO report.
- xxi. On completion of activities, the well should be either plugged and suspended (if the well evaluation indicates commercial quantities of hydrocarbon) or killed and permanently abandoned with mechanical plugs and well cap. If well is suspended, it should be filled with a brine solution containing small quantities of inhibitors to protect the well.
- xxii. Recommendations mentioned in the Risk Assessment & Consequence Analysis and Disaster Management Plan should be followed. For any design estimation of rig facility, maximum period for which data is available shall be taken into account.
- xxiii. Adequate funds both recurring and non-recurring should be earmarked to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government alongwith the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purposes.
- xxiv. A brief report on environmental status & safety related information in what form it is generated and measures taken as well as frequency of such reporting to the higher Authority should be submitted to this Ministry and its respective Regional Office.
- xxv. Petroleum and Natural Gas (safety in Offshore Operations) Rules 2008 of OISD should be strictly adhered to.
- xxvi. An independent audit should be done to ensure that the Environment Management Plan is in place in totality.
- xxvii. On completion of drilling, the company have to plug the drilled wells safely and obtain certificate from environment safety angle from the concerned authority.

2.5.14. Setting up of Di-methyl Sulphate, Linear Alkyl Benzene Sulphonic Acid, Alum (Ferric/Non ferric) and Chloro Sulphonic Acid Plants at Sy No. 23/3, 22/2, 22/3, Village Biccavolu & Balabhadrapuram, Mandal Biccavolu, District East Godavari, Andhra Pradesh by **M/s K.P.R. Fertilizers Ltd. (TOR to 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 31st Meeting of the Expert Appraisal Committee (Industry) held during 12th-13th January, 2012 for preparation of EIA/EMP.

M/s K.P.R. Fertilizers Ltd. have proposed for setting up of Di-methyl Sulphate, Linear Alkyl Benzene Sulphonic Acid, Alum (Ferric/Non ferric) and Chloro Sulphonic Acid Plants at Sy No.23/3, 22/2, 22/3, Village Biccavolu & Balabhadrapuram, Mandal Biccavolu, District East Godavari, Andhra Pradesh. Existing land is 19.53 acres and additional 20.25 acres land is acquired for the expansion. No national park/wildlife sanctuary/reserve forest is located within 10 Km. Lingala Cheruvu is located at 0.8 Km. Total cost of the project is Rs. 20.00 Crores. Following will be manufactured:

S.N.	Products	Production Capacity
Existing:		
1	Single Super Phosphate	500 TPD
2	NPK Mixtures	800 TPD
3	Di-Calcium Phosphate	40 TPD
4	Sulphuric Acid	300 TPD
5	Co-generation Power	3 MW
Expansion:		
1	Di Methyl Sulphate	50 TPD
2	Linear Alkyl Benzene Sulphonic Acid	40 TPD
3	Alum (Ferric/Non-Ferric)	50 TPD
4	Chlorosulphonic Acid	50 TPD

Emission from methanol recovery plant will be passed through packed scrubber. Alkali scrubbing system will be provided to control process emissions viz. SO₂ and HCl. Cyclone followed by bagfilter will be provided to grinding operation of bauxite. Adequate stack height will be provided to oil fired boiler. Total ground water requirement from Samalkot canal for the expansion plant will be increased from 721 m³/day to 768 m³/day. Total water requirement for the proposed expansion will be 47 m³/day. Total waste water generation will be increased from 72 to 88.6 m³/day after expansion will be treated in ETP and treated effluent will be recycled/reused after confirming to the standards of CPCB/APPCB. Domestic effluent will be treated in the existing Sewage Treatment Plant (STP). Bauxite sludge (2850 kg./day) will be used as filler material in existing SSP plant. ETP sludge will be sent to TSDF. Spent catalyst / Waste oil (50 l/annum) will be sold to authorized recyclers / re-processors.

Out of 39.78 acres, green belt is proposed in 10 acres. Total power requirement for the expansion project will be 6.100 kwh/day and met from existing captive power.

The committee noted that unit has obtained environmental clearance vide Ministry's letter no. J-11011/299/2007-IA II (I) dated 11th September, 2007 and public

hearing for the project was conducted on 14th March, 2007. The Committee exempted the public hearing under 7 (ii) of EIA Notification, 2006.

MoEF vide letter no. J-11011/299/2007-IA II (I) dated 11th September, 2007 has accorded environmental clearance for the existing unit. The Committee deliberated upon the monitoring report by the Ministry's regional office, Bangalore. Project proponent committed to carry out monitoring of PM_{2.5} levels in ambient at plant premises. Mist eliminator performance by increasing the no. of candles and reduced the acid mist content. Greenbelt target will be achieved by planting 6000 no. of trees in another two years. Project proponent has responded satisfactorily to the observations made by the Regional Office.

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

- i) All the conditions stipulated in environmental clearance J-11011/299/2007-IA (II) dated 11thSeptember, 2007 accorded for the existing projects should be satisfactorily implemented.
- ii) The gaseous emissions (SO₂, HCl, NO_x) and particulate matter from various process units shall conform to the norms prescribed by the CPCB/SPCB from time to time. At no time, the emission levels shall go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Stack emissions shall be monitored regularly.
- iii) Two stage chilled water/caustic scrubber shall be provided to process vents to control HCl. Two stage scrubber with caustic lye media solution shall be provided to process vents to control SO₂. The scrubbing media shall be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. At no time, the emission levels shall go beyond the prescribed standards.
- iv) Cyclone followed by bagfilter shall be provided to grinding operation of bauxite
- v) In plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fugitive emissions shall be controlled by providing closed storage, closed handling & conveyance of chemicals/materials, multi cyclone separator and water sprinkling system. Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emissions should conform to the limits stipulated by the APPCB.
- vi) Additional water requirement from Samalkot canal for the expansion plant should not exceed 768 m³/day and prior permission shall be obtained from

concerned Authority and a copy submitted to the Ministry's Regional Office at Bangalore.

- vii) As proposed industrial effluent should not exceed 88.6 m³/day after expansion. Effluent shall be treated in ETP and treated effluent shall be recycled/reused after confirming to the standards of CPCB/APPCB.
- 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. Measures shall be taken for fire fighting facilities in case of emergency.
- ix) Spent catalysts and used oil shall be sold to authorized recyclers/re-processors only.
- x) The company shall strictly follow all the recommendations mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP).
- xi) At least 5 % of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program should be ensured accordingly in a time bound manner.
- xii) As proposed, green belt should be developed in 10 acres out of total land 39.78 acres. Selection of plant species shall be as per the CPCB guidelines.

2.5.15. Production of Ethanol in Lignocellulosic Biomass Pilot Plant (10 MTPD) at A-1, Industrial Area, Bazpur Road, Kashipur, Uttarakhand by **M/s India Glycols Ltd. (TOR to 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 17th Meeting of the Expert Appraisal Committee (Industry) held during 22nd-23rd December, 2010 for preparation of EIA/EMP. All non molasses based distillery (<30 KLD) are listed at S.N. 5(g) (ii) under category 'B' and appraised at State level. However, applicability of specific condition due to locations of the project within 10 km of Intestate Boundary of U.P, proposal is treated as category 'B'.

M/s India Glycols Ltd. have proposed for the production of Ethanol in Lignocellulosic Biomass Pilot Plant (10 MTPD) at A-1, Industrial Area, Bazpur Road, Kashipur. The proposed new plant will be located in the existing campus of M/s India Glycols Ltd. Technology is sponsored by DBT-ICT Centre for energy biosciences, Mumbai. Total project area is 7,21,312 sq.m. Total cost of the project is Rs. 10.00 Crores. No national park/wild life sanctuary/biosphere reserve is located within 10 km. Lignocellulosic Biomass Pilot Plant (10 MTPD) will produce 3 KLPD ethanol. The

methodology includes biomass size reduction, pretreatment technology, enzymes hydrolysis, fermentation followed by distillation process & the effluent so produced will be reused to have zero discharge. Utilities such as boiler, heater and DG set will not be installed and sourced from existing unit.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 9 locations during March, 2011 – May 2011 and submitted data indicates PM_{10} (48.8-86.2 $\mu\text{g}/\text{m}^3$), SO_2 (18.1-24.2 $\mu\text{g}/\text{m}^3$) and NO_x (10.2-14.9 $\mu\text{g}/\text{m}^3$). Ammonia vapour will be passed through chilled water for ammonia condensation followed by scrubber. The recovered ammonia will be reused into the process. Water requirement from ground water source will be 31 m³/day. Effluent generation will be from fermenter washing and lignin separation, which will be recycling into process. Spent wash will be concentrated in MEE followed by incinerator. Lignin will be burnt in boiler. Environment Clearance for the existing distillery unit has been accorded by the Ministry's letter no. J-11011/219/2003-IA-II(I) dated 11th July, 2006. Committee deliberated upon the compliance report and the project proponent responded satisfactory.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the UEPPCB on 2nd April, 2012. The issues raised during public hearing were benefit from projects, treatment of wastewater, air pollution, raw materials 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. Ethanol production shall be based on Lignocellulosic Biomass.
- ii. As proposed, utilities such as boiler, heater etc shall be sourced from the existing unit.
- iii. Ammonia vapour will be passed through chilled water for ammonia condensation followed by scrubber. The recovered ammonia will be reused into the process
- iv. Total fresh water requirement from ground water should not exceed 31 m³/day and prior permission for drawl of ground water should be obtained from the CGWA/SGWA.
- v. Spent wash generation should not exceed 8 KI/KI of alcohol respectively. Spent wash will be concentrated in MEE followed by incinerator in the existing plant to achieve zero discharge. Effluent generation will be from fermenter washing and lignin separation, which will be recycled into process
- vi. 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.
- vii. As proposed, no effluent from distillery should be discharged outside the premises and Zero discharge should be adopted.

viii. All the issues raised during the public hearing/consultation meeting held on 2nd April, 2012 should be satisfactorily implemented.

2.5.16. Manufacture of Nicotine and its Derivatives (35 MTPM) at Sy. No.317, 321 Paiki, 305, Village Rakhial, Taluka Thasra, District Kheda, Gujarat **by M/s NICO Orgo Marketing Pvt. Ltd.– (TOR to EC).**

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 as per Draft Terms of References (TORs) awarded during the 21st Meeting of the Expert Appraisal Committee (Industry) held during 23rd-24th March, 2011 for preparation of EIA/EMP. All the Nicotine and its derivative manufacturing units, if located outside notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s NICO Orgo Marketing Pvt. Ltd. have proposed for the manufacture of Nicotine and its Derivatives (35 MTPM) at Sy. No.317, 321 Paiki, 305, Village Rakhial, Taluka Thasra, District Kheda, Gujarat. Total plot area is 2,346 m². Nearest town is Dakor at 0.5 m. Shedhi River, Mahisagar River and Narmada canal are located at 0.33 km, 10.17 km and 3.75 km respectively. No national park/wildlife sanctuary/reserve forests are located within 10 Km. Rs. 16.71 Lakhs and Rs. 0.85 Lakhs/annum are earmarked towards capital cost and recurring cost per annum for pollution control measures. Total cost of the project is Rs. 1.00 Crore. Following products will be manufactured:

Production of Nicotine and its Derivatives : 35 MTPM (as 100%):	
S.N.	Products
1	Nicotine Alkaloid
2.	Nicotine Sulphate
3.	Nicotine Tartrate
4.	Nicotine Polacryrex Resin
5.	Other Nicotine Derivatives

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 7 locations during May-June, 2011 and submitted data indicates as PM₁₀ (29 – 141 ug/m³), NO_x (10 – 64.7 ug/m³) and SO₂ (8–43 ug/m³). Solvent will be recovered through single stage condenser using cool water for circulation.

Total fresh water requirement from ground water source will 20 m³/day. Industrial effluent generation will be 40 m³/day. Effluent (28 m³/day) will be recirculated in the process. Remaining effluent will be treated in effluent treatment plant and treated water will be recycled/reused within the factory premises. Domestic effluent (0.8 m³/day) will be treated in septic tank followed by soak pit. No effluent will be discharged outside the premises and 'Zero' discharge will be adopted. Waste/used oil (25 l/yrs) will be sold to authorized recyclers / re-processors. Process solid waste will be neutralized and used for manure. Power (100 KVA/MT of product) will be sourced from MGVCL.

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

22ndFebruary, 2012. The issues raised during public hearing were local employment, rain water harvesting, odour problem 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 satisfactory and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i) The levels of PM₁₀, SO₂, NO_x and VOC should be monitored in ambient air.
- ii) 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.
- iii) Total fresh water requirement from ground water source should not exceed 20 m³/day and prior permission should be obtained from the CGWA/SGWA.
- iv) Industrial effluent generation shall not exceed 40 m³/day. Effluent (28 m³/day) shall be recirculated in the process. Remaining effluent will be treated in effluent treatment plant and treated water will be recycled/reused within the factory premises. 'Zero' effluent discharge should be adopted and no effluent will be discharged outside the premises.
- v) All the solvent storage tanks should be connected with vent condensers with chilled brine circulation.
- vi) Green belt should be developed in 33 % of the total plant area.
- vii) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- viii) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- ix) All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 22ndFebruary, 2012 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhopal.
- x) At least 5 % of the total cost of the project should be earmarked towards the corporate social responsibility 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.

2.5.17. Manufacture of Phenol Formaldehyde Resin (550 MTPM) and Melamine Formaldehyde Resin (100 MTPM) at Sy. No. 81, Village Sartanpur, Tehsil Wankaner, District Rajkot, Gujarat by **M/s Riona Laminate Pvt. Ltd. (TOR to 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 29th Meeting of the Expert Appraisal Committee (Industry) held during 17th–18th November, 2011 for preparation of EIA/EMP. All the synthetic organics manufacturing units, if located outside notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Riona Laminate Pvt. Ltd. have proposed for the manufacture of Phenol Formaldehyde Resin (550 MTPM) and Melamine Formaldehyde Resin (100 MTPM) at Sy. No. 81, Village Sartanpur, Tehsil Wankaner, District Rajkot, Gujarat. Total plot area is 13,557 sq.m. No national park, wildlife, sanctuary, reserve forest is located within 10 km radius. Paneli reserve forest is located at 3.75 Km. Total cost of the project is Rs. 9.0 Crores. Rs.14.00 Lakhs and Rs. 9.60 Lakhs are earmarked towards capital cost and recurring cost/annum towards environmental pollution control measures. Following will be manufactured:

S.N.	Name of Products	Quantity
1	Phenol Formaldehyde Resin	550 MTPM
2	Melamine Formaldehyde Resin	100 MTPM

Ambient air quality monitoring was carried out at 8 locations during October 2011 – December 2011 and submitted data indicates as PM₁₀ (53.7–83 ug/m³), SO₂ (15.3 – 28.2 ug/m³) and NO_x (7.0-17.4 ug/m³). Predicted value of ground level concentration due to proposed project is SPM (3.97 ug/m³), NO_x (2.667 ug/m³) and SO₂ (7.44 ug/m³). Methanol vapor gas will be passed through water scrubber. Dust collector will be provided to lignite/white coal fired boiler (4 TPH).

Total fresh water requirement from ground water source will be 47 m³/day. Effluent will be treated in ETP based on photo fenton process. Treated water will be evaporated to achieve zero discharge. ETP sludge will be sent to secured landfill site. Waste/residue resins will be incinerated at common hazardous waste disposal facility. Used oil will be sent to authorized recyclers. Lignite/white coal will be used as fuel for boiler. Power requirement for the proposed project is estimated to be 450 HP, which will be met from Gujarat State Electricity Board.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 5th May, 2011. The issues raised during public hearing were safety of workers, possible damage to nearby agriculture fields due to emissions from stacks 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 47 m³/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) 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.
- ix) Green belt should be developed in 33% of total plant area.

- x) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

2.5.18. Distillery (ENA/RS/AA, 70 KLPD), Cogen power Plant (2 MW) and Liquid Carbon di-oxide (30 T/d) at Sy. No. 72/2, 79/4, 80/1, 80/4, 86/1, Kenganoor and Sy No. 84/2, Pattihal KB, Taluk Bailhongal, District Bengaum, Karnataka by **M/s.Lorvin Industries Ltd. (TOR to EC).**

The Committee noted that EIA/EMP report has been prepared by M/s SEAMAK Hi Tech Products, Bangalore, who is a non-accredited consultant as on date. Therefore, Committee advised that EIA/EMP report shall be validated by the QCI/NABET accredited consultant and submitted to the Ministry for consideration of environmental clearance.

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

2.5.19. **Exploratory Drilling in additional 2 wells (MDM-H & one additional well) in On-shore NELP-IV Block CY-ONN-2002/2 of Cauvery Basin, Nagapattinam District, Tamil Nadu by M/s Oil & Natural Gas Corporation Ltd. (ONGCL)(TOR to 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 20th Meeting of the Expert Appraisal Committee (Industry) held during 3rd – 4th March, 2011 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. Public hearing meeting was exempted as per 7(ii) of EIA Notification, 2006.

M/s Oil & Natural Gas Corporation Ltd. (ONGCL) have proposed for the Exploratory Drilling in additional 2 wells (MDM-H & one additional well) in On-shore NELP-IV Block CY-ONN-2002/2 of Cauvery Basin, Nagapattinam District, Tamil Nadu. The block was awarded to ONGC (60%) & BPCL (40%) with ONGC as 'Operator' under NELP-IV round in 2004. The Production Sharing Contract (PSC) between ONGC and BPCL was signed on 6th February, 2004. The Petroleum Exploratory License (PEL) was granted w.e.f. 31st August, 2004 for 7 years. Block area is 210 km². No wildlife sanctuaries or National Parks or eco-sensitive areas are located within 10 Km from proposed wells. No forest land is involved. Bay of Bengal is located at 6.5 Km. The well will be drilled upto 3,800 m depth. Total cost of the project will be Rs. 40.00 Crores. Total capital cost and recurring cost for environmental protection measures will be Rs. 1.03 Crore. Location and co-ordinates of the MDM-M blocks are as follows:

Name of location	Type / Category	TD (M)	Latitude	Longitude
MDM-H	Expl. Test / 'B'	3800 / B	11°17' 15.49"	79° 45' 56.08"
Additional well	Expl. Test / 'B'	3800 /B	11o17' 14.68"	79o 44' 29.40"

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 10 locations during December, 2011-March, 2012 and submitted data indicates PM_{10} (32.3-54.2 $\mu\text{g}/\text{m}^3$), SO_2 (5.1-14.5 $\mu\text{g}/\text{m}^3$) and NO_x (10.3- 22.22 $\mu\text{g}/\text{m}^3$). Incremental concentration due to proposed project was estimated to be PM_{10} (0.01 $\mu\text{g}/\text{m}^3$), SO_2 (0.09 $\mu\text{g}/\text{m}^3$) and NO_x (6.0 $\mu\text{g}/\text{m}^3$). Air emissions from D.G. sets will be dispersed by providing adequate stack height. Fresh water requirement will be 25 m^3/day , which will be procured from tanker. Water based mud (WBM) and Synthetic based mud will be used. Total wastewater generated for entire drilling period will be around 800 m^3 . Effluent will be treated in effluent treatment plant (ETP) comprising equalization, chemical coagulation, flocculation and clarification by settling and residual unusable mud will be collected in lined pits and solar evaporated. Drill cutting (DC) will be separated from water based mud (WBM) and washed properly and unusable drilling fluids (DF) will be disposed off in well designed lined pit with impervious liner for solar drying. Disposal of drill cuttings and drill mud will be carried out in accordance with the GSR 546 (E) dated 30th August, 2005. Used oil will be sent to authorized recyclers.

HSD (5.5 KLD) will be used as fuel in rig and D.G. sets during drilling period. DG sets (3 x 1000 KVA) will be installed. Number of blow out prevention techniques will be part of drilling rig unit. Blow out preventers (BOP) will be installed to control fluid from the formation gushing to the surface. In the event the well is unsuccessful the well bore will be cement plugged.

The committee noted that environmental clearance for existing 2 exploratory wells in NELP Block CY-ONN-2002/2 in Cauvery basin was accorded vide Ministry's letter no.J-11011/13/2007-IA(II)-I dated 16th September, 2008. The committee deliberated upon the compliance report submitted by the project proponent and project proponent responded satisfactorily.

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

- i. This EC is only for Exploratory Drilling. In case Development drilling is to be done in future, prior clearance must be obtained from concerned authorities.
- ii. Ambient air quality should be monitored near the closest human settlements as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for PM_{10} , $PM_{2.5}$, SO_2 , NO_x , CO, CH_4 , HC, Non-methane HC etc.
- iii. Mercury should also be analyzed in air, water and drill cuttings twice during drilling period.
- iv. Approach road should be made pucca to minimize generation of suspended dust.

- v. The company should make the arrangement for control of noise from the drilling activity. Acoustic enclosure should be provided to DG sets and proper stack height should be provided as per CPCB guidelines.
- vi. Total water requirement should not exceed 25 m³/day and prior permission should be obtained from the concerned agency.
- vii. The company should construct the garland drain all around the drilling site to prevent runoff of any oil containing waste into the nearby water bodies. Separate drainage system should be created for oil contaminated and non-oil contaminated. Effluent should be properly treated and treated wastewater should conform to CPCB standards.
- viii. Drilling wastewater including drill cuttings wash water should be collected in disposal pit lined with HDPE lining evaporated or treated and should comply with the notified standards for on-shore disposal. The membership of common TSDF should be obtained for the disposal of drill cuttings and hazardous waste. Otherwise, secured land fill should be created at the site as per the design approved by the CPCB and obtain authorization from the SPCB. Copy of authorization or membership of TSDF should be submitted to Ministry's Regional Office at Lucknow.
- ix. Good sanitation facility should be provided at the drilling site. Domestic sewage should be disposed off through septic tank/ soak pit.
- x. Oil spillage prevention scheme should be prepared. In case of oil spillage/contamination, action plan should be prepared to clean the site by adopting proven technology. The recyclable waste (oily sludge) and spent oil should be disposed of to the authorized recyclers.
- xi. The company should comply with the guidelines for disposal of solid waste, drill cutting and drilling fluids for onshore drilling operation notified vide GSR.546(E) dated 30th August, 2005.
- xii. The Company should take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. Possibility of using ground flare should be explored. At the place of ground flaring, the overhead flaring stack with knockout drums should be installed to minimize gaseous emissions during operation.
- xiii. The company should develop a contingency plan for H₂S release including all necessary aspects from evacuation to resumption of normal operations. The workers should be provided with personal H₂S detectors in locations of high risk of exposure along with self containing breathing apparatus.

- xiv. On completion of drilling, the company have to plug the drilled wells safely and obtain certificate from environment safety angle from the concerned authority.
- xv. The Company should carry out long term subsidence study by collecting base line data before initiating drilling operation till the project lasts. The data so collected should be submitted six monthly to the Ministry and its Regional Office at Lucknow.
- xvi. Blow Out Preventer (BOP) system should be installed to prevent well blowouts during drilling operations. BOP measures during drilling should focus on maintaining well bore hydrostatic pressure by proper pre-well planning and drilling fluid logging etc.
- xvii. Emergency Response Plan (ERP) should be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- xviii. The company should take measures after completion of drilling process by well plugging and secured enclosures, decommissioning of rig upon abandonment of the well and drilling site should be restored to the original condition. In the event that no economic quantity of hydrocarbon is found a full abandonment plan should be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations.
- xix. Occupational health surveillance of the workers should be carried out as per the prevailing Acts and Rules.
- xx. In case the commercial viability of the project is established, the Company should prepare a detailed plan for development of oil and gas fields and obtain fresh environmental clearance from the Ministry.
- xxi. Restoration of the project site should be carried out satisfactorily and report should be sent to the Ministry's Regional Office at Bangalore.
- xxii. Oil content in the drill cuttings should be monitored by some Authorized agency and report should be sent to the Ministry's Regional Office at Bangalore.
- xxiii. Under Corporate Social Responsibility (CSR), sufficient budgetary provision should be made for health improvement, education, water and electricity supply etc. in and around the project.
- xxiv. An audit should be done to ensure that the Environment Management Plan is implemented in totality and report should be submitted to the Ministry's Regional Office.
- xxv. All personnel including those of contractors should be trained and made fully aware of the hazards, risks and controls in place.

- xxvi. Company should have own Environment Management Cell having qualified persons with proper background.
- xxvii. Company should prepare operating manual in respect of all activities. It should cover all safety & environment related issues and system. Measures to be taken for protection. One set of environmental manual should be made available at the drilling site/ project site. Awareness should be created at each level of the management. All the schedules and results of environmental monitoring should be available at the project site office.

2.5.20. Expansion of Exploratory Drilling in Mahanandi (Offshore) Block NEC-DWN-2002/2 Under NELP-IV in Mahanandi Basin in Orissa by M/s Oil and Natural Gas Corporation Ltd. (ONGCL) (TOR to 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 16th Meeting of the Expert Appraisal Committee (Industry) held during 18th-19th November, 2010 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. **No public hearing/consultation is required due to location of the project at more than 12 nautical miles from the coastal seashore of EIA Notification, 2006.**

M/s Oil and Natural Gas Corporation Ltd. have proposed for the expansion of Exploratory Drilling in Mahanandi (Offshore) Block NEC-DWN-2002/2 Under NELP-IV in Mahanandi Basin in Orissa. The block NEC-DWN-2002/2 Under NELP-IV was awarded on 17.03.2004. Total area of the exploratory block is 15,465 sq. km. 9 Wells will be drilled during 2012-14. All the locations are more than 150 Km away from coastline and projected drilling depth are 5000 – 7000 m with water depth ranging between 1060 m to 2150 m. Following are the coordinates of the 9 well locations in NEC-DWN-2002/2 blocks:

	S.N.	Well Location	X	Y	Water Depth (m)	Target Depth (m)	Nearest Distance to the coast (km)
Exploratory wells	1	NEC-DWN-2K2-D	576701.81	2174175.5	1750	5000	153
	2	NEC-DWN-2K2-F	668698.44	2222460.8	1160	5000	200
	3	NEC-DWN-2K2-G	563997.50	2179037.5	1670	6500	140
Appraisal Wells	1	NEC-DWN-2K2-H	639205.81	2221795	1060	5500	150

	2	NEC-DWN-2K2-I	578697.44	2201253.50	1380	5800	125
	3	NEC-DWN-2K2-J	625933.25	2170419.25	1575	6000	168
	4	NEC-DWN-2K2-K	645850.75	2116317.00	1950	6500	220
	5	NEC-DWN-2K2-L	570683.3	2143983.2	1950	7000	149
	6	NEC-DWN-2K2-M	560356.5	2112201.5	2150	7000	165

ONGC block is situated at about 290 Km east of Chilka lake. Bitar Kanika Gahirmathawildlife sanctuary is located at distance of 170 Km east.

Adequate stack height will be provided to D.G. sets. Any hydrocarbon generated during testing will be diverted to the burner for combustion. Values of PHC were observed in the range of 0.25 ug/l to 4.11 ug/l. Total water requirement for domestic purpose will be 35 m³/day. Sewage will be treated in sewage treatment plant. Water based drilling fluid will be used in the well. Synthetic oil based drilling mud (SOBM) will be used in case of specific hole problem. SOBM will not be discharged into sea. Drill cutting will be segregated from the drilling mud. Drilling mud will be recycled. Drill cuttings will be washed and disposed into sea. If drill cutting found toxic, these will be brought to shore for safe disposal. Power requirement will be met from DG sets. HSD fuel (60 Kl/day) will be used in D.G. sets as fuel.

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. No drilling shall be done in the shipping lane.
- ii. Total water requirement should not exceed 35 m³/day.
- iii. Water based mud shall be used. Synthetic oil based drilling mud (SOBM) shall be used in case of specific hole problem. SOBM shall not be discharged into sea.
- iv. Water based drilling mud should be discharged to the sea after proper dilution as per E(P) Rules vide G.S.R 546(E) dated 30th August, 2005.
- v. The Company should ensure that there should be no impact on flora fauna due to drilling of wells in the offshore sea. The company should monitor the petroleum hydrocarbons and heavy metals concentration in the marine fish species regularly and submit report to the Ministry.
- vi. Only high efficiency DG set with adequate stack height and modern emission control equipment and low sulphur clean diesel should be used. Acoustic enclosure should be provided to the DG sets to mitigate the noise pollution.

- vii. Treated wastewater (produced water or formation water) should comply with the marine disposal standards notified under the Environment (Protection) Act, 1986. Sewage treatment on board of the rig as per MARPOL regulation. Residual chlorine should not exceed 1 mg/l before disposal.
- viii. The drill cutting (DC) wash water should be treated to conform to limits notified under the Environment (Protection) Act, 1986, before disposal into sea. The treated effluent should be monitored regularly.
- ix. All the guidelines should be followed for the disposal of solid waste, drill cutting and drilling fluids for onshore and offshore drilling operation notified vide GSR.546(E) dated 30th August, 2005.
- x. All the hazardous waste generated at the rig/offshore facility should be properly treated, transported to on shore and disposed of in accordance with the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008. No waste oil should be disposed off into sea. Waste/Used oil should be brought on-shore and sold to MoEF/CPCB authorized recyclers/reprocessors only.
- xi. The company should undertake conservation measures to protect the marine animals/biota in the region.
- xii. The International 'Good Practices' adopted by the Petroleum Industry viz International norms to safeguard the coastal and marine biodiversity should be implemented by the company.
- xiii. Requisite infrastructure facilities should be provided near the offshore installations so that booms and skimmers/chemical dispersants could be deployed immediately in case of oil leakage from the installations. Efforts should be made to curtail the oil slick within 500 meters of the installation and accordingly, action plan and facilities to check the oil slick beyond 500 meters should be provided.
- xiv. Approval from DG Shipping under the Merchant Shipping Act prior to commencement of the drilling operations should be obtained. At least 30 days prior to the commencement of drilling, the exact location should be intimated to the Director General of Shipping and the Company should abide by any direction he may issue regarding ensuring the safety of navigation in the area.
- xv. The Company should take necessary measures to reduce noise levels such as proper casing at the drill site and meet DG set norms notified by the MoEF. Height of all the stacks/vents should be provided as per the CPCB guidelines.
- xvi. Gas produced during testing should be flared with appropriate flaring booms.
- xvii. The flare system should be designed as per good oil field practices and oil industry Safety Directorate (OISD) guidelines. The stack height should be provided as per the regulatory requirements and emissions from stacks will meet the MOEF/CPCB guidelines.
- xviii. The design, material of construction, assembly, inspection, testing and safety aspects of operation and maintenance of pipeline and transporting the natural gas/oil should be governed by ASME/ANSI B 31.8/B31.4 and OISD standard 141.
- xix. The project authorities should install SCADA system with dedicated optical fibre based telecommunication link for safe operation of pipeline and Leak Detection System. Intelligent pigging facility should be provided for the entire pipeline

system for internal corrosion monitoring. Coating and impressed current cathodic protection system should be provided to prevent external corrosion.

- xx. The project proponent should also comply with the environmental protection measures and safeguards recommended in the EIA /EMP /RA/NIO report.
- xxi. On completion of activities, the well should be either plugged and suspended (if the well evaluation indicates commercial quantities of hydrocarbon) or killed and permanently abandoned with mechanical plugs and well cap. If well is suspended, it should be filled with a brine solution containing small quantities of inhibitors to protect the well.
- xxii. Recommendations mentioned in the Risk Assessment & Consequence Analysis and Disaster Management Plan should be followed. For any design estimation of rig facility, maximum period for which data is available shall be taken into account.
- xxiii. Adequate funds both recurring and non-recurring should be earmarked to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government alongwith the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purposes.
- xxiv. A brief report on environmental status & safety related information in what form it is generated and measures taken as well as frequency of such reporting to the higher Authority should be submitted to this Ministry and its respective Regional Office.
- xxv. Petroleum and Natural Gas (safety in Offshore Operations) Rules 2008 of OISD should be strictly adhered to.
- xxvi. An independent audit should be done to ensure that the Environment Management Plan is in place in totality.

2.5.21. Exploratory drilling in NELP – VII Block CB-ONN-2005/4 at District Ahmedabad and CB-ONN-2005/10, at District Bharuch in Western Onshore Basin, Vadodra by **M/s ONGC Limited (TOR to EC)**

The project authorities and their consultant (Kadam Environmental Consultants) 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 3rd Meeting of the Expert Appraisal Committee (Industry) held during 15-16th September, 2009 for preparation of EIA/EMP. Validity of TOR was extended vide Ministry's letter dated 20th December, 2011. 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 ONGC Ltd. have proposed for exploratory drilling in NELP – VII Block CB-ONN-2005/4 at District Ahmedabad, Western Onshore Basin in Vadodra. Area of the block is 31 km². Production sharing contract was signed on 23.12.2008. PEL was issued on 20.11.2009. Total 8 exploratory wells will be drilled in the block. Depth of wells will be 1200-2000m. No national park/wildlife sanctuary/eco-sensitive area is located within the study area. The approximately land area required for each well will be 110m x 110m.

Water based drilling fluid will be used. Cost of the project is Rs. 75.00 crores. Longitude and latitude of the proposed wells are as given below:

Well No.	Longitude (E)	Latitude (N)
1	72°37'6.25"	23°20'44.4"
2	72°36'43.8"	23°20'7.23"
3	72°35'54.25"	23°20'5.78"
4	72°38'26.98"	23°21'17.8"
5	72°38'17.02"	23°21'49.42"
6	72°38'5.62"	23°20'46.15"
7	72°38'40.23"	23°19'51.6"
8	72°36'31.69"	23°19'31.48"

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 10 locations during February, 2012-March, 2012 and submitted data indicates PM₁₀ (36-101ug/m³), SO₂ (8-11.9 ug/m³), NO_x (10.0- 17.8 ug/m³) and THCs (NS) (969-1130 ug/m³). Incremental concentration due to proposed project was estimated to be PM₁₀ (0.15 ug/m³), SO₂ (0.047 ug/m³) and NO_x (26.66 ug/m³).

(ii) M/s ONGC Ltd. have proposed for exploratory drilling in NELP – VII Block CB-ONN-2005/10 in District Bharuch in Western Onshore Basin in Vadodara. Area of the block is 270 km². No national park/wildlife sanctuary/eco-sensitive area is located within the study area. Drilling will be done upto depth of 3500-4000m. The approximately land area required for each well will be 110m x 110m. Water based drilling fluid will be used. Cost of the project is Rs. 100.00 crores. Longitude and latitude of the proposed wells are as given below:

Well Name	Longitude (E)	Latitude (N)
B-Anor-1	72°54'25.875"	21°56'44.037"
B-Anor-2	72°55'9.165"	21°53'13.197"
B-Anor-3	72°54'49.571"	21°55'48.316"
B-Samni-1	72°54'39.233"	21°51'19.816"
B-Argema-1	72°55'6.33"	21°50'24.833"
Well-6	72°54'25.875"	21°56'44.037"
Well-7	72°50'25.00"	21°46'1.68"
Well-8	72°56'35.24"	21°46'26.67"

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 8 locations during March, 2012-April, 2012 and submitted data indicates PM₁₀ (17-102ug/m³), SO₂ (8-27.5ug/m³), NO_x (10.0-35.1ug/m³) and THCs (NS) (1002-1430 ug/m³). Incremental concentration due to proposed project was estimated to be PM₁₀ (0.6ug/m³), SO₂ (0.30ug/m³) and NO_x (52.89ug/m³).

Fresh water requirement will be 35 m³/day, which will be procured from tanker. Water based mud (WBM). Effluent will be generated around 3 m³/day. Effluent will be treated in effluent treatment plant (ETP) comprising equalization, chemical coagulation, flocculation and clarification by settling and residual unusable mud will be collected in lined pits and solar evaporated. Drill cutting (DC) will be separated from water based mud (WBM) and washed properly and unusable drilling fluids (DF) will be disposed off in well designed lined pit with impervious liner for solar drying. Disposal of drill cuttings and

drill mud will be carried out in accordance with the GSR 546 (E) dated 30th August, 2005. Used oil will be sent to authorized recyclers.

HSD (150 KLH and 200 KLH) will be used as fuel in rig and D.G. sets during drilling period. DG sets (2 x 380 KVA) and DG sets (3x1250 KVA) will be installed for CB-ONN-2005/4 and CB-ONN-2005/10. Number of blow out prevention techniques will be part of drilling rig unit. Blow out preventers (BOP) will be installed to control fluid from the formation gushing to the surface. In the event the well is unsuccessful the well bore will be cement plugged.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 19th June, 2012 for Gandhinagar district. The issues raised during public hearing were road made by ONGC, damage of house wall, compensation, restoration of drilled well, development of village, local employment etc. and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 4th September, 2012 for Bharuch district. The issues raised during public hearing compensation for the damage by the another company, restoration of drilled area, rehabilitation of tree instead of cutting a tree, development of village, local 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 EIA/EMP reportsatisfactory and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i. This EC is only for Exploratory Drilling. In case Development drilling is to be done in future, prior clearance must be obtained from concerned authorities.
- ii. Ambient air quality should be monitored near the closest human settlements as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for PM₁₀, PM_{2.5}, SO₂, NO_x, CO, CH₄, HC, Non-methane HC etc.
- iii. Mercury should also be analyzed in air, water and drill cuttings twice during drilling period.
- iv. Approach road should be made pucca to minimize generation of suspended dust.
- v. The company should make the arrangement for control of noise from the drilling activity. Acoustic enclosure should be provided to DG sets and proper stack height should be provided as per CPCB guidelines.
- vi. Total water requirement should not exceed 35 m³/day/well and prior permission should be obtained from the concerned agency.

- vii. The company should construct the garland drain all around the drilling site to prevent runoff of any oil containing waste into the nearby water bodies. Separate drainage system should be created for oil contaminated and non-oil contaminated. Effluent should be properly treated and treated wastewater should conform to CPCB standards.
- viii. Drilling wastewater including drill cuttings wash water should be collected in disposal pit lined with HDPE lining evaporated or treated and should comply with the notified standards for on-shore disposal. The membership of common TSDF should be obtained for the disposal of drill cuttings and hazardous waste. Otherwise, secured land fill should be created at the site as per the design approved by the CPCB and obtain authorization from the SPCB. Copy of authorization or membership of TSDF should be submitted to Ministry's Regional Office at Bhopal.
- ix. Good sanitation facility should be provided at the drilling site. Domestic sewage should be disposed off through septic tank/ soak pit.
- x. Oil spillage prevention scheme should be prepared. In case of oil spillage/contamination, action plan should be prepared to clean the site by adopting proven technology. The recyclable waste (oily sludge) and spent oil should be disposed of to the authorized recyclers.
- xi. The company should comply with the guidelines for disposal of solid waste, drill cutting and drilling fluids for onshore drilling operation notified vide GSR.546(E) dated 30th August, 2005.
- xii. The Company should take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. Possibility of using ground flare should be explored. At the place of ground flaring, the overhead flaring stack with knockout drums should be installed to minimize gaseous emissions during operation.
- xiii. The company should develop a contingency plan for H₂S release including all necessary aspects from evacuation to resumption of normal operations. The workers should be provided with personal H₂S detectors in locations of high risk of exposure along with self containing breathing apparatus.
- xiv. On completion of drilling, the company have to plug the drilled wells safely and obtain certificate from environment safety angle from the concerned authority.
- xv. The Company should carry out long term subsidence study by collecting base line data before initiating drilling operation till the project lasts. The data so collected should be submitted six monthly to the Ministry and its Regional Office at Bhopal.
- xvi. Blow Out Preventer (BOP) system should be installed to prevent well blowouts during drilling operations. BOP measures during drilling should focus on maintaining well bore hydrostatic pressure by proper pre-well planning and drilling fluid logging etc.

- xvii. Emergency Response Plan (ERP) should be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- xviii. The company should take measures after completion of drilling process by well plugging and secured enclosures, decommissioning of rig upon abandonment of the well and drilling site should be restored to the original condition. In the event that no economic quantity of hydrocarbon is found a full abandonment plan should be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations.
- xix. Occupational health surveillance of the workers should be carried out as per the prevailing Acts and Rules.
- xx. In case the commercial viability of the project is established, the Company should prepare a detailed plan for development of oil and gas fields and obtain fresh environmental clearance from the Ministry.
- xxi. Restoration of the project site should be carried out satisfactorily and report should be sent to the Ministry's Regional Office at Bhopal.
- xxii. Oil content in the drill cuttings should be monitored by some Authorized agency and report should be sent to the Ministry's Regional Office at Bangalore.
- xxiii. Under Corporate Social Responsibility (CSR), sufficient budgetary provision should be made for health improvement, education, water and electricity supply etc. in and around the project.
- xxiv. An audit should be done to ensure that the Environment Management Plan is implemented in totality and report should be submitted to the Ministry's Regional Office.
- xxv. All personnel including those of contractors should be trained and made fully aware of the hazards, risks and controls in place.
- xxvi. Company should have own Environment Management Cell having qualified persons with proper background.
- xxvii. Company should prepare operating manual in respect of all activities. It should cover all safety & environment related issues and system. Measures to be taken for protection. One set of environmental manual should be made available at the drilling site/ project site. Awareness should be created at each level of the management. All the schedules and results of environmental monitoring should be available at the project site office.

2.5.22. Exploratory Drilling in NELP-VIII (Block: KG-OSN-2009/1, KG-OSN-2009/2 & KG-OSN-2009/4) in KG Offshore in Basin Off Andhra Pradesh Coast by M/s Oil & Natural Gas Corporation Ltd.(TOR to EC).

The project authorities and their consultant (Senes Consultant) 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 18th Meeting of the Expert Appraisal Committee (Industry) held during 20th-21st January, 2011 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 Oil & Natural Gas Corporation Ltd. have proposed for the exploratory Drilling in NELP-VIII (Block: KG-OSN-2009/1, KG-OSN-2009/2 & KG-OSN-2009/4) in KG Offshore in Basin Off Andhra Pradesh Coast.

S. N	Block	Location distance envisaged from coast
1	KG-OSN-2009/1	10-20 Km
2	KG-OSN-2009/2	12.5-35 Km
3	KG-OSN-2009/4	7-20 Km

Location and coordinates of the block **KG-OSN-2009/1 (NELP-VIII)** will be as follows:

Point	Longitude			Latitude		
	Deg.	Min.	Sec.	Deg.	Min.	Sec
A	80	6	20.00	14	49	15.00
B	80	4	0.00	15	4	0.00
C	80	7	0.00	15	18	0.00
D	80	25	55.00	15	8	25.00
E	80	21	23.20	15	1	3.00
F	80	19	49.00	14	52	18.00
G	80	15	0.00	14	44	18.00
A	80	6	20.00	14	49	15.00

Block area is 1472 Km². Exploratory wells (6 Nos.) will be drilled upto depth of 4300 m. Duration of drilling will be 40-45 days. Total cost of the project will be Rs.536.60 Crores. Water consumption will be 25-30 m³/day. water based mud will be used. Jackup rig will be used. Quantity of drill cutting will be 500-550 m³/day. Drill cutting (DC) will be separated from water based mud (WBM) and washed properly and unusable drilling fluids (DF) will be disposed off in well designed lined pit with impervious liner for solar drying. Disposal of drill cuttings and drill mud will be carried out in accordance with the GSR 546 (E) dated 30th August, 2005. Fuel will be used 8-12 KLD of diesel for gensets of drilling rigs. Power requirement will be met from DG sets (5x1500 KVA).

A. Block-KG-OSN-2009/2 (NELP-VIII)

Location and coordinates of the block KG-OSN-2009/2 will be as follows:

Point	Longitude			Latitude		
	Deg.	Min.	Sec.	Deg.	Min.	Sec
A	80	7	0.00	15	16	0.00
B	80	13	48.00	15	28	0.00
C	80	17	0.00	15	40	0.00
D	80	37	21.00	15	19	0.00
E	80	29	19.80	15	13	58.14
F	80	25	55.00	15	6	25.00

A	80	7	0.00	15	18	0.00
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Block area is 1471 Km². Exploratory wells (6 Nos.) will be drilled upto depth of 3700 m. Duration of drilling will be 35-40 days. Total cost of the project will be Rs. 475.90 Crores. Water consumption will be 25-30 m³/day. Water based mud will be used. Jackup rig will be used. Quantity of drill cutting will be 400-500 m³/day. Drill cutting (DC) will be separated from water based mud (WBM) and washed properly and unusable drilling fluids (DF) will be disposed off in well designed lined pit with impervious liner for solar drying. Disposal of drill cuttings and drill mud will be carried out in accordance with the GSR 546 (E) dated 30th August, 2005. Fuel will be used 8-12 KLD of diesel for gensets of drilling rigs. Power requirement will be met from DG sets (5x1500 KVA).

B. Block-KG-OSN-2009/4 (NELP-VIII)

Location and coordinates of the block **KG-OSN-2009/4 (NELP-VIII)** will be as follows:

Point	Longitude			Latitude		
	Deg.	Min.	Sec.	Deg.	Min.	Sec
A	80	45	0.00	15	39	0.00
B	80	47	28.00	15	40	0.00
C	80	56	15.00	15	42	54.00
D	81	2	0.00	15	46	0.00
E	81	1	0.00	15	48	0.00
F	81	4	0.00	15	53	0.00
G	81	9	35.14	15	57	28.69
H	81	13	40.00	15	45	25.00
I	81	1	42.00	15	38	32.00
J	81	1	24.00	15	36	3.00
K	80	49	24.00	15	33	2.00
A	80	45	0.00	15	39	0.00

Block area is 835 Km². Exploratory wells (7 Nos.) will be drilled upto depth of 4600 m. Duration of drilling will be 45-50 days. Total cost of the project will be Rs. 674.1 Crores. Water consumption will be 25-30 m³/day. Water based mud will be used. Jackup rig will be used. Quantity of drill cutting will be 550-600 m³/day. Drill cutting (DC) will be separated from water based mud (WBM) and washed properly and unusable drilling fluids (DF) will be disposed off in well designed lined pit with impervious liner for solar drying. Disposal of drill cuttings and drill mud will be carried out in accordance with the GSR 546 (E) dated 30th August, 2005. Fuel will be used 8-12 KLD of diesel for gensets of drilling rigs. Power requirement will be met from DG sets (5x1500 KVA).

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. Total water requirement should not exceed 30 m³/day.
- ii. Water based mud shall be used.

- iii. Water based drilling mud should be discharged to the sea after proper dilution as per E (P) Rules vide G.S.R 546(E) dated 30th August, 2005.
- iv. The Company should ensure that there should be no impact on flora fauna due to drilling of wells in the offshore sea. The company should monitor the petroleum hydrocarbons and heavy metals concentration in the marine fish species regularly and submit report to the Ministry.
- v. Only high efficiency DG set with adequate stack height and modern emission control equipment and low sulphur clean diesel should be used. Acoustic enclosure should be provided to the DG sets to mitigate the noise pollution.
- vi. Treated wastewater (produced water or formation water) should comply with the marine disposal standards notified under the Environment (Protection) Act, 1986. Sewage treatment on board of the rig as per MARPOL regulation. Residual chlorine should not exceed 1 mg/l before disposal.
- vii. The drill cutting (DC) wash water should be treated to conform to limits notified under the Environment (Protection) Act, 1986, before disposal into sea. The treated effluent should be monitored regularly.
- viii. All the guidelines should be followed for the disposal of solid waste, drill cutting and drilling fluids for onshore and offshore drilling operation notified vide GSR.546 (E) dated 30th August, 2005.
- ix. All the hazardous waste generated at the rig/offshore facility should be properly treated, transported to on shore and disposed of in accordance with the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008. No waste oil should be disposed off into sea. Waste/Used oil should be brought on-shore and sold to MoEF/CPCB authorized recyclers/re-processors only.
- x. The company should undertake conservation measures to protect the marine animals/biota in the region.
- xi. The International 'Good Practices' adopted by the Petroleum Industry viz International norms to safeguard the coastal and marine biodiversity should be implemented by the company.
- xii. Requisite infrastructure facilities should be provided near the offshore installations so that booms and skimmers/chemical dispersants could be deployed immediately in case of oil leakage from the installations. Efforts should be made to curtail the oil slick within 500 meters of the installation and accordingly, action plan and facilities to check the oil slick beyond 500 meters should be provided.
- xiii. Approval from DG Shipping under the Merchant Shipping Act prior to commencement of the drilling operations should be obtained. At least 30 days prior to the commencement of drilling, the exact location should be intimated to the Director General of Shipping and the Company should abide by any direction he may issue regarding ensuring the safety of navigation in the area.
- xiv. The Company should take necessary measures to reduce noise levels such as proper casing at the drill site and meet DG set norms notified by the MoEF. Height of all the stacks/vents should be provided as per the CPCB guidelines.
- xv. Gas produced during testing should be flared with appropriate flaring booms.
- xvi. The flare system should be designed as per good oil field practices and oil industry Safety Directorate (OISD) guidelines. The stack height should be

provided as per the regulatory requirements and emissions from stacks will meet the MOEF/CPCB guidelines.

- xvii. The design, material of construction, assembly, inspection, testing and safety aspects of operation and maintenance of pipeline and transporting the natural gas/oil should be governed by ASME/ANSI B 31.8/B31.4 and OISD standard 141.
- xviii. The project authorities should install SCADA system with dedicated optical fibre based telecommunication link for safe operation of pipeline and Leak Detection System. Intelligent pigging facility should be provided for the entire pipeline system for internal corrosion monitoring. Coating and impressed current cathodic protection system should be provided to prevent external corrosion.
- xix. The project proponent should also comply with the environmental protection measures and safeguards recommended in the EIA /EMP /RA/NIO report.
- xx. On completion of activities, the well should be either plugged and suspended (if the well evaluation indicates commercial quantities of hydrocarbon) or killed and permanently abandoned with mechanical plugs and well cap. If well is suspended, it should be filled with a brine solution containing small quantities of inhibitors to protect the well.
- xxi. Recommendations mentioned in the Risk Assessment & Consequence Analysis and Disaster Management Plan should be followed. For any design estimation of rig facility, maximum period for which data is available shall be taken into account.
- xxii. Adequate funds both recurring and non-recurring should be earmarked to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government alongwith the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purposes.
- xxiii. A brief report on environmental status & safety related information in what form it is generated and measures taken as well as frequency of such reporting to the higher Authority should be submitted to this Ministry and its respective Regional Office.
- xxiv. Petroleum and Natural Gas (safety in Offshore Operations) Rules 2008 of OISD should be strictly adhered to.
- xxv. An independent audit should be done to ensure that the Environment Management Plan is in place in totality.

2.5.23. Drilling Exploratory drilling in Offshore NELP Block AN-DWN-2009/1, 2009/2, 2009/3, 2009/4, 2009/5, 2009/13, 2009/18, MBA Basin by **M/s ONGC (TOR)**.

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 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 ONGC has proposed for exploratory drilling of 3 wells in offshore NELP block AN-DWN-2009/1. The block was awarded to ONGC (70%) & OIL (30%) with ONGC as

'Operator' on 30.06.2010. Block area is 4981 km². Total project cost is Rs. 900 Crores. Following are the coordination of well location:

Well Location	Longitude (E)	Latitude (N)	Water depth (m)	Target (m)	Distance (Km) from	
					Port Blair Line	Coast
1	91°03'09.90"	14°11'54.61"	2795	6000	337	212
2	90°48'09.38"	14°02'58.66"	2820	6000	333	224
3	90°57'57.93"	13°57'25.76"	2850	6000	314	206

M/s ONGC has proposed for exploratory drilling of 3 wells in offshore NELP block AN-DWN-2009/2. The block was awarded to ONGC (60%) & OIL (40%) with ONGC as 'Operator' on 30.06.2010. Block area is 3995 km². Total project cost is Rs. 900 Crores. Following are the coordination of well location:

Well Location	Longitude (E)	Latitude (N)	Water depth (m)	Target (m)	Distance (Km) from	
					Port Blair Line	Coast
1	90°40'15.28"	13°44'31.60"	2875	6000	313	230
2	90°26'13.40"	13°39'51.75"	2880	6000	329	255
3	90°29'15.38"	13°24'40.88"	2905	6000	307	245

M/s ONGC has proposed for exploratory drilling of 3 wells in offshore NELP block AN-DWN-2009/3. The block was awarded to ONGC (60%) & OIL (40%) with 'joint Operatorship' on 30.06.2010. Block area is 3992 km². Total project cost is Rs. 900 Crores. Following are the coordination of well location:

Well Location	Longitude (E)	Latitude (N)	Water depth (m)	Target (m)	Distance (Km) from	
					Port Blair Line	Coast
1	90°57'01.83"	13°44'27.40"	2915	6000	300	200
2	91°09'31.82"	13°39'35.18"	2925	6000	272	177
3	90°54'48.79"	13°27'39.55"	2910	6000	274	200

M/s ONGC has proposed for exploratory drilling of 3 wells in offshore NELP block AN-DWN-2009/5. The block was awarded to ONGC (90%) & OIL (10%) with 'joint Operatorship' on 30.06.2010. Block area is 4002 km². Total project cost is Rs. 900 Crores. Following are the coordination of well location:

Well Location	Longitude (E)	Latitude (N)	Water depth (m)	Target (m)	Distance (Km) from	
					Port Blair Line	Coast
1	90°32'30.29"	13°17'06.95"	2940	6000	287	239
2	90°32'33.76"	12°56'56.84"	2980	6000	270	233
3	90°46'27.63"	12°54'58.86"	2980	6000	247	195

M/s ONGC has proposed for exploratory drilling of 3 wells in offshore NELP block AN-DWN-2009/13. The block was awarded to ONGC (70%), GSPC (10%), GAIL (10%) & NTPC (10%) with ONGC as 'Operator' on 30.06.2010. Block area is 4007 km². Total project cost is Rs. 900 Crores. Following are the coordination of well location:

Well Location	Longitude (E)	Latitude (N)	Water depth (m)	Target (m)	Distance (Km) from	
					Port Blair Line	Coast
1	95°22'4.99"	12°55'1.72"	3280	6000	320	255
2	95°21'52.89"	12°52'31.61"	3380	6000	314	263
3	95°21'54.50"	12°33'21.02"	3420	6000	304	260

M/s ONGC has proposed for exploratory drilling of 3 wells in offshore NELP block AN-DWN-2009/18. The block was awarded to ONGC (60%), OIL (30%), GAIL (10%) with ONGC as 'Operator' on 30.06.2010. Block area is 4040 km². Total project cost is Rs. 900 Crores. Following are the coordination of well location:

Well Location	Longitude (E)	Latitude (N)	Water depth (m)	Target (m)	Distance (Km) from	
					Port Blair Line	Coast
1	94°35'13.88"	10°24'17.15"	3200	6000	250	241
2	95°07'39.23"	10°25'22.57"	2350	6000	288	280

3	95°06'22.74"	10°01'46.67"	2320	6000	308	300
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Water consumption will be 20-25 m³/day. water based mud will be used. Quantity of drill cutting will be 300 m³/day. Drill cutting (DC) will be separated from water based mud (WBM) and washed properly and unusable drilling fluids (DF) will be disposed off in well designed lined pit with impervious liner for solar drying. Disposal of drill cuttings and drill mud will be carried out in accordance with the GSR 546 (E) dated 30th August, 2005. Fuel will be used 10 KLD of diesel for gensets of drilling rigs. Power requirement will be met from DG sets.

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

1. Executive summary of the project.
2. No. of exploratory wells for which environmental clearance is accorded and No. of new wells proposed during expansion. Status and No. of the wells which are completed and closed.
3. Project Description and Project Benefits;
4. Distance from coast line.
5. Commitment for no drilling will be carried within 1.0 Km.
6. Details of sensitive areas such as coral reef, marine water park, sanctuary and any other eco-sensitive area.
7. Approval for the forest land from the State/Central Govt. under Forest (Conservation) Act, 1980, if applicable.
8. CRZ clearance as per CRZ Notification dated 6th January, 2011.
9. Climatology and meteorology including wind speed, wave and currents, rainfall etc.
10. 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.

11. Actual source of water and 'Permission' for the drawl of water from the Competent Authority. Detailed water balance, waste water generation and discharge.
12. Noise abatement measures and measures to minimize disturbance due to light and visual intrusions in case coastally located.
13. Procedure for handling oily water discharges from deck washing, drainage systems, bilges etc.
14. Procedure for preventing spills and spill contingency plans.
15. Procedure for treatment and disposal of produced water.
16. Procedure for sewage treatment and disposal and also for kitchen waste disposal.
17. Procedure for handling solid waste and any waste segregation at source for organic, inorganic and industrial waste.
18. Storage of chemicals on site.
19. Commitment for the use of WBM and synthetic oil based mud in special case.
20. Risk assessment and mitigation measures including whether any independent reviews of well design, construction and proper cementing and casing practices have been followed.
21. Handling of spent oils.
22. Handling of oil from well test operations.
23. Mud make up and mud and cuttings disposal procedures.
24. H₂S emissions control plans, if required.

25. 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.
26. Restoration plans and measures to be taken for decommissioning of the rig and restoration of on-shore support facilities on land.
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:

- (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) The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. In this regard circular no F. No.J -11013/77/2004 -IA II (I) dated 2nd December, 2009 posted on the Ministry's website <http://www.moef.nic.in> may be referred.

- (ix) Status of approval of Accreditation with Quality Council of India / National Accreditation Board of Education and Training (QCI/NABET) as per circular no F. No. J -11013/77/2004-IA II(I) dated 28th June, 2010 available on the Ministry's website <http://www.moef.nic.in>.
- (x) '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.

2.5.24. Expansion of Fertilizer Unit at Sy. No. 108 & 109, at Village Halavarthi, Taluka & District Koppal, Karnataka by M/s K.P.R Fertilizers Ltd. (TOR)

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 fertilizer plant except single super phosphate plant is listed at S.N. 5(a) under category 'A' and appraised at Central level. under category 'A' and appraised at Central level.

M/s K.P.R Fertilizers Ltd has proposed for Expansion of Fertilizer Unit at Sy. No.108 & 109, at Village Halavarthi, Taluka & District Koppal, Karnataka. No forests land is involved. no Court case/litigation is pending against the project. Total land in possession is 20.07 acres. Additional land of 7.05 acres will be acquired. Trugabhadra reservoir is located 5.0 km. Project cost is Rs. 20.0 crores. Tungabhadra Reservoir is located at 4.8 Km. No national parks/sanctuaries are located within 10 Kms. Environmental clearance was accorded by the Ministry's letter no J-11011/677/2009 –IA II (I) dated 7th July, 2011. Following are the list of existing and proposed products.

S. N.	Product	Production Capacity (TPD)		
		Existing	Proposed Expansion	Total
1	Single Super Phosphate (Powdered /Granulated)	200	150	350
2	Di-Calcium Phosphate (DCP)	10	40	50
3	Mineral Mixtures	40	--	40
4	N.P.K. Mixtures Plant	500	100	600
5	Pesticides formulation unit	35	--	35
6	Sulphuric acid unit	120	--	120
7	Di methyl Sulphate	--	50	50
8	Linear alkyl benzene Sulphonic Acid (LABSA)	--	40	40

In the NPK mixtures plant, Unit will be provided with two stage Cyclone Separators followed by a wet scrubber. In the SSP plant operation, Cyclone separator followed by a dust collector will be provided for the removal of particulate matter from grinding and conveying of rock phosphate. 3 stage scrubbers will be provided to control Hydrogen fluoride gas. Water requirement will increase from 532 m³/day to 565 m³/day. Wastewater generation will be mainly from SSP and DMS Units. The wastewater generated will be treated in ETP and treated water will be utilized for grading purpose. Gypsum sludge will be sent to cement plants. ETP sludge and Sulphur sludge will be sent to TSDF. Used lubricant oil will be sent to authorized re-processors. Power requirement for the expansion project will be 500 KVA. The project proponent has requested for public hearing exemption. The Committee observed that no suitable ground was found for public hearing exemption as increase in the capacity of SSP is more than 50 % and also no reduction of pollution load was envisaged.

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 30th 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 APPCB.
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.
14. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
15. Details of the total land and break-up of the land use for green belt and other uses.
16. List of products alongwith the production capacities and list of solvents and its recovery plan.
17. Detailed list of raw materials required and source, mode of storage and transportation.
18. Manufacturing process details alongwith the chemical reactions and process flow chart of each products.
19. Action plan for the transportation of raw materials and products.

20. Ambient air quality monitoring at 6 locations within the study area of 10 km., aerial coverage from project site as per NAAQES notified on 16th 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 PM₁₀, PM_{2.5}, SO₂, NO_x, CO, NH₃, Fluoride, Benzene including 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 surface and ground water and noise monitoring should also be included.
22. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits. Control of fluorine emissions at source.
23. Plant-wise air pollution control measures proposed for the control of emissions from all the sources particularly uncontrolled NO_x emission and method to control NO_x.
24. Details of water and air pollution and its mitigation plan.
25. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
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. Details of water requirement for the proposed and expansion project. Water balance chart including water intake, effluent generated, recycled and reused and discharged is to be provided.
28. Reduce fresh water requirement. Methods adopted/to be adopted for the water conservation should be included.
29. Recheck the water requirement figure, which seems to be higher side. 'Permission' for the drawl of proposed water from the Competent authority.
30. Design details of the ETP and STP as well as air pollution control equipments (Bag filters/ wet scrubber etc.).
31. Action plan for Zero Discharge of effluent as proposed should be included.
32. 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).
33. Baseline data for fluoride levels in surface water, ground water, soil in and around plant site.
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 should be included.
35. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
36. Plan for the implementation of the recommendations made for the fertilizer plants in the CREP guidelines must be prepared and included.
37. Action plan for regular monitoring of worker and population for fluoride in the working area and population within 1 Km.
38. Details of captive landfill alongwith design details as per CPCB guidelines. Location of secured land fill/TSDF.
39. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
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 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 should 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 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. 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 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 4th August, 2009, which are available on the website of this Ministry should also be followed.
- viii. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. In this regard circular no. J -11013/77/2004-IA II(I) dated 2nd December, 2009 posted on the Ministry's website <http://www.moef.nic.in> may be referred.
- ix. 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 Karnataka State 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.

2.5.25. Molasses based Distillery (30 KLPD) and Co-generation power plant (27 MW) at Village Amdapur, District Parbhani, Maharashtra by **M/s Tridhara Sugar Ltd. (TOR)**

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 molasses based distilleries are listed at S.N. 5(g) (i) under category 'A' and appraised at Central level.

M/s Tridhara Sugar Ltd. has proposed for setting up of Molasses based Distillery (30 KLPD) and Co-generation power plant (27 MW) at Village Amdapur, District Parbhani, Maharashtra. No archeological structures, historical places, protected forests, sanctuaries and biosphere are located. Total land acquired is 90 acres. Sugar plant (2500 TCD) is the existing unit. Total project cost is Rs. 15697.70 Crores.

ESP alongwith stack of adequate height will be provided to bagasse fired boiler. Water requirement from Godavari River will be 400 m³/day for distillery project and 1000 m³/day for cogeneration power plant. Spent wash will be treated in anaerobic digester. Effluent of digester will be concentrated in MEE and further concentrate will be bio-

composted with press mud. Fly ash of bagasse is enriched with potash content and will be used in land reclamation.

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
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 and CPP.
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 and CPP 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 SO₂ 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 PM₁₀, PM_{2.5}, SO₂ and NO_x as per GSR 826(E) dated 16th 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 PM₁₀, SO₂, NO_x 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 (30 KLPD), Co-generation plant (27 MW). 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), sugar unit as well as CPP 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.

2.5.26. Synthetic Organic Chemicals at Survey No.891, 890 part, Village Jangam pally, Mandal Bikunur, District Nizamabad, A.P. by **M/s Elite Pharmaceuticals Pvt. Ltd. (TOR)**

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

2.5.27. Setting up of Surface production facilities -3 Nos in CB-ONN-2000/01 at Village Ingoli & Ghuma, District Ahmadabad,Gujarat by **M/s GSPC Ltd. (TOR)**

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 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 GSPC Ltd. has proposed for setting up of surface production facilities (3 Nos.) in CB-ONN-2000/01 at Village Ingoli & Ghuma, District Ahmadabad, Gujarat. Following are the details of the surface production facilities:

S.N.		PK-1	SE-1	SE-1A-1
1	Total area	15241 m ²	12459.62 m ²	11018 m ²
2	Crude oil production	4-6 m ³ /day	1-2 m ³ /day	4-5 m ³ /day
3	Associated Gas	800-1400 m ³ /day	800-1500 m ³ /day	20-100 m ³ /day

Separated oil will be stored in 2 overhead tanks of 45 m³ each. Wastewater in the form of produced water is expected to be generated at the rate of 4 m³/day, which shall be collected in waste pit and handed over to CETP. Domestic wastewater will be disposed off to soak pit. Waste oil will be used for internal purpose. Oily cotton waste will be handed over to authorized disposal site. Power requirement for PK-1, SE-1 and SE-1A1 will be 80 HP & 25 KVA, 25 HP & 15 KVA and 50 HP & 5 KVA respectively and sourced from Madhya Gujarat Vij Company Ltd. GSPC has obtained the environmental clearance vide Ministry's letter no. J-11011/178/2007-IA II(I) dated 3rd August, 2007 for 5 wells and J-11011/497/2009-IA II(I) dated 16th August, 2011 for 5 wells. The Committee observed no suitable ground for public hearing exemption as 3 separate land areas are involved and also additional pollution load was envisaged

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 30th 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/ critically polluted area.
7. Project location and plant layout.
8. Current status of construction activities.
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. Present land use based on satellite imagery for the study area of 10 km radius.
13. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
14. Details of the total land and break-up of the land use for green belt and other uses.
15. List of products alongwith the production capacities.
16. Detailed list of raw material required and source, mode of storage and transportation.
17. Manufacturing process details alongwith the chemical reactions and process flow chart.
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 16th 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 PM₁₀, SO₂, NO_x 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.
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 boiler, scrubbers/bag filters etc.
23. Details of water and air pollution and its mitigation plan
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. Permission for drawl of water from concerned 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. Treatment & disposal of produced water.
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. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
31. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF.
32. An action plan to develop green belt in 33 % area
33. 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.
34. 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.
35. Details of occupational health surveillance programme.
36. Socio-economic development activities should be in place.
37. Note on compliance to the recommendations mentioned in the CREP guidelines.
38. 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.
- 39. 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.
40. 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.
41. 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.
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 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. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. In this regard, circular no. J-11013/77/2004-IA II(I) dated 2nd December, 2009 and 30th September, 2011 available on the Ministry's website <http://www.moef.nic.in> may be referred.
 - ix. 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 report alongwith Certificate of Accreditation issued by the QCI should be submitted to the Ministry for obtaining environmental clearance.

2.5.28. Synthetic Organic (Bulk Drugs & Intermediates) Manufacturing Unit (Phase-I 600 kg/day, Phase-II 400 kg/day) at Sy. No. 113, Village Chennavelly, Mandal Balanagr, District Mahaboob Nagar, Andhra Pradesh by **M/s Creative Organics. (TOR)**

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 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 Creative Organics has proposed for setting up of Synthetic Organic (Bulk Drugs & Intermediates) Manufacturing unit at Sy. No. 113, Village Chennavelly, mandal Balanagr, District Mahaboob Nagar, Andhra Pradesh. Total plot area is 9.625 acres. Project cost is Rs. 5.0 crores. No forest land is involved. No court case /litigation is pending against the project. No national park/sanctuary is location within 10 Km from the project site. Following products will be manufacturing:

S.N.	Product	Capacity (Kg/Day)
1	Aliskiren Hemifumarate	50
2	Allopurinol	50
3	Bisoprolol	350
4	Dabigetrin	50
5	Fexofenidane	100
6	Fingolimod	20
7	Irbesartan	50
8	Letrozole	20

9	Levothroxin	20
10	Linogliptan	50
11	Linozolid	150
12	Metoprolol Succinate	200
13	Olanzapine	200
14	Olapatidine	100
15	Olmesartan Medoxomil	150
16	Parsugrel HCl	200
17	Prosaconazole	200
18	Ranolazine	250
19	Valgancyclovir	50
	Sub-total Phase I	600
	Sub-total Phase II	400
	Total	1000
Note	Phase I: At any point of time only 2 products shall be manufactured	
	Phase II: At any point of time only 2 products shall be manufactured	

Multicyclone will be provided to coal fired boiler (2x3TPH). DG set (1 x 350 KVA) will be installed. Fresh water requirement from ground water source will be 54.1 m³/day. Industrial effluent generation will be 39 m³/day. High TDS effluent will be treated in stripper followed by MEE and ATFD. Low TDS effluent will be treated in biological treatment system. Fly ash will be sold to brick manufacturers. Process & Solvent residue will be sent to TSD/Cement industries. ETP sludge, evaporation salt and Hyflow will be sent to TSD. Catalyst will be sent to recyclers. Waste oil/used batteries will be sent to authorized recyclers. Greenbelt will be developed in 3.21 acres out of 9.625 acres.

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 16th 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 PM₁₀, SO₂, NO_x, CO, NH₃ 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 16th September, 2009.
28. Permission from CGWA/SGWA for the drawl of 54.1 m³/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.
 - vii) To which chemicals, workers are exposed directly or indirectly.
 - viii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - ix) What measures company have taken to keep these chemicals within PEL/TLV.
 - x) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - xi) What are onsite and offsite emergency plan during chemical disaster.
 - xii) Liver function tests (LFT) during pre-placement and periodical examination.
39. Details of occupational health surveillance programme.
40. Socio-economic development activities shall 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 shall be provided.
43. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
44. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 45. 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.
46. 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.
47. 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.
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 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.

2.5.29. Expansion of Maize based Products (from 120 TPD to 300 MTPD) Manufacturing Unit and Addition of New Sorbital Manufacturing Facilities (20 TPD) at Khasra No 761/1-4, 760/1, 745/2, 745/3, Village Mohad, Tahsil & District Rajnandgaon, Chhattisgarh by M/s Rajaram Maize Products. (TOR)

The project authorities and their consultant (SGS India 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 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 Rajaram Maize Products has proposed for expansion of Maize based Products (from 120 TPD to 300 MTPD) Manufacturing Unit and addition of New Sorbital Manufacturing Facilities (20 TPD) at Khasra No 761/1-4, 760/1, 745/2, 745/3, Village Mohad, Tahsil & District Rajnandgaon, Chhattisgarh. Total plot area is 16.02 acres. Existing plant is located in 4.49 acres of land. The proposed sorbital plant will be located in 1.30 acres of land within existing plant area. No forest land is involved. No court case/litigation is pending against the project. Shivanath River and Ranisagar lake is at 1.0 KM and 7.0 Km respectively from the project site.

Dust collector and stack are provided with existing Coal fired boiler (3.0 TPH), husk fired boiler (6 TPH) + 10TPH+15 TPH). Rice husk fired (3.9 TPH) boiler will be installed. Water requirement will be increased from 380 m³/day to 690 m³/day which will be met from Shivanath River and ground water source. Industrial effluent generation will be increased from 235 m³/day to 395 m³/day. Industrial effluent will be treated in ETP consisting primary (UASB) and secondary treatment (ASP). Treated effluent will be used for gardening. Used Lubrication oil (75 LPA) and Nickel catalyst (1.5 Kg/day) will be sold to authorized recyclers. Fly ash will be sent to brick manufacturers.

Power requirement will be increased from 1225 KVA to 3000 KVA, which will be met from Chhattisgarh electricity board and CPP. DG sets (1 x 625 KVA + 1 x 125 KVA) will be installed.

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 16th 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 PM₁₀, SO₂, NO_x, CO, NH₃ 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 16th September, 2009.
28. Permission from concerned Authority for the drawl of **690 m³/day** 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.
39. Details of occupational health surveillance programme.
40. Socio-economic development activities shall 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 shall be provided.
43. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
44. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 45. 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.
46. 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.
 47. 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.
 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 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.

2.5.30. Expansion of Synthetic Organic Chemicals (9735 TPA to 12135 TPA) at Village Kuranwala, Tehsil Derabassi, District Mohali, Punjab by **M/s Kudos Chemie Ltd. (TOR).**

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 alongwith the draft Term of References for the preparation of EIA/EMP. All Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Kudos Chemic Ltd has proposed for expansion of Synthetic Organic Chemicals (Bulk Drugs) manufacturing unit at Village Kuranwala, Tehsil Derabassi, District Mohali, Punjab. No forest land is involved. No court case/litigation is pending against the project proposal. Dangri River and Ghagghar River are flowing at 7.6 Km and 6 Km respectively. Land of 41.6 acre are available with the existing unit. Additional land is acquired for the proposed activity is 12.96 acres. Total project cost is Rs. 144 crores. Ministry vide letter no. J-11011/487/2007-IA II (I) dated 22nd December, 2011 has accorded environmental clearance for the existing unit. Following products will be manufactured:

S.N.	Existing	Capacity-TPA	S.N.	Proposed	Capacity-TPA
				Module -1	
1	Caffeine	6035	1	Tenofovir	600
2	Theophylline	2600	2	Valacyclovir	600
3	Aminophylline	400	3	Acyclovir	600
4	Etophylline	500	4	Zidovudine	600
5	Theobromine	200	5	Adifovir	300
				Gancyclovir	150
				Abacavir	150
	Total	9735		Worst case (Any one shall be manufactured out of 1 to 5)	600
				Module -2	
			1	Pregabalin	600
			2	Gabapentine	500
			3	Dextro methorphan HBr	600
			4	Valporic acid Na Salt	300
				Allopurinol	200
				Worst case (Any one shall be manufactured out of 1 to 4)	600
				Module -3	
			1	Cyclo Hexanile Ethylamine	
			2	Cyclohexane Diacetic acid Monoamide	
			3	6-Chloro 2-hexanone	

			4	p-Methoxy Phenyl acetic acid	
			Worst case (Any one shall be manufactured out o 1 to 4)		1200
			Total (Module 1 +Module 2+ Module 3		2400

Unit has existing coal fired boiler (2x5 TPH, 2 x 10 TPH) and Husk fired boiler (1 x 54 TPH). Thermic fluid heater is proposed to be installed. Scrubber will be provided to proposed incinerator. DG sets (6 x 1500 KVA) will be installed.

Water requirement from ground water source will be increased from 2415 m³/day to 3320 m³/day. Industrial effluent generation will be increased from 1131 m³/day to 1317.4 m³/day and treated in ETP consist of stripper, MEE and biological treatment. Treated water will be reused for cooling tower makeup.

Ash will be sent for filling of low lying area. ETP Sludge, waste Iron sludge, Incinerator Ash and inorganic salts will be sent to TSDF. Used oil/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. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30th 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. 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.
12. 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.
13. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
14. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
15. Details of the total land and break-up of the land use for green belt and other uses.

16. List of products alongwith the production capacities.
17. Detailed list of raw material required and source, mode of storage.
18. Manufacturing process details alongwith the chemical reactions and process flow chart.
19. Action plan for the transportation of raw material and products.
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 16th 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 PM₁₀, PM_{2.5}, SO₂, NO_x, 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.
23. Air pollution control measures proposed for the effective control of gaseous/process 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 alongwith 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 NAAQS Standards notified by the Ministry on 16th September, 2009.
28. An action plan prepared by SPCB 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 from CGWA/SGWA for the drawl of **3320 m³/day** ground water. Water balance chart including quantity of effluent generated recycled and reused and effluent discharge.
31. Attempt to be made for reduction for usage of water.
32. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
33. Zero discharge effluent concepts to be adopted.
34. 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).
35. 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.
36. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
37. Material Safety Data Sheet for all the Chemicals are being used/will be used.
38. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
39. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.

40. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
41. 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.
42. Details of occupational health surveillance programme.
43. Socio-economic development activities shall 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 shall be provided.
46. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
47. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 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 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.
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 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.

Regarding proposal of Kudos Agrohols Ltd., the Committee of the view that although proposal of M/s Kudos Agrohols Ltd. was submitted alongwith M/s Kudos Chemie Ltd. but not listed in the agenda. Therefore, proposal of Kudos Agrohols Ltd., will be considered in the next coming meeting.

2.5.31. Expansion of Sugar Mill (2500 TCD to 7000 TCD) at P.O. Naraipur, Tehsil Bagaha, District West Champaran, Bihar by **M/s Tirupati Sugars Ltd. (TOR).**

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 sugar industries (> 5000 TCD cane crushing) are listed at S.N. 5(j) under category 'B' and appraised at state level. However, due to applicability of general condition (i.e. Balmiki Tiger reserve within 10 Km), project proposal is treated as category 'A' project.

M/s Tirupati Sugars Ltd. has submitted revised proposal for the expansion of sugar mill (2500 TCD to 7000 TCD) at village Naraipur, Tehsil Bagba, District West Champaran, Bihar. No forest land is involved. Total plot area is 125 acres. Gandok river is at 25 Km. Balmiki Tiger reserve is situated at about 5 Kms. Co-generation plant (3 MW) is installed in the existing Unit. CPP (3 MW) and CPP (6MW) will be installed. Total project Cost is Rs. 10178.05 lakhs. Expansion will be done within existing premises. No court case / litigation is pending against the project.

High efficiency wet scrubber system will be installed with new boilers to control particulate emissions within 150 mg/Nm³. Water requirement from ground water source will be 550 m³/day. Wastewater generation in sugar factory has been reduced from 400 l/Ton of Cane Crushed to 100 l/Ton of cane crushed in 2010. Zero discharge concept will be followed by adopting recycle and reuse of wastewater. Air cooled condenser will be installed. Effluent will be treated in the ETP and treated water will be used for irrigation or in house use. Boiler Ash, Bagasse, Pressmud are the solid waste. Bagasse will be used as fuel. Press mud will be composted. Green belt will be developed in 19.55 acres out of 59.10 acres total land. DG Set will be provided with acoustic enclosure.

Total power requirement will be 7.5 MW.

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
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. 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 distance of Balmiki Tiger reserve.
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 and CPP.
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 sugar plant and CPP 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 SO₂ 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 PM₁₀, PM_{2.5}, SO₂ and NO_x as per GSR 826(E) dated 16th 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 PM₁₀, SO₂, NO_x 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 Sugar and Co-generation plant. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
21. 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. Proposed effluent treatment system for sugar unit as well as CPP and scheme for achieving 'zero' discharge.

24. Lagoon capacity for sugar unit and spent wash as well measures to be taken to control ground water contamination.
25. Details of solid waste management including management of boiler ash. Submit Ash management plan. MoU with cement plant for the use of fly ash.
26. Land available for bio-composting. Details of lining to be provided in the compost yard.
27. Green belt development as per the CPCB guidelines.
28. List of flora and fauna in the study area.
29. Noise levels monitoring at five locations within the study area.
30. 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.
31. EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
32. Details of bagasse storage. Details of press mud requirement.
33. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
34. Alcohol storage and handling area and its fire fighting facility as per norms.
35. 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.
36. 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.
37. Details of socio-economic welfare activities to be provided.
38. 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.
39. Action plan for post-project environmental monitoring.

Corporate Environmental Responsibility

40. (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.
41. 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.

42. 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.
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. 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.
45. 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.

2.5.32. Manufacturing of Urea Formaldehyde Glue/Urea Melamine Formaldehyde Glue (16.3 MTPD) at Block No. 1037, RS No. 770/2, Village Hariyal Taluka Mandvi, District Surat, Gujarat by **M/s Darshan Boardlam Ltd. (TOR)**.

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 (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 Darshan Boardlam Ltd. has proposed for Manufacturing of Urea Formaldehyde Glue/Urea Melamine Formaldehyde Glue (16.3 MTPD) at Block No. 1037, RS No. 770/2, Village Hariyal Taluka Mandvi, District Surat, Gujarat. Total plot area is 3500 m². Existing unit is involved in manufacturing of particle block. Project cost is Rs. 1.5 Crores. River Tapi is flowing at a distance of 7.5 Km. Following products will be manufactured:

S.N.	Product	Capacity (MTPD)
1	Urea Formaldehyde Glue/Urea Melamine Formaldehyde Glue	16.3

Water requirement from ground water source will be 10. M3/day. Effluent generation from UF process will be 1.8 m³/day. Effluent will be treated in ETP and treated water will be used for gardening purpose. Domestic effluent will be disposed through septic tank followed by soak pit. ETP sludge will be sent to TSDF. Waste oil will be sent to authorized reproprocessors.

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 16th 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 PM₁₀, SO₂, NOx 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 16th 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 10 m³/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.

2.5.33. Expansion of Synthetic Organic Chemical Manufacturing Facility at Sy. No. 8,13,15,16,25,& 75 Takai, at Village Honad, Khalapur District Raigad, Maharashtra by M/s Prasol Chemical Ltd. (TOR).

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 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 Prasol Chemical Ltd. has proposed for expansion of Organic chemical manufacturing facility at Sy. No. 8,13,15,16,25,& 75 Takai, at Village Honad, Khalapur District Raigad, Maharashtra. No forest land is involved. no court case/litigation is pending against the project. Kondhave caves (Notified heritage site archeological survey of India) is located at 11km. Following products will be manufactured:-

S.No	Product	Quantity (MT/A)
1	Phenol	20000
2	Acetone	12000
	Byproducts	
	Alpha Methyl Styrene	1500
	Acetophenone	800
3	Zinc Di-Organo Dithiophosphate	1500
4	Mesityl Oxide	750
5	Hydrogenated compounds	1800

Total water requirement from ground water source will be 352 m³/day. Effluent will be treated in ETP. No effluent will be discharged outside the factory premises. Tar from phenol/acetone manufacture will be sent to cement manufacturing unit. ETP sludge will be sent to TSDF, Taloja. Used oil will be sent to recyclers. Power requirement will be increase from 1250 Kw to 2250 KW and sourced from MSEDCL. DG set (2 x 600 kw) are 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 30th 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 MPCB.
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 16th 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 PM₁₀, SO₂, NO_x, CO, NH₃ 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 16th 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 CGWA/SGWA for the drawl of 352 m³/day ground 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.

- 2.5.34. Expansion of Phenol Formaldehyde and Melamine Formaldehyde Resin Manufacturing Unit at Sy. No. 1743 & 1761/1, Village Gangad, Taluka Dholka, District Ahmedabad, Gujarat by **M/s Meridian Sunmica & Laminates Pvt. Ltd. (TOR)**.

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 Meridian Sunmica & Laminates Pvt. Ltd. has proposed for expansion of Phenol Formaldehyde and Melamine Formaldehyde Resin Manufacturing Unit at Sy. No. 1743 & 1761/1, Village Gangad, Taluka Dholka, District Ahmedabad, Gujarat. Total plot area is 38631 m². Following products will be manufactured :

S.N.	Product	Existing (MTPM)	Proposed (MTPM)	Capacity after expansion (MTPM)
1	Phenol Formaldehyde resin	120	600	720
2	Melamine Formaldehyde resin	40	200	240

Multicyclone followed by dust collector are installed in the existing steam boiler and thermic fluid heater. Scrubber will be provided to methanol dryer. Water requirement from ground water source will be increased from 40 M3/day to 46.8 m³/day after expansion. Effluent generation will be increased from 2.5 m³/day to 3.3 m³/day. Effluent will be treated in ETP based on photo fenton process and treated water will be evaporated to achieve zero discharge. Domestic effluent will be disposed through septic tank followed by soak pit. ETP sludge will be sent to TSDF. Resin waste will be incinerated in the common incineration facility. Waste oil will be sent to authorized reprocessors. Greenbelt will be developed in 12850 m².

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 30th 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 MPCB.
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 16th 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 PM₁₀, SO₂, NO_x, CO, NH₃ 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 16th 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 CGWA/SGWA for the drawl of 46.8 m³/day ground 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.
 50. 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. 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.

2.5.35. Organic Chemicals Manufacturing Plant at Kumbhivali District Raigad, Maharashtra by **M/s Dujodwala Products Ltd. (TOR).**

The project authorities and their consultant (Mitcon Consultancy and Engineering Services Ltd., Pune) 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 outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Dujodwala Products Ltd. have proposed for Expansion of Organic Chemical Manufacturing plant at Village Kumbhivalim, Tehsil Khalapur, Distt Raigad, Maharashtra. No forest land is involved. no court case/litigation is pending against the project. Total plot area is 20.5 acres. Out of which expansion will be done in 5 acres of land. Patal ganga River is flowing at a distance of 2.75 Km. Total project cost is Rs. 31 crores. No national park/sanctuary is located within 10 Km.

Following products will be manufactured:

S.N.	Name of the chemical	Existing	Proposed	Post
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		capacity (MT/Month)	capacity (MT/month)	Expansion capacity (MTPM)
1	Alphapinene (95%)	N.A	200.00	200
2	Polyester Resin	125	100.00	225
3	Phenolic Resin	166.66	800.00	966.66
4	Alkyd Resin	25.00	300.00	325
5	Coating	NIL	500.00	500
6	Rosin Easter	50	150	200
7	Maleic Modified Resin	25	75.00	100
8	Phenolic Modified Resin	25	75.00	100
9	PVC chemicals	NIL	500.00	500
10	Camphene	75	200.00	275
11	Dipentene	150	350.00	500
12	Ketonic Resin	25	100	125
13	Polyamide Resin	25	100	125

Dust collector followed by wet scrubber will be provided to boiler (10 TPH)

Water requirement from Patalganga River will be increased from 146 m³/day to 182m³/day after expansion. Industrial effluent generation will be increased from 49 to 72 m³/day after expansion. Effluent will be treated in ETP and treated effluent will be transferred to CETP for further treatment. Greenbelt will be developed in 6 acres of land.

Fly ash will be sent to cement manufacturers. Resin residue, ETP sludge, copper based and titanium based catalyst will be sent to CHWTSDF.

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 separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30th 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.
7. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the MPCB.
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. 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.
14. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
15. Details of the total land and break-up of the land use for green belt and other uses.
16. List of products alongwith the production capacities.
17. Detailed list of raw material required and source, mode of storage and transportation.
18. Manufacturing process details alongwith the chemical reactions and process flow chart.
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 16th 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 PM₁₀, SO₂, NOx 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.
22. Air pollution control measures proposed for the effective control of gaseous 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, 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 16th 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 from concerned Authority for the drawl of **182m³/day**water from River Patalganga. Water balance chart including quantity of effluent generated recycled and reused and discharged.
30. Action plan for 'Zero' discharge of effluent should be included.
31. 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).
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.
33. Action plan for the management of fly ash generated from boiler should be included. Tie-up or agreement with brick manufacturer to be provided.
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. 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. 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.

2.5.36. Resin manufacturing unit at plant No. 5, Sy. No. 1/1, NH-8A, Varsana, Gandhidham, Kutch, Gujarat by M/s Rajkripal Exim Pvt. Ltd(TOR).

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 located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Rajkripal Exim Pvt. Ltd. Has proposed for setting up of Resin manufacturing unit at plant No. 5, Sy.No.1/1, NH-8A, Varsana, Gandhidham, Kutch, Gujarat. Total project cost is Rs. 5.23 crores. No forest land is involved. No court case/litigation is pending against the project. Total plot area is 21000 m². Following products will be manufactured

List of Existing product

S.N.	Name of Product	Quantity in Sq. m/month
1	Plywood and block board	16,70,000

List of Proposed intermediate Product

S.N.	Name of Product	Quantity (MTPM)
1	Phenol Formaldehyde Resin	350
2	Urea Formaldehyde Resin	100
3	Melamine Urea Formaldehyde Resin	50

Multi cyclone followed by dust collector will be provided to agro waste /lignite fired boiler. Fresh water requirement will be 8 m³/day. Industrial effluent will be treated in ETP and treated effluent will be evaporated to achieve zero discharge. ETP waste will be sent to TSDF. Used oil/spent oil will be sent to authorized recycler. Total power requirement for PGVCL will be 475 KVA. Fuel used in boiler will be agro waste / lignite. DG sets (1X 600 + 1x 25 KVA) will be installed.

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 16th 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 PM₁₀, SO₂, NO_x 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 16th 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 8 m³/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.
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.
- 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.

2.5.37. Resin Manufacturing Unit at Village Vemardi, Taluka Karjan, District Vadodara, Gujarat by **M/s Jason Dekor Pvt. Ltd. (TOR).**

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 alongwith the draft Term of References for the preparation of EIA/EMP. All Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Jason Dekor Pvt. Ltd. has proposed for setting up of resin Manufacturing Unit at Village Vemardi, Taluka Karjan, District Vadodara, Gujarat. Total project cost is Rs. 1.5 Crores. No defence installation, biosphere reserve, national parks, wildlife sanctuary, are located within 10 Km. Total plot area is 35037 m². Following products will be manufactured :

S.N.	Product	Capacity (MTPM)
1	Phenol Formaldehyde resin	325
2	Melamine Formaldehyde resin	150
3	Urea Formaldehyde Resin	650

Multicyclone separator will be provided to hot air generator and thermic fluid heater. Scrubber will be provided to methanol dryer. Water requirement from ground water source will be 11.21 M³/day. Effluent generation will be 4.278 m³/day. Effluent will be treated in ETP based on photo fenton and treated water will be evaporated to achieve zero discharge. Domestic effluent will be disposed through septic tank followed by soak pit. ETP sludge will be sent to TSDF. Resin waste will be incinerated in the common incineration facility. Waste oil will be sent to authorized reprocessors. Greenbelt will be developed in 11562 m².

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 16th 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 PM₁₀, SO₂, NO_x 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 16th 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 11.21 m³/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.
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.
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.

2.5.38. Pharmaceutical Advanced Intermediates Manufacturing Facility at Sy. No 105/3D, 105/3B, 105/7B, Village Chennivakkam, Tehsil Ponneri, District Thiruvallur, Tamil Nadu by M/s Arudaa Vis Labs Pvt. Ltd. . (TOR).

The project authorities and their consultant (ABC Techno Labs Pvt. Ltd, Chennai) 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 outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Arudaa Vis Labs Pvt. Ltd. has proposed for setting up of pharmaceutical advanced Intermediates Manufacturing Facility at Sy. No 105/3D, 105/3B, 105/7B, Village Chennivakkam, Tehsil Ponneri, District Thiruvallur, Tamil Nadu. Plot area is 4862.0 m². No forest land is pending against the project. Erumaivettipalam RF and Palavakkam RF are located at 6.0 km and 13.0 km respectively. KoratliyarRiver, AraniRiver and sholarvarmLake are located at 3.0 Km, 5.5 km and 5.8 km respectively. No national parks/wildlife sanctuaries are located within 15 km. project cost is Rs. 2.6 crores. Rs. 57.05 lakhs and Rs. 14.5 lakhs are earmarked towards capital cost and recurring cost per annum. Following products will be manufactured:-

S.N	Products	Capacity (Kg/Annum)
1	EDC-CB Trimer	120
2	AB Dimer	120
3	DMT-5MeU	120
4	DMT-5MeC	120
5	DMT-G	120
6	DMT-A	120
	Total	720

Scrubber will be provided to control process emissions. Stack of 30 m will be provided to disperse air emissions from oil fired boiler.

Fresh water requirement from ground water source will be 6.5 m³/day. Effluent generation will be 4.5 m³/day and treated in ETP.ETP waste and chemical residue will be sent to TN waste management ltd. at Gummidipoondi. Power requirement will be 232 HP/170 KW and met from TNEB. Greenbelt will be developed in 1374.10 m². DG set (60 KVA) will be installed.

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 16th 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 PM₁₀, SO₂, NO_x 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 16th 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. Permission for the drawl of 6 m³/day water from the CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
27. Action plan for segregation of effluent based on high COD, high TDS and Low TDS effluent stream alongwith '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 utilized 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.

2.6 Any Other

- 2.6.1. Expansion of Sugar Plant (5,500-11,000 TCD), Molasses based Distillery Unit (35 KLPD to 100 KLPD), ENA Plant (20 KLPD to 75 KLPD) and Co-generation Power Plant (39 MW to 64 MW), establishment of Ethanol Plant (30 KLPD) and D.G. sets (2x1 MW) at Village Bellad-Bagewadi, Taluka Hukeri, District Belgaum, Karnataka by **M/s Vishwanath Sugar and Steel Industries Limited, Karnataka. –reg.**

Environmental Clearance was accorded by the MoEF's letter no J-11011/453/2009 dated 24th November, 2011 for Expansion of Sugar Plant (5,500-11,000 TCD), Molasses based Distillery Unit (35 KLPD to 100 KLPD), ENA Plant (20 KLPD to 75 KLPD) and Co-generation Power Plant (39 MW to 64 MW) by **M/s Vishwanath Sugar and Steel Industries Limited.**

Now, project proponent informed that boiler (150 TPH) will be installed instead of 100 TPH. This modification will help the industry to generate 5 MW additional power without any increase in fuel. The cogeneration capacity will ultimately become 69 MW instead of 64 MW without any additional fuel requirement, land requirement & effluent generation.

After detailed deliberations, the Committee recommended the proposal for amendment to the existing environmental clearance for use of boiler (150 TPH) instead of 100 TPH.

- 2.6.2. Expansion of project of NPK Grade Fertilizers at Valasapkala, Kakinada Rural Mandal East Godavari, Andhra Pradesh by **M/s Godavari Fertilizers and Chemicals Ltd. –extension of validity.**

Project proponent vide letter 29th December, 2011 (received in the Ministry on 17th April, 2012) has requested for extension of the validity of the existing environmental clearance. Environmental clearance was accorded by the MoEF's letter no. J-

11011/381/2006-IA II (I) dated 11th May, 2007 for the expansion project of NPK Fertilizer by M/s Godavari Fertilizers and Chemicals Ltd. Project proponent informed that project implementation was delayed due to late execution of joint venture with Tunisia regarding supply of key raw material i.e. phosphoric acid. Project completion is 90 % as on date. Pre-commissioning and trial run expected by December, 2012.

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

2.6.3. Setting up of small test cell for production of Sodium metal at Heavy Water Plant, Baroda, Gujarat by **M/s Heavy Water Board**-clarification

M/s Heavy Water Board has proposed to develop an indigenously cell for production of sodium metal for captive purpose. It is noted that 2000 amp test cell will be operated on electrolysis process of molten electrolyte mixture of salts for generating sodium metal (1.7 Kg/hr). Committee noted that as such sodium metal does not attract the provisions of EIA Notification, 2006. After detailed deliberations, the Committee recommended that no environmental clearance is required for the small test cell. However other statutory clearances under the Air and Water Acts shall be obtained.

31st October, 2012

2.7.0 Consideration of the Projects:

2.7.1. Laying of Petroleum Product Pipeline with Associated Facilities from Rewari, Haryana to Kanpur, U.P. by M/s Hindustan Petroleum Corporation Ltd. (TOR to EC).

The project authorities and their consultant (SECON Pvt. Ltd, Vadodara) 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 25th Meeting of the Expert Appraisal Committee (Industry) held during 28th-30th July, 2011 for preparation of EIA/EMP. All the Petroleum product storage and transportations facilities are listed at S.N. 6(a) under Category 'B' and should have been appraised at the State level. However, due to applicability of general condition, pipeline passing through interstate boundary, project is treated as category 'A' and appraised at the Central Level.

M/s Hindustan Petroleum Corporation Ltd. have proposed for laying of Petroleum Product Pipeline with Associated Facilities from Rewari to Kanpur. Total laying of pipeline in Haryana, Rajasthan and U.P. will be 1020 km, 137 km & 288.8 km respectively alongwith 437 km (final survey length is 441.12 Km) pipeline between Rewari, Haryana and Kanpur, UP. The design capacity of the proposed pipeline is 7.98 MMTPA. Following facilities will be installed:

1. 18" Dia Pipeline from Rewari (Haryana) to Kanpur (approx. Length 441.12 Km)
 - a) Dispatch Station at Rewari
 - b) SV/CP Station with associated facilities – 11 Nos. along the pipeline route
 - c) IPS Station with associated facilities – Saiyyadpur Pran (Uttar Pradesh)
 - d) Receipt, Storage cum Marketing Terminal at Kanpur (Uttar Pradesh)
 - e) Pumping station at Bahadurgarh

2. Additional Tankage Facilities for the storage
 - a) Additional Tankage facilities at Bharatpur (Rajasthan)
 - b) Additional Tankage facilities at Mathura (Uttar Pradesh)
 - c) Additional Tankage facilities at Palanpur (Gujarat)

No national park/wildlife sanctuary/ tiger reserve/elephant reserve/turtle nesting ground /core zone of biosphere reserve is located within study area. During presentation, project proponent confirmed that Bharatpur bird sanctuary is 11 km away from the project site. Rewari to Kanpur pipeline will cross state highway (15 nos.), other roads (268 Nos.), canals (58 Nos.), drains (5 Nos.), nals (19 Nos.), rivers (15 Nos.), other pipeline (9 Nos), National Highways (12 Nos.), Railways (12 Nos.), social forests (6 Nos.) and protected forests (8 Nos.).

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 16 locations and submitted data indicates PM_{2.5} (5-10ug/m³), PM₁₀ (20-30 ug/m³), SO₂ (7.0-30 ug/m³) and NO_x (8-14 ug/m³). DG set (1x 160 KVA) and DG Set (1x 100 KVA) will be installed at Rewari terminal and Bhartpur. Source of water requirement will

be ground water. Oily effluent will be treated in ETP of 75 KLH at Rewari and 100 KLH ETP at Bharatpur.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Rajasthan State Pollution Control Board on 10th April, 2012 for Bharatpur terminal. The issues raised during public hearing were about project pipeline, land acquisition, rout of pipeline, no pipeline laying in populated area, fire safety and positive environmental impact on environment etc. and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

The Committee deliberated on the issues raised for the separate Public Hearing / Public Consultation meeting conducted by the UP Pollution Control Board on 14th May, 2012 for Mathura Terminal. The issues raised during public hearing were regarding social development program for public residing at Village Brari, health facility scheme, compensation against land, any negative impact due to proposed project on surrounding, tree plantation on waste land etc. and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the UP Pollution Control Board on 4th May, 2012 for Kanpur Terminal. The issues raised during public hearing were regarding land acquisition, facility against the land acquisition, involvement of locals in the project etc. and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 3rd April, 2012 for Palanpur Terminal. The issues raised during public hearing were regarding fire safety, village development welfare activity, local 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 along with other environmental conditions while considering the grant of environmental clearance:

- i. The project authority i.e. M/s HPCL shall ensure restoration of the Right of Way to preconstruction level as soon as construction activity completed. To ensure prevention of soil erosion, backfilled areas should be properly compacted.
- ii. Adequate buffer zone around the oil tankage shall be maintained, as may be required as per OISD or other statutory requirements.
- iii. The company shall monitor PM10, SO₂, NO_x & HC and displayed periodically on the company's web site.

- iv. Regularly monitoring of VOC and HC in the work zone area in the tankages premises shall be carried and data be submitted to Ministry's Regional Office at Lucknow.
- v. The design, material of construction, assembly, inspection, testing and safety aspects of operation and maintenance of pipeline and transporting the natural gas should be governed by ASME/ANSI B 31.8/B31.4 and OISD standard 141.
- vi. Annual safety audit should be carried out for the initial three years by an independent agency and report submitted to this Ministry for ensuring the strict compliance of safety regulations on operation and maintenance.
- vii. The construction of pipeline particularly at the river and stream crossing should be done during dry seasons to avoid disturbance of breeding seasons and soil erosion. The riverbed, embankments and / dykes should be restored adequately after installation of crossings.
- viii. Pipeline wall thickness and minimum depth of burial at river crossings and casings at rails, major road crossings should be in conformity with ANSI/ASME requirements.
- ix. The company should follow horizontal drilling technique for laying of pipeline while passing through major rivers.
- x. The project authorities should install SCADA system with dedicated optical fiber based telecommunication link for safe operation of pipeline and Leak Detection System. Additional sectionalizing valves in the residential areas and sensitive location should be provided to prevent the leaking of gas going to the atmosphere in the event of pipeline failure. Intelligent pigging facility should be provided for the entire pipeline system for internal corrosion monitoring. Coating and impressed current cathodic protection system should be provided to prevent external corrosion.
- xi. The project authorities should patrol and inspect the pipeline regularly for detection of faults as per OISD guidelines and continuous monitoring of pipeline operation by adopting non-destructive method(s) of testing as envisaged in the EMP. Pearson survey and continuous potential survey should be carried out at regular intervals to ensure the adequacy of cathodic protection system.
- xii. The fire water facilities at the terminal must be designed as per OISD-117 guidelines. However, for fighting prolonged fires, the company should firm up a plan for assured water supply from nearby ground water source/ surface water source. This must be complied before commissioning the project.
- xiii. All the recommendations mentioned in the risk assessment report should be implemented.

- xiv. All the issues raised during the public hearing/consultation meetings held on 10th April, 2012, 4th May, 2012 and 14th May, 2012 should be satisfactorily implemented.
- xv. Prior permission should be obtained from CGWA/SGWA to meet water requirement from ground water source.
- xvi. The company should construct the garland drain all around the project site to prevent runoff of any oil containing waste into the nearby water bodies. Separate drainage system should be created for oil contaminated and non-oil contaminated streams. During rainy season, the storm water drains should be connected to oil water separator and passed through guard pond. Water quality monitoring of guard pond should be conducted.
- xvii. Effluent from washing of storage tanks should be properly treated in ETP and treated wastewater should conform to CPCB standards. As proposed, separate treatment system should be provided for white oil and black oil effluent streams. No effluent should be discharged outside the premises.
- xviii. Oil Industry Safety Directorate guidelines regarding safety against fire, spillage, pollution control etc. should be followed. Company should ensure no oil spillage occur during loading / unloading of petroleum products.
- xix. The project authorities should strictly comply with the provisions made in Manufacture, Storage and Import of Hazardous Chemicals Rules 1989, as amended in 2000 and the Public Liability Insurance Act for handling of hazardous chemicals etc. All the hazardous waste should be properly treated and disposed of in accordance with the Hazardous Waste (Management, Handling and Transboundary Movement) Rules 2008.
- xx. Necessary approvals from Chief Controller of Explosives must be obtained before commission of project. Requisite On-site and Off-site Disaster Management Plans will be prepared and implemented.
- xxi. The company should obtain all requisite clearances for fire safety and explosives and should comply with the stipulation made by the respective authorities.
- xxii. All storage tanks should be provided with design features based on applicable OISD standards.
- xxiii. No change in the storage capacity and other facilities should be made without getting proper approval from the Ministry.
- xxiv. Fully automated tank farm management system (TFMS) will be provided for accounting of products & reconciliation.
- xxv. Emergency Response Plan should be based on the guidelines prepared by OISD, DGMS and Govt. of India. Mock drill should be conducted once in a month.

- xxvi. Bottom oil sludge should be handled, stored and disposed as per CPCB/ MoEF guidelines. An action plan in this regard including bioremediation should be submitted to the Ministry and its Regional Office at Lucknow within 3 months of issue of the letter.
- xxvii. Occupational health surveillance of worker should be done on a regular basis and records maintained as per the Factory Act.
- xxviii. Green belt should be developed in 33% of the tankage area to mitigate the effect of fugitive emission all around the plant in consultation with DFO as per CPCB guidelines. Thick green belt around POL depot should be ensured.
- xxix. The Company should harvest surface as well as rainwater from the rooftops of the buildings proposed in the project and storm water drains to recharge the ground water and use the same water for the various activities of the project to conserve fresh water.
- xxx. Company should adopt Corporate Environment Policy as per the Ministry's O.M. No. J-11013/41/2006-IA.II (I) dated 26th April, 2011 and implemented.
- xxxi. Under Corporate Social Responsibility (CSR), sufficient budgetary provision should be made for health improvement, education, water and electricity supply etc. in and around the project.

2.7.2. Expansion of Synthetic Organic Chemical (Bulk Drugs & Drugs Intermediates 11.0 MTPM to 37.0 MTPM) Manufacturing Unit at Survey No. 47, Hadmtala Industrial Area, Rajkot Gondal Highway Taluka Kotda Sangani, District Rajkot, Gujarat by **M/s Sam Finechem Limited (TOR to EC)**.

The Committee noted that EIA/EMP report has been prepared by M/s Envisafe Environmental Consultant, Ahmedabad, who is a non-accredited consultant as on date. Therefore, Committee advised that EIA/EMP report shall be validated 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 consultants submitted.

2.7.3. Expansion of Mini Refining Plant (55,000 KLPA to 1,20,000 KLPA) at Village Devaliya Taluka Anjar, District Kachchh, Gujarat by **M/s Kandla Energy and Chemicals Ltd. (TOR to EC)**

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 as per Draft Terms of References (TORs) awarded during the 13th Meeting of the Expert Appraisal Committee (Industry) held during 19th–20th August, 2010 for preparation of EIA/EMP report. All petrochemical based

processing unit located outside the notified industrial area/estate are listed at S.N. 5(e) under category 'A' and appraised at Central level.

M/s Kandla Energy & Chemicals Limited has proposed for expansion of Mini Refining Plant (55,000 KLPA to 1,20,000 KLPA) at Village Devaliya Taluka Anjar, District Kachchh, Gujarat. In addition the unit intends to have a waste oil processing plant also with a capacity of 4.5 KL/day. No National Park Wild Life Sanctuary/ Biosphere reserves etc is located within 10 km radius of the project site. Project is located at a distance of 14 Km from Arabian Sea. Total plot area is Rs. 60 acres. Total project cost is Rs. 30 crores. Rs. 271.6 lakhs and Rs. 18.5 Lakhs are earmarked towards capital cost and recurring cost per annum for pollution control measures. List of products along with their production capacity are given below:

S. N.	NAME OF PRODUCT	EXISTING (KLPA)	CAPACITY AFTER EXPANSION (KLPA)
1	Mineral Turpentine Oil	55,000 KLPA	1,08,000 KLPA
2	Ink Oil		
3	White Oil		
4	Aluminum Oil		
5	Spray Oil		
6	De-odorized Kerosene		
7	C-9, C-10		
8	Oil recovered from waste Oil and tank bottoms		30,000 KLPA

Ambient air quality monitoring was carried out at 8 locations during March 2011 – May 2011 and submitted data indicates as PM₁₀ (28–54 ug/m³), SO₂ (6.0 – 11 ug/m³) and NO_x (6-8 ug/m³). Predicted value of ground level concentration due to proposed project is SPM (7.41 ug/m³), NO_x (9.15 ug/m³) and SO₂ (8.57 ug/m³). Multi-cyclone alongwith stack height of 32 m will be provided to coal fired thermic fluid heater. Water requirement will increase from 1.5 m³/day to 16.5 m³/day after expansion, which will be met through the Narmada water canal. The Committee noted that actual water requirement will be high due to cooling water make up requirement. Therefore water requirement needs to be recalculated. Industrial effluent generation will be mainly from cooling tower blow down 2.3 m³/day, which will be treated in effluent treatment plant. Treated water will be used for gardening after meeting the standards. Domestic effluent (4 m³/day) will be disposed through soak pit/septic tank. Bottom residues from final fractionation column will be sent to authorized industries as fuel. Ash from fuel combustion in thermic fluid heart will be sent to brick manufacturers. Used oil /waste lubricant oil will be sent authorized recyclers/re-processors. Used containers (200 nos/month) will be partly used for packing and partly will be sold to GPCB consented dealers. Power requirement of 500 KVA will be met from the Gujarat Electricity Board. Fuel for thermic fluid heater will be HSD (2000 lts/day). Greenbelt will be developed in 12.5 acres. Solar based power plant (0.5 MW) will be installed.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 8th May, 2012. The issues raised during public hearing were regarding whether any adverse

impact on surrounding due to the proposed expansion, facilities to be provided to company employee, raw materials to be used, local employment, development of the area, development and maintenance of village road, medical facilities, facilities for fire fighting etc. and 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. LDR measurement data from the exhaust of vacuum pump of the existing unit.
2. Baseline VOC in the ambient air to be monitored for 1 month data.
3. Evaporation loss is envisaged around 100 m³/day. Revised water balance chart to be submitted.

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

2.7.4. Grain and Molasses based Distillery Unit (160 KLPD), Co-generation Power Plant (28 MW), CPP (3 MW) and expansion of Sugar Plant (925 to 4750 TCD) at Khasra No. 1098, 1140, 1217, 1331, 1342, 1141, 1337, 1339, 1340, 72, 184, 1144, 1370, 1220, 1369, 932, 934, 1097, 485, 936, 1137, 133, 1138, Village & Tehsil Ryam, District Darbhanga, Bihar **by M/s Tirhut Industries Limited- (TOR to 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 27th Meeting of the Expert Appraisal Committee (Industry) held during 21st – 22nd September, 2011 for 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 Tirhut Industries Ltd. have proposed for Distillery Unit (Grain and Molasses based, 60 KLPD), Co-generation Power Plant (28 MW), CPP (3 MW) from concentrated spent wash/rice husk and expansion of Sugar Plant (925 to 4750 TCD) at Khasra No. 1098, 1140, 1217, 1331, 1342, 1141, 1337, 1339, 1340, 72, 184, 1144, 1370, 1220, 1369, 932, 934, 1097, 485, 936, 1137, 133, 1138, Village & Tehsil Ryam, District Darbhanga, Bihar. Total land area envisaged for the proposed unit is 67 acres. No eco-sensitive area such as national park/wildlife sanctuary/biosphere reserve/reserved forests are located within 10 km. The proposed project involves expansion & modernization of old 925 TCD plant to 4750 TCD. Total project cost is Rs. 314.00 Crores. Distillery will be operated for 310 days i.e. 160 days during season with molasses and cane juice and remaining 150 days with grains.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during December, 2011 to February, 2012 and submitted data indicates as PM_{2.5} (11.8–19.2 ug/m³), SO₂ (5.8 – 7.3 ug/m³), NO_x (7.1-11.4 ug/m³) and HC (non-methane) (BDL). Incremental ground level concentration due to proposed project is PM₁₀ (0.5 ug/m³), SO₂ (7.9 ug/m³) and NO_x (2.8 ug/m³). High efficiency ESP alongwith stack (75 m) will be provided to bagasse/cane thrash/rice husk fired boiler (135 TPH) and high efficiency ESP alongwith stack height (30 m) will be provided to

concentrated spent wash/rice husk fired boiler (25 TPH). Total water requirement from ground water source will be 3300 m³/day. Spentwash from molasses based distillery will be concentrated in MEE to 60 % solid and then concentrate will be sent to a boiler (25 TPH) for incineration to achieve zero discharge. 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. Wet cake will be used as cattle feed directly. Bagasse from sugar will be used as fuel in co-gen boiler. Molasses from sugar plant will be used in distillery plant. Press mud from sugar plant will be given to farmers. Yeast sludge will be mixed with press mud and composted to dispose as manure. DDGS will be sold as cattle feed. Ash from the boiler will be given to brick manufacturers/ cement plant. Greenbelt will be developed in 22.1 acres of land.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Bihar State Pollution Control Board on 18th May, 2012. The issues raised included implementation of environmental management, pollution control measures in order to improve quality of living standards 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. Molasses and cane based distillery unit (60 KLPD) shall be operated for 160 days and grain based distillery (60 KLPD) shall be operated for remaining 150 days per annum.
- ii. As proposed, Electrostatic precipitator (ESP) alongwith stack of adequate height should be provided to boiler (1x135 TPH and 1x25 TPH) to control particulate emissions within 50 mg/Nm³.
- 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 water source shall not exceed 600 m³/day for distillery (Molasses/Grain), 550 m³/day for sugar unit and 1400 m³/day for cogeneration unit and prior permission for drawl of water should be obtained from the CGWA/SGWA.
- vi. Spent wash generation from molasses and grain should not exceed 10 Kl/Kl and 6 Kl/Kl of alcohol respectively. Spent wash from molasses based distillery should be concentrated in MEE to 60 % solids and sent to an incinerator boiler (25 TPH) for incineration to achieve zero discharge. Spent wash from the grain based distillery should be separated in decanter and then concentrated in MEE to concentrate the solids to 30 % followed by drying in a dryer 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.
- vii. Spent wash shall 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.
- viii. Wastewater generation from the sugar unit shall not exceed 100 litres per tonne of cane crushed. Effluent from sugar unit should be treated in the effluent treatment plant.
- ix. As proposed, no effluent from sugar, distillery and co-generation power plant should be discharged outside the premises and Zero discharge shall be achieved.
- 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. Bagasse/rice husk storage should be done in such a way that it does not get air borne or fly around due to wind.
- xii. 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.

- xiii. 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.
- xiv. 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.
- xv. All the issues raised during the public hearing/consultation meeting held on 18th May, 2012 should be satisfactorily implemented.
- xvi. Green belt should be developed in 33 % of plot 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.

2.7.5. Laminate Sheet (300 MTPM) and Resin (Phenol Formaldehyde & Melamine Formaldehyde) at Survey No.88, Near 8-A, National Highway, Old Jambudia, Taluka Morbi, District Rajkot, Gujarat by M/s Bell Laminates (TOR to EC).

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 as per Draft Terms of References (TORs) awarded during the 25th Meeting of the Expert Appraisal Committee (Industry) held during 28th-30th July, 2011 for preparation of EIA/EMP. All the Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s. Bell Laminates have proposed for the Laminate Sheet (300 MTPM) at Survey No.88/p, Near 8-A, National Highway, Old Jambudia, Taluka Morbi, District Rajkot, Gujarat. Total plot area is 11,635 m². Laminated sheet is being manufactured in the existing unit (28 MTPM). No wildlife sanctuary/reserve forest is located within 10 Km distance. Total cost of the project is Rs. 5.44 Crores. Following products will be manufactured:

S.N.	Product	Production Capacity		
		Existing	Proposed	Total
1	Laminates sheet	7000 Nos./month or 28 MTPM	193000 Nos./ month or 772 MTPM	200000 Nos./Month or 800 MTPM
2	Phenol Formaldehyde	0.0	315 MTPM	315 MTPM

	Resin			
3	Melamine F Resin	0.0	75 MTPM	75 MTPM

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during November, 2011 to January, 2012 and submitted data indicates as PM₁₀ (53.2–83.7 ug/m³), SO₂ (10.0 – 19.3 ug/m³), NO_x (13.9-22.7 ug/m³) and VOC (16–54 ug/m³). Incremental ground level concentration due to proposed project is PM (1.372 ug/m³), SO₂ (0.501 ug/m³) and NO_x (0.349 ug/m³). Multi-Cyclone separator along with stack (30 m) will be provided to control coal/lignite fired boiler/thermic fluid heater.

Total ground water requirement from ground water source will increase from 4.0 m³/day to 12 m³/day. Industrial wastewater generation will increase from 0.1 m³/day to 6.0 m³/day. Effluent will be treated in effluent treatment plant followed by evaporator to achieve zero discharge. Domestic effluent will be treated in septic tank followed by soak pit.

Discarded drums and empty bags will be sent back to suppliers or sold to SPCB approved vendors. Waste / used oil (0.5 KLPA) will be sold to authorized recyclers / re-processors. ETP sludge will sent to TSDF. Organic waste residue will be sent to common hazardous waste incineration facility. Green belt will be developed in 33 % of plant area. Total power requirement is 180 KVA. Coal/lignite (20 TPD) will be used as fuel. DG set (400 KVA) will be installed.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 4th May, 2012. The issues raised during public hearing were regarding greenbelt in the existing unit, safety aspect, show cause notice issued by the GPCB etc. and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report. The Committee noted that unit is engaged in the manufacturing of laminated sheet in the existing unit and laminated sheet manufacturing is not covered under EIA Notification, 2006.

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) Ambient air quality data should be collected as per NAAQS standards notified by the Ministry on 16th September, 2009.
- ii) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.
- iii) Bag filter alongwith stack of adequate height should be provided to coal/lignite fired boiler/thermic fluid heater.
- 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) Wet scrubber should be provided to control process emissions. Methanol should be recovered from the process area.
- vi) Total fresh water requirement from ground water source should not exceed 12 m³/day and prior permission should be obtained from the CGWA/SGWA.
- 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 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.
- 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.
- xxii) Green belt should be developed in 33%.
- xxiii) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

2.7.6. Lanimate Sheet and Resin (Phenol Formaldehyde & Melamine Formaldehyde) at Survey No.768/p/1, Lakhdirpur Road, behind Monarch Ceramic, 8-A, National highway, Morbi by Gujarat M/s Monal Laminate Pvt. Ltd, Morbi. (TOR to EC).

The project authorities and their consultant (San Envirotech 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 25th Meeting of the Expert Appraisal Committee (Industry) held during 28th–30th July, 2011 for preparation of EIA/EMP. All Synthetic Organic Chemicals

Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Monal Laminate Pvt. Ltd have proposed for the Plywood Plant at Sy. No. 768/p/1, Village Ghuntu, Lakhdirpur Road, Behind Monarch Ceramic, 8-A, National Highway, Taluka Morbi, District Rajkot, Gujarat. Total plot area is 13,456 m². Total cost of the project for expansion is Rs. 65.00 Lakhs. No national park/wildlife sanctuary/reserve forest is located within 10 km distance. Following products will be manufactured:

S.N.	Products	Production Capacity		
		Existing	Proposed	Total
1	Laminates sheet	150000 Nos./month or 375 MTPM	150000 Nos./ month or 375 MTPM	300000 Nos./ Month or 750 MTPM
2	PhenolFormaldehyde Resin	0.0	465 MTPM	465 MTPM
3	Melamine F Resin	0.0	110 MTPM	110 MTPM

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during November, 2011 to January, 2012 and submitted data indicates as PM₁₀ (56.9–89.3 ug/m³), SO₂ (12.0 – 20.2 ug/m³), NO_x (13.8-25.7 ug/m³) and VOC (18–60 ug/m³). Incremental ground level concentration due to proposed project is PM (1.321 ug/m³), SO₂ (0.354 ug/m³) and NO_x (0.271 ug/m³). Multi-Cyclone separator along with stack (30 m) will be provided to control coal/lignite fired boiler/thermic fluid heater.

Total ground water requirement from ground water source will increase from 5.0 m³/day to 12 m³/day after proposed project. Industrial wastewater generation will increase from 0.3 m³/day to 6.9 m³/day. Effluent will be treated in effluent treatment plant followed by evaporator to achieve zero discharge. Domestic effluent will be treated in septic tank followed by soak pit.

Discarded drums and empty bags will be sent back to suppliers or sold to SPCB approved vendors. Waste / used oil (0.5 KLPA) will be sold to authorized recyclers / re-processors. ETP sludge will sent to TSDF. Organic waste residue will be sent to common hazardous waste incineration facility.

Green belt will be developed in 33 % of plant area. Total power requirement is 180 KVA. Coal/lignite (20 TPD) will be used as fuel. DG set (400 KVA) will be installed.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 4th May, 2012. The issues raised during public hearing were regarding social activity of the company; health of workers, hazardous waste generation, show cause notice issued by the GPCB etc. and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report. The Committee noted that unit is engaged in the manufacturing of laminated sheet in the existing unit and laminated sheet manufacturing is not covered under EIA Notification, 2006.

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) Ambient air quality data should be collected as per NAAQS standards notified by the Ministry on 16th September, 2009.
- ii) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.
- iii) Bag filter alongwith stack of adequate height should be provided to coal/lignite fired boiler/thermic fluid heater.
- 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) Wet scrubber should be provided to control process emissions. Methanol should be recovered from the process area.
- vi) Total fresh water requirement from ground water source should not exceed 12 m³/day and prior permission should be obtained from the CGWA/SGWA.
- 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 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.
- 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) Green belt should be developed in 33% of the plant area.
 - xii) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- 2.7.7. Resin (Phenol Formaldehyde Resins 500 MTPM; Melamine Formaldehyde Resins 100 MTPM and Urea Formaldehyde Resins 100 MTPM) at Sy. No. 43/1, Village Nandasan, Taluka Kadi, District Mehsana, Gujarat by **M/s Decent Laminates Pvt. Ltd. (TOR to EC)**

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 as per Draft Terms of References (TORs) awarded during the 22nd Meeting of the Expert Appraisal Committee (Industry) held during 29th– 30th April, 2011 for preparation of EIA/EMP. All the Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Decent Laminates Pvt. Ltd. have proposed for the Resin (Phenol Formaldehyde Resins 500 MTPM; Melamine Formaldehyde Resins 100 MTPM and Urea Formaldehyde Resins 100 MTPM) at Sy. No. 43/1, Village Nandasan, Taluka Kadi, District Mehsana, Gujarat. Total project area is 9228 m². PAs confirmed that this project will be established in the existing premises. No wildlife sanctuary / reserve forest are located within 10 Km distance. Total cost of the project is Rs. 40.00 Lakhs. Following products will be manufactured:

S.N.	Name of the Products	Existing	Proposed addition	Total
1.	Laminates sheets	28000 pieces /month	--	28000 pieces /month
2.	Phenol Formaldehyde Resins	--	500 MTPM	500 MTPM
3	Melamine Formaldehyde Resins	--	100 MTPM	100 MTPM
4	Urea Formaldehyde Resins	--	100 MTPM	100 MTPM

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during May, 2011 to June, 2011 and submitted data indicates as PM₁₀ (52–84 ug/m³), SO₂ (14.1 – 25.9 ug/m³), NO_x (15.4-27.0 ug/m³) and VOC (18–58 ug/m³). Incremental ground level concentration due to proposed project is SP (0.98 ug/m³), SO₂ (0.168 ug/m³) and NO_x (0.130 ug/m³). Multi-Cyclone separator along with stack (30 m) will be provided to control saw dust/lignite fired boiler/thermic fluid heater.

Total ground water requirement from ground water source will increase from 7.5 m³/day to 20 m³/day after proposed project. Industrial wastewater generation will increase from 0.075 m³/day to 2.25 m³/day. Effluent will be treated in effluent treatment plant followed by evaporator to achieve zero discharge. Domestic effluent will be treated in septic tank followed by soak pit.

Discarded drums and empty bags will be sent back to suppliers or sold to SPCB approved vendors. Waste / used oil (0.5 KLPA) will be sold to authorized recyclers / re-processors. ETP sludge will sent to TSDF. Organic waste residue will be sent to common hazardous waste incineration facility.

Green belt will be developed in 33 % of plant area. Total power requirement is 180 KVA. Coal/lignite (20 TPD) will be used as fuel. DG set (180 KVA) will be installed.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 4th May, 2012. The issues raised during public hearing were regarding air emissions, local employments, show cause notice issued by the GPCB etc. and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report. The Committee noted that unit is engaged in the manufacturing of laminated sheet in the existing unit and laminated sheet manufacturing is not covered under EIA Notification, 2006.

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) Ambient air quality data should be collected as per NAAQS standards notified by the Ministry on 16th September, 2009.
- ii) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.
- iii) Bag filter alongwith stack of adequate height should be provided to coal/lignite fired boiler/thermic fluid heater.
- 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) Wet scrubber should be provided to control process emissions. Methanol should be recovered from the process area.
- vi) Total fresh water requirement from ground water source should not exceed 20 m³/day and prior permission should be obtained from the CGWA/SGWA.
- 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 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.
- 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) Green belt should be developed in 33% of the plant area.
- xii) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

2.7.8. Manufacture of Laminate Sheet and Resin (Phenol Formaldehyde & Melamine Formaldehyde) at Plot No. 24/p1, Near Lilapar Road, Navagam Taluka Morbi, District Rajkot, Gujarat **by M/s Suntouch Laminate(TOR to EC)**

The project authorities and their consultant (San Envirotech 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 25th Meeting of the Expert Appraisal Committee (Industry) held during 28th-30th July, 2011 for preparation of EIA/EMP. All the Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Suntouch Laminate have proposed for the manufacturing of Laminate Sheet and Resin (Phenol Formaldehyde & Melamine Formaldehyde) at Plot No.24/p1, Near Lilapar Road, Navagam Taluka Morbi, District Rajkot, Gujarat. Total plot area is 10,927 m². No national park/wildlife sanctuary/reserve forest is located within 10 Km distance. Total cost of the expansion project is Rs.0.6 Crore. Following products will be manufactured:

S.N.	Products	Existing	Proposed	Total
1	Laminates Sheet	4,50,000 Nos./Month or 1800 MTPM	Nil	4,50,000 Nos./Month or 1800 MTPM

2	P. F. Resin	0.0	700 MTPM	700 MTPM
3	M.F. resin	0.0	165 MTPM	165 MTPM

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during November, 2011 to January, 2012 and submitted data indicates as PM₁₀ (47.4–94.0 ug/m³), SO₂ (5.7 – 27.3 ug/m³), NO_x (6.4-25.5 ug/m³) and VOC (24–52 ug/m³). Incremental ground level concentration due to proposed project is PM (1.775 ug/m³), SO₂ (0.380 ug/m³) and NO_x (0.267 ug/m³). Multi-Cyclone separator along with stack (30 m) will be provided to control saw dust/lignite fired boiler/thermic fluid heater.

Total ground water requirement from ground water source will increase from 11.5 m³/day to 17 m³/day after proposed project. Industrial wastewater generation will increase from 0.75 m³/day to 12.3 m³/day. Effluent will be treated in effluent treatment plant followed by evaporator to achieve zero discharge. Domestic effluent will be treated in septic tank followed by soak pit.

Discarded drums and empty bags will be sent back to suppliers or sold to SPCB approved vendors. Waste / used oil (0.5 KLPA) will be sold to authorized recyclers / re-processors. ETP sludge will be sent to TSDF. Organic waste residue will be sent to common hazardous waste incineration facility. Green belt will be developed in 33 % of plant area. Total power requirement is 350 KVA. Coal/lignite (20 TPD) will be used as fuel. DG set (500 KVA) will be installed.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 28th April, 2012. The issues raised during public hearing were regarding water requirement, wastewater generation, safety, show cause notice issued by the GPCB etc. and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report. The Committee noted that unit is engaged in the manufacturing of laminated sheets in the existing unit and laminated sheets manufacturing is not covered under EIA Notification, 2006.

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) Ambient air quality data should be collected as per NAAQES standards notified by the Ministry on 16th September, 2009.
- ii) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.
- iii) Bagfilter alongwith stack of adequate height should be provided to coal/lignite fired boiler/thermic fluid heater.
- 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) Wet scrubber should be provided to control process emissions. Methanol should be recovered from the process area.
- vi) Total fresh water requirement from ground water source should not exceed 17 m³/day and prior permission should be obtained from the CGWA/SGWA.
- 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 GPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for firefighting 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) Green belt should be developed in 33% of the plant area.
- xii) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

2.7.9. Manufacture of Laminate Sheet and Resin (Phenol Formaldehyde & Melamine Formaldehyde) at Survey No. 753, 754/2, Paiki, 8/A, National Highway, Village Lalpur, Taluka Morbi, District Rajkot, Gujarat **by M/s Rainbow Laminate Pvt. Ltd.. (TOR to EC).**

The project authorities and their consultant (San Envirotech 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 25th Meeting of the Expert Appraisal Committee (Industry) held during 28th–30th July, 2011 for preparation of EIA/EMP. All Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Rainbow Laminate Pvt. Ltd have proposed for manufacturing of Laminate Sheet and Resin (Phenol Formaldehyde & Melamine Formaldehyde) at Survey No. 753, 754/2, paiki, 8/A, National Highway, Village Lalpur, Taluka Morbi, District Rajkot, Gujarat. Total plot area is 16289 m². Total cost of the expansion project is Rs. 0.7Crores. No wildlife sanctuary/ reserve forest is located within 10 km distance. Following products will be manufactured:

S.N.	Products	Existing	Proposed	Total
1	Laminate Sheet	1,20,000 Nos./Month or 300 MTPM	1,80,000 Nos./Month or 450 MTPM	3,00,000 Nos./Month or 750 MTPM
2	P. F. Resin	0.0	465 MTPM	465 MTPM
3	M.F. resin	0.0	110 MTPM	110 MTPM

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during November, 2011 to January, 2012 and submitted data indicates as PM₁₀ (47.4–92.3 ug/m³), SO₂ (5.7 – 20.4 ug/m³), NO_x (6.4-25.7 ug/m³) and VOC (24–54 ug/m³). Incremental ground level concentration due to proposed project is PM (1.605 ug/m³), SO₂ (0.389 ug/m³) and NO_x (0.286 ug/m³). Multi-Cyclone separator along with stack (30 m) will be provided to control coal/lignite fired boiler/thermic fluid heater.

Total ground water requirement from ground water source will increase from 7.1 m³/day to 11.5 m³/day after proposed project. Industrial wastewater generation will increase from 0.4 m³/day to 8.2 m³/day. Effluent will be treated in effluent treatment plant followed by evaporator to achieve zero discharge. Domestic effluent will be treated in septic tank followed by soak pit.

Discarded drums and empty bags will be sent back to suppliers or sold to SPCB approved vendors. Waste / used oil (0.5 KLPA) will be sold to authorized recyclers / re-processors. ETP sludge will be sent to TSDF. Organic waste residue will be sent to common hazardous waste incineration facility.

Green belt will be developed in 33 % of plant area. Total power requirement is 350 KVA. Coal/lignite (20 TPD) will be used as fuel. DG set (380 KVA) will be installed.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 27th April, 2012. The issues raised during public hearing were regarding wastewater discharge outside the factory premises, local employment, show cause notice issued by the GPCB etc. and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report. The Committee noted that unit is engaged in the manufacturing of laminated sheet in the existing unit and laminated sheet manufacturing is not covered under EIA Notification, 2006.

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) Ambient air quality data should be collected as per NAAQES standards notified by the Ministry on 16th September, 2009.
- ii) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.
- iii) Bagfilter alongwith stack of adequate height should be provided to coal/lignite fired boiler/thermic fluid heater.
- 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) Wet scrubber should be provided to control process emissions. Methanol should be recovered from the process area.
- vi) Total fresh water requirement from ground water source should not exceed 17 m³/day and prior permission should be obtained from the CGWA/SGWA.
- 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 GPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for firefighting 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) Green belt should be developed in 33% of the plant area.
- xii) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

2.7.10. Expansion of Distillery Grain based (from 25 KLPD to 175 KLPD) and Molasses based Distillery (25 KLPD) and Co-generation Power Plant (8 MW) at Hisar Delhi By-pass Road, National Highway, Tehsil & District Hisar, Haryana by M/s Associated Distilleries (**TOR**).

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 along with the draft Term of Reference 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 Associated Distilleries have proposed for expansion of Distillery based on Grain (from 25 KLPD to 175 KLPD) and Molasses based Distillery (25 KLPD) and Co-generation Power Plant (8 MW) at Hisar Delhi By-pass Road, National Highway, Tehsil & District Hisar, Haryana. Total plot area is 36.5 acres. Balsam Canal is adjacent to the boundary. No forest land is involved. No national park/wildlife sanctuary/biosphere reserves is located within 10 Km distance. No litigation is pending against the project proposal. Grain based distillery will be operated for 330 days. Molasses based will be operated for 270 days in a year. Total project cost is Rs. 120.00 Crores. Rs. 22 Crores and Rs. 1.0 Crores are earmarked towards capital cost and recurring cost per annum for pollution control measures.

Rice husk/coal fired boiler (80 TPH) will be installed to generate 8 MW electricity. 5 MW of electricity will be consumed in distillery and 3 MW will be export to grid. Existing water requirement for 25 KLPD molasses based distillery is 306 KLPD. Total water requirement for the proposed expansion will be 1844 m³/day and met from ground water source. Spent wash will be passed through decanter and concentrated in multi-effect evaporator (MEE). Thick syrup and wet cake will be mixed together to form Distiller's Wet Grains with Soluble (DWGS) to achieve zero discharge. DWGS will be used for cattle feed. DWGS will be dried to form DDGS. Fly ash will be sent to brick manufacturers/cement manufacturers. Greenbelt will be developed in 33% of plant area.

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 30th 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 along with latest photograph of the area.
4. Present land use based on satellite imagery.
5. Details of site along with photographs 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 forests.
8. List of existing distillery units in the study area along with their capacity.
9. A copy of 'Environment Clearance' for the existing plant along with point-wise compliance report (if not give reasons).

10. Consents to operate accorded by the HSPCB for the existing distillery unit alongwith point-wise compliance report to be submitted.
11. Notice issued by the regulatory agencies under the Water Act, 1974, Air Act 1981 and directions issued under the of E (P)Act, 1986 during the last one year, if any.
12. Stack emission, fugitive emissions data; water requirement and water balance cycle; generation, re-utilization and disposal of solid/ hazardous waste for the existing unit.
13. Number of working days of the distillery unit.
14. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
15. Details of raw materials and source & quality of raw material including molasses.
16. Sources and quantity of fuel (coal etc.) for the boiler. Measures to take care of SO₂ emission. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted.
17. Storage facility for coal, bagasse, rice husk, molasses, alcohol etc.
18. Action plan to control ambient air quality as per NAAQES Standards for PM₁₀, PM_{2.5}, SO₂ and NO_x as per GSR 826(E) dated 16th November, 2009.
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 PM₁₀, PM_{2.5}, SO₂, NO_x 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.
20. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
21. An action plan to control and monitor secondary fugitive emissions from all the sources.
22. Details of the use of steam from the boiler.
23. Ground water quality around existing/proposed spent wash storage lagoon and the project area.
24. Details of water requirement, water balance chart for Molasses based Distillery and co-generation plant. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
25. Water requirement should be restricted upto 10 Kl/Kl of alcohol for molasses/grain based distillery, for which Permission for the ground water drawal from the CGWB/SGWB should be obtained.
26. Hydro-geological study of the area for availability of ground water.
27. Proposed effluent treatment system for molasses/grain based distillery (spent wash and spent lees) as well as utility wastewater and scheme for achieving zero discharge.
28. Capacity for spent wash holding tank.
29. Details of solid waste management including management of boiler ash.
30. Layout of existing greenbelt. Green belt development plan 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. 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 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 should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
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. 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. 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.
45. 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 4th August, 2009, which are available on the website of this Ministry should also be followed.

The Committee decided that the proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the Haryana 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.

2.7.11. Speciality Chemicals and Agrochemical Intermediates Manufacturing Unit and CPP (3.9 MW) & Turbine (2.5 MW) at Plot No. CH-2, Dahej Industrial Estate, Village Dahej, Distt Bharuch, Gujarat by M/s Agrasen Impex Pvt. Ltd. (TOR).

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 alongwith the draft Term of References for the preparation of EIA/EMP. All the Pesticides plants are listed at S.N. 5(b) under Category 'A' and appraised by the Expert Appraisal Committee in the MoEF.

M/s Agrasen Impex Pvt. Ltd. has proposed for setting up of Speciality Chemicals and Agrochemical Intermediates Manufacturing Unit and CPP (3.9 MW) & Turbine (2.5 MW) at Plot No. CH-2, Dahej Industrial Estate, Village Dahej, Distt Bharuch, Gujarat. Total plot area is 1,60,000 m². Forest land is not involved. No national park, wildlife sanctuaries, biosphere reserves is located within 10 Km distance. No court case/litigation is pending against the project proposal. A total of 49 products with total capacity of 11950 MTPA alongwith 37 byproducts with capacity 18924 MTPA will be manufactured. Following products will be manufactured:

SR.NO.	PRODUCTS	PROPOSED QUANTITY (TPA)
A.	SPECIALTY CHEMICALS	
1	2,3-Dichloropyridine (2,3-DCP)	650
2	Dimethyl 1,3-acetonecarboxylate (ADC dimethyl)	880
3	N-(2-Amino-4,6-dichloropyrimidin-5-yl)formamide (FADCP)	300
4	Methyl 4-Methyl-3-oxopentanoate (MeOPMe)	700
5	N-Methylmethane Sulfonamide (MMSA)	450
6	4-Methyl-3-oxopentanoate (OPMe)	800
7	2-Carbethoxy-3-(2-thienyl)propanoic acid (Thiophen)	480
8	p-Xylene dimethyl ether (PXDM)	550
9	4,6-Difluoro-2-ethoxy pyrimidine (DFEP)	360
10	1,4-Bis(hydroxymethyl)benzene (PXG)	380
11	5-Bromopyrimidine (5-BrP)	450
12	1,1-Bis(4'-hydroxy-3'-methylphenyl)cyclohexane (DMBPC)	460
13	Exo-5-(p-tert-butylphenol)bicycle[2,2,1]-2-heptane (exo) (TBPH)	480
14	Chlorinated Paraffin Wax (JB92)	4800
15	2,4-Diamino-6-chloropyrimidine (MM ACID)	600
16	2,4,6-Trimethylbenzoylchloride (M ACID)	600
17	3-Amino-4-chlorobenzoic acid (P ACID)	1000
18	2,3-Dihydroxy quinoxaline-6-carboxylic acid (Z ACID)	400
19	2-Amino-5-(aminomethyl)naphthalene-1-sulphonic acid (E ACID)	480
20	4,4-dimethoxy-2-butanone (AADMA)	800
21	Nitro guanidine (NGN)	1500

22	4,6-Dimethoxy-2-chloropyrimidine (DMP, 2-Cl)	590
23	2,2'-Oxybis[5,5-dimethyl-1,3,2-dioxaphosphorinane]2,2'disulphide (OPDDD)	1100
24	3,3'-Dichloro-4,4' Diamino Diphenyl	5000
25	2-Benzyl-2-(Dimethylamino)-4-Morpholino-Butyrophenone	960
26	Methyl Ethyl ketone	2000
27	4-Nitro-2-sulphobenzoic Acid potassium salt (OM)	600
28	4,6-Dimethoxy-2-(C Phenoxy Carbonyl) Amino-Pyrimidine (OC)	720
29	1,3-Dimethyl-5-pyrazolone (DMPO)	440
30	2-Bromo-4-fluoro acetanilide (BFA)	590
31	(3-Ethylsulfonyl)-2-pyridinesulfonamide (IE)	750
32	1,3-Dimethyl-5-chloropyrazol carbonyl chloride (VMPCH)	600
33	1,3-Dimethyl-5-fluoropyrazol carbonyl fluoride (VMPFLO)	600
34	2,5-Dimethyl phenyl acetyl chloride (DMPAC)	670
35	4-[[2-Methoxybenzoyl]amino]sulfonyl]benzoylchloride (WW)	800
36	Tris (4-Aminophenyl) methane (TM)	650
37	2,4,6 Trimethyl phenyl acetyl chloride (TMPAC)	800
38	Trichloro 1,3-Diazabenzene (L Acid)	840
39	Tetrachloro 1,3-Diazabenzene (S Acid)	750
40	Diamino Chloro 1,3 Diazabenzene (L.L)	480

B	AGROCHEMICAL INTERMEDIATES	
41	2-Amino-5,8-dimethoxy(1,2,4)triazolo(1,5-C)pyrimidine (DAT)	510
42	2-Amino-4,6-dimethoxypyrimidine (O ACID)	600
43	4,6-Dimethoxy-2-((phenoxy carbonyl)amino)pyrimidine (OC ACID)	960
44	4-Amino-2,5-dimethylphenol (AMP)	540
45	2-Benzyl thionicotinic (BTNA)	600
46	4-Chloro-2,6-dimethylbromobenzene (CLDMBB)	580
47	4,6-Dichloropyrimidine (RP ACID)	500
48	1,3-Thiazolan-2-one (2 Thiazo)	600
49	Pyrimidine and Derivatives	1000
Total	41,950	
50	Captive Power Plant (3#) & Turbine	3.9 MW (3# x 1.3)

SR.NO.	BY-PRODUCTS	PROPOSED QUANTITY (TPA)
1	HCl (30%)	1421 KL
2	POCl3	2150
3	Dilute Sulphuric acid 25 to 50%	1125

4	Isopropyl Alcohol (recovered)	507
5	Acetic Acid (recovered)	850
6	1,4-Dioxane	693
7	N,N-Dimethyl aniline	150
8	Sodium Sulphate	583
9	Hydrobromic Acid 30 to 40%	225
10	Formic acid (recover)	215
11	Ethyl acetate (recover)	516
12	Phthalic acid	160
13	Methanol (recover)	650
14	Polyethylene glycol 400	180
15	Methylene di chloride (MDC) Recovered	690
16	Ethanol (recovered)	855
17	Methyl tertiary butyl ether MTBE (recovered)	125
18	Ethylene di chloride EDC (recovered)	380
19	Acetone (recovered)	275
20	Methyl isobutyl ketone MIBK (recovered)	135
21	Toluene (recovered)	410
22	Tetrahydrofuran (recovered)	310
23	Methylacetoacetate (recovered)	96
24	Pet. Ether (recovered)	784
25	Tertiary butanol (recovered)	309
26	Potassium chloride (recovered)	125
27	Tri ethyl amine HCl (recovered)	620
28	N-methylpyrrolidone NMP (recovered)	710
29	N,N-Dimethyl Aniline HCl (recovered)	170
30	Ortho dichloro benzene ODCB (recovered)	295
31	Dimethylsulphoxide DMSO (recovered)	1050
32	2,5-Norbornadine NBD (recovered)	214
33	Xylene (recovered)	980
34	Ethylene glycol dimethyl ether (recovered)	675
35	HCl gas (recovered)	587
36	Sodium bi sulphite (recovered) Soln. 20-25 %	225
37	Sodium Formate	900
Total		18,924

Adequate stack height will be provided to gas fired boiler, thermopack, CPP-1, CPP-2 and CPP-3, Water scrubber followed by alkali scrubber will be provided to process vent-1 to control HCl. Alkali scrubber will be provided to process vent-II to control SO₂. Total water requirement is 2350 m³/day and sourced from GIDC water supply. Industrial effluent generation is 855 m³/day. Effluent will be segregated into high TDS and low TDS. High TDS effluent will be treated in MEE. Low TDS will be treated in ETP and treated effluent will be sent to deep sea through GIDC drain. Process waste and distillation residue will be sent to common incineration facility. ETP sludge and incineration ash will be sent to TSDF. Used oil will be sent to recyclers. Iron waste will be sent to TSDF/actual users of cement Industries. DG set-I (1500 KVA) and DG set II (1500 KVA) will be installed. Power requirement will be 7 MW and met from GEB. CPP (3 x 1.3 MW) and 2.5 MW turbine will be installed. DG set (2x1500 KVA) will be installed.

Natural gas (3500 m³/day), diesel (50 KLPM and furnace oil (50 KLPM) will be used as fuel. Greenbelt will be developed in 52800 m².

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. A copy of Gazette Notification issued by the Govt. of Gujarat indicating location of the project in notified GIDC should be included necessarily.
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 photographs and site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
11. Present land use based on satellite imagery for the study area of 10 km radius.
12. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
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 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 16th 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 PM₁₀, SO₂, NO_x, HCl, Cl₂, HBr 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.
20. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
21. Name of all the solvents to be used in the process and details of solvent recovery system.
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 16th 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 for the drawl of 2350 m³/day water from the GIDC water supply. Water balance chart including quantity of effluent generated recycled and reused and discharged.
28. Action plan for 'Zero' discharge of effluent should be included.
29. 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).
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 management 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. 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.
34. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF.
35. Risk assessment for storage for chemicals/solvents.
36. Material safety data sheet to be submitted.
37. An action plan to develop green belt in 33 % area. Layout map indicating greenbelt to be submitted.
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.
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.
51. Details of occupational health surveillance programme.
52. Socio-economic development activities shall be in place.
53. Note on compliance to the recommendations mentioned in the CREP guidelines.
54. 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.
55. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.

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

57. 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.

58. 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.

39. 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.

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 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) 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 Committee noted that no public hearing / consultation is required due to project being located in notified GIDC as per stage Section 7 (i), III Stage (3), Para (i)(b) of EIA Notification 2006 subject to submission of documents in support of industrial area. The final EIA/EMP report should be submitted to the Ministry for obtaining environmental clearance.

2.7.12. Chemical Manufacturing Plant at Block No. 450 to 460 & 502, Village Karkhadi, Tehsil Padra, Distt Vadodara, Gujarat by M/s Shiva Pharmachem Ltd. (**TOR**).

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 outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised by the Expert Appraisal Committee in the MoEF.

M/s Shiva Pharmachem Ltd. has proposed for setting up of Chemical Manufacturing Plant at Block No. 450 to 460 & 502, Village Karkhadi, Tehsil Padra, Distt Vadodara, Gujarat. No forest land is involved. No litigation/court case is pending against the project. Total plot area is 1,02,945 m². River Mahi is flowing at a distance of 7 Km. Following products will be manufactured:

S.N.	Products	Capacity (MTPA)
A	STYRENE BUTYL ACRYLATE CO-POLYMER TONER	13,200
B	CO-POLYMERS SOLIDS (RESINS)	
	1. Styrene Butyl Acrylate 2. Styrene Methyl Acrylate 3. Styrene Ethyl Acrylate 4. Styrene Isobutyl Acrylate 5. Styrene Ethyl Hexyl Acrylate 6. Styrene Methyl Methacrylate 7. Styrene Ethyl Methacrylate 8. Styrene Butyl Methacrylate 9. Styrene Isobutyl Methacrylate 10. Styrene Lauryl Methacrylate 11. Styrene Stearyl Methacrylate	9900

There will be emissions from boiler and process vents. Total water requirement from ground water source will be 153.25 m³/day. Effluent generation will be 68.5 m³/day and treated in ETP. Treated water will be recycled/reused within the factory premises. ETP sludge and filter cake from evaporator will be sent to TSDF site. Used oil will be sent authorized recyclers/reprocessors. Greenbelt will be developed in 33972 m² out of total land 1,02,945 m². Power requirement will be 490 KVA and sourced from MGVCL. DG set (1x625 KVA) will be installed for emergency power back up. Agro waste (1.25 TPD), HSD (120 LPH) will be used as fuel.

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

1. Recommendation on project proposal from Gujarat Pollution Control Board to be submitted alongwith the EIA 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 photographs of the project area site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
11. Present land use based on satellite imagery for the study area of 10 km radius.
12. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
13. Details of the total land and break-up of the land use for greenbelt and other uses.
14. List of products alongwith the production capacities.
15. Detailed list of raw material 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 16th September, 2009. Location of two 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 PM₁₀, SO₂, NO_x including 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.
20. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
21. Name of all the solvents to be used in the process and details of solvent recovery system.
22. Design details of ETP, incinerator, if any alongwith 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 16th 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 for the drawl of 153.25 m³/dayground water from the CGWA/SGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
28. Action plan for Zero Discharge of effluent should be included.
29. Ground water quality monitoring minimum at 6 locations should be carried out.
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. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilized all the organic solid waste generated.
33. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF.
34. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
35. Risk assessment for storage for chemicals/solvents and phosgenes. Action plan for handling & safety system, whenever any cyanide is involved in process.
36. An action plan to develop green belt in 33 % area. Layout indicating proposed greenbelt should be submitted.
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. Socio-economic development activities should be in place.
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. 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.
44. (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 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 4th August, 2009, which are available on the website of this Ministry should also be followed.
- viii. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc.
- ix. 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 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 report alongwith Certificate of Accreditation issued by the QCI should be submitted to the Ministry for obtaining environmental clearance.

2.7.13. Synthetic Organic Chemical Manufacturing Unit at Village Jangam Pally, District Nizamabad, A.P by M/s Kosher Pharmaceuticals Pvt. Ltd. (TOR).

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

2.7.14. Sugar Plant crushing Capacity 3500 TCD to 7500 TCD, CPP 15 MW to 45 MW at village Yadrav & Soundatti, District Belgaum, Karnataka, by M/s Shivashakti Sugar Ltd. (TOR).

The Committee noted that a court case (SLP Petition No. 64254/2010) is pending against the project proposal. The project proposal was deferred till the outcome of court case.

2.7.15. **Expansion of Rubber Processing Chemicals at Plot No. A1/45, 100 shed area, Degam road, GIDC Vapi, Tehsil Pardi, District Valsad, Gujarat by M/s Shri Hap Chemicals Enterprises Pvt. Ltd. (Unit –I) (TOR).**

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 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' 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 Shri Hap Chemicals Enterprises Pvt. Ltd. (Unit –I) has proposed for expansion of Rubber processing Chemicals at Plot No. A1/45, 100 shed area, Degam road, GIDC Vapi, Tehsil Pardi, District Valsad, Gujarat. Plant is located within the 10 Km of Union territory boundary i.e. Daman. No forest land is involved. No court case/litigation is pending against the project. Plot area is 3800.92 m². Total project cost is Rs 2.5 crores. Following products will be manufactured.

S.N.	Product	Quantity (MT/Month)		
		Existing	Additional proposed	After total proposed expansion
1	Rubber Processing Chemicals such as Accelerators	40	275	315

Adequated stack height is provided to gas fired boiler. Caustic scrubbing system is provided to (Chlorination) process vent. Bag filter is provided to dryer. Cyclone separator followed by bag filter is provided to grinder. For the proposed expansion, adequate stack height will be provided to gas fired boiler. Caustic scrubbing system will be provided to process vent of chlorination. Ag filter will be provided to dryers. Cyclone separator

alongwith bag filter will be provided to grinder. Fresh water consumption will increase from 34 m³/day to 208 m³/day after expansion. Industrial effluent generation will be 140 m³/day and treated in ETP. Treated water will be discharged to CETP for further treatment and then to sea. ETP waste will be sent to TSDF. Used oil will be sent to authorized recyclers/ re-processors. Power requirement will be 250 KVA from GEB. Natural gas will be used as fuel.

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. 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. A copy of Gazette Notification issued by the Govt. of Gujarat indicating location of the project in notified GIDC should be included necessarily.
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 photographs of the project site and 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.
14. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
15. Details of the total land and break-up of the land use for green belt and other uses.
16. List of products alongwith the production capacities.
17. Detailed list of raw material required and source, mode of storage and transportation.
18. Manufacturing process details alongwith the chemical reactions and process flow chart.
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 16th 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 PM₁₀, SO₂, NO_x 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.

22. Air pollution control measures proposed for the effective control of gaseous 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 along with control of Dioxin & Furan, 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 16th 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 **208** m³/day water from the concerned agency. Water balance chart including quantity of effluent generated recycled and reused and discharged.
30. Action plan for 'Zero' discharge of effluent should be included.
31. 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).
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.
33. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
34. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilize all the organic solid waste generated.
35. A copy of 'Memorandum of Understanding' (MoU) signed with coal supplier for imported coal and brick manufacturers for management of fly ash.
36. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
37. Risk assessment for storage for chemicals/solvents.
38. Material safety data sheet of chemicals to be submitted.
39. An action plan to develop green belt in 33 % area.
40. 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.
41. 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.
42. Socio-economic development activities should 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 should be provided.
45. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
46. 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.
47. 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.
48. 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.
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.
50. 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.

2.7.16. Expansion of Rubber Processing Chemicals at Plot No. A2/2225, 2226, Phase-III, GIDC Vapi, Tehsil Pardi, District Valsad, Gujarat by M/s Shri Hap Chemicals Enterprises Pvt. Ltd.(Unit-II). (TOR).

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 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' 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 Shri Hap Chemicals Enterprises Pvt. Ltd. (Unit –II) has proposed for expansion of Rubber Processing Chemicals at Plot No. A2/2225, 2226, Phase-III, GIDC Vapi, Tehsil Pardi, District Valsad, Gujarat. Plant is located within the 10 Km of Union territory boundary i.e. Daman. No forest land is involved. No court case/ litigation is pending against the project. Plot area is 3602.48 m². Total project cost is Rs 2.5 crores. Following products will be manufactured.

S.N.	Product	Quantity (MTPM)		
		Existing	Additional proposed	After total proposed expansion
1	Rubber Processing Chemicals such as Accelerators	75	350	425

Adequated stack height is provided to gas fired boiler. Caustic scrubbing system is provided to (Chlorination) process vent. Bagfilter is provided to dryer. Cyclone separator followed by bagfilter is provided to grinder. For the proposed expansion, adequate stack height will be provided to gas fired boiler. Caustic scrubbing system will be provided to process vent of chlorination. Ag filter will be provided to dryers. Cyclone separator alongwith bagfilter will be provided to grinder. Fresh water consumption will be increased from 55 m³/day to 286 m³/day after expansion. Industrial effluent generation will be 180 m³/day and treated in ETP. Treated water will be discharged to CETP for further treatment and then to sea. ETP waste will be sent to TSDF. Used oil will be sent to authorized recyclers/ re-processors. Power requirement will be 3000 KVA from GEB. Coal will be used as fuel.

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. 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. A copy of Gazette Notification issued by the Govt. of Gujarat indicating location of the project in notified GIDC should be included necessarily.
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 photographs of the project site and 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.
14. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
15. Details of the total land and break-up of the land use for green belt and other uses.
16. List of products alongwith the production capacities.
17. Detailed list of raw material required and source, mode of storage and transportation.
18. Manufacturing process details alongwith the chemical reactions and process flow chart.
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 16th 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 PM₁₀, SO₂, NO_x 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.
22. Air pollution control measures proposed for the effective control of gaseous 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 along with control of Dioxin & Furan, 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 16th 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 **286** m³/day water from the concerned agency. Water balance chart including quantity of effluent generated recycled and reused and discharged.
30. Action plan for 'Zero' discharge of effluent should be included.
31. 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).

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.
33. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
34. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilize all the organic solid waste generated.
35. A copy of 'Memorandum of Understanding' (MoU) signed with coal supplier for imported coal and brick manufacturers for management of fly ash.
36. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
37. Risk assessment for storage for chemicals/solvents.
38. Material safety data sheet of chemicals to be submitted.
39. An action plan to develop green belt in 33 % area.
40. 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.
41. Details of occupational health programme.
 - viii) To which chemicals, workers are exposed directly or indirectly.
 - ix) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - x) What measures company have taken to keep these chemicals within PEL/TLV.
 - xi) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - xii) What are onsite and offsite emergency plan during chemical disaster.
 - xiii) Liver function tests (LFT) during pre-placement and periodical examination.
 - xiv) Details of occupational health surveillance programme.
42. Socio-economic development activities should 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 should be provided.
45. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
46. 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.
47. 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.
48. 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.

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.
50. 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.

2.7.17. Perfumery Chemicals(3254 MTPM) Manufacturing unit at Plot No. 258/1, Village Bherai, Tehsil Rajula, District Amreli, Gujarat by M/s Kalpsutra Terpenoids . (TOR).

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 (Bulk Drugs & Intermediates) located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised by the Expert Appraisal Committee (Industry) in the Ministry.

M/s Kalpsutra Terpenoids have proposed for Perfumery Chemicals(3254 MTPM) Manufacturing unit at Plot No. 258/1, Village Bherai, Tehsil Rajula, District Amreli, Gujarat. Total plot area is 30649 m². No forest land is involved. No ecologically sensitive area, historical place, wildlife sanctuary exists within the 10 Km periphery of the project site. No Court Case/ litigation is pending against the project.

Following products will be manufactured:-

S.N.	Name of Products	Production Capacity	Production capacity
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		(MTPA)	(MTPM)
1	Camphor	5000	417
2	Comphene	2000	167
3	Isobornyl Acetate	2000	167
4	Isoborneol	3000	250
5	Alpha Terpeneol & Terpenyl acetate	3000	250
6	Nopol & Nopyl Acetate	600	50
7	Myrcene	600	50
8	Terpen-4-ol	1200	100
9	Terpen Hydrate	1200	100
10	Delta- 3-Carene	900	75
11	Phenol Terpene Resins	1800	150
Total (Products)		21300	1776
By products			
12	Sodium Acetate Trihydrate	5000	417
13	Sodium Acetate Anhydrous	1800	150
14	Dipentene	6000	500
15	Pinetar	4500	375
16	Camphor Oil	450	38
Total		17750	1480

Cyclone and bag filter will be provided to coal/ground nut husk fired boiler (10 TPD). Stack height of 9m will be provided to DG set. Water requirement from ground water source will be 22.5 m³/day. Effluent will be treated in ETP. ETP sludge will be sent to TSDf. Used oil will be sent to register recyclers. Power requirement will be 500 KVA. DG set (450 KVA) will be installed.

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 16th 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 PM₁₀, SO₂, NOx 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 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 16th 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. Permission for the drawl of **22.5 m³/day** water from the CGWA. 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 utilized 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.

2.7.18. Expansion Plant for the Manufacture of Organic Intermediates at Village Nadod, District Navasi, Gujarat by M/s Yashashvi Rasayan Pvt. Ltd. (TOR).

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

2.7.19. **Distillery (30 KLPD), Co-generation Power Plant (22 MW) and Sugar (3500 TCD) Manufacturing Unit at Village Belewadi-Kamma, Tehsil Kagal, District Kolhapur, Maharashtra by M/s Sar Senapti Santaji Ghorpade Sugar Factory Ltd. (TOR).**

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 molasses based distilleries are listed at S.N. 5(g) (i) under category 'A' and appraised by the Expert Appraisal Committee in the MoEF.

M/s Sar Senapti Santaji Ghorpade Sugar Factory Ltd. has proposed for setting up of distillery (30 KLPD), Co-generation Power Plant (22 MW) and Sugar (3500 TCD) Manufacturing unit at village Belewadi-Kamma, Tehsil Kagal, District Kolhapur, Maharashtra. No forest land is involved. No court case/litigation are pending against the project. Plant will be operated for 270 days. Total plot area is 172441.62 m². Total project cost is Rs. 259.72 crores. Proposed distillery will use molasses from own 3500 TCD sugar factory (175 days) and outside sugar factories during balance 95 days. River Chikutra is flowing at a distance of 3 Km. interstate boundary is located 8.3 Km.

ESP alongwith stack ht of 85 m will be provided to coal fired boiler. Low Nox burner will be provided. The water requirement for the distillery and Co-generation will be 360 m³/day and 2200 m³/day respectively. Spent wash will be evaporated followed by incinerated. Domestic effluent will be treated in STP. Fly ash will be sent for brick manufacturing. Biocompost will be sent to farmer. Bagasse and coal will be used as raw material.

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

1. Executive summary of the project.
2. Project proponent should inform CPCB and RSPCB about proposed activity and obtain NOC for the new plant at new location.
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. Information regarding eco-sensitive area such as national park/wildlife sanctuary/ biosphere reserves within 10 km radius of project area.
7. List of existing distillery units in the area alongwith their capacity.
8. Number of working days of the distillery unit, cogeneration plant and sugar unit.
9. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
10. 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.

11. Manufacturing process details of sugar plant, distillery plant and CPP along with process flow chart.
12. Sources and quantity of fuel for the boiler. Management of bagasse during the lean season. Details of bagasse storage facility.
13. Action plan to control ambient air quality as per NAAQES Standards for PM₁₀, PM_{2.5}, SO₂ and NO_x as per GSR 826(E) dated 16th November, 2009.
14. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, PM_{2.5}, SO₂, NO_x and HC (methan & 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.
15. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
16. An action plan to control and monitor secondary fugitive emissions from all the sources.
17. Details of the use of steam from the boiler.
18. 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.
19. 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.
20. 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.
21. 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
22. Hydro-geological study of the area for availability of ground water.
23. Proposed effluent treatment system for sugar, distillery and co-generation plant. Scheme for achieving 'zero' discharge for distillery effluent and 100 m³/Ton of sugar regarding water discharge.
24. Details of solid waste management including management plan of disposal of boiler ash.
25. Sufficient land should be earmarked for bio-composting activity and details of bio-composting lining as per CPCB guidelines.
26. Odour management plan should be prepared to control odour from molasses based distillery.
27. Green belt development as per the CPCB guidelines. Layout of greenbelt plant to be submitted.
28. List of flora and fauna in the study area.
29. Noise levels monitoring at five locations within the study area.
30. 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.
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. Details of TOC analyzer to be installed to monitor TOC in the treated effluent.
33. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.

34. Alcohol storage and handling area with fire fighting facility as per norms.
35. Provision of foam system for fire fighting to control fire from the alcohol storage tank.
36. 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.
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. 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. 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. Action plan for post-project environmental monitoring.
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. 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.

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.

2.7.20. Coal to Liquid Plant (80,000 Barrels per day)at Village Durgapur, Tehsil Banrapal/Chhendipada, DistrictAngul, Odisha by M/s Jindal Synfuels Ltd. (**TOR**)

The project authorities and their consultant (Vimta Labs 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 Petrochemicals units are listed at S.N. 5(c) under Category 'A' and appraised at the Central level.

M/s Jindal Synfuels Ltd. has proposed for setting up of Coal to Liquid Plant (80,000 Barrels per day) at Village Durgapur, Tehsil Banrapal/Chhendipada, District Angul, Odisha. Total plot area is 4805 acres. Total project cost is Rs. 43000 Crores. TOR for 9 x 125 MW has been granted by MoEF on 20th September, 2012. Forest land (212.11 acres) is involved. No national park, historical monument, wildlife sanctuary and elephant reserve etc located in 10 Km area of site. Satkosia tiger reserve is located at 15.5 Km distance. Nigra Nala (0.1 Km, SE), Lingra Nala (1.7 Km, SSW), Singhada Jhor (7.0 Km, NNW) and Derjang reservoir (9.0 Km, ESE) are located. The project will involve rehabilitation and resettlement.

Water requirement for CTL plant will be 6130 m³/hr and sourced from River Mahanadi. There will be no extraction ground water. Process water will be treated in ETP. The treated water will be reused in Ash handling and horticulture. Coal requirement for CTL project is 2250 TPH.

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

- 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 photographs of the project site and 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. Copy of authenticated map by the Forest & Wild Life Department indicating wild life sanctuary/tiger reserve alongwith comments/recommendations to be submitted.
- 11 Copy of the forest clearance for 212.11 acres of forest land.
- 12 Details of the total land and break-up of the land use for green belt and other uses.
- 13 Details of facilities alongwith utilities to be provided for the proposed project.
- 14 List of products alongwith the production capacities and list of solvents and its recovery plan.
- 15 Detailed list of raw material required and products to be manufactured, source, mode of storage and transportation.
- 16 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 I30-10500 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.).
- 17 A copy of letter from Coal Ministry regarding coal linkage to the proposed Coal to liquid Plant.
- 18 Manufacturing process details alongwith the chemical reactions and process flow chart.
- 19 Energy balance chart should be prepared.
18. Action plan for the transportation of raw materials and products.
19. Ambient air quality monitoring at 10 locations within the study area of 10 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009.
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 PM₁₀, PM_{2.5}, SO₂, NO_x, CO, H₂S, NH₃ including HC (Methane and Non-methane) 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. Baseline data for surface and ground water and noise monitoring (day and night) should also be included.

21. 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.
18. Details of Sulphur balance in the proposed unit.
19. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
20. Plant-wise air pollution control measures proposed for the control of emissions from all the sources.
21. Details of water and air pollution and its mitigation plan.
22. An action plan to control and monitor secondary fugitive emissions from all the sources.
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. Air quality modelling for proposed plant.
24. Study of flora and fauna alongwith conservation plan for the biodiversity.
25. Permission from the concerned authority for the drawl of 6130 m³/hr water from Mahanadi River. Water balance chart including water intake, effluent generated, recycled and reused and discharged is to be provided.
26. Action plan to reduce fresh water requirement. Methods adopted/to be adopted for the water conservation should be included.
27. Design details of the ETP and air pollution control equipments (Bag filters/ wet scrubber etc.). Installation of Continuous TOC analyzer to holding tank before discharge of effluent.
28. Action plan for Zero Discharge of effluent as proposed should be included.
29. Details of phenol recovery unit.
30. Odour control management if any.
31. Storm water management within plant premises.
32. 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).
33. Note on compliance to the recommendations mentioned in the CREP for petrochemical industries.
34. Detailed ash management including characterization, leachability study, stability and suitability for backfilling and alternate use of ash.
35. 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.
36. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
37. Details of captive land fill alongwith design details as per CPCB guidelines, if applicable.
38. Details of storage yard for coal, slag, gypsum, ash etc.
39. A copy of MoU with various agencies for disposal of slag and fly ash.
40. Diversion of forests with impact on ecology.
41. An action plan to develop green belt in 33 % area. Layout plan for proposed greenbelt.
42. 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.
43. 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,
44. 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.
 45. Annual report of health status of workers with special reference to Occupational Health and Safety.
 46. Action plan for the implementation of OHS standards as per OSHAS/USEPA.
 47. Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
 54. Socio-economic development activities shall be in place.
 55. 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.
 56. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
 57. 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.
 58. 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.
 59. 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.
 48. Social impact assessment and resettlement and rehabilitation plan. Details of Resettlement and Rehabilitation policy to be followed.
 49. 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.
 50. Environmental monitoring programme. Give details of online stack monitoring system as well as continuous ambient air quality monitoring system. Calibration methods adopted for the automatic monitoring station.

51. Details of Corporate Social Responsibility (CSR) including sufficient budgetary provision for health improvement, education, water and electricity supply etc. in and around the project.
52. Transportation management should cover earmarking of area for parking of Lorries, their movement at a remote location to avoid congestion.
53. Adequate width of approach road to avoid congestion and to have safe exit in emergencies.
54. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
55. 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.
56. 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.
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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 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 4th August, 2009 and 30th September, 2011, which are available on the website of this Ministry should also be followed.

The Committee decided that the proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the Orissa 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 IN 2ndREAC (INDUSTRY) MEETING (29TH – 31ST OCTOBER, 2012)

Expert Appraisal Committee (Industry) :			
1.	Shri M. Raman	Chairman	P
2.	Shri R.K. Garg	Vice-Chairman	P
3.	Shri. Shiban Raina	Member	P
4.	Prof. R.C. Gupta	Member	P
5.	Dr. Prem Shankar Dubey	Member	A

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	P
12.	Prof. C. S. Dubey	Member	P
13.	Shri Niranjan Raghunath Raje	Member	A
MOEF Officials :			
14.	Dr. P.L. Ahujarai	Member Secretary	
15.	Shri A.N. Singh	Scientist 'C'	
16.	Shri Ramesh Motipalli	Scientist 'C'	

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