MINUTES OF 16th MEETING OF EXPERT APPRAISAL COMMITTEE (EAC) (INDUSTRY) (I) HELD ON 20th-21st FEBRUARY 2014

16.1 Confirmation of the Minutes of the 15th Reconstituted Expert Appraisal Committee (Industry) held during **29th-30th January, 2014**.

The minutes of 15th Reconstituted Expert Appraisal Committee (Industry) held during **29th-30th January, 2014** was confirmed subject to the following corrections:
15.3.1 5th Sentence: Replace "Rajamundhry" with "Godavari". 8th sentence: introduce the word "untreated" before effluents.

The agenda Items for the 16th Meeting were taken up.

Thursday, 20th February 2014

16.2 Consideration of the EC Projects

16.2.1 Proposed Expansion of Asbestos Cement Sheet Manufacturing Unit from 120,000 TPA to 240,000 TPA of M/s. Visaka Industries Limited at Jujjur village, Virulapadu Mandal, Krishna District of Andhra Pradesh (EC)

All the Asbestos milling and asbestos based products have been kept at S.N. 4(c) under Metal Processing industries under category – A and to be appraised at Central level.

The Project Proponent (PP) and their Consultant M/s. Pioneer Enviro Laboratories and Consultants Private Limited – Hyderabad gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per the Terms of Reference (TORs) awarded during the 14th meeting of the Expert Appraisal Committee (Industry -1) held on 23rd – 25th September, 2010 for preparation of EIA-EMP report. The TOR was awarded by MoEF vide F.No. J-11011/341/2010-IA.II(I) dated 20.10.2010 for preparation of EIA-EMP report. The PP has submitted the final EIA-EMP report vide letter dated 10.10.2012 after conducting Public Hearing for grant of Environmental Clearance. Ministry vide letter dated 16.1.2013 deferred the proposal as the EIA-EMP report was prepared by M/s. Paryavaran Labs – Hyderabad, who was a non-accredited consultant by QCI/NABET and also requested the PP to submit the certified compliance report obtained from Regional Office of MoEF at Bangalore. The PP vide letter no. Nil dated 28.11.2013 submitted the EIA-EMP report through the QCI/NABET accredited consultant – M/s. Pioneer Enviro Laboratories and Consultants Private Limited – Hyderabad along with the certified compliance report. The said EIA-EMP report was placed before the EAC.

2. The salient points of the proposed project as per the final EIA-EMP report submitted by PP are as follows:

M/s Visaka Industries Limited have proposed to expand the manufacturing capacity of Asbestos cement sheets & Accessories from 1,20,000 TPA to 2,40,000 TPA at Jujjuru Village, Veerulapadu Mandal, Krishna District, Andhra Pradesh. The proposed expansion will be carried out in the existing plant of 35 acres. No additional land is required for the proposed expansion. The land is in possession of the PP. The longitude and latitude of the project site is 80^0 26' 06.38" E and 16^0 44' 28.80" N respectively. No Forest land is involved. Kondapalli RF is situated at a distance of 2.7 Kms from the proposed site. No Ecologically Sensitive Area (ESA) such as Biosphere Reserve, National Park/Wild Life Sanctuary is located within 10 km radius of the project site. Nearest village is Chinnaraopalem at a distance of 0.7 KM & Jujjuru Village is at a distance of 1.5 KM. from the existing plant. NH-9 connecting Vijayawada to Hyderabad is at a distance of 10 KM. from the project site. Wira River is flowing at a distance of 7.7 Kms. from the site. Total cost of the expansion project is Rs. 25 crores. Rs. 50 lakhs and Rs.10 lakhs is earmarked for the capital cost and recurring cost per annum towards the environmental pollution control measures. Rs. 1.25 crores is earmarked towards the Enterprise Social Commitment based on issues raised during Public Hearing for a period of five years. No court case/litigation is pending against the project.

The capacity of the existing and the proposed expansion project activity has been tabulated below:

Name of product	**Existing capacity (TPA)**	**Expansion Capacity (TPA)**	**After Expansion (TPA)**
Asbestos cement sheets & accessories	1,20,000	1,20,000	2,40,000

The existing plant obtained an environmental clearance from the Ministry vide letter no. J-11011/95/2006-IA.II (I) dated 11.9.2006. Regional Office of MoEF at Bangalore had sent the certified compliance report for the existing unit. The Committee noted that compliance to the EC conditions is satisfactory.

It was informed that Asbestos Cement Corrugated Sheet Plant will be based on fully automated closed system by adopting "Hatschek Process" which is more commercially viable and is currently in use in the majority of the Asbestos Cement Corrugated Sheet plants in India. This process is adopted in all countries and it is proposed to introduce the same process with latest development in the technology and machines.

Raw material required for the proposed expansion is 46,156 MT/Annum of cement, 28,578 MT/Annum of fly ash, 8,789 MT/annum of Asbestos Fibre & 660 KL/Annum of wood pulp. The asbestos fibre will be imported from Brazil, Canada and Russia. Cement – OPC will be obtained from the cement plants. Fly ash will be sourced from thermal power plants. Power required for the proposed plant will be sourced from AP Transco.

Ambient air quality monitoring has been carried out at 7 locations during November 2010 to January 2011 and the data submitted indicated: PM_{10} (21.1 to 36.2 µg/m^3), $PM_{2.5}$ (7.6 to 16.9 µg/m^3),

SO_2 (6.0 to 14.1 µg/m^3), NO_x (10.2 to 25.3 µg/m^3) and Asbestos Fibre Count (0.010 to 0.052 (f/CC)). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs would be 1.6 µg/m^3 with respect to PM_{10}. Fugitive Dust generated from the proposed plant will be arrested by providing Dust Extraction and Suppression system. The fibre bag opening and shredding will be carried out using fully automatic bag opening machine inside closed chamber kept at negative pressure. Pulse jet bag filter will be provided for Automatic Chrysotile Fibre Handling System, Cement and Fly ash Handling System and Moulding Section with 99.9% efficiency. For control of fugitive dust, Fibre Dust Extraction system, Dust extractor with bag filters for flyash mixing system, Bag filter for Cement handling systems, Shop floor cleaning by using vacuum cleaners will be provided.

Total water required for the proposed expansion project will be 140 m^3/day & same will be sourced from Ground water resources. PAs informed that as per the Central Ground Water Board (CGWB) the area falls under SAFE category, hence no permission is required for the water drawl of 140 m^3/day. Closed loop water system will be adopted; hence no process water will be discharged and zero discharge will be adopted and entire process waste water will be reused / recycled in the manufacturing process. The Domestic wastewater from plant will be treated in septic tank followed by soak pit.

Entire solid waste generated in the process, wet sheet cuttings, reject broken pieces, dust from bag filters will be recycled 100 % and reused in the manufacturing process. The cut and damaged fibre bags will immediately be repaired. Used bag filter bags are shredded and recycled into the plant process. Piling of AC sheets will be done in wet condition only. The disposal facilities for asbestos waste will be in accordance with the Bureau of Indian Standards. Greenbelt of 15 Acres will be developed (inclusive of existing 12.48 Acres) in the plant premises. It was informed that the monitoring of measurable respirable asbestos fibre dust concentration is being carried out in a centralised lab of the company at Paramati. It is proposed to establish one in the premises. The company has empanelled doctor for occupational health issues.

The Committee considered the revalidated data provided. The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Andhra Pradesh Pollution Control Board on 6th June 2012. Public Hearing was chaired by the Additional Joint Collector, Krishna district. The main issues raised in the public hearing meeting were developing of local area, providing employment, pollution control, and infrastructure development etc. In response to this, PP informed that all precautions are taken in the existing plant for safe handling of asbestos, roads are black topped and VIL will give top priority for the local employment etc. Approval of CGWA for use of groundwater is required only if water consumption is more than 1000KLD, in the present unit it is 80 KLD, and the unit also falls in safe zone.

After detailed deliberations, the Committee recommended the proposal for environmental clearance and stipulated the following specific conditions along with other environmental conditions while considering accord of environmental clearance:

i. The project proponent shall adhere to the prescribed BIS standards and laws regarding use and handling of asbestos, safety of employees etc. Raw materials like asbestos fibre and cement shall be transported in closed containers. Asbestos fibre shall be brought in pelletized form in impermeable bags and under compressed condition.

ii. Only Chrysotile white asbestos fibre shall be used. Blue asbestos shall not be utilised as raw material in the manufacturing process.

iii. There shall be no manual handling/opening of asbestos fibre bags. The company shall install fully automatic asbestos fibre debagging system.

iv. Fugitive emissions shall be controlled by bringing cement in closed tankers, fly ash in covered trucks and asbestos in impervious bags opening inside a closed mixer. Dust collectors shall be provided to Fibre mill, Bag opening device (BOD), Cement and Fly ash silos to control emissions. Bag filters followed by wet washer shall be provided at automatic bag opening machine, bag shredder, fibre mill and to cement silo to collect the dust and recycle it into the process. Fugitive emissions generated from hopper of Jaw crusher and pulverizer shall be channelised through hood with proper suction arrangement, bag filter and stack.

v. The Company shall comply with total dust emission limit of 2 mg/Nm^3 as notified under the Environment (Protection) Act, 1986. Adequate measures shall be adopted to control the process emission and ensure that the stack emission of asbestos fibre shall not exceed the emission limit of 0.2 fiber/cc. Asbestos fibre in work zone environment shall be maintained within 0.1 fibre/cc.

vi. Bags containing asbestos fibre shall be stored in enclosed area to avoid fugitive emissions of asbestos fibre from damaged bags, if any.

vii. Proper housekeeping shall be maintained within the plant premises. Process machinery, exhaust and ventilation systems shall be laid in accordance with Factories Act. Better housekeeping practices shall be adopted for improvement of the environment within the work environment also. These include:

a) All monitoring transfer points shall be connected to dust extraction system.
b) Leakages or dust from machines and ducts shall be plugged.
c) Floor shall be cleaned by vacuum cleaner only.
d) Enclosed belt conveyer shall be used instead of manual transportation of asbestos within the premises.

viii. Quarterly monitoring of pollutant (PM_{10}, asbestos fibre count) in the work zone area and stack(s) and in the ambient air shall be undertaken by the Project proponents. In addition, the asbestos fibre count including the fugitive dust in the work zone area shall be monitored by an Independent monitoring agency like NIOH / ITRC / NCB or any other approved agency on six monthly basis and reports shall be submitted to the Ministry's Regional Office at Bangalore, SPCB and CPCB.

ix. As reflected in the Environmental Management Plan, all the treated effluent shall be recycled and reused in the manufacturing process. No process water shall be discharged outside the premises and 'zero' discharge shall be maintained. All the domestic wastewater shall be treated in septic tank followed by soak pit and used for green belt development.

x. The Company shall ensure that the entire solid waste generated including process rejects, cement, fly ash, dust from bag filters and empty asbestos bag shall be recycled back in the manufacturing process. There will be no solid waste disposal outside the plant premises. Asbestos fibres which cannot be further recycled due to contamination of iron dust shall be stored in HDPE lined secured landfill. The disposal facilities for asbestos waste shall be in accordance with the Bureau of Indian Standard Code.

xi. The cut and damaged fibre bags shall be repaired immediately. Empty fibre bags will be shredded into fine particles in a bag shredder and recycled into the process. Piling of AC sheets shall be done in wet condition only.

xii. The Company shall obtain a certificate from the supplier of Chrysotile fibre that it does not contain any toxic or trace metals. A copy of certificate shall be submitted to the Ministry of Environment and Forests.

xiii. Regular medical examination of the workers and health monitoring of all the employees shall be carried out and if cases of asbestosis are detected, necessary compensation shall be arranged under the existing laws. A competent occupational health physician shall be appointed to carry out medical surveillance. Occupational health of all the workers shall be monitored for lung function test, chest x-ray, sputum for acid-fast-bacilli (AFC) and asbestos body (AB), urine for sugar and albumen, bloat tests for TLC, DLC, ESR, Hb and records maintained for at least 40 years from the beginning of the employment or 15 years after the retirement or cessation of employment whichever is later. Occupational Health Surveillance shall be carried out as per the directives of the Hon'ble Supreme Court including the recent Kalyaneswari case.

xiv. To educate the workers, all the work places where asbestos dust may cause a hazard shall be clearly indicated as a dust exposure area through the use of display signs which identifies the hazard and the associated health effects.

xv. The company shall also undertake rain water harvesting measures and plan of action shall be submitted to the Ministry's Regional Office at Bangalore within three months.

xvi. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 6.6.2012 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.

xvii. As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.

xviii. 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 submitted to the Ministry's Regional Office at Bangalore. Implementation of CSR should be ensured in a time bound manner. The company shall earmark 2% of retain profits over life of project.

xix. 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.

16.2.2 Proposed cement grinding unit (1.5 MTPA) and DG Sets (2x6 MW) of M/s. J.K. Lakshmi Cement Ltd at village Ghantikhal/Radhesyampur, Tehsil Athgarh, District Cuttack, Odisha (EC)

All stand alone cement grinding units are covered under Category 'B' as per Schedule 3(b) of the EIA notification 2006 and needs to be appraised by the SEIAA/SEAC concerned. The aforesaid proposal was accorded by Terms of Reference (TOR) by the State Level Expert Appraisal Committee, Orissa vide letter no. 122/SEAC-212 dated 1.3.2011. After issuance of TOR Letter by SEAC – Orissa, Kapilash Wildlife Sanctuary has been declared by State Govt. of Orissa on 29.4.2011, which falls within 10 km radius of the proposed project site. As per the general condition of the EIA Notification 2006, any project or activity specified in Category 'B' will be treated as Category A, if located in whole or in part within 10 km from the boundary of Protected Areas notified under the Wild Life (Protection) Act, 1972 and notified Eco-sensitive areas as notified under section 3 of the Environment (Protection) Act, 1986. Thereafter, State Environment Impact Assessment Authority (SEIAA), Odisha vide their letter no.2003/SEIAA dated 24.4.2013 sent the file containing proposal cited above for consideration as per the EIA Notification 2006 and final EIA-EMP Report has been submitted by proponent to MoEF, New Delhi vide letter no. JKLC/OR/ENV/0109 dated 21.01.2013 after conducting Public Hearing for grant of Environmental Clearance. Ministry vide letter no. J-11011/132/2013-IA-II (I) dated 30.5.2013 informed M/s. J.K. Lakshmi Cement Ltd to submit the following:

i. An authenticated map of the study area by the Chief Wildlife Warden, Government of Odisha showing the distance between the boundary of project site and Kapilash Wildlife Sanctuary along with his recommendations and comments;

ii. A copy of the application submitted to the Standing Committee for National Board for Wildlife (SCNBWL) seeking clearance under the Wildlife Protection Act, 1972.

iii. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden, Government of Odisha for conservation of Schedule I fauna if any, exists in the study area.

M/s. J.K. Lakshmi Cement Limited vide letters dated 5.12.2013, 6.1.2014 and 20.2.2014 submitted the aforesaid information and the proposal was placed before the EAC for consideration.

2. The salient points of the proposed project as per the Final EIA-EMP Report submitted by project authorities vide letter referred above in para 1 are as follows:

M/s. J.K. Lakshmi Cement Limited have proposed to set up a Cement Grinding Unit (1.5 MTPA) and DG Sets (2 x 6 MW) at village Ghantikhal/Radhesyampur, Tehsil Athgarh, District Cuttack, Odisha. The land requirement for the proposed project is 122 acres (49.373 ha). Out of the 49.373 ha, government land is 25.373 ha and private land is 24 ha. 90% of the land has been acquired and 10% of government land is in final stage of lease deed. The longitude and latitude of the project site is 85°44'1.06" to 85°44'31.17"E and 20°31'19.62" to 20°32'17.50"N, respectively. No Forest Land is involved. As per the authenticated map submitted by the proponent, the Kapilash Wildlife Sanctuary falls at a distance of about 8.5 km in NW direction from the proposed project site. No National Park, Biosphere Reserve, Tiger / Elephant Reserve exist within 10 km radius of the proposed project site. Site-specific Conservation plan for wild fauna has been prepared for the project. The proposal ahs recommended in the meeting of State Board for Wildlife of Odisha held on 11.02.2014 for onward submission to National Board for Wildlife for final approval. 12 Reserve forests fall within 10 km radius from proposed site. Radheshyampur village is located at a distance of 0.5km from the project site. River Sapua river and River Mahanadi flow at a distance of 4km and 4.3 km respectively from the project site. Total cost of the project is Rs. 155 crores. Rs. 12 crores and Rs. 1.1 crores/annum is earmarked for the capital cost and recurring cost per annum respectively towards the environmental pollution control measures. Rs.7.725 crores is earmarked for the CSR activities. No court case/litigation is pending against the proposed project.

The raw materials required for the proposed project are Clinker, Fly ash, Gypsum & Blast furnace slag which will be procured from the Upcoming Integrated Cement Plant, Durg (C.G.), Aarti Steel Ltd., RSMML Rajasthan mines / Visakhapatnam (chemical gypsum) & Steel plants of Jajpur, Angul & other steel plants, respectively. It was informed that the clinker unit would be commissioned by June 2014. Entire clinker would be transported by rail. It is planned to establish own railway siding within the project area as a railway line passes very close to site. Initially, clinker will be transported by road and after construction of railway siding, the entire clinker will be transported by rail. Slag and fly ash would be transported by road for use within 10km. The power requirement is 10.85 MW which will be met from the Orissa Electricity Board. D.G. sets of 2x6 MW is envisaged for the emergency power.

Ambient air quality monitoring has been carried out at 8 locations during Summer Season, 2011. The concentration for all the AAQM stations for PM_{10} ranges between 59.11 to 35.67 µg/m^3, $PM_{2.5}$ ranges between 28.44 to 14.81 µg/m^3, SO_2 ranges between 6.03 to 7.64 µg/m^3 and NO_2 ranges between 11.27 to 16.68 µg/m^3. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs would be 2.158µg /m^3 & 1.429µg /m^3 with respect to PM_{10} and SO_2 respectively. Proper pollution control equipment like Bag Houses, Bag filters will be installed which help in reducing emissions. Covered conveyors will be utilised for transportation inside the plant. Good housekeeping practices will be adopted to control the fugitive emissions.

Water requirement for the proposed project will be around 700 m^3/day. Source of water will be the ground water. CGWA, New Delhi; vide letter no. 21-4(315)/SER/CGWA/2011–711 dated 9.6.2011 has

granted permission for withdrawal of water. No industrial waste water will be generated from the proposed grinding unit. Domestic effluents generated will be disposed off in soak pits via septic tank. No solid waste will be generated from the proposed grinding unit. However, dust collected from the dust collectors (Bag House/Bag Filters) will be automatically recycled in the process. Out of the total project area (i.e. 49.373), 33% of total area will be developed under green belt/plantation in a scientific manner around the plant boundary, roadside, office buildings and stretches of open land.

The Committee deliberated on the issues raised during Public Hearing/Public Consultation conducted by State Pollution Control Board, Orissa on 17.11.2012 under the chairmanship of Shri Laxmidhar Mohanty, Additional District Magistrate, Cuttack (Orissa) at Radheyshyampur Primary School, Village Radhesyampur, Tehsil Athgarh, District Cuttack (Orissa). The issues raised during public hearing are adequate pollution control measures, development work in near-by villages w.r.t. employment, education, medical & water facility etc. In response to this, PP replied that company will install advanced technology Pollution Control devices for control of Air pollution. There shall be no discharge of any industrial waste water to outside the premises as there is no use of water in the process except cooling and domestic purposes. The Committee desired that the Company provide direct & indirect employment to the locals and will undertake various development activities including skill developmental activities & for rainwater harvesting structures in villages, etc.

3. After detailed deliberations, the Committee recommended the proposal for environmental clearance and stipulated the following specific conditions along with other environmental conditions for accord of environmental clearance:

i. Environmental clearance is subject to obtaining prior clearance under the wildlife (Protection) Act, 1972 from the Standing Committee on Wildlife (SCWL) of the National Board of Wildlife (NBWL).

ii. Environmental clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ petition (Civil) no.460 of 2004, as may be applicable to this project.

iii. A Wildlife Conservation Plan for protection/conservation of endangered flora and fauna, if any, shall be prepared in consultation with the State Wildlife Department before start of construction of work on the project. A copy of the same shall be submitted to the Ministry and its Regional Office at Bhubaneshwar.

iv. A separate Budget head shall be created for implementation of the WL Conservation Plan. The funds earmarked for the implementation of the Wildlife Conservation Plan shall not be diverted for any other purposes. Details of the activities undertaken and expenditure thereon shall be submitted as part of the Compliance Report to RO, Bhubaneshwar.

v. Particulate emissions shall be controlled within 50 mg/Nm^3 by installing adequate air pollution control system viz. Bag filters and stacks of adequate height etc. Data on ambient air, fugitive

and stack emissions shall be submitted to the Ministry's Regional Office at Bhubaneshwar, SPCB and CPCB regularly.

vi. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be followed.

vii. Gaseous emissions including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines/Code of Practice issued by the CPCB should be followed.

viii. The company shall install adequate dust collection and extraction system to control fugitive dust emissions at various transfer points, raw mill handling (unloading, conveying, transporting, stacking), vehicular movement, bagging and packing areas etc. All the raw material stock piles should be covered. A closed clinker stockpile system shall be provided. All conveyers should be covered with GI sheets. Covered sheds for storage of raw materials and fully covered conveyers for transportation of materials shall be provided besides coal, cement, fly ash and clinker shall be stored in silos. Pneumatic system shall be used for fly ash handling.

ix. Asphalting/concreting of roads and water spray all around the stockyard and loading/unloading areas in the cement plant shall be carried out to control fugitive emissions. Regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM and RSPM such as haul road, loading and unloading points, transfer points and other vulnerable areas. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.

x. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash should be transported in the closed containers only and should not be overloaded. Vehicular emissions should be regularly monitored.

xi. Total ground water requirement for the cement plant shall not exceed 700m^3/day and necessary permission for the drawl shall be obtained. All the treated wastewater should be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge should be adopted.

xii. 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.

xiii. All the bag filter dust, raw meal dust, coal dust, clinker dust and cement dust from pollution control devices should be recycled and reused in the process used for cement manufacturing. Spent oil and batteries should be sold to authorized recyclers / reprocessors only.

xiv. 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.

xv. At least 5 % of the total cost of the project of the initial 5 years 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 Bhubaneshwar. Implementation of such program should be ensured accordingly in a time bound manner. Activities hall include capital cost for a primary health centre, and a school. The PP shall also undertake skill development of the youth in local comminutes. The company shall earmark 2% of the retain profits towards CSR for life of the project.

xvi. 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.

16.2.3 Integrated Steel Plant (1.2 MTPA) and Captive Power Plant (160 MW) of M/s. Xindia Steels Limited at village Kunikere & Hirebagnal, Post Genegera, Taluk & Dist. Koppal, Karnataka (EC)

All 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.

The Project Proponents (PP) and their consultant M/s. Environment and Power Technologies Private Limited -Bangalore 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) recommended during the 16th Meeting of the Expert Appraisal Committee (Industry) held during 22nd-24th November 2010 and accorded by MoEF vide F.No.J-11011/518/2010-IA-II (I) dated 15.12.2010 for preparation of EIA-EMP report. Thereafter, Ministry vide letter dated 28.6.2013 extended the validity of the TOR for a period of one year with effect from 15.12.2012. The PP submitted the final EIA-EMP report vide letter dated 02.12.2013 after conducting Public Hearing for grant of Environmental Clearance. The Committee noted that the consultant (M/s. Environment and Power Technologies Private Limited - Bangalore) who had prepared the EIA-EMP report is not accredited by QCI/NABET. However, proponent has submitted an order dated 5.8.2013 of Hon'ble High Court of Karnataka at Bangalore staying the applicability of QCI accreditation to the consultant. Hence, the consultant was allowed by the Committee to present the proposal.

2. The salient points of the proposed project as per the final EIA-EMP report submitted by PP vide letter referred above in para 1 are as follows:

M/s Xindia Steels Limited have proposed to set up an Integrated Steel Plant (1.2 MTPA) and Captive Power Plant (160 MW) at Village Kunikere & Hirebagnal, Post Genegera, Taluk & Dist. Koppal, Karnataka. PP informed that they are already operating 0.8 MTPA Iron ore pellet plant at the proposed site for which Environment Clearance was accorded by the SEIAA, Karnataka. Total land envisaged for the proposed project is 1201 acres, of which 1028 acres is in the possession of PP and the remaining 173 acres of land is under negotiation. The latitude and longitude of the project site is 15^0 17' 40.4"N and 76^0

13’ 42.1” E respectively. No forest land is involved in the project site. No National Park / wildlife sanctuary is located within 10 km radius of the project site. Nearest habitation is Kunikere village at a distance of 1 km from the project site. Nearest railway station is Ginegera located at a distance of 8 km from the project site. Total cost of the project is Rs. 6160 crores. Rs. 325 crores and Rs. 32 crores / annum will be earmarked towards capital cost and recurring cost for environmental pollution control measures. Rs. 300 crores is earmarked towards the Enterprise Social Commitment related activities based on local needs over a period of 10 years. No litigation or court case is in pending against the project and/or land.

The following facilities and production capacities are proposed:

S.N	Proposed Facilities	Production Capacity
i	Rolling mills	1.2 Mt/yr
ii	Billet casters	1.24Mt/yr
iii	Basic oxygen furnaces	1.26 Mt/yr
iv	Pipe Plant	0.4 Mt/yr
v	Blast furnace	1.82 Mt/yr
vi	Sinter plant	2.75 Mt/yr
vii	Pellet Plant	2.0 Mt/yr(existing 0.8 Mt/yr + proposed 1.2 Mt/yr)
viii	Beneficiation Plant	4.28 Mt/yr
ix	Coke plant	0.88 Mt/yr
x	Power plant	160 MW
xi	Calcination plant	640 t/d
xii	Dolomite Calcination plant	500t/d
xiii	Oxygen plant	1000 t/d

Iron ore (6.370 Mt/yr), coking coal (1.180 Mt/yr), non-coking coal (0.580 Mt/yr), limestone (0.390 Mt/yr), dolomite (0.290 Mt/yr), quartzite (0.060 Mt/yr) and bentonite (0.014 Mt/yr) are the raw materials required for the project. The iron ore will be sourced through E-auction process, which is practiced in Karnataka based on the Hon’ble Supreme Court Order. Further, 15 Mining Lease Applications (For around 200 Million Tonnes) of the Company is under various stages of process with Department of Mines & Geology, Govt. of Karnataka. PP has entered into Coal Linkage Agreement with M/s. Bhatia Global Trading Limited, Bellary on 20.11.2013 for supply of Coking Coal [1.180 MT/ yr] & Non Coking Coal [0.580 MT/yr] from Indonesia. As per the MoU submitted, the ash and sulphur content in the coal will be 4.9% and 0.8% respectively. Calorific value of the coal will be 6000 kcal/kg. The limestone, dolomite and quartzite will be sourced from Bagalkout, Dhone. Power requirement will be met from the captive power plant. Raw Material and Finished Products will be transported through rail only.

Ambient air quality monitoring has been carried out at 8 locations during December 2010 to February 2011 and the data submitted indicated: PM_{10} (21 to 62 µg/m^3), $PM_{2.5}$ (6 to 12 µg/m^3), SO_2 (4.1 to 8.2 µg/m^3) and NO_x (4.8 to 14.8 µg/m^3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs would be 24.94 µg/m^3, 11.10 µg/$m^3$and 32.99 µg/m^3 with respect to PM_{10}, SO_2 and NO_x respectively. Stacks of adequate height will be provided. Covered conveyor, Dry Fogging, Water sprinkling and Fabric filter based DE system will be provided at the raw material handling section. Electrostatic precipitator (ESP) will be provided to the sinter plant. Bag filters will be provided to material handling areas, coal handling areas, crusher, stock house, cooler discharge area, screening area etc.

The proposed project requires about 3260 m^3/hr [80 MLD] of fresh water. Water required for the proposed project will be sourced from Almatti dam. It was informed that Water Resources Department, Government of Karnataka, on 12.3.2008, has sanctioned 120 MLD of water from Almatti dam. Effluents will be treated in the ETP. The treated effluent will be sent to Guard pond. Blow down water will be collected in guard ponds and used for dust suppression and green belt. The contaminated water from the Rolling mill will be treated to separate out mill scale and then be treated to separate out oil before recycling. Wastewater of DM Plant containing acids/ alkalis will be neutralized and collected in guard ponds and used in Ash handling System, Coal handling for Dust suppression and for Plant washings and Gardening. Sanitary waste from canteens and toilets will be treated in a Centralized sewage treatment plant using a conventional activated sludge process. The treated water will be reused in the plant. The plant will work on zero discharge principle.

Dust generated from pellet plant, sinter plant and blast furnace will be recycled in the process. Tailings from beneficiation plant (2.16 MTPA) will be stored in an area of 15 ha. Dump height will be 4.5mts. Sludge generated by the BOD plant will be recycled to Coke ovens. Tar decanted sludge will be circulated in a solvent grinding pump and then sprayed on to coal prior to charging into oven. Granulated slag will be sent to the Cement Manufacturers. Muck of 9150 TPA generated from spun pipe plant will be disposed in a land fill. SMS slag will be used for road making. Fly ash will be sold to cement manufacturers. Waste oil and used oil will be sent to the KSPCB authorized agents. Green belt will be developed in 33% of the land in a phase wise manner over a period of 5 years at an estimated cost of Rs. 25 lakhs. Preference will be given in selecting local plant species depending upon the soil quality and in consultation with Forest Department.

The Committee requested the PP to provide a copy of the environmental clearance accorded by SEIAA-Karnataka for the Stand Alone Pellet Plant along with the certified monitoring report from Regional Office of MoEF at Bangalore. The EAC sought details of the names of companies in the country with which M/s Bhatia Global Trading Ltd. has entered an MOU for supplying coking and non-coking coal.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Karnataka State Pollution Control Board (KSPCB) on 27.2.2013. The main issues raised in the public hearing meeting were jobs for land losers, provision of concrete road to villages, irrigation facility for 1200 acres from the water brought from Almatti dam and toilet

facility to the villages etc. which were addressed in the EIA-EMP report. The Committee noted that there are a number of issues raised during P.H. No employment given to land losers for the existing project. A total of 208 land losers in 2008. Complaints of reduction in crop yield and dust pollution from the pellet plant. The Committee sought details of compliance report of the EC obtained from SEIAA, Karnataka. The Committee desired that a one-season baseline data should be collected.

3. After detailed deliberations, the Committee sought the following additional information for reconsideration:-

i. Copy of the EC granted by SEIAA – Karnataka along with the certified monitoring report from RO-Bangalore;

ii. Firm iron ore linkage documents;

iii. Specific agreement made by M/s. Bhatia Global Trading Limited with the coal mines at Indonesia for the coal supply along with the mode of transportation from place of import to the plant site;

iv. Details of coal supply agreements made by M/s. Bhatia Global Trading Limited with other firms in India for along-term supply of coal;

v. Socio-economic survey and R&R action plan;

vi. Recheck the Ambient Air Quality data and additional one season baseline data collection;

vii. Revised layout plan incorporating the rain water harvesting structures; and

viii. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) for the initial 5 years and 2% of retain profit thereafter for CSR based on local needs and village wise action plan with financial and physical breakup/details should be prepared over a period of ten years and shall be submitted.

16.3 Any Other Items

16.3.1 Sponge Iron Plant (2x100 TPD, 200 TPD) along with Captive Power Plant (8 MW; 4 MW WHRM & 4 MW FBC) of M/s. Kumaraswamy Ispat Pvt. Ltd. at sy. No. 389 B, 401, 402, 407, 408, Village Halkundi, Taluga & District Bellary, Karnataka – (EC)

The aforesaid proposal was considered in the 27th Meeting of the Expert Appraisal Committee (Industry) held during 26-27th August, 2011 as item no. 27.2.1 wherein the EAC has recommended the project for the grant of environmental clearance**.** As per the information submitted by the proponent, the source of iron ore for the proposal cited above is from Bellary, Sandur, Hospet and Chitradurga districts of Karnataka.

As per the Ministry's O.M. dated 5.10.2011, the projects received for environmental clearance in MoEF / SEIAAs relating to integrated steel plants and sponge iron plants, which are largely dependent

on iron ore as raw material to be sourced from the mines located in Districts of Bellary, Tumkur and Chitradurga in Karnataka and are at different stages of consideration/processing shall be delisted. Accordingly, the project was delisted by the Ministry.

The Hon'ble Supreme Court vide its order dated 18.4.2013 in W.P(C) No. 562 of 2009 has allowed the resumption of mining operations in the aforesaid three districts in all Category 'A' mines and 63 Category 'B' mines subject to certain conditions including overall cap on production. MoEF vide O.M. dated 1.7.2013 lifted the moratorium for consideration of proposals for EC for integrated steel plants/sponge iron plants, as imposed earlier vide O.M. of 5.10.2011 subject inter-alia to the condition that while considering such proposals, the Expert Appraisal Committee will look into and satisfy themselves about availability of requisite iron ore, transportation requirements and other parameters of Environment law and rules for such projects.
Meanwhile, the proponent vide letter dated 2.4.2013 stated that the raw materials will be purchased through e-auction process through the government agency MSTC. Apart from the e-auction process, the raw materials will be purchased from the existing pellet plants in the vicinity of the project site. Proponent has requested MoEF to grant Environmental Clearance for the project cited above.

In accordance with the provisions under the Ministry's O.M. dated 01.07.2013, the aforesaid proposal was placed before the Expert Appraisal Committee (Industry) for consideration. The PP along with their consultant (M/s KRS Enterprises - Bangalore) also made a presentation before the Committee. It was informed that the iron ore requirement for the project is 1,08,000 TPA will be sourced through E – auction through a Government agency MSTC Limited. Apart from the E-auction iron ore will also be purchased from the nearby pellets plants - M/s.BMM Ispat Limited, Bellary; M/s. Janki Corp Limited, Bellary and M/s.MSPL Ltd, Koppal. The iron ore will be transported to the plant site by road.

After detailed deliberations, the Committee recommended the project for environmental clearance subject to the specific conditions stipulated in its 27th meeting held on 26-27th August, 2011.

16.3.2 Expansion-cum-modernization of Durgapur Steel Plant (2.088 MTPA to 3.50 MTPA) along with Captive Power Plant 40 MW of M/s Steel Authority India Limited at Faridpur, Burdwan, Durgapur, West Bengal (Amendment in EC)

The aforesaid proposal was considered in the 12th meeting of the Expert Appraisal Committee (Industry) held during 30th September 2013 to 1st October 2013 as item no. 12.4.3, wherein the EAC sought following additional information from the proponent for reconsideration:

i. Project report for the proposed minor changes in the coke ovens
ii. Pollution load details (air emissions, wastewater treatment and solid /hazardous waste generation) in tabular form [Original approved proposal vis-à-vis minor changes in the coke ovens] along with its pollution mitigation measures
iii. Certified compliance report from Regional Office of MoEF at Bhubaneshwar for the existing unit.

The Proponent vide letter dated 13.12.2013 furnished the aforesaid information. It was informed that total 5 Coke Oven Batteries are available for coke making. The Committee was informed that the Coke oven of the existing project has 4 batteries. It is proposed provide one more battery as a replacement of an old one (5^{th} Battery), with no expansion in production. The present proposal is to bring back Battery 5 back in the circuit. The old one being replaced would be dismantled. The estimated project cost is Rs.291.16 crores and Rs.75.5 crores is envisaged for the pollution control facilities. The amendment sought by the proponent is as below:

S.No.	Parameters	As per the EC dated 10.9.2007	Proposed	Remarks
1.	Dry Coal Charge	2.237Mt/yr	2.237Mt/yr	**No change**
2.	Gross Coke Production	1.7M/yr	1.7M/yr	
3.	Coke Oven Gas Production	$694X10^6$ Nm^3/yr	$694X10^6$ Nm^3/yr	
4.	Ovens under operation	312 nos.	312 nos.	
5.	Battery#1, 2, 3, 4, & 6	Available	Available	
6.	Water requirement : 312 ovens operation	$260m^3$/hr	$260m^3$/hr	
7.	Fuel requirement : 312 ovens operation	312	312	
8.	**Batteries in Operation**	**Four (4)**	**Five (5)**	**Change**
9.	**Battery #5**	**Not in operation**	**Rebuilt/ constructed**	

The Committee noted that replacement of an old battery is an environment friendly process with reduction in pollution load and is part of modernisation process. The Committee stated that this could be considered as an amendment of EC only if there is no expansion in production. The Committee sought a specific clarification from the PP in this regard. The Committee noted that the compliance report of the Regional Office of MoEF at Bhubaneshwar vide letter no. 102-202/EPE dated 5.12.2013. of the existing project indicates a number of areas with poor compliance – oil drums, some areas with wastes, six monthly compliance report not being uploaded, including details of production figures. The Committee stated that the following conditions need special attention:

i. Uploading of six monthly compliance status of the conditions stipulated in the environmental clearance letter and also monitored data in own website is not being done;
ii. Production details of various products are not being submitted during submission of the six monthly compliance report;
iii. Study of aquatic life on the upstream and downstream of the raw water intake needs to be conducted. Besides, assessment of other users of the resources for drinking, irrigation, bathing, industry etc has not been carried out;

iv. No facility to monitor both PM10 and PM2.5 at a time in the continuous AAQ monitoring station. Besides, the project should monitor all the 12 AAQ parameters as per NAAQS notification;

v. The project should take up good housekeeping near SGP plant including removal of old tyres near it. Inventorization of all the cables (both old and new) should also be done in a proper manner as a part of good housekeeping. The old oil drums should be stored systematically so that any oil leakages be collected properly;

vi. Project proponent should strengthen the env. cell and the mandate of the cell should be defined to take various environmental control measures effectively.

The Committee requested the proponent to initiate necessary action for the effective compliance of the aforesaid findings as reported by the RO- Bhubaneshwar. The Committee recommended that fresh site inspection shall be undertaken by the RO- Bhubaneshwar thereafter and the inspection report sent by the RO Bhubaneshwar to the Ministry for further consideration of the proposal. The Committee also sought a specific clarification whether the project involves expansion in production.

16.3.3 Expansion of Sponge Iron Plant (100 TPD to 200 TPD) along with installation of Induction Furnace (95,000 TPA), Rolling Mill (90,000 TPA) and Captive Power Plant (10 MW; 4 MW WHRB and 6 MW AFBC) of M/s Bellary Ispat Pvt. Ltd. at Village Halkundi, Tq. & District Bellary, Karnataka (EC)

The aforesaid proposal was considered in the 27th Meeting of the Expert Appraisal Committee (Industry) held during 26-27th August, 2011 as item no. 27.2.3, wherein the EAC has recommended the project for the grant of environmental clearance**.** As per the information submitted by the proponent, the source of iron ore for the proposal cited above is from Bellary, Sandur, Hospet and Chitradurga districts of Karnataka.

As per the Ministry's O.M. dated 5.10.2011, the projects received for environmental clearance in MoEF / SEIAAs relating to integrated steel plants and sponge iron plants, which are largely dependent on iron ore as raw material to be sourced from the mines located in Districts of Bellary, Tumkur and Chitradurga in Karnataka and are at different stages of consideration/processing shall be delisted. In view of this, the project was kept on hold by MoEF for the grant of EC.

The Hon'ble Supreme Court vide its order dated 18.4.2013 in W.P(C) No. 562 of 2009 has allowed the resumption of mining operations in the aforesaid three districts in all Category 'A' mines and 63 Category 'B' mines subject to certain conditions including overall cap on production. MoEF vide O.M. dated 1.7.2013 lifted the moratorium for consideration of proposals for EC for integrated steel plants/sponge iron plants, as imposed earlier vide O.M. of 5.10.2011 subject inter-alia to the condition that while considering such proposals, the Expert Appraisal Committee will look into and satisfy themselves about availability of requisite iron ore, transportation requirements and other parameters of Environment law and rules for such projects.

Meanwhile, the proponent vide letter dated 6.1.2014 requested MoEF to grant Environmental Clearance for the project cited above. In accordance with the provisions under the Ministry's O.M. dated 1.7.2013, the aforesaid proposal was placed before the Expert Appraisal Committee (Industry) for consideration. The PP along with their consultant (M/s KRS Enterprises - Bangalore) also made a presentation before the Committee.

It was informed that the iron ore requirement for the project is 1,08,000 TPA which will be sourced through E – auction through a Government agency MSTC Limited. Apart from the E-auction iron ore will also be purchased from the nearby pellets plants - M/s BMM Ispat Limited, Bellary; M/s. Janki Corp Limited, Bellary and M/s.MSPL Ltd, Koppal. The iron ore will be transported to the plant site by road.

After detailed deliberations, the Committee recommended the project for environmental clearance subject to the specific conditions stipulated in its 27th meeting held on 26-27th August, 2011.

16.3.4 Expansion of Sponge Iron Plant by installation of Induction Furnace (30,000 TPA), Rolling Mill (30,000 TPA) and Captive Power Plant (4 MW) of M/s Rangineni Steel Pvt. Ltd. at Sy. No. 286, Village Halkundi, Taluka & District Bellary, Karnataka (EC)

The aforesaid proposal was considered in the 27th Meeting of the Expert Appraisal Committee (Industry) held during 26-27th August, 2011 as item no. 27.2.4, wherein the EAC has recommended the project for the grant of environmental clearance**.** As per the information submitted by the proponent, the source of iron ore for the proposal cited above is from Bellary, Sandur, Hospet and Chitradurga districts of Karnataka.

As per the Ministry's O.M. dated 5.10.2011, the projects received for environmental clearance in MoEF / SEIAAs relating to integrated steel plants and sponge iron plants, which are largely dependent on iron ore as raw material to be sourced from the mines located in Districts of Bellary, Tumkur and Chitradurga in Karnataka and are at different stages of consideration/processing shall be delisted. In view of this, the project was kept on hold by MoEF for the grant of EC.

The Hon'ble Supreme Court vide its order dated 18.4.2013 in W.P(C) No. 562 of 2009 has allowed the resumption of mining operations in the aforesaid three districts in all Category 'A' mines and 63 Category 'B' mines subject to certain conditions including overall cap on production. MoEF vide O.M. dated 1.7.2013 lifted the moratorium for consideration of proposals for EC for integrated steel plants/sponge iron plants, as imposed earlier vide O.M. of 5.10.2011 subject inter-alia to the condition that while considering such proposals, the Expert Appraisal Committee will look into and satisfy themselves about availability of requisite iron ore, transportation requirements and other parameters of Environment law and rules for such projects.

Meanwhile, the proponent vide letter no. RSPL/MoEF/2014 dated 6.1.2014 requested MoEF to grant Environmental Clearance for the project cited above. In accordance with the provisions under the Ministry's O.M. dated 1.7.2013, the aforesaid proposal was placed before the Expert Appraisal Committee (Industry) for consideration. The PP along with their consultant (M/s KRS Enterprises - Bangalore) also made a presentation before the Committee.

It was informed that the iron ore requirement of the expansion project is 50 TPD + 35 TPD (85 TPD) i.e. 45,900 TPA which would be met by e-auction through a Government agency MSTC Limited. Apart from the E-auction iron ore will also be purchased from the nearby pellets plants - M/s.BMM Ispat Limited, Bellary; M/s. Janki Corp Limited, Bellary and M/s.MSPL Ltd, Koppal. The iron ore will be transported to the plant site by road. Char' is presently being sold to brick kilns. After expansion, Char would be used in the WHRB and in the 1 MW AFBC Power Plant.

After detailed deliberations, the Committee recommended the project for environmental clearance subject to the specific conditions stipulated in its 27th meeting held on 26-27th August, 2011.

16.3.5 Castor Oil Derivatives Manufacturing Unit of M/s Shipra Agrichem Pvt. Ltd. at Block No. 364, Aakarni Prakar 0-79-67, located in village Luna, Tehsil Padra, District Vadodara, Gujarat (Amendment in EC) (internal discussion)

MoEF vide letter no. J-11011/307/2010-IA –II dated 24th December, 2012 has issued EC for the above mentioned project. The project proponent vide letter dated 4th June, 2013 has requested for amendment in EC for following change in fuel:

Fuel Consumption	LDO requirement in Lt /Hr (EC received for)	Coal Requirement in Kg/hr.
Boiler	60	750
Thermic Fluid Heater 1	7	220
Thermic Fluid Heater 2	7	160

The PP stated that the castor oil manufactured is for use as fuel for boiler instead of LDO. PP explained the reasons for change of fuel were LDO is not cost viable any more as a fuel source; alternate fuel agro waste availability is dependent on harvesting. Therefore, PP decided to adopt coal as fuel. Prediction of GLC for LDO and coal as a fuel was carried out. Incremental increase in GLC is insignificant. It was informed that it is proposed to change in effluent disposal mode- originally it was zero-discharge, it is now proposed to discharge 200 KLD into ECPL channel.

After detailed deliberations, the Committee recommended the project proposal for amendment in EC with following specific conditions:

- Bagfilter shall be provided to coal fired boiler and Thermic fluid heater to control particulate emissions within 50 mg/m^3. Effective stacks for coal boiler and Thermic fluid heater shall be estimated based on CPCB formula.

The EAC also decided that GSPCB's permission for change from zero discharge to discharging effluents into the channel should be submitted to Ministry for record for granting the aforesaid amendment.

16.3.6 Drilling of Exploratory/Appraisal Wells (300) at RJ-ON-90/1 Block of M/s Cairn India Ltd. at District Barmer & Jalore, Rajasthan– regarding EC (internal Discussion)

Most of the members informed that they have not received the proposal documents. The proposal was therefore deferred.

16.3.7 Pesticides & Chemicals (8250 TPM) Manufacturing Unit at Plot No.D-2/CH/41/A of M/s Shivalik Rasayan Ltd. at Dahej-II, Industrial Estate, Village Vadadala Tehsil Vagra District Bharuch State Gujarat regarding E.C (Internal Discussion)

The project proposal was considered in the 13th Expert Appraisal Committee (Industry) meeting held during 18th–20thNovember, 2013 and the Committee had sought the following information:

1 List of byproducts along with quantity to be incorporated.
2 Action plan for development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
3 Odour control plan for the product viz. acephate manufacturing.
4 Toxic chemical management plan.
5 LC 50 of the effluent from existing unit.
6 Revised Disaster Management Plan.
7 Solvent (acetic acid) recovery plan.
8 ETP should have a system for treatment of high COD/TDS by MEE.
9 Regular online monitoring to be ensured for TOC & pH.

The project proponent vide letter dated 24thDecember, 2013 has submitted the above mentioned additional information. The PP informed that following products and by-products will be manufactured:

S.N.	Products	Quantity (TPM)
1.	Dimethoate Technical	**150**
2.	Acephate Technical	**300**
3.	Hexaconazole Technical	**350**
4.	Glyphosphate Technical	**150**
5.	Chlorpyriphos Technical	**150**

6.	Melathion Technical	**350**
7.	Tebuconazole Technical	**250**
8.	Pendimthalin Technical	**150**
9.	Fipronel Technical	**250**
10.	Imidacloprid Technical	**150**
11.	Acetamitrid Technical	**150**
	Total	**750 TPM (Any four be manufactured at time)**
By-products		
1	NaHS (Sodium Hydrogen Sulphide)	**75**
2	Acetic Acid	**150**

In regard to greenbelt development, it was informed that as per GIDC norms, greenbelt is required in only 6 % of the total area. However, it is proposed to develop greenbelt in 4188 m^2 (8.38 %) area of total area. The company will put efforts to develop additional greenbelt along roadside in GIDC Industrial Estate. The PP has submitted a Toxic chemical management plan and disaster management plan.

After detailed deliberations, the Committee recommended the project for environmental clearance and stipulated the following specific conditions along with other environmental conditions while considering 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. Multicyclone followed by bagfilter along with adequate stack height shall be provided to coal fired boiler and thermic fluid heater to control particulate emissions.

iii. Two stage water scrubber followed by alkali scrubber shall be provided to process vent to control HCl, Cl_2, P2O5, NH_3, CH3Cl, HBr emissions. Two stage water scrubber shall be provided to process vent to control NH_3 emissions. The scrubbed water should be sent to ETP for further treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. Scrubbers vent shall be provided with on-line detection and alarm system to indicate higher than permissible value of controlled parameters. At no time, the emission levels shall go beyond the prescribed standards. The system should be interlocked with the pollution control equipments so that in case of any increase in pollutants beyond permissible limits, plant should be automatically stopped.

iv. In order to control odour, outlet of process vents should be passed through activated charcoal bed column to complete deodorize the outlet gas.

v. Chilled brine circulation system should be provided to condensate solvent vapors and reduce solvent losses. It should be ensured that solvent recovery should not be less than 95%.

vi. All necessary steps should be taken for monitoring of chlorine, HCl and HBr as well as VOCs in the proposed plant.

vii. A proper Leak Detection and Repair (LDAR) Program for pesticide industry shall be prepared and implemented as per the CPCB guidelines.

viii. Alarm for chlorine leakage if any in the liquid chlorine storage area is provided along with automatic start of the scrubbing system.

ix. Total water requirement from GIDC water supply should not exceed 150 m^3/day and prior permission should be obtained from the Competent Authority.

x. Industrial effluent generation should not exceed 76 m^3/day. Effluent should be segregated into High COD, High TDS and low COD/TDS effluent streams. High TDS effluent should be treated through stripper followed by MEE. Low COD/TDS effluent should be treated in ETP and treated effluent shall be discharged to the GIDC effluent after conforming the norms prescribed by GPCB. Water quality of treated effluent should meet the norms prescribed by CPCB/SPCB.

xi. Treated effluent should be passed through guard pond. Online pH meter, flow meter and TOC analyzer should be installed. Efforts shall be also made to explore the possibility of recycling/reuse of the treated effluent.

xii. The Company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans boundary movement) Rules, 2008 for management of hazardous wastes and prior permission from UPPCB should be obtained for disposal of solid / hazardous waste in the TSDF. The concerned company should undertake measures for fire fighting facilities in case of emergency.

xiii. As proposed, ETP sludge and inorganic waste should be sent to TSDF site. High calorific value waste such as spent organic should be incinerated.

xiv. All the commitment made regarding issues raised during the public hearing/ consultation meeting held on 23rd August, 2013shall be satisfactorily implemented.

xv. At least 5 % of the total cost of the project should be earmarked towards the Enterprise social responsibility based on public hearing issues and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.

xvi. Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

xvii. The company should make the arrangement for protection of possible fire and explosion hazards during manufacturing process in material handling.

xviii. Green belt should be developed at least in 4188 m^2 of the plant area in and around the plant premises to mitigate the effects of fugitive emissions all around the plant as per the CPCB guidelines in consultation with DFO. Selection of plant species should be as per the CPCB guidelines.

16.3.8 Molasses based Distillery (30 KLPD), Sugar (2500 MTPD) and Cogeneration Plant (12 MW) of M/s. Gangamai Industries and Construction Limited at Survey No.222, 223, 224, Village Babulgaon, Post Rakshi, TalukaShevgaon, District Ahmednagar, Maharashtra – regarding EC. (**Internal Discussion**)

The existing unit is a sugar cum cogen unit, the present proposal is for setting up a molasses based distillery. The proposal was considered in the 13th Expert Appraisal Committee (Industry) meeting held during 18th–20th November, 2013 and the Committee had desired the following information:

1 Plan for improvement of work environment to be submitted.
2 Ensure tertiary treatment to reduce the water requirement.
3 Detailed Disaster Management Plan.
4 Enterprises social responsibility considering 5 % of project cost for five year to be submitted.
5 Status note & feasibility for use of 60 KLPD spentwash for molasses dilution.

The Project proponent vide letter dated 26thDecember, 2013 has submitted the above mentioned additional information. It was informed that the PP has proposed action plans for its workers especially from the viewpoints of occupational health. ETP of sugar unit will be upgraded to improve the quality of treated effluent i.e. BOD less than 30 mg/l. Treated effluent will be recycled/reused within the plant premises. Detailed disaster management plan is submitted. An amount of Rs. 1.5 crores has been earmarked towards ESR to be undertaken over a period of 5 year for priority areas such as de-silting renovation of Bandhas/dams in the command area, development of roads and supply of various plant species to Grampanchayat for mass plantation have been identified.

After detailed deliberations, the Committee recommended the proposal for environmental clearance and stipulated the following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

i) Bagfilter/ESP along with stack of adequate height shall be provided to bagasse fired boilers to control particulate emissions within 50 mg/Nm^3. 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.

ii) 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. Dust suppression system including water sprinkling system shall be provided at loading and unloading areas to control dust emissions. Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored and records shall be maintained. The emissions shall conform to the limits imposed by Maharashtra Pollution Control Board (MPCB).

iii) The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB guidelines. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution.

iv) The company shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on its website and shall update the

same periodically. It shall simultaneously be sent to the Regional office of MOEF, the respective Zonal office of CPCB and the MPCB. The levels of PM_{10}, $PM_{2.5}$, SO_2, NOx, CO and HC (Methane) in ambient air shall be monitored and displayed at a convenient location near the main gate of the company and at important public places.

v) 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.

vi) Pucca approach road to project site shall be constructed prior to commencing construction activity of the main distillery to avoid fugitive emissions.

vii) Total fresh water requirement from Jayakwadi Dam for distillery along with cogeneration shall not exceed 310 m^3/day. Prior permission for the drawl of 310 m^3/day water shall be obtained from the Competent Authority.

viii) Spent wash generation from molasses shall not exceed 8 Kl/Kl of alcohol produced (i.e. 240 m^3/day). The spent wash from molasses based distillery should be treated in bio-methanation followed bio-composting with press mud to achieve 'Zero' discharge. Treated spentlees will be reused as dilution water for fermentation, cooling tower and boiler make up. Spent wash shall be stored in impervious pucca lagoons with proper lining with HDPE and shall be kept in proper condition to prevent ground water pollution. The storage of spent wash shall not exceed 5 days capacity.

ix) Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area shall 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 shall be monitored. Sampling and trend analysis monitoring must be made on monthly basis and report submitted to the Ministry's Regional Office at Bhopal and MPCB.

x) As proposed, no effluent from sugar, distillery and co-generation power plant shall be discharged outside the premises and Zero effluent discharge concept shall be followed.

xi) Baggase storage should be done in such a way that it does not get air borne or fly around due to wind. Fly ash shall be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by wind or water regime during rainy

season by flowing along with the storm water. Direct exposure of workers to fly ash & dust shall be avoided.

xii) Fire fighting system shall be as per the norms and cover all areas where alcohol is produced, handled and stored. Provision of foam system for fire fighting shall be made to control fire from the alcohol storage tank.

xiii) Risk Assessment shall be carried to assess the fire and explosion risk due to storage of alcohol and report submitted to the Ministry and its Regional Office at Bhopal within six months.

xiv) Occupational health surveillance programme should be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre should be strengthened and the regular medical test records of each employee should be maintained separately.

xv) Dedicated parking facility for loading and unloading of material shall be provided in the factory premises. Unit shall develop and implement good traffic management system for their incoming and outgoing vehicles to avoid congestion on the public road.

xvi) As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.

xvii) 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 medical records of each employee should be maintained separately.

xviii) All the commitments made during the Public Hearing / Public Consultation meeting held on 6thNovember, 2013 should be satisfactorily implemented and adequate budget provision should be made accordingly.

xix) As proposed, an amount of Rs. 1.5 crores should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical break-up/details should be prepared for the initial 5 years and submitted to the Ministry's Regional Office at Bhopal. Thereafter the PP shall earmark 2% of the retain profits towards CSR. Implementation of CSR should be in a time bound manner.

16.3.9 Expansion of Grain based Distillery (134 KLPD to 500 KLPD) of M/s SPY Agro Industries at Plot No.169 & 170, Village Udumulapur, MandalNandyal, District Kurnool, Andhra Pradesh – regarding EC(internal Discussion)

The project proposal was considered in the 13th Expert Appraisal Committee (Industry) meeting held during 18th–20th November, 2013 and the Committee desired following information:

1. As per EIA report, the present land is occupied by the plant is 17.6 acres and an additional area of 9.8 acres which is own land of SPYAIL. However, during presentation, it was informed that the existing plant area is 43 acres and no additional land is required. Give correct land figure along with supporting documents indicating land.
2. Efficiency of ESP for rice husk fired boiler.
3. Commitment for all storage should be covered.
4. 'Zero' effluent discharge status to be maintained in the plant.
5. Compliance report along with photographs on the observations made by the MoEF's Regional Office at Bangalore.
6. Disaster Management Plan.

Project proponent vide letter dated 3rd January, 2013 has submitted the above mentioned additional information. PP clarified that the existing plant area is 43 acres, which is already mentioned in the existing environmental clearance issued vide MoEF letter dated 28th June, 2007. The proposed expansion is within the existing land. Efficiency of ESP based on rice husk is 99.8 %. It was confirmed that all the storage area will be covered under shed. Zero effluent discharge will be followed. Spent wash from grain based distillery will be decanted and thin slop will be concentrated in the Multi-effect evaporators (MEE). Concentrated thin slop will be mixed with settleable solids to form Distiller's Wet Grains with Soluble (DWGS).Compliance report along with photographs on the observations made by the MoEF's Regional Office at Bangalore has been submitted. Disaster Management Plan has been submitted.

After detailed deliberations, the Committee recommended the proposal for environmental clearance and stipulated 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. ESP shall be provided coal/rice husk fired boiler (3 x 50 TPH) to emission less than 50 mg/Nm^3.

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 River Kundu should not exceed 5442 m3/day for distillery and cogeneration unit.

v. Water consumption should be reduced by adopting 3 R's (reduce, reuse and recycle) concept in the process.

vi. Spent wash generation should not exceed 6 Kl/Kl of alcohol. After expansion, entire Spent wash of 500 KLPD distillery should be treated through decanter and concentrated in multi-effect evaporator (MEE) to form DWGS. DWGS will be sent to dryer to form DDGS. Spentlees, effluent from utilities and cogeneration unit should be treated in effluent treatment plant (ETP) and

water quality of treated effluent should meet the norms prescribed by CPCB/SPCB and recycle/reuse.

vii. As proposed no spent wash storage lagoon will be provided.

viii. No effluent from distillery and co-generation power plant should be discharged outside the premises and Zero discharge should be adopted.

ix. Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area should be set up. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to SPCB and this Ministry. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and total dissolved solids should be monitored.

x. No storage of wet cake should be done at site. An additional dryer should be installed so that at any time wet cake is not sold then wet cake should be converted into dry cake by operating additional dryer.

xi. Coal storage should be done in such a way that it does not get air borne or fly around due to wind.

xii. Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided.

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. As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.

xvi. At least 5 % of the total cost of the project should be earmarked towards the Enterprise social responsibility based on public hearing issues and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.

xvii. The Company shall submit within three months their policy towards Corporate Environment Responsibility which should inter-alia address (i) Standard operating process/procedure to being into focus any infringement/deviation/violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental

issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.

The Committee also recommended that details of permission of the Competent Authority for drawl of water of 5442 m3/day for distillery and cogeneration unit shall be submitted for record of the Ministry.

16.3.10 Expansion of OGT [Natural Gas (300 MMscfd to 600 MMscfd) and condensate (1,344 MTPD to 2,400 MTPD)] and CPP (4 MW to 24 MW) at onshore and addition of Process cum Living Quarters Platform (PLQP) bridge connected to Well Head Platform (WHP) at Offshore of Development Operation in KG-OSN-2001/3 (Deendayal Field) Offshore Block of M/s Gujarat State Petroleum Corporation at Village Mallavaram, Mandal Tallarevu, District Godavari, Andhra Pradesh - regarding EC. (**Internal Discussion**)

The Project proposal was considered in the 31stMeeting held during 12th–13th January, 2012, the Committee desired following additional information:

i) Location of Coringa Wildlife Sanctuary on the map duly authenticated by the Chief Wildlife Warden of the area concerned.

ii) Prior clearance should be obtained from the Standing Committee of the National Board for Wildlife regarding Coringa bird sanctuary and no work at the site should be started without prior permission.

iii) A copy of the CRZ clearance.

GSPC vide letter no. GSPC/QHSE/KG-Dev/EC/2014-01 dated 8th January, 2014 has submitted following addl. information:

i. Authenticated map as issued by Principal Chief Conservator of Forest vide letter no. 34516/200/WL-1 dated 15th May, 2013.

ii. As per the above mentioned Authenticated map, GSPC's facility which are under consideration for Environmental Clearance are falling outside the Eco-sensitive Zone of Coringa Wildlife Sanctuary. Project proponent informed that the requirement of NBWL clearance is not applicable.

iii. Copy of CRZ clearance dated 1st January, 2014.

After detailed deliberations, the Committee recommended the project for environmental clearance and stipulated the following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

i. All the specific conditions and general conditions specified in the environmental clearance letter accorded vide Ministry's letter nos. J-11011/415/2007-IA dated 8th September, 2008 shall be implemented.

ii. The process emissions (particulate matter, SO_2, NOx, HC, CO and VOCs) from various units shall conform to all standards prescribed by the CPCB/A. P. Pollution Control Board (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.

iii. Adequate stack height should be provided to flare stack.

iv. Low NOx burner shall be installed to control NOx emissions.

v. As proposed vapour recovery system should be provided at loading gantry and slope tank.

vi. Steps shall be taken to minimise fugitive emissions. Monitoring of fugitive emissions shall be carried out as per guidelines of CPCB by fugitive emissions detector and report shall be submitted to the Ministry' Regional Office at Bangalore. Continuous monitoring system for VOCs at all important places/areas should be ensured. When monitoring results indicate above the permissible limits, effective measures should be taken immediately.

vii. Total fresh water requirement for onshore gas terminal from canal should not exceed 8880 m^3/day and water requirement for PLQP from sea water should be 480 m^3/day and prior permission should be obtained from the concerned Authority.

viii. As proposed, produced water (1200 KLD) generated during hydrocarbon production on process cum living quarters platform (PLQP) should be treated and disposed at marine outfall location at PLQP. For marine disposal, prior permission should be obtained from the APPCB. Wastewater generation from onshore gas terminal should not exceed 2620 m^3/day and treated in the ETP and treated effluent should be disposed at marine outfall after obtaining permission from APPCB. Surface runoff from the plant area should be segregated from process wastewater. Water quality of treated effluent shall conform to the norms prescribed by the CPCB/APPCB from time to time.

ix. The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from MPPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. Measures shall be taken for fire fighting facilities in case of emergency.

x. Spent catalyst and bottom tank sludge shall be sent to authorized re-processors/recyclers.

xi. The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system should be as per the OISD norms. All the OISD standards shall be followed.

xii. OISD guidelines shall be followed for minimum distance between various units.

xiii. The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 *as* amended time to time. All Transportation of Hazardous Chemicals shall be *as per* the Motor Vehicle Act (MVA), 1989.

xiv. Green belt shall be developed in 33 % area to mitigate the effects of fugitive emissions all around the plant as per CPCB guidelines in consultation with the local DFO. Thick greenbelt with suitable plant species shall be developed around the proposed expansion.

xv. Company shall prepare project specific environmental manual and a copy shall be made available at the project site for the compliance.

xvi. 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.

xvii. Under Corporate Social Responsibility (CSR), sufficient budgetary provision shall be made for health improvement, education, water and electricity supply etc. in and around the project.

16.3.12 Proposed Surface Production facilities of M/s Gujarat State Petroleum Corporation (GSPC), located at Ahmedabad District Gujarat (Amendment in TOR) (internal discussion)

MoEF vide letter no. J-11011/163/2012-IA –II dated 15th January, 2013 has issued TOR for the above mentioned project.

Project proponent vide letter no. GSPC/QHSE/AMD/MoEF-EC/2013-115 dated 6th September, 2013 has requested for amendment in TOR for the following project configuration:

S.N.	Detail	EC applied for			Proposed revision in EC application		
		PK1	SE1	SE1A1	PK1	SE1	SE1A1
1	Crude Oil (m3/day)	4-8	1-2	5-8	18	60	60-120
2	Associated Gas (m3/day)	800-1400	800-1500	10-100	1000	1800	1800-3800

The Committee noted the revised scope of work and recommended same TOR for EIA-EMP report preparation for the revised configuration as above.

16.3.13 Exploratory Drilling (Onshore) for Oil and Gas (8 wells) in Block CB-ONN-2005/3 of M/s Mercator Petroleum Limited in District Ahmedabad and Mehsana, Gujarat – Regarding Environment Clearance. (**Internal Discussion**)

The project proposal was considered in the 5thMeeting held during 31st January 2013 to 1st February, 2013, the Committee desired following additional information:

1. Non methane hydrocarbon and VOC monitoring for 1 month to be conducted.
2. Ambient air quality monitoring data in respect of SO_2 to be conducted.
3. Coliform value in surface water quality monitoring to be rechecked.

Mercator Petroleum Ltd. vide letter no. MPL/EIA/CB-03/MoEF/006 dated 19thJune, 2013, (received in the Ministry on 10.01.2014) has submitted the above mentioned additional information.

After detailed deliberations, the Committee recommended the proposal for environmental clearance and stipulated the following specific conditions along with 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 the Ministry.

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, methane & 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 20 m^3/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 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 H_2S release including all necessary aspects from evacuation to resumption of normal operations. The workers should be provided with personal H_2S 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. 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. Abandoned well inventory and remediation plan shall be submitted within six months from the date of issue of letter.

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 Bhopal.

xxiii. Under Enterprise Social Commitment (ESC), 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. A social audit shall be carried out for the whole operation area with the help of reputed institute like Madras Institute of Social Science etc.

xxvi. All personnel including those of contractors should be trained and made fully aware of the hazards, risks and controls in place.

xxvii. Company should have own Environment Management Cell having qualified persons with proper background.

xxviii. 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.

16.3.14 Expansion of Nirma Chemical Complex of M/s Nirma Limited at Sy No. 478/P, 447-453, 455-457, Village Kalatalav, Tehsil Bhavnagar, District Bhavnagar, Gujarat --regarding EC (internal Discussion)

The project proposal was considered in the 14th Expert Appraisal Committee (Industry) meeting held during 19th-20th December, 2013and the Committee desired detailed need based Enterprise Social Responsibility Plan for 5 % of project cost.

Project proponent vide letter dated 30th November, 2013 had informed that 5 % of the project cost has been earmarked towards Enterprise Social Responsibility Plan. The amount earmarked for the year 2013-2015, 2015-2017, 2017-2019, 2019-2021 and 2021-2023 are Rs. 345 lakhs, Rs 450 lakhs, Rs 450 lakhs, Rs. 450 lakhs and Rs. 410 lakhs respectively. The earmarked amount will be spent on the identified priority areas such as human development and capacity building; infrastructure; Health & Hygiene; Socio-economic Development; Sports & Recreation etc.

After detailed deliberations, the Committee recommended the project for EC and stipulated the following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

1. Electrostatic Precipitator along with adequate stack height shall be provided to coal fired boiler(200 TPH) to control particulate emissions. 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.

2. Two stage chilled water/caustic scrubber shall be provided to process vents to control HCl.Two stage chilled water/caustic scrubber should be provided to process vents to control Cl2. Two stage scrubber with chilled water media shall be provided to process vents to control NH3. 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.

3. The levels of PM_{10}, SO_2, NO_X, Cl_2, HCl, NH_3, CO and HC (Methane and Non-methane) in ambient air and emissions from the stacks shall be monitored and displayed at a convenient location near the main gate of the company and at important public places.

4. One continuous ambient air quality monitoring station shall be installed.

5. Unit shall create covered coal storage yard in the expansion project along with facilities of garland drain around coal handling area which leads to a settling pit. Pucca road shall be created in and around coal storage area and parking area.

6. Total fresh water requirement from sea water source shall not exceed 942MLD and prior permission shall be obtained from the Competent Authority.

7. Effluent shall be treated in ETP. Effluent shall be treated in effluent treatment plant. Water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB. Treated effluent will be recycled/reused within factory premises. Water quality of treated effluent from ETP shall be monitored regularly. Domestic wastewater shall be treated in STP.

8. As proposed, no effluent shall be discharged outside the factory premises and 'Zero water discharge concept' will be adopted.

9. Fly ash shall be utilised in brick manufacturing, bund preparation and strengthening, construction of road, back filling. Brine sludge and settling pond sludge shall reused for filling the low lying areas.

10. Proper utilisation of fly ash shall be ensured as per Fly Ash Notification, 1999 as amendment in 2003. Fly ash shall be provided to cement and brick manufacturers for further utilisation.

11. As proposed, additional greenbelt shall be developed in 80 acres. Unit shall carry out gap plantation in areas which suffered mortalities.

12. Proper hood along with 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 along with automatic start of the scrubbing system.

13. Personal protective equipments shall be provided to all employees. More messages regarding safety and environment conservation shall be provided for more awareness on safety aspects.

14. All the commitments made to the public during public hearing/public consultation meeting held on 12th September, 2012 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.

15. As proposed, 5 % of the total cost of the project for 1st 5 years and therafter 2% of the retain profit should be earmarked towards the Enterprise Social Commitment based on locals needs. A CSR Plan with 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.

16. Monitoring of occupational health issues. – In this regard an OHS Lab should be established

16.3.15 Grain based Distillery (3 KLPD) of M/s Piccadily Sugar & Allied Industries Ltd. at Plot 358, Sector 8, IMT Bawal Industrial Estate, Tehsil Bawal, District Rewari, Haryana - regarding TOR. (**Internal Discussion**)

The project proposal was considered in the 14th Expert Appraisal Committee (Industry) meeting held during 19th-20thDecember, 2013 and the Committee recommended the proposal for award of TOR.

In the meantime, the Project proponent vide letter dated 3rd January, 2014 has informed that they shifted the project location from plot no. 358 to plot no. 346 in the same industrial area. However, plot area will remain same (i.e. 7875 m^2) and project parameters will remain the same.

The Committee noted the revised location and recommended the same TOR for EIA-EMP report preparation.

16.4 Terms of Reference (TORs)

16.4.1 Expansion of Bulk Drugs of M/s Wockhardt Ltd. at Village Chikalthana MIDC Area, Tehsil and District Aurangabad, Maharashtra (TOR)

The project authorities and their Consultant (S D Engineering Services 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 References for the preparation of EIA-EMP. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within 10 km distance nearest critically polluted area i.e. Aurangbad, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Wockhardt Ltd.has proposed for expansion of Bulk Drugs of at Village Chikalthana MIDC Area, Tehsil and District Aurangabad, Maharashtra. Moratorium was lifted recently. MIDC was set up in the 1970s. Unit was established in 1980. A copy of land allotment letter dated 18.08.2003 issued by MIDC was submitted. High pollution hazardous effluents (100 litres/d) would be incinerated. Land area is 24291.49 m^2. The following products will be manufactured:

S.N.	Product	Maximum Quantity (KG/month)
1	Epinephrine and its salt	19
2	Fesoterodine furmarate	40
3	WCK-771	30
4	Pramipexole dihydrochloride	80

	monohydrate	
5	Chlorothiazide and its salts	40
6	Saxagliptin hydrochloride	20
7	WCK-5107	40
8	Gatifloxacin	10
9	WCK 4873	20

Stack height of 21m has been provided in furnace oil fired boiler (3 TPH). Stack height of 35 m has been provided in furnace oil fired boiler (3 TPH). Scrubber will be provided to control process emissions. Double condenser system with brine and chiller will be provided to control VOC. Total water requirement will be 80 m3/day. Effluent generation will be 68 m3/day and treated in effluent treatment plant. Process residue and waste, chemical sludge from waste water treatment, residues/wastes, off specification products, boiler soot, high COD/TDS concentrated wastewater and mixed spent solvent will be sent to CHWTSDF The cost of project is Rs. 62 lakhs

After detailed deliberations, the Expert Appraisal Committee prescribed the TORs given in Annexure-1 read with Annexure-2 for preparation of EIA-EMP report:

16.4.2 Expansion of Drug & Intermediate manufacturing unit of M/s S.S Organics Ltd. at Village Aroor Village Sadasivpet Mandal, Dist. Medak, A.P (TOR)

The project authorities and their consultant (Rightsource Industrial Solutions Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP report. All the Synthetic Organic Chemicals Manufacturing Unit located outside the notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s S.S Organics Ltd. has proposed for expansion of Drug & Intermediate manufacturing unit at Sy. No. 252/1 Village Aroor, Sadasivpet Mandal, Dist. Medak, A.P. Environmental clearance for the existing unit was obtained vide MoEF letter no. J-11011/150/2005-IA II (I) dated 11th August, 2005. However, the unit was under litigation and has bene in operation only for the past 3-4 months. Cost of expansion project is Rs. 15.25 Crore. Total plot area of the site is 64768 m2 of which greenbelt will be developed in 26312 m^2. No national park, sanctuary and reserve forest is located within 10 km distance. Following products will be manufactured:

Name of the product	CAS No's	Therapeutic Category	Quantity in MT /Month
Atorvastatin Calcium	134523-03-8	Anti lipemic agent	5.00
Ciprofloxacin Hydrochloride	85721-33-1	Anti-infective	95.00

Esomeprazole Sodium	161796-78-7	Proton-pump Inhibitors	0.50
Esomeprazole Magnesium Trihydrate	217087-09-7	Antiulcer agent	5.00
Gabapentin	60142-96-3	Anticonvulsant	2.00
Ilaprazole	172152-36-2	Proton pump inhibitor	2.00
Lamivudine	134678-17-4	Antiretroviral	2.00
Lansoprazole	103577-45-3	Antiulcer	2.00
Losartan Potassium	124750-99-8	Antihypertensive	5.00
Nevirapine	129618-40-2	Antiretroviral	2.00
Omeprazole Magnesium	95382-33-5	Antiulcer	5.00
Omeprazole Sodium	95510-70-6	Proton-pump Inhibitor	0.50
Pantoprazole Sodium	138786-67-1	GI agent	5.00
Rabeprazole Sodium	117976-90-6	Gastric anti secretory agent	2.00
Ritonavir	155213-67-5	Antiretroviral	2.00
Roxatidine	78628-28-1	Anti ulcerative	2.00
Zidovudine	30516-87-1	Antiretroviral	2.00
Total			**139.00**

Bagfilter will be provided to coal fired boiler (2 x 5 TPH) to control particulate emissions. Scrubber will be provided to control process emissions viz. HCl, SO2 and ammonia. Vent condensers will be installed to storage tank to prevent fugitive emissions. Primary and secondary condensers with chilled water and chilled brine circulation. Total fresh water requirement from ground water source will be increased from 80.2 m3/day to 218.71 m3/day after expansion. Effluent generation will be 23.99 m^3/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. Power requirement from state electricity board will be 900 KVA. DG sets (200 KVA& 250 KVA) have been installed in the existing unit for standby arrangement. Organic solid waste will be sent to cement industries. Inorganic solid waste, evaporation salts and ETP sludge will be sent to TSDF. Fly ash will be sent to brick manufacturers.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs read with the Generic TOR at Annexure-1 read with additional TORs at Annexure-2 for preparation of EIA-EMP report:

(i) Details of recently obtained CTE and CTO.
(ii) Compliance report of earlier EC.
(iii) Recommendation of APPCB whether the Ind. area can take the additional pollution load.

16.4.3 Drug Manufacturing unit of M/s Balaji Formulation Pvt.Ltd. Unit –III at Village Machanpally, Mandal Bommalaramaram, District Nalgoda, A.P. (TOR)

The project authorities and their consultant (Rightsource Industrial Solutions Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP report. All the Synthetic Organic Chemicals Manufacturing Unit located outside the notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Balaji Formulation Pvt.Ltd. Unit –III has proposed for setting up of Drug Manufacturing unit at village Machanpally, Mandal Bommalaramaram, District Nalgonda, A.P. Total plot area of the site is 24645.17 m2 of which greenbelt will be developed in 8187.20 m^2. No national park, sanctuary and reserve forest is located within 10 km distance. Cost of project is Rs. 12.68 crores. The following products will be manufactured:

Name of the product	CAS No's	Therapeutic Category	Quantity (in MTPM)
Emtricitabine	143491-57-0	Anti-Infective Agent	3.00
Tenofovir Diisoproxil Fumarate	202138-50-9	Anti-Infective Agent	2.00
Valsartan	137862-53-4	Antihypertensive	2.00
Fluconazole	86386-73-4	Antifungal	1.00
Rabeprazole Sodium	117976-90-6	Gastric anti secretory agent	2.00
Zidovudine	30516-87-1	Antiretroviral	5.00
Losartan Potassium	124750-99-8	Antihypertensive	1.00
Rosuvastatin Calcium	147098-20-2	Antilipemic	1.00
Levocetrizine Dihydrochloride	130018-87-0	Respiratory Agent	2.00
		Total	**19.00**

Bagfilter will be provided to coal fired boiler to control particulate emissions. Scrubber will be provided to control process emissions viz. HCl and SO2. Vent condensers will be installed to storage tank to prevent fugitive emissions. Primary and secondary condensers with chilled water and chilled brine circulation. Total fresh water requirement from ground water source will be 104.02 m3/day and the balance will be met from recycle, reuse and rainwater harvesting. Effluent generation will be 43.74 m^3/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. Power requirement from state electricity board will be 600 KVA. DG sets (180 KVA &320 KVA) have been installed in the existing unit for standby arrangement. Organic solid waste will be sent to cement industries. Inorganic solid

waste, evaporation salts and ETP sludge will be sent to TSDF. Fly ash will be sent to brick manufacturers. It was clarified that there is no F problem in their area. Of the total water

After detailed deliberations, the Expert Appraisal Committee prescribed the TORs as given in Generic TOR at Annexure-1 read with additional TORs at Annexure-2 for preparation of EIA-EMP.

16.6.4 Expansion of Pesticide Manufacturing Unit (Unit – 2) of M/s Anupam Rasayan India Ltd. at Plot No. 701, 2419/1, 2419/2, Sachin GIDC Estate, Tehsil & District Surat, Gujarat. (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 along with the draft Term of References for the preparation of EIA-EMP. All units producing technical grade pesticides are listed at S.N. 5(b) under category 'A' and appraised at Central level.

M/s Anupam Rasayan India Ltd. has proposed for expansion of Pesticide Manufacturing Unit (Unit – 2) at Plot No. 701, 2419/1, 2419/2, Sachin GIDC Estate, Tehsil & District Surat, Gujarat. Total plot area is 5982 m^2 of which greenbelt area will be developed in 1794 m^2. Total cost of expansion project is Rs. 50.0 Crore. No national parks, wildlife sanctuaries, biosphere reserves, heritage sites, tanks, reserve forests etc. are located within 10 km distance. It was informed that Sachin Industrial Area established in 1993.

It was informed that in addition to CETP membership, it is proposed to treat the effluents (Pr. Effluents with high COD (20,000 mg/l) High TDS (80,000 mg/l) within own premises. Of the total 165 KLD of effluents, an estimated 90 KLD is to be sent to CETP. It was informed that a new technology – Soil biotechnology treatment system, patented by IIT Bombay to be installed.

The following products will be manufactured:

S.N.	Product	Existing (MTPM)	Proposed (MTPM)	Total after expansion(MTPM)
1	Insecticides	--	370	370
2	Amino Diphenyl/Phenoxy Compounds	250	100	350
3	Speciality Phenols	50	200	250
4	Amino Benzoic Esters	--	250	250
5	Acetylated Compounds	--	170	170
6	Nitro Compounds	--	170	170
7	Hydrogenation Compounds	--	85	85
8	Triclosan/Diclosan/amino hydroxyl ether/ HP100	--	170	170
	Total	350	1635	1985

ESP along with stack height (35 m) will be provided to coal fired boiler (6 TPH). Stack height of 20 m will be provided to LDO fired thermic fluid heater. Scrubber will be provided to control process emissions viz. HCl, SO2 and HBr. Fresh water requirement from GIDC water supply will be increased from 89.125 m^3/day to 416 m3/day after expansion. Quantity of effluent generation will be increased from 50.96 m^3/day to 177 m3/day. Effluent will be segregated into High COD/TDS and low COD/TDS effluent streams. High COD/TDS effluent stream will be evaporated in MEE. Low TDS/Cod effluent stream will be treated in ETP. Treated effluent will be discharged into CETP for further treatment. DG set (500 KVA) will be installed. ETP Sludge and MEE salt will be sent to TSDF. Fly ash will be sent to brick manufacturers. Iron sludge will be sent to cement industry. Distillation residue will be sent to co-processing or disposal at common incineration site.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs read with Generic TOR given in Annexure-1 read with additional TORs at Annexure-2 for preparation of EIA-EMP:

(i) A letter from PP that after the 1994 Notification, they have not manufactured pesticide intermediates and pesticides finished products and manufacture of only specialty chemicals.

(ii) PP prepare and implement a Toxic Management Plan.

16.4.4 Manufacturing of Organic Chemicals Product of M/s Archit Organosys Limited at Village Kala Talev, Tehsil & District Bhavnagar, Gujarat (TOR)

The project authorities and their Consultant (T R Associates, Stay order no. C/SCA/1782/2013 dated 2/5/2013) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP report. All the Resin Units located outside the notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Archit Organosys Limited has proposed for setting up of Synthetic organic manufacturing unit at Sy. No 228/1a Paiki 7, Paiki 2 Village Narmad, Tehsil & District Bhavnagar, Gujarat. Total plot area is 56434.79 m^2 of which greenbelt will be developed in 4397 m^2. Cost of project is Rs. 20 crores. The following products will be manufactured:

S.N	Products	Quantity (MTPM)
1	Chlorinated Paraffin Wax	2000 MTPM
2	Mono Chloro Acetic Acid (MCAA)	2000 MTPM
3	Sodium Mono-chloro Acetic Acid (SMCA)	500 MTPM
4	Tri Chloro Acetyl Chloride (TCAC)	250 MTPM

HCl vapour will be absorbed in water through packed absorption column. Multicyclone dust collector will be provided to coal/white coal fired steam boiler (2 MT) to control particulate emissions. Committee suggested installing bagfitler instead of Multicyclone dust collector for better removal efficiency. Total water requirement from outside agency will be 248.62 m3/day. Effluent will be treated in ETP. Treated effluent will recycled in process. No effluent will be discharged outside the plant premises. DG set (500

KVA) will be installed. Power requirement from Gujarat Electricity Board will be 750 HP. ETP sludge will be sent to TSDF. Used oil will be sent to authorized recyclers/re-processors. It was informed that chlorine (60-70T/d) will be obtained from m/s Nirma located at a distance of 1km.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of EIA-EMP read with Generic TOR at Annexure-1 and additional TORs at Annexure-2:

(i) The EAC sought a Plan for Storage, handling and Transportation of Chlorine.

(ii) The Committee further desired that transportation of chlorine by pipeline be explored. The Committee also requested the PP to look up M/s Nirma's Caustic Soda Plant.

(iii) The Committee desired that a detailed Risk and Disaster preparedness and Management Plan be prepared.

16.4.5 Grain based Distillery (120 KLPD) along with CPP (3.5 M) of M/s Globus Spirits Ltd. at village Belari, Sub District Ausgram-1, District Bardhman, West Bengal (TOR)

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

16.4.6 Expansion Organic Manufacturing Unit of M/s Artemis Biotech Ltd. at Plot No. 1 & 5, Phase-1, IDA, Jeedimetla village, Mandal Qutubullapur, District Rangareddy, A.P. (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 along with the draft Term of References for the preparation of EIA-EMP. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within 10 km distance nearest critically polluted area ie., IDA, Patancheru, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Artemis Biotech Ltd. has proposed for expansion of bulk Drugs Manufacturing Unit at Plot No. 1 & 5, Phase-1, IDA, Village Jeedimetla, Mandal Qutubullapur, District Rangareddy, A.P. The project is located within 10km of CPA – 8.8km from Bollaram and Pattancheru. Existing unit was established in 1982 and no EC was required at that time. Cost of project is Rs. 1.5 crores. Total plot area of the site is 4.06 acres of which greenbelt will be developed in 1.34 acres. No national park, sanctuary and reserve forest is located within 10 km distance.The nearest human settlement from the site is Chintal located at a distance of 0.5 Km to the industrial estate premises. Dulapalle RF at a distance of 1.5 km in north direction and Gajularamaram RF at a distance of 3.5 km in northwest directions respectively. The site is located at a distance of 8.85 Km from the critically polluted area of Patancheru and Bollaram Industrial estates. Water body i.e. Kottacheru is located within 10 km. The following products will be manufactured:

S.No	Name of the Product	Capacity (TPM)	
		Permitted*	After Expansion**
1	Dimethyl Chloro Tetra Cycline	0.84	--
2	Simvastatin	0.1	10
3	Fumagillin DCH Salt	0.04	0.2
4	Lovastatin VSP	0.2	5
	Total	**1.18**	**15**

- *Only one product will be manufactured at any point of time on campaign basis*

*** All three products will be manufactured.*

List of Utilities

S.No	Description	Capacity	
		Existing	Proposed
1	Coal Fired Boiler	2 x 2.5 TPH	1 x 2.5 TPH
2	DG Set*	2 x 500 KVA	1 x 1000 KVA

** DG set will be used during load shut down.*

It is proposed to provide Multi-cone cyclone separators as air pollution control equipment to the boilers, while effective stacks based on CPCB formula is proposed for DG sets and boilers. The Committee suggested installing bagfilter in the boiler for better efficiency. Scrubber will be provided to control process emissions. Total fresh water requirement from HMWS and SB industrial water supply will be increased from 62 m3/day to 103 m3/day after expansion. Out of which fresh water requirement will be 68 m^3/day. Total effluent generation will be 41.5 m^3/day after expansion. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. Process organic residue, solvent residue and spent carbon will be sent to TSDF/cement industries. Process Inorganic residue, evaporation salts and ETP sludge will be sent to TSDF. Fly ash will be sent to brick manufacturers. However, Gazette Notification of the industrial area is not submitted.

After detailed deliberations, the Expert Appraisal Committee prescribed TORs as given below read with Generic TOR at Annexure-1 and additional TORs in Annexure-2 for preparation of EIA-EMP report:

(i) Recommendation of APPCB whether the Ind. area can take the additional pollution load.

16.4.7 Molasses based Distillery Unit (60 KLPD) along with Cogeneration Power Plant (2.0 MW) of M/s L H Sugar Factories Ltd. at Village Jangraulipul Tehsil Pilibhit District U.P. (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 along with the draft Term

of References for the preparation of EIA-EMP report. All molasses based distillery are listed at S.N. 5(g) (i) under category 'A' and appraised at Central level.

M/s L H Sugar Factories Ltd. has proposed for setting up of Molasses based Distillery Unit (60 KLPD) along with Cogeneration Power Plant (2.0 MW) at Village Jangraulipul, Tehsil Pilibhit District U.P. Total plot area is 29.6 acres of which greenbelt will be developed in 9.76 acres. Devha Nadi and River Apsarya are flowing within 10 km distance. No national parks/reserved forests/protected forest/wildlife sanctuaries/biosphere reserves are located within 10 km distance. Distillery will be operated for 270 days per annum. Cost of project is Rs. 61.0 crores.

ESP/bagfilter along with stack height of 45 m will be provided to bagasse/biogas/coal/rice husk fired boiler. Fresh water requirement from ground water source will be 597 m3/day. Spent wash will be treated in bio-digestor followed by concentrated in MEE. Concentrated spent wash will be bio-composted. Spentlees, blowdown and MEE condensate will be treated trough RO. Treated effluent will be recycled into process. No effluent will be discharged outside the plant premises and Zero discharge concept will be adopted. Ash will be sent to brick manufacturers. Used/spent oil will be sent authorized recyclers.

After deliberations, the Committee prescribed TORs given in Generic TOR at Annexure-1 read with additional TORs at Annexure-4 for the preparation of draft EIA-EMP:

16.4.8 Drilling of 8 additional exploratory/appraisal drilling in the Block CY – DWN – 2001/2 (CY-III-D5) of M/s Reliance Industries Ltd., Off the Coast of Tamil Nadu Bay of Bengal (TOR)

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 Term of References for the preparation of EIA-EMP. All the projects related to offshore and onshore Oil and Gas exploration, development and production are listed in para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at central level.

M/s Reliance Industries Ltd. has proposed for drilling of 8 additional exploratory / appraisal drilling in the Block CY – DWN – 2001/2 (CY-III-D5), OFF the Coast of Tamil Nadu Bay of Bengal. EC granted on 18.03.2005 for drilling 8 wells, of which 5 have HCs and the remaining 3 are dry. Distance from nearest coastline is 22 km. Area of block is 10,655 km^2. Environmental clearance was obtained vide MoEF's letter no J-11011/213/2004-IA-(II) I dated 18th March, 2014 for drilling of 11 wells. So far, only 9 wells have been drilled. Cost of additional wells proposed for drilling project is Rs. 800 crores (Rs 100 crores/well). Drilling is upto a depth of 3-4km depth. Water depth ranges from 400m to 3500m.

Water based and synthetic based mud will be used for drilling. Total water requirement through offshore supply vessels and desalination plant will be 100 m3/day. Total quantity of effluent generation is 55 m3/day. Wastewater will be treated through onboard STP and oil water separator as per MARPOL

(IMO) requirements. Treated effluent will be disposed to sea sa per MARPOL. Drill cuttings and residual mud (if required) will be disposed into sea as per the GSR 546 (E) 30th August, 2005.

After deliberations, the Committee prescribed the TORs at Annexure-6 for the preparation of EIA-EMP report.

16.4.9 Expansion of Drugs Unit & Intermediate Manufacturing unit of M/s Vensa Lab. Pvt. Ltd., at Plot No. 171 & 172, Phase –II, IDA, Pashamylaram, Medak District A.P. (TOR)

The project authorities and their Consultant (Right Source Industrial Solutions 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 References for the preparation of EIA-EMP. It was informed that the unit is a Category B project. The project is located within 10km of CPA – 6.63 km from Pattancheru and hence a Cat. A project. P.H. was held in 2013. The unit was established in 1998. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within 10 km distance nearest critically polluted area ie., IDA, Patancheru, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Vensa Lab. Pvt. Ltd. has proposed for expansion of Drugs Unit & Intermediate Manufacturing unit at Plot No. 171 & 172, Phase –II, IDA, Pashamylaram, Manadal Patancheru, District Medak, A.P. Cost of expansion project is Rs. 9.25 Crore. Total plot area of the site is 4683 m^2 of which greenbelt will be developed in 1151.3 m^2. The following products will be manufactured:

Name of the product	CAS No's	Therapeutic Category	Quantity in MT /Month
Gabapentin	60142-96-3	Anticonvulsant	10.00
Citalopram Hydrobromide	59729-33-8	Antidepressant	1.00
Escitalopram Oxalate	128196-01-0	Antidepressant	0.55
Efaverinz	154598-52-4	Antiretroviral	1.00
Diltiazem Hydrochloride	33286-66-9	Antianginal	3.00
Domperidone	57808-66-9	Antiemetic	1.00
Aceclofenac		Anti- Inflammatory Agents	5.00
Amlodipine Besylate	111470-99-6	Antihypertensive	1.00
Mebeverine Hydrochloride	2753-45-9	Antispasmodic agent	3.00
Valsartan	137862-53-4	Anti hypertensive	3.00
		Total	**28.55**

Bagfilter will be provided to additional coal fired boiler (2TPH) to control particulate emissions. Scrubber will be provided to control process emissions. Total fresh water requirement from APIIC water supply will be increased from 10 m3/day to 110.82 m3/day after expansion. Effluent generation will be 42.27

m^3/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. Organic solid waste will be sent to cement industries. Inorganic solid waste, evaporation salts and ETP sludge will be sent to TSDF. Fly ash will be sent to brick manufactures.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TOR read with Generic TOR at Annexure-1 and additional TORs at Annexure-2 for preparation of EIA-EMP report:

(i) Recommendation of APPCB whether the Ind. area can take the additional pollution load.

16.4.10 Expansion of Pesticide Manufacturing Unit of M/s Anupam Rasayan India Ltd. at Plot No. 8104, 8109, 8110, 8111 & 268/1, Sachin GIDC Estate, Tehsil &District Surat, Gujarat (Unit – 1) (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 along with the draft Term of References for the preparation of EIA-EMP. All units producing technical grade pesticides are listed at S.N. 5(b) under category 'A' and appraised at Central level.

M/s Anupam Rasayan India Ltd. (Unit-1) has proposed for Expansion of Pesticide Manufacturing Unit at Plot No. 8104, 8109,8110, 8111 & 268/1, Sachin GIDC Industrial Estate, Tehsil &District Surat, Gujarat. The proposed expansion will be carried out within the existing unit having land area of 19,508 m^2. Greenbelt will be developed in 6,676 m^2. Total cost of expansion project is Rs. 50.0 Crore. No national parks, wildlife sanctuaries, biosphere reserves, heritage sites, tanks, reserve forests etc. are located within 10 km distance. No manufacture of insecticide. It was informed that only herbicide and fungicide (agrochemicals). Expansion is to be done by adding to existing manufactured products, specialty chemicals.

The following products will be manufactured:

S.N.	Product	Existing (MTPM)	Proposed (MTPM)	Total after expansion (MTPM)
1	Herbicides	--	500	500
	Fungicides	--	375	375
2	Amino Diphenyl Ether /Phenoxy Compounds	200	133	333
3	Speciality Phenols	40	210	250
4	Amino Benzoic Esters	20	230	250
5	Amino Compounds	--	167	167
6	Acetylated Compounds	--	167	167

7	Nitro Compounds	--	167	167
8	Triclosan/Diclosan/amino hydroxyl ether/ HP100	70	100	170
	Total	330	2133	2463

Adequate Stack height will be provided to gas fired boiler/thermic fluid heater. Scrubber will be provided to control process emissions viz. HCl, SO2 and HBr. Fresh water requirement from GIDC water supply will be increased from 69.3 m^3/day to 262 m3/day after expansion. Quantity of effluent generation will be increased from 45 m^3/day to 169 m3/day. Effluent will be segregated into High COD/TDS and low COD/TDS effluent streams. High COD/TDS effluent stream will be evaporated in MEE. Low TDS/Cod effluent stream will be treated in ETP. Treated effluent will be discharged into CETP for further treatment. DG set (500 KVA+125 KVA) will be installed.ETP Sludge and MEE salt will be sent to TSDF. Fly ash will be sent to brick manufacturers. Iron sludge will be sent to cement industry. Distillation residue will be sent to co-processing or disposal at common incineration site. It was clarified that there would be no odour issues as no open vents.

After detailed deliberations, the Expert Appraisal Committee prescribed TORs given in generic TOR at Annexure-1 read with additional TORs at Annexure-2 for preparation of EIA-EMP.

16.4.11 Expansion of Viscose Filament Yarn of M/s Indian Rayon, at Town Veraval, District Girsomnath, Gujarat (TOR)

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 Term of References for the preparation of EIA-EMP report. All manmade fibres manufacturing including rayon are listed at S.No. 5(d) under category 'A' of Schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) in the Ministry.

M/s Indian Rayon has proposed for expansion of viscose filament yarn at Town Veraval, District Girsomnath, Gujarat. It was informed that a new dist.- Gir-Somnath has been created out of Junagadh. Total plant area is 176 acres of which greenbelt will be developed in 59 acres. EC 2008 and 2011- P.H. exempted. No national parks/wildlife sanctuaries /biosphere reserve & reserved /protected forest lies within 10 km radius project site. Arabian sea is at 700 m from the plant site. Triveni sangam of the rivers namely Hiran, Kapila, Saraswati is located at 6.5 km from the plant site. The Seasonal River Devka is passing just near the plant site. Effluents being sent to sea. Cost of the proposed expansion is Rs. 850 crores.

The following products will be manufactured:

S.N.	**Products**	**Existing Quantity (MTPM)**	**Proposed additional (MTPM)**	**Total Quantity after expansion (MTPM)**

1	Viscose Filament Yarn	1650	750	2400
2	Captive Power Plant	34.5 MW	20 MW	54.5 MW
3	Sodium Sulphate	2050	300	2350
4	Sodium Sulphite	Nil	3000	3000
5	Liquid SO_2	Nil	1500	1500
6	Sulphuric Acid	3600	No change	3600
7	Carbon Disulphide	1000	No change	1000
8	Caustic soda Lye (100 %)	12000	No change	12000
9	Chlorine (100 %)	10560	No change	10560
10	Compressed Hydrogen	650000 Nm^3	No change	650000 Nm^3
11	Sodium Sulphide, ($Na_2S^{)}$	100	No Change	100
12	HCl	1800	No change	1800
13	Sodium Hypochlorite (100%)	3750	No Change	3750

ESP will be provided to coal fired boiler to control particulate emissions. Fluidized bed combustion boiler & lime dosing system will be provided to control SO2 emissions. Bagfilter & cyclone separator will be installed in boiler house to control particulate emissions. Bagfilter will be provided in coal crusher plant. Three stage scrubbing system with chilled caustic will be provided in Sodium Hypochlorite plant. Bubble cap tray followed by packed bed scrubber will be provided to hydrochloric acid plant. Alkali scrubber will be provided in sulphuric acid plant. Alkali scrubbers will be installed in Rayon Plant to control hydrogen sulphide emissions. Water scrubber will be provided in Sodium sulphate plant. Sodium Suphite Recovery Unit – existing and proposed Total water requirement will be increased from 12938 m3/day to 17938 m3/day after expansion. Additional water will be sourced from Umrethi dam (3000 m3/day) and remaining quantity will be met from recycled treated effluent. Effluent will be treated in ETP and treated effluent will be discharged into deep sea through existing Marine pipeline with diffuser system, which is designed for a discharge of 15000 m3/day. Sewage will be treated in STP and treated sewage will be used as make up water for cooling tower & plantation inside the premises. Cellulose waste and sulphuric sludge will be sent to CTSDF, Saurashtra Enviro Pvt. Project Ltd. Fly ash will be sent to group cement plant, brick plant & rest of the quantity will be given to the GPCB approved vendors. Process sludge is being stored in identified area and briquettes are formed by use of process sludge, cellulose waste, coal ash, charcoal churry and used in boiler & co-incineration in the Group plant Ultra Tech Rajula. Coal/lignite will be procured from Africa, Indonesia and local trader for lignite from GMDC.

After deliberations, the Committee prescribed the following TORs read with Generic TOR at Annexure-1 and additional TORs at Annexure-2 for the preparation of EIA-EMP report.

(i) The EAC desired that Monitoring Report of Bhopal of earlier ECs is required.

(ii) A CSR Plan is also required.

16.4.12 Expansion of Bulk Drugs & Intermediates Manufacturing Unit of M/s Suven Life Science Ltd. at Sy. No. 99, 101-109, Village Dasaigudem, Mandal Suryapet, District Nalgonda A.P. (TOR)

The project authorities and their consultant (Team Labs) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP report. All the Synthetic Organic Chemicals Manufacturing Unit located outside the notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Suven Life Science Ltd. has proposed for expansion of Bulk Drugs & Intermediates Manufacturing Unit at Sy. No. 99, 101-109, Village Dasaigudem, Mandal Suryapet, District Nalgonda A.P. The unit is located 5.5 km from Bollaram Ind. Area established prior to 1996, when ban came into force and lifted in 2013. Cost of project is Rs. 12.68 crores. Total plot area of the site is 70 acres of which greenbelt will be developed in 23.4 acres. No national park, sanctuary and reserve forest is located within 10 km distance. The nearest human settlement from the site is Durajpalli located at distance of 1 km from the site in east direction. Dasaigudem cheru is at a distance of 0.77 km in southwest direction, Nallacheru is at a distance of 4.15 km in southwest direction and River Musi flows at a distance of 6.8 km in southwest, flowing from northwest to south.

The following products will be manufactured:

S. No	Name of the Product	Quantity (Kg/day)
1	**Methyl-2-(Chloromethyl Phenyl)-3-Methoxy-2-Acrilate(MCPMA)**	**2167.7**
2	5-Cyano pthalide	336
3	4-hydroxy-5-methyl pyrrolo[2,1-f][1,2,4]triazine-6-carboxylic acid ethyl ester (PTZN)	81
4	Gabapentine	95.9
5	Divalproex Sodium	300
6	Azacytocine	112.2
7	4,6-dichloro pyrimidine (4,6- DCPY)	227.2
8	Adenine	132
9	**1-{[5-methyl-3-(trifluoromethyl)-1H-pyrazol-1-yl]acetyl}piperiidne-4-carbothiomide (MPC)**	**787.2**
10	Losartan potassium (LP)	150.3
11	Theobromine (TBN)	243.2
12	Malonic acid	324.3
13	Cyanoacetamide	379.7
14	Barbituric Acid (BBA)	500
15	Imatanib	298.9
16	5-Fluoro-4,6-Dichloro pyrimidine (5-Fluro-4,6-DCPY)	302.9
17	1,2,3-Trizole	471.6
18	Chloro Ethoxy Ethyl Acetate (CEEA)	520.8
19	Entacapone	100
20	Calcium Acetate	180
21	Carprofen	71.4
22	Tetra hydro ribo furanose	83
23	2,4-Dichloro-5-methyl pyrimidine (2,4-DCMPY)	330

24	Piperinyl alcohol	208
25	**2-Chloro-4-Methyl pyrimidine (CMP)**	**521.7**
26	Chloro ethyliodo pyrimidine	248.1
27	**Cyano Acetic Acid (CAA)**	**1144**
28	Lamotrigen	187.9
29	**Methyl Cyanoaceate (MCA)**	**1135.6**
30	**Ethyl Cyanoaceate (ECA)**	**2600**
31	Tomsulosin	30
32	Homoveratryl Amine (HVA)	166.7
33	D-Mannose	410
34	Verapamil HCl	181.8
35	Nitazozoxanide	250
36	Zolmitripton	100
37	2-methyl pyrolidine carboxilic acid	132.5
38	Hydroxy tetrahydrofuran	213.2
39	2,5-diamino 4,6-dichloro pyrimidine (DADCP)	331.6
40	1-Tert-butoxy carbonyl amino cyclobutane carboxylic acid (BCAC)	280
41	Benzhydrol Thioacetamide (BTA)	284.5
42	Benzoin	355.7
43	2-n-Butyl-4-formyl-5-chloro imidazole (BCFI)	296.5
44	Fenoprofen Calcium dehydrate	109.6
45	Capacitabine	169.5
46	Chloro propyl amino pyrazole	99
47	Fluoro Phenyl Methanone	229
48	3,5-Diacetoxy acetophenone (DAAP)	520.8
49	Bromo-iodo benzene (BIB)	473.6
50	L-Xylose	274.3
51	5-Bromo-2-iodo pyrimidine	176.3
52	8-chloro theophylline	258.9
53	S- Indoline-2-carboxilic acid	210.1
54	2,4-Dichloro-5-Nitro pyrimidine (DCNPY)	115.6
55	Dimethyl thiophenol	310.5
56	2-Amino-5-Chloro Benzoic acid (ACB acid)	266.7
57	Methyl-Napthalene-1-Methyl-amine Hydro chloride (NAP)	382.4
58	3-Hydroxy- N-benzyl pyrrolidine (BHP)	200
59	Valsartan	85.7
60	Carbonyl amino cyclo butiric acid	228
61	Metane sulfonyl-L-lucyne	202.1
62	2,4-Diamino-6-hydroxy pyrimidine (DAHP)	246.5
63	5-Chlorothiophene-2-carboxylic acid (5-CTA)	396.4
64	3,5-Dibenzoyl tartaric acid (DBTA)	436
65	Pamabromo	331.9
66	2-chloro-5-iodo benzoic acid	491.7
67	Tetra hydro isoquinoline (THIQ)	153

68	2,4-Dichloropyrimidine (2,4-DCPY)	345
69	Doxofylline	364.6
70	Dimethyl dithiophosphoric	71.4
71	Aripiprazole	142.9
72	Phentramine hydrochloride	200
73	D-Penicillamine	80.2
74	dimethyl phenyl isothiocyanate	216
75	2-Chlorothioxanthene-9-one (2-CTX)	366.5
76	2,6-dichloro-4,8-dipiperdine-1-yl-pirimido5,4d)pyrimidine (DDH)	249.8
77	Homoveratryl Amine (HOVA)	428
78	Thiozole-5-carboxaldehyde	181.5
79	2,5-Dimethylamino-2-phenyl Butan-1-Ol (RC-105)	267.2
80	Amino Dimaleate (ADM)	418.3
81	2,4,5-Trichloro pyrimidine (TCPY)	198
82	4,4-Nitro phenyl-3-marpholine(NPMP)	115.6
	Total (Worst Case – 6 Products on campaign basis)	**8356**

Note: Products shall be manufactured on campaign basis.

List of Utilities

S.No	Utility	Permitted	Proposed
1	Coal Fired Boiler	3 & 4TPH	2 x 10 TPH*
2	Thermic Fluid Heater	---	1 lac K.cal/hr
3	DG Set*	500 KVA & 600 KVA	1000 KVA

** One 10TPH boiler shall be kept as standby*

*** DG set will be used during load shut down*.

Bagfilter will be provided to coal fired boiler (2 x 10 TPH) to control particulate emissions. Scrubber will be provided to control process emissions. Total fresh water requirement will be increased from 37.5 m^3/day to 686.72 m^3/day. Out of which 476.76 m^3/day will be fresh water and 210 m^3/day is recycled. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. DG sets (500 KVA,600 KVA& 1000 KVA) have been installed in the existing unit for standby arrangement. The stripper distillate, process residue and solvent residue are sent to cement plants for co-incineration. The evaporation salts are sent to TSDF. Filter media like activated carbon and hy-flow are sent to TSDF. Waste oil and used batteries from the DG sets are sent to authorize recyclers. The sludge from effluent treatment plant is sent to TSDF. Ash generated from coal fired boilers sent to brick manufacturers.

After detailed deliberations, the Expert Appraisal Committee prescribed Generic TORs as given in Annexure-1 read with additional TORs at Annexure-2 for preparation of EIA-EMP report.

16.4.13 Expansion of Drug & Intermediate manufacturing unit of M/s Lofty Lab. Pvt. Ltd, at Plot No. 233& 234, Phase- II, IDA Pashamylaram, Medak District A.P. (TOR)

The project authorities and their Consultant (Right source Industrial Solutions 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 References for the preparation of EIA-EMP. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within 10 km distance nearest critically polluted area ie., IDA, Patancheru, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Lofty Lab. Pvt. Ltd has proposed for expansion of Drug & Intermediate manufacturing unit at Plot No. 233& 234, Phase- II, IDA Pashamylaram, Medak District A.P. Cost of expansion project is Rs. 7.92 Crore. Total plot area of the site is 8112 m^2. The following products will be manufactured:

Name of the product	CAS No's	Therapeutic Category	Quantity in (MTPM)
Amlodipine Besylate	111470-99-6	Antihypertensive	20.00
Losartan Potassium	124750-99-8	Antihypertensive	3.00
Sildenefil Citrate	171599-83-0	Antihypertensive	15.00
Carsoprodol	78-44-4	Skeletal Muscle Relaxant	3.00
Terbinafine Hydrochloride	78628-80-5	Antifungal	2.00
Total			**43.00**

Bagfilter will be provided to additional coal fired boiler (3TPH) to control particulate emissions. Scrubber will be provided to control process emissions. Total fresh water requirement from APIIC water supply will be 122.37 m3/day after expansion. Effluent generation will be 64.9 m^3/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. Organic solid waste will be sent to cement industries. Inorganic solid waste, evaporation salts and ETP sludge will be sent to TSDF. Fly ash will be sent to brick manufactures.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TOR read with Generic TOR given at Annexure-1 and Additional TORs at Anenxure-2 for preparation of EIA-EMP report:

(i) Recommendation of APPCB whether the Ind. area can take the additional pollution load.

16.4.14 Expansion of Synthetic Organics Chemicals Bulk Drugs & Intermediates Manufacturing Unit of M/s Mylan Lab Ltd. at Sy. No. 14, 99 & 100, IDA, Village Pashamylaram, Mandal Patancheru Medak Disrict A.P. (TOR)

The project authorities and their Consultant (Team Labs) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within 10 km distance nearest critically polluted area i.e., IDA, Patancheru, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Mylan Lab Ltd.has proposed for expansion of Bulk Drugs & Intermediates Manufacturing Unit (From 15.51 TPM to 81.52 TPM) and 5MW Co-Generation Power Plant at Sy. No. 14, 99 & 100, IDA, Village Pashamylaram, Mandal Patancheru Medak Disrict A.P. Cost of expansion project is Rs. 40 crores. Total plot area of the site is 30.81 acres of which greenbelt will be developed in 10.78 acres. No national park, sanctuary and reserve forest is located within 10 km distance. The nearest human settlement from the site is Phashamylaram located at distance of 0.5 km from the site in Southeast direction. Nakkavagu stream is at a distance of 6.2 km in northeast direction, flowing from north to south. Following products will be manufactured:

S.N.	Name of Product	Quantity (TPM)
1	Acyclovir	30
2	Aliskiren Hemifumarate	0.1
3	Almotriptan	0.1
4	Alprazolam	0.2
5	Amlodipine Besilate	1
6	Armodafinil	0.04
7	Asenapine Maleate	0.1
8	Atorvastatin	0.01
9	Azelnidipine	0.02
10	Azilsartan Medomoximil	0.02
11	Cetrizine	1
12	Clarithromycin	4
13	Cyclobenzaprine	0.11
14	Des Venlafaxine Fumarate	0.03
15	Des-Loratadine	0.1
16	Dexalansoprozol	0.5
17	Dronedarone	0.08
18	Fluconazole	1
19	Irbesetran	8
20	Itraconazole	0.05
21	Labetelol	0.02
22	Lamotrigene	0.25
23	Lansaprazole	1
24	Lisinopril	0.01

25	llapprazole Sulfide	0.08
26	Lloperidone	0.02
27	Loratadine	1
28	Losartan	1
29	O-Des methyl Venlafaine Succinate	0.03
30	Omeprazole	0.03
31	Oxybutynim H CL	0.05
32	Paliperidone	0.03
33	Perindopril Arginine	0.03
34	Perindropil Erbumine	0.05
35	Pioglitazone	3
36	Pitavastatin	0.1
37	Rebeprazole	0.15
38	Resperidone	0.15
39	Rizatriptan	0.1
40	Rosuvastatin	0.2
41	Telmesetran	2
42	Temazepam	0.01
43	Terbinafine HCl	0.02
44	Tetrabenazine	0.02
45	Valacyclovir	25
46	Zoledronic Acid	0.01
47	Zolmitriptan	0.1
48	Validation products	0.6
	Total	**81.52**
	Co-Generation Power Plant	**5MW**

List of By-Products

S.No	Name of the Byproduct	Quantity (Kg/day)	Name of the Product
1	1,3 Di Cyclo Hexyl Urea	1000	Valacyclovir

List of Utilities

S.No	Utility	Permitted	Proposed
1	Coal Fired Boiler	8TPH*	30 TPH
2	Furnace Oil Fired Boiler	5 TPH*	---
3	DG Set**	3 x 750 KVA 1 x 1250 KVA 2 x 1500 KVA	3 x 1500 KVA

**Boilers shall be kept as standby*

*** DG set will be used during load shut down*.

Bagfilter will be provided to coal fired boiler (30 TPH) to control particulate emissions. Scrubber will be provided to control process emissions. Total fresh water requirement will be increased from 257 m^3/day

to 1175 m^3/day. Out of which 821 m^3/day will be fresh water and 354 m^3/day is recycled. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. The stripper distillate, process residue and solvent residue are sent to cement plants for co-incineration. The evaporation salts are sent to TSDF. Filter media like activated carbon and hy-flow are sent to TSDF. Waste oil and used batteries from the DG sets are sent to authorize recyclers. The sludge from effluent treatment plant is sent to TSDF. Ash generated from coal fired boilers sent to brick manufacturers.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TOR read with Generic TOR at Annexure-1 and Additional TORs at Annexure-2 for preparation of EIA-EMP report:

(i) Recommendation of APPCB whether the Ind. area can take the additional pollution load.

Friday, 21st February, 2014

16.5 Consideration of the EC Projects

16.5.1 Resin Manufacturing Unit of M/s Jason Dekor Pvt. Ltd. at Sy.No.501/P, 502 & 503, village Vemardi, Taluka Karjan, District Vadodara, Gujarat (EC)

The project authorities and their consultant (T R Associates, Stay order no. C/SCA/1782/2013 dated 9/12/2013) 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 2nd Meeting of the Expert Appraisal Committee (Industry) held during 29th – 31st October, 2012 for preparation of EIA-EMP report. All the synthetic organic chemicals industry (basic organic, chemicals, other synthetic organic chemicals and chemical Intermediates) located outside the notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Jason Dekor Pvt. Ltd. has proposed for setting up of Resin Manufacturing Unit at Sy.No.501/P, 502 &503Village Vemardi, Taluka Karjan, District Vadodara, Gujarat. Total plot area is 35037 m^2. Cost of the project is Rs. 1.5 crores. No national parks/wildlife sanctuary is located within 10 Km distance. The following products will be manufactured:

S.N.	Product	Quantity (MTPM)
1	Phenol Formaldehyde Resin	325
2	Melamine Formaldehyde Resin	150
3	Urea Formaldehyde Resin	650
4	Plain & Pre-laminated Baggase Board and Plain and Pre-laminate Particle Board	90,000 Nos./Month

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during February, 2013 to April, 2013 and submitted baseline data indicates that ranges of concentrations of PM_{10} (55.2 µg/m^3 to 90.0 µg/m^3), $PM_{2.5}$ (34.4 µg/m^3 to 73.7 µg/m^3), SO_2 (8.2 µg/$m^3$to 16.4 ug/m^3) and NO_x (10.1 µg/m^3 to 25.3 µg/m^3) respectively. However, the committee was not satisfied with the results of ambient air quality data. Therefore, ti was decided to recheck the ambient air quality data by collecting one month data. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 11 µg/$m^3$and 25 µg/$m^3$and 11 µg/m^3 with respect to SPM, SO_2 and NOx.

Multicyclone Dust collector will be provided to coal/cotton stalk fired hot air generator& Thermic fluid heater to control particulate emissions. DG set (1000 KVA) will be installed. Scrubber will be provided to Dryer to control methanol. Fresh water requirement from ground water source will be 29.67 m^3/day. Industrial effluent generation will be 4.45 m^3/day. Industrial effluent will be treated in ETP with photo fenton oxidation process method followed by evaporator. Condensate from evaporator will be recycled/reused in process. No effluent will be discharged outside the plant premises. ETP sludge will be sent to TSDF. Resin waste will be sent to common incineration facility. Used oil/spent oil will be sent to registered recyclers.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board. The issues were raised regarding disposal of wastewater, 1 % of profit to be used for development of village, mitigation measures for fly ash and dust emissions, greenbelt etc. The Committee noted in consistencies in the environmental data presented. After deliberations, the Committee sought following additional information:

1 Recheck ambient air quality data by conducting fresh one month monitoring.
2 Recheck water quality data by conducting fresh monitoring.

The proposal is deferred till the aforesaid information is submitted. The Response received will be discussed internally without calling project proponent.

16.5.2 Expansion in Resin Manufacturing Unit (450 MTPM to 1600 MTPM) manufacturing unit of M/s Touch Laminates Pvt. Ltd, at Block No.198, Plot No.146, Village: Sonasan, Opp. Ceramic Zone, Tehsil Prantij, District Sabarkantha, Gujarat (EC)

The project authorities and their consultant (M/s T R Associates, Stay order no. C/SCA/1782/2013 dated 9/12/2013) 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 33rdMeeting of the Expert Appraisal Committee (Industry) held during 21st–22nd March, 2012 for preparation of EIA-EMP report. All the synthetic organic chemicals industry (basic organic, chemicals, other, synthetic organic chemicals and chemical Intermediates) located outside the notified industrial area are listed at S.N. 5(f) under Category ‘A’ and appraised at the Central level.

M/s Touch Laminates Pvt. Ltd has proposed for expansion in Resin Manufacturing Unit (from 450 MTPM to 1600 MTPM) at Block No.198, Plot No.146, Village Sonasan, Opposite Ceramic Zone, Tehsil Prantij, District Sabarkantha, Gujarat. Total plot area is 18818 m^2. No national parks/wildlife sanctuary is located within 10 Km distance. Cost of the project is Rs. 1 crore.

The following products will be manufactured:

S.N.	Product	Existing	Proposed	Total after expansion
1	Phenol Formaldehyde Resin	300	700	1000
2	Melamine Formaldehyde Resin	100	300	400
3	Urea Formaldehyde Resin	50	150	200
4	Decorative Laminated Sheets	2,00,000 Nos/month	2,00,000 Nos/month	4,00,000 Nos/month

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 7 locations during March, 2013 to May, 2013 and submitted baseline data indicates that ranges of concentrations of PM10 (52 µg/m3 to 76.4 µg/m3), PM2.5 (29 µg/m3 to 56.3 µg/m3), SO2 (9.3 µg/m3 to 15.8 ug/m3) and NOx (13.5 µg/m3 to 22.7 µg/m3) respectively. However, the committee was not satisfied with the results of ambient air quality data. Therefore, ti was decided to recheck the ambient air quality data by collecting one month data.AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 13 µg/$m^3$and 2.0 µg/m3 and 3.0 µg/m3 with respect to SPM, SO2 and NOx. The resultant concentrations are within the NAAQS.

Multicyclone Dust collector will be provided to coal fired boiler& Thermic fluid heater to control particulate emissions. DG set (250 KVA) will be installed. Scrubber will be provided to Dryer to control methanol. Fresh water requirement from ground water source will be increased from 6.35 m^3/day to 25.33 m^3/day after expansion. Industrial effluent generation will be 12.80 m^3/day. Industrial effluent will be treated in ETP with photo fenton oxidation process method followed by evaporator. Condensate from evaporator will be recycled/reused in process. No effluent will be discharged outside the plant premises. ETP sludge will be sent to TSDF. Resin waste will be sent to common incineration facility. Used oil/spent oil will be sent to registered recyclers.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 21st August, 2013. The issues were raised regarding drawl of ground water, air emission, use of latest technology, use of Narmada water, recycling of treated effluent, etc. The Committee noted that issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report and there were too many inconsistencies and discrepancies in the environmental data presented in the EIA-EMP Report.

After deliberations, the Committee desired that the environmental data requires revalidation with respect to the following information:

1 Recheck the ambient air quality data by conducting fresh one month monitoring.
2 Recheck water quality data by conducting fresh monitoring.

The proposal is deferred till the desired information is submitted. The above information shall be provided with the uploading of minutes on the website. The response will be discussed internally without calling project proponent.

16.5.3 Exploratory Drilling in Andaman (offshore) Blocks AN-DWN-2009/1, AN-DWN-2009/2, ANDWN- 2009/3 & AN-DWN-2009/5 under NELP-VIII of M/s. Oil and Natural Gas Corporation Limited (ONGCL) (EC)

The project proponent and consultant (M/s ONGC) 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 2nd Meeting of the Reconstituted Expert Appraisal Committee (Industry) held during 29th to 31st October, 2012 for preparation of EIA-EMP report. All the projects related to offshore within 12 Nautical mile distance and onshore Oil and Gas exploration, development and production are listed in para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at Central level.

M/s. Oil and Natural Gas Corporation Limited (ONGCL) has proposed for exploratory drilling (18 Wells) in Andaman (offshore) Blocks AN-DWN-2009/1, AN-DWN-2009/2, AN-DWN-2009/3 & AN-DWN-2009/5 under NELP-VIII. The 6 Blocks are located in the Andaman Offshore. The total area of this block is 25017 Km^2. Cost of project is Rs. 5400 crores. The blocks are located about 265 km to 342 km away from Port Blair having bathymetry varying from 2850m to 3000m. ONGC proposes drilling of exploratory wells with target depth of 6000m each, of which the water depth is about 3000m. A number of national park, Wildlife Sanctuary or Eco sensitive area like Cinque Island Sanctuary, Saddle Peak National Park etc are located in the study area. Distance of these sensitive areas from the blocks is from 204km to 856km. Due to enormous distance, it will have no impact on sensitive areas such as coral reefs. As the water depth of drilling would exceed 400m and the drilling locations are away from traditional/commercial fishing areas, the impact of drilling on fisheries or fishing activities will be insignificant. It was clarified that although Oil spill Contingency Plan is required to be prepared as per Coast Guard Regulations, Oil spill emergency issues are not so relevant as Bombay crude- is light- breaks down rapidly with wave action before it reaches shore –of the Anadamans or of other countries (Thailand/Malaysia).

The Block wise well locations are given below:

S.N.	Block Name	Participating Interest	Area (SKM)	Bathymetry (m)	Distance from Port Blair (Km)	No of Wells to be drilled

1	AN-DWN-2009/1	ONGC 70 % OIL 30 %	4981	2950-3050	342	3
2	AN-DWN-2009/2	ONGC 60 % OIL 40 %	3995	2850-2925	327	3
3	AN-DWN-2009/3	ONGC 60 % OIL 40 %	3992	2850-2925	287	3
4	AN-DWN-2009/5	ONGC 90 % OIL 10 %	4002	2925-3000	265	3
5	AN-DWN-2009/13	ONGC 70% (Operator) GSPC 10% GAIL 10% NTPC 10%	4007	500 - 2800	290	3
6	AN-DWN-2009/18	ONGC 60% (operator) OIL 30% GAIL 10%	4040	1600-3400	275	3

Water based mud (fluid) will be used for drilling operation. Main constituents of the fluid are Bentonite and barites, both of which are natural minerals. However during drilling of difficult/complicated sections, if required Synthetic Oil based mud (SOBM) will be used as per applicable guidelines. SOBM has low toxicity and will meet LC50>30000 mg/lt as per mysid toxicity test.

DG sets will be provided with adequate stack height. The impact of air pollutants on personnel working on rig will be insignificant as the stack height of DG sets is 15m above sea level. Flare stack will be provided of adequate height in accordance with Oil Mines Regulation Rules, 1984. Well testing will be done for minimum duration. Location of drilling is far away from the coast. The blocks are 265km to 342km from Port Blair. Hence the impact on land and the coastal areas is not envisaged. Air pollutants will rapidly disperse as wind speeds of 5-6 m/s in the study area. About 20-30 m^3/day of water will be required for drilling operationof a single well. Water for drilling operation will be sourced from sea. Potable water will be brought by OSVs. The water requirement for domestic and wash use is very less.Produced water is treated in the produced water handling system where oil is separated and water is disposed to sea after meeting CPCB standards.

Use of water based mud system has been planned. The mud will be re-cycled and reused to maximum extent. Drill Cuttings(DC)will be tested for presence of oil & grease by an approved laboratory under the EP Act. Drill cuttings generated in the drilling process are naturally occurring earth materials comprising of chips of sandstone, shale, sand and lumps of clay. Drill cuttings, thoroughly washed and separated from WBM, will be discharged intermittently below the water surface as per GSR 546(E), 2005.Their discharges do not cause significant impact on marine water column as they settle down to the sea bottom and form small heaps. Used oil will be sold to approved recycler. Three DG sets of 1250 KVA each (One Stand by) will be used during drilling operation. Consumption of fuel (HSD) during drilling operations will be 8-12 kl/day.

After detailed deliberations, the Committee recommended the proposal for environmental clearance and stipulated the following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

i. Only high efficiency DG set with adequate stack height and modern emission control equipment and low sulphur clean diesel shall be used. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution.

ii. Gas produced during testing shall be flared with appropriate flaring booms.

iii. The flare system shall be designed as per good oil field practices and Oil Industry Safety Directorate (OISD) guidelines. The stack height shall be provided as per the regulatory requirements and emissions from stacks will meet the MOEF/CPCB guidelines.

iv. Total water requirement shall not exceed 30 m^3/day/well and prior permission shall be obtained from the Competent Authority for the drawl of water. Only water based mud system shall be used.

v. Water based drilling mud shall be discharged to the sea after proper dilution as per E(P) Rules vide G.S.R 546(E) dated 30th August, 2005.

vi. The Company shall ensure that there shall be no impact on flora fauna due to drilling of wells in the offshore sea. The company shall undertake conservation measures to protect the marine animals/biota in the region. The company shall monitor the petroleum hydrocarbons and heavy metals concentration in the marine fish species regularly and submit report to the Ministry.

vii. Treated wastewater (produced water or formation water) shall 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 shall not exceed 1 mg/l before disposal.

viii. The drill cutting (DC) wash water shall be treated to conform to limits notified under the Environment (Protection) Act, 1986, before disposal into sea. The treated effluent shall be monitored regularly.

ix. All the guidelines shall 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. Different types of wastes shall be kept segregated.

x. High efficiency equipment shall be used to separate solids, hydrocarbons and water such as shale shakers with improved capacity to filter smaller solids, low shear pumps for use in produced water shall be employed.

xi. Good book keeping practices shall be put in place to manage wastes such as waste tracking program i.e. identify where and when the waste generated, the type of waste and its volume, the disposal method and its location, and the personnel responsible for the waste management.

xii. A waste minimisation plan shall be developed and followed through proper inventory management following best practices in drilling operations, good house keeping practices and optimised equipment maintenance schedules.

xiii. Only essential rig personnel shall be on board the rig. Emergency Response Plan and health, safety and environment (HSE) system shall be installed. Geo- hazard and geotechnical studies shall be carried out to ensure safe drilling operations.

xiv. All the hazardous waste generated at the rig/offshore facility shall 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 shall be disposed off into sea. Waste/used oil shall be brought on-shore and sold to MoEF/CPCB authorized recyclers/re-processors only.

xv. Requisite infrastructure facilities shall 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 shall be made to curtail the oil slick within 500 meters of the installation and accordingly, action plan and facilities to check the oil slick within 500 meters shall be provided.

xvi. Approval from DG Shipping under the Merchant Shipping Act prior to commencement of the drilling operations shall be obtained. At least 30 days prior to the commencement of drilling, the exact location shall be intimated to the Director General of Shipping and the Company shall abide by any direction he may issue regarding ensuring the safety of navigation in the area.

xvii. The International 'Good Practices' adopted by the Petroleum Industry following International norms to safeguard the coastal and marine biodiversity shall be implemented by the company.

xviii. The Company shall 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 shall be provided as per the CPCB guidelines.

xix. 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.

xx. The project proponent shall also comply with the environmental protection measures and safeguards recommended in the EIA /EMP/RA/NIO report.

xxi. Full drawings and details of Blow Out Preventor to encounter well kick due to high formation presence, if encountered, shall be submitted to the Ministry within 3 months of the issue of environment clearance.

xxii. On completion of activities, the well shall 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 shall be filled with a brine solution containing small quantities of inhibitors to protect the well. The position at the

end of the activities shall be communicated in detail to the Ministry indicating the steps taken i.e. whether all the wells are plugged or abandoned and necessary precautions taken.

xxiii. A brief report on environmental status & safety related information generated and measures taken as well as frequency of such reporting to the higher Authority shall be submitted to this Ministry and its respective Regional Office at Bhubaneshwar.

xxiv. Petroleum and Natural Gas (Safety in Offshore Operations) Rules 2008 of OISD should be strictly adhered to.

xxv. Recommendations mentioned in the Risk Assessment & Consequence Analysis and Disaster Management Plan shall be followed.

xxvi. Adequate funds both recurring and non-recurring shall be earmarked to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purposes.

xxvii. An independent audit shall be done to ensure that the Environment Management Plan is in place in totality.

16.5.4 Fertilizer Capacity Enhancement (2000 to 3000 TPD) of M/s Fertilizers and Chemicals Travancore Ltd. at Ambalamedu, Kochi, Kerala (EC)

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

Reconsideration of Environmental Clearance

16.5.5 Expansion of Sugar Factory (2,500-6,000 TCD) and Co-Generation Plant (15 MW to 31.5 MW) of M/s Lokmangal Sugar Ethanol & Co-Generation Industries Ltd. at Plot No.588 -590, 592 & 645, Village Bhandarkavathe, Tehsil South Solapur, District Solapur, Maharashtra (EC).

Project proposal was considered in the 1st Reconstituted Expert Appraisal Committee (Industry) meeting held during 24th – 25th September, 2012 and the Committee desired following information:

1. Recheck data on ambient air quality in respect of PM_{10}, SO_2, NOx for one month.
2. A certified copy of compliance check of existing environmental clearance by the Regional Office at Bhopal.

Project proponent vide letter dated 8th December, 2012 has submitted above mentioned information. A copy of certified compliance report dated 13.11.2013 issued by MoEF Regional Office is submitted. The Committee deliberated on the monitoring report of RO, Bhopal. It is reported that project proponent has already commissioned the proposed expansion project for sugar unit and cogeneration unit without

prior environmental clearance. Therefore, the project proposal involves violation of the Environment (Protection) Act, 1986 or Environment Impact Assessment (EIA) Notification, 2006 will be considered as per Ministry's O. M no. J-11013/41/2006-IA II (I) dated 12th December, 2012 and 27th June, 2013.

16.5.6 Sugar (3500 TCD), Molasses based Distillery (50 KLD) & Cogeneration Power Plant (26 MW) of M/s Shree Basaveshwar Sugars Ltd. at Sy. No.9/1, 9/3, 18/3, 19, 20, 22, 33, 34, 35, 36, 37/1, 37/2, 38 & 39 at Village Karjol, Taluka& District Bijapur, Karnataka (EC)

Project proposal was considered in the 13th Reconstituted Expert Appraisal Committee (Industry) meeting held during 18th– 20th November, 2013 and the Committee desired following information:

1 MoU with the sugar plant to supply molasses.
2 Village wise enterprises social responsibility considering 5 % of project cost for five years.
3 Detailed Disaster Management Plan.
4 Copy of MoU with coal supplier along with coal characteristics.
5 Reduction of water requirement upto 10 Kl of Kl of alcohol produced and revised water balance.

Project proponent vide letter dated 26th December, 2013 has submitted above mentioned information. A copy of consent letter for supply of 10000 MTS molasses by M/s Bilagi Sugar Mill Ltd. is submitted. Unit has allocated a sum of total Rs. 20. Crores i.e. 5 % of the total investment on the project towards Environmental Social Corporate Plan village and enterprise wise for the period of 5 years from start of the industry is submitted. Villages name include Karjol, Dudihal, Mulvad, Malaghan and Mittihal. Priority areas identified are potable drinking water supply, school building and toilet, infrastructure for primary health centre, improving village road, providing ambulance and toilet to the nearby Govt. Hospital, health care camps/ program etc.

After detailed deliberations, the Committee recommended the project for environmental clearance and stipulated following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

i. ESP along with stack of adequate height should be provided to bagasse/agro waste/coal fired boiler (130TPH)to control particulate emissions within 50 mg/Nm^3. Bagfilter should be provided to biomass/concentrated spent wash fired boiler (18 TPH). At no time, the emission levels should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit should not be restarted until the control measures are rectified to achieve the desired efficiency.

ii. 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.

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; and green belt development with suitable plantation in and around the treatment units to mitigate odour from the distillery unit.

iv. The gaseous emissions from DG set should be dispersed through adequate stack height as per CPCB guidelines. Acoustic enclosure should be provided to the DG sets to mitigate the noise pollution.

v. Total fresh water requirement from Krishna River/Almatti reservoir for distillery and sugar along with cogeneration should not exceed 500m^3/day and 1150 m3/day respectively. Prior permission for the drawl of 1650 m^3/day water should be obtained from the concerned authority.

vi. Water consumption should be reduced by adopting 3 R's (reduce, reuse and recycle) concept in the process.

vii. The spent wash from molasses based distillery should be treated in bio-methanation followed by evaporation. Concentrated spent wash should be mixed with bagasse/biomass and then burnt as fuel in boiler to achieve 'Zero' discharge. Multi-effect evaporator should be installed. The plant effluents consisting of washings, lees water and cooling water purge shall be treated in ETP.No effluent should be discharged outside the premises and 'Zero' discharge should be maintained. Spent wash should be stored in impervious pucca lagoons with proper lining with HDPE and should be kept in proper condition to prevent ground water pollution. The storage of spent wash should not exceed 5 days capacity.

viii. Adequate numbers of ground water quality monitoring stations should be set up by providing piezometers around the project area. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to KSPCB and this Ministry.

ix. Fire fighting system should be as per the norms and cover all areas where alcohol is produced, handled and stored. Provision of foam system for fire fighting should be made to control fire from the alcohol storage tank.

x. Risk Assessment should be carried to assess the fire and explosion risk due to storage of alcohol and report submitted to the Ministry and its Regional Office at Bangalore within six months.

xi. As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project

area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.

xii. Occupational health surveillance programme should be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre should be strengthened and the medical records of each employee should be maintained separately.

xiii. All the commitments made during the Public Hearing / Public Consultation meeting held on 25thMay, 2013 should be satisfactorily implemented and adequate budget provision should be made accordingly.

xiv. As proposed, an amount of Rs. 20 crores should be earmarked towards the Enterprise Social Commitment (ESC) for the initial 5 years and thereafter 2% of the retain profits spent on CSR activities based on local needs and action plan with financial and physical breakup/details 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.

16.6 Terms of Reference (TORs)

16.6.1 Manufacturing activity of Linear Alkyl Benzene Sulphonic Acid (LABSA) of M/s Visat Detergents Pvt. Ltd. at Village Zak, Taluka Dahegam, District Gandhinagar (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 along with the draft Term of References for the preparation of EIA-EMP report. All the Synthetic Organic Chemicals Manufacturing Unit located outside the notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Visat Detergents Pvt. Ltd. has proposed for addition of Linear Alkyl Benzene Sulphonic Acid (LABSA) manufacturing activity in the existing unit at block no. 32, Village Zak,TalukaDahegam, District Gandhinagar, Gujarat. Total plot area is 5463 m^2 of which greenbelt will be developed in 1800 m^2. The unit is not located in an industrial area. The cost of proposed addition is Rs. 72 lakhs.

The following products will be manufactured:

S.N.	Product	Existing (MTPM)	Additional (MTPM)	Total after proposed product addition
1	Detergent Powder (Non EC Product)	200	---	200
2	Detergent Cake (Non EC Product)	200	---	200
3	LABSA (EC Product)	--	500	500

Storage of liquid in 20-T closed unit. Steps will be taken for control of VOCs. Sulphuric Acid is used. Fresh water requirement from ground water source will be increased from 5.5 m^3/day to 9.745 m^3/day after

expansion. Domestic effluent generation will be increased from 2 m3/day to 3.65 m3/day after expansion. Industrial effluent generation as cooling tower blow down will be 900 m^3/da, which will be treated and recycled /reused in manufacturing process to achieve zero discharge. DG set (125 KVA) will be installed. Used oil will be sent to authorized recycler/re-processors. Spent sulphuric acid will be sent to authorized actual users. One-season baseline data has been collected, which the EAC agreed to.

After detailed deliberations, the Expert Appraisal Committee prescribed Generic TORs at Annexure-1 read with additional TORs at Annexure-2 for preparation of EIA-EMP report:

(i) The EAC sought compliance report of the SPCB.

16.6.2 Drug manufacturing Unit of M/s Nirmala Laboratories Pvt. Ltd. at Plot No. 25, 26A, 27 A & 28A, IDA, Phase-1, Pashamailaram, Patancheru, Medak, A.P. (TOR)

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 Term of References for the preparation of EIA-EMP. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within 10 km distance nearest critically polluted area i.e., IDA, Patancheru, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Nirmala Laboratories Pvt. Ltd. has proposed for setting up of bulk drug manufacturing Unit (45 MTPM)at Plot No. 25, 26A, 27 A & 28A, IDA, Phase-1, Pashamailaram, Patancheru, Medak, A.P. Cost of project is Rs. 911.33 Lakhs. Total plot area of the site is 153846 m^2 of which greenbelt will be developed in 4572.49 m^2. Water would be supplied by APIIC –Pashmaylaram. It is a Zero discharge unit. Organic wastes would be sent for incineration.

The following products will be manufactured:

Name of the product	CAS No's	Therapeutic Category	Quantity (in MTPM)
Amlodipine Besylate	111470-99-6	Antihypertensive	2.00
Ciprofloxacin Hydrochloride	85721-33-1	Anti-infective	20.00
Duloxetine	136434-34-9	Antidepressant	1.00
Lamotrigine	84057-84-1	Anticonvulsant	5.00
Lansoprazole	103577-45-3	Antiulcer	4.00
Levocetrizine Dihydrochloride	130018-87-0	Anti Histamine	3.00
Losartan Potassium		Antihypertensive	2.00
Pantoprazole Sodium	38786-67-1	Proton Pump Inhibitor	2.00
Terbenafine Hydrochloride	78628-80-5	Antifungal	4.00
Valsartan	137862-53-4	Antihypertensive	2.00
Total			**45.00**

Bagfilter will be provided to coal fired boiler (4 TPH) to control particulate emissions. Scrubber will be provided to control process emissions viz. HCl and SO_2. Total fresh water requirement from APIIC water supply will be 116.40 m3/day. Effluent generation will be 53.75 m^3/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. Power requirement from state electricity board will be 600 KVA. DG set (500 KVA) will be installed.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TOR read with Generic TOR at Annexure-1 and additional TORs at Annexure-2 for preparation of EIA-EMP report:
(i) Recommendation of APPCB whether the Ind. area can take the additional pollution load. P.H. is required.

16.6.3 Expansion of Drug Manufacturing unit of M/s Syn-Finechem Lab.Pvt. Ltd. at Phase III, IDA, Jeedimetla District Rangareddy, A.P (TOR)

The project authorities and their Consultant (Right source Industrial Solutions 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 References for the preparation of EIA-EMP. Located within Jeedimetla IDA (est. In 1973), which is not a CPA. However, it is 8km from Bollaram IDA which is a CPA, hence Category A unit. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within 10 km distance nearest critically polluted area ie., IDA, Patancheru, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Syn-Finechem Lab.Pvt. Ltd. has proposed for expansion of Drug Manufacturing unit at Plot No. D-151, Phase III, IDA, Jeedimetla District Rangareddy, A.P. Cost of expansion project is Rs. 4.55 crores. Total plot area of the site is 1350 m^2 of which greenbelt will be developed in 469.9 m^2. No national park, sanctuary and reserve forest is located within 10 km distance.

The following products will be manufactured:

Name of the product	CAS No's	Therapeutic Category	Quantity in Kgs /Month
Bosentan	174227-18-0	Anti hypertensive	750.00
Dapagliflozin Propanediol	960404-48-2	Anti diabetic	1000.00
Ponatinib	943319-70-8	Anti neoplastic	1500.00
Posaconazole	171228-49-2	Anti fungal	1000.00
Vildagliptin	274901-16-5	Anti diabetic	450.00
		Total	**4700.00**

Bagfilter will be provided to coal fired boiler (2 TPH) to control particulate emissions. Scrubber will be provided to control process emissions.Vent condensers will be installed to storage tank to prevent

fugitive emissions. Primary and secondary condensers with chilled water and chilled brine circulation. Total fresh water requirement from APIIC water supply will be 31.80 m3/day. Effluent generation will be 13.62 m^3/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. Unit will operate on zero-discharge -No effluent will be discharged outside the plant premises. Power requirement from state electricity board will be 250 HP. DG set (125 KVA) will be installed. Organic solid waste will be sent to cement industries. Inorganic solid waste, evaporation salts and ETP sludge will be sent to TSDF. Fly ash will be sent to brick manufacturers.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs read with Generic TOR at Annexure-1 and additional TORs at Annexure-2 for preparation of EIA-EMP report:

(i) Monitoring of VOC and NMHC in addition to other AAQ parameters (PM 10, PM 2.5. SO2 and NOx).
(ii) Recommendation of APPCB whether the Ind. area can take the additional pollution load.

16.6.4 Expansion of Drug Manufacturing unit of M/s Basr Fine Chemicals Pvt. Ltd. at Phase III, IDA, Jeedimetla District Rangareddy, A.P (TOR)

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 Term of References for the preparation of EIA-EMP. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within 10 km distance nearest critically polluted area ie., IDA, Patancheru, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Basr Fine Chemicals Pvt. Ltd. has proposed for expansion of Drug Manufacturing unit at Plot No. D-122, Phase III, IDA, Jeedimetla District Rangareddy, A.P. Cost of expansion project is Rs. 3.95 Crore. Total plot area of the site is 1512 m^2 of which greenbelt will be developed in 502.64 m^2. No national park, sanctuary and reserve forest is located within 10 km distance. The following products will be manufactured:

Name of the product	CAS No's	Therapeutic Category	Quantity in Kgs /Month
Bicalutamide	90357-06-5	Anti neoplastic	900.00
Febuxostat	144060-53-7	Anti- Gout Medication	750.00
Telmisartan	144701-48-4	Anti hypertensive	2250.00
Tianeptine Sodium	30123-17-2	Anti depressant	600.00
		Total	**4500.00**

Bagfilter will be provided to existing coal fired boiler (1 TPH) to control particulate emissions. Scrubber will be provided to control process emissions. Vent condensers will be installed to storage tank to prevent fugitive emissions. Primary and secondary condensers with chilled water and chilled brine circulation. Total fresh water requirement from APIIC water supply will be 22.60 m3/day. Effluent generation will be 8.5 m^3/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. Power requirement from state electricity board will be 250 HP. Additional DG set (100 KVA) will be installed. Organic solid waste will be sent to cement industries. Inorganic solid waste, evaporation salts and ETP sludge will be sent to TSDF. Fly ash will be sent to brick manufacturers.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs read with Generic TOR at Annexure-1 and additional TORs at Annexure-2 for preparation of EIA-EMP report:

(i) Unit should operate on Zero discharge.
(ii) Plantation to be improved.
(iii) The 8.5KLD of effluents to be incinerated in TSDF in Hybd.
(iv) Monitoring of VOC and NMHC in addition to other AAQ parameters (PM 10, PM 2.5. SO2 and NOx).
(v) Recommendation of APPCB whether the Ind. area can take the additional pollution load.

16.6.5 Pesticide Manufacturing Unit (1800 TPA) of M/s Shakti Insecticides Industries at village Ityara, District Meerut, UP (TOR)

Proposal could not be discussed as most of the members did not receive project documents i.e. form-1 and prefeasibility report. Project is deferred for the next meeting to be held in the month of March, 2014.

16.6.6 Bulk Drugs Manufacturing Unit of M/s Hatri Pharma Pvt. Ltd. at Sy. No. 1472, Village Vinjamur & Mandal Nellore, A.P. (TOR)

The project authorities and their consultant (Team Labs) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP. 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 Expert Appraisal Committee (I).

M/s Hatri Pharma Pvt. Ltd. has proposed for setting up of Drug Manufacturing unit at Sy. No. 1472, Village Vinjamur & Mandal Nellore, District SPSR Nellore, A.P. Total plot area of the site is 7.92 acres of which greenbelt will be developed in 2.6acres. No national park, sanctuary and reserve forest is located within 10 km distance. Vinjamur RF and Yerukollu Gundemadakala RF and Rajavulu Dubangunta

RF are located within 10 Km distance. Nerella Vagu and Kaveru Vagu are located within 10 km. Cost of project is Rs. 4.5 crores. The following products will be manufactured:

S.No	Name of the Product	Capacity (TPM)
1	Atorvastatin Calcuim	15
2	Brinzolomide	1.5
3	Canagliflozin	0.9
4	Capacitabine	3
5	Cefsulodine Sodium	6
6	Dabigatran	1.5
7	Dapoxetine HCl	1.2
8	Darunavir Ethanolate	15
9	Dexlansoprazole	15
10	Diacereine	1.5
11	Dorzolamide HCl	1.5
12	Dapagliflozin	0.9
13	Esomeprazole Magnesium	15
14	Irbesartan	9
15	Montelukast Na	22.5
16	Posaconazole	6
17	Quetiapine Fumerate	6
18	Residronate Na	6
19	Telmisartan	22.5
20	Vilazodone	1.5
	Phase I (Worst Case 2 Products on campaign basis)	**45**
	Phase II (Worst Case 4 Products on campaign basis)	**60**
	Total (Phase I + Phase II)	**105**

The sources of air pollution from the proposed plant are from 2TPH and 4TPH coal fired boilers in Phase I and Phase II respectively and standby DG set of capacity 500KVA and 1000KVA in Phase I and Phase II respectively. It is proposed to provide Multi-cone cyclone separators as air pollution control equipment to the boilers, while effective stacks based on CPCB formula is proposed for DG sets and boilers. Scrubber will be provided to control process emissions. Total fresh water requirement from ground water source will be 85.5 m3/day. Total effluent generation in two phases will be 52.5 m^3/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. Process organic residue, solvent residue and spent carbon will be sent to TSDF/cement industries. Process Inorganic residue, evaporation salts and ETP sludge will be sent to TSDF. Fly ash will be sent to brick manufacturers.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs read with Generic TORs at Anneuxre-1 and additional TORs at Annexure-2 for preparation of EIA-EMP report:

(i) Monitoring of VOC and NMHC in addition to other AAQ parameters (PM 10, PM 2.5. SO2 and NOx).

(ii) Zero-discharge.

16.6.7 Specialty Chemicals & Pesticide Manufacturing Plant (unit –IV) of M/s Hemani Intermediates Pvt. Ltd. at GIDC Dahej-1, TalukaVagra District Bharuch, Gujarat (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 along with the draft Term of References for the preparation of EIA-EMP. All units producing technical grade pesticides are listed at S.N. 5(b) under category 'A' and appraised at Central level.

M/s Hemani Intermediates Pvt. Ltd. has proposed for setting up of Specialty Chemicals & Pesticide Manufacturing Plant (unit –IV) at GIDC Dahej-1, TalukaVagra District Bharuch, Gujarat. The GIDC-Dahej-I was established in 1994. Total 9 units of the total 60-70 units in Dahej-I are pesticide units. Dahej –II and III were established after 2006. Total plot area is 9705 m^2 of which greenbelt area will be developed in 2400 m^2. No national parks, wildlife sanctuaries, biosphere reserves, heritage sites, tanks, reserve forests etc. are located within 10 km distance. Total cost of project is Rs. 10 crores.

The following products will be manufactured :

S.N.	Products	Quantity (in MTPM)
1	Chlorination Derivatives (e.g. MCB, DCB, ODCB, PDCB, MDCB & TCB)	3500
2	Nitration of Chlorobenzene (ONCB, PNCB & MNCB)	4000
3	Calcium Chloride	1500
4	Di-Calcium Phosphate	1500
5	2,4 DNCB	1500
6	Fungicide	
a)	Hexaconzole (T)	300
b)	Tebuconzole (T)	
c)	Propioconzole (T)	
d)	Mancozeb (T)	
7	Herbicide	
a)	Dicamba (T)	300
b)	Metribuzine (T)	
c)	Metsulfuron Methyl (T)	
d)	Pendimethalin (T)	
8	Insecticide	
a)	Transfluthrin (T)	300
b)	Cyfluthrin & Beta Isomers (T)	
c)	Bifenthrin (T)	

d)	Cypermethrin (T) & beta/Zeta/Theta Isomers (T)	
e)	Chlorphyriphos (T)	
f)	Imidacloprid (T)	
	Total	**12900**

ESP along with stack height (50 m) will be provided to coal fired boiler (20 TPH). Venture & packed scrubber will be provided to incinerator. Scrubber will be provided to control process emissions viz. HCl, Cl2 and SO2. Fresh water requirement from GIDC water supply will be 858 m^3/day. Quantity of effluent generation will be 437 m^3/day and treated in ETP consisting of primary, secondary and tertiary treatment units. Treated effluent will be disposed into deep sea through GIDC pipeline. Sludge and distillation residue will be sent to TSDF. Fly ash will be sent to brick manufacturers.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs read with Generic TOR at Annexure-1 and additional TORs at Anenxure-2 for preparation of EIA-EMP report:

(i) A clarification from GPCB whether addition of this unit would be absorbed by Dahej-I.

(ii) Toxicity Bioassay Tests also reqd. BTEX Test (VOC Test) required.

(iii) Monitoring of VOC and NMHC in addition to other AAQ parameters (PM 10, PM 2.5. SO2 and NOx).

16.6.8 New Ammonia/Urea Fertilizer Complex by Consortium of M/s Engineers India Ltd., NFL and FCI at Ramagundam Unit Tehsil Ramagundam Mandal, District Karimanagar, A.P (TOR)

The project authorities and their Consultant (EIL) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP. All the Fertilizer Plants are listed at S.N. 5(a) under Category 'A' and appraised at the Central level.

Consortium of M/s Engineers India Ltd., NFL and FCI have proposed for setting up of new Ammonia/Urea Fertilizer Complex at Ramagundam Unit Tehsil Ramagundam Mandal, District Karimanagar, A.P. The proposal consists of new ammonia and urea plant along with associated offsite and utility facilities within the premises of existing Ramagundam Fertilizer complex. Ammonia plant will be single stream having a capacity of 2200 MTPD. The plant will be designed to use NG/RLNG as feed and fuel. The urea plant will be a single stream having capacity of 3850 MTPD prilled urea. New CPP of 29.1 MW (Normal)/34.6MW (Max.) (GTG + HRSG) will be installed. Nearest ports are Krishnapatanam, Kakinada. Project is being revived as per National Urea Policy. Gas being supplied is subsidised. Project is being revised and economics of reviving the project is based on WB projections and new gas finds and their use and sensitivity analysis done on the pricing of gas (future projections). Reliance gas pipeline exists on E to W. Another pipeline is also in the anvil. EC was obtained for existing project in 1999. However, due to shut down of plant, plant and machinery sold as scrap. Except for buildings which will be refurbished, all plant machinery and equipment would be established anew. Cost of project is Rs. 4694 crores.

Urea dust emission will be less than 50 mg/Nm^3. Requirement of water to the extent of 40.8 MLD will be from River Godavari, for which approval has been obtained. Total wastewater generation is around 300 m^3/hr. Coal-ash pond to be used as a storage pond for 2 months storage capacity/rainwater harvesting. Two storage tanks of storage capcity of 15,000 m3 and 5000 m3 envisaged. Wastewater generated in ammonia and Urea plants will be treated in new ETP. Sewage will be treated in STP. Treated effluent will be utilised for greenbelt development. Spent catalyst generation will be 900 – 1300 MT in every 5-6 years. Spent catalyst /spent oil will be sold to authorized re-processors. It was clarified that retrofit of coal with gasifier may be difficult. Besides, coal would result in ash.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs in addition to generic TOR at Anenxure-1 read with additional TORs at Annexure-2 for preparation of EIA-EMP:

(i) PP to examine if a multi-fuel system could be established. In addition, Alternate fuel analysis (CBM, shale gas) should also be done.
(ii) Storage tank capacity of 2 tanks of 10000 is better than 15000 and 5000 m3.
(iii) Risk assessment-cum Disaster preparedness-cum-Management Plan to be prepared.
(iv) One season baseline data for AAQ + VOC + NH3 + NMHC.
(v) In case of use of coal and establishment of a CPP (to be independent of National Grid), a flyash management plan is required.

16.6.9 Expansion of Bulk Drugs Manufacturing Plant of M/s Oneiro Chemicals Ltd., at Village Ekalbara, Taluka Padra, District Vadidara, Gujarat (TOR)

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 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 Expert Appraisal Committee (I).

M/s Oneiro Chemicals Ltd. has proposed for expansion of Bulk Drugs Manufacturing Plant at plot no./block no. 475/P, 469/A, 469/B/1, 469/B/2, 470/1, 472/A, 472/B, 473, Village Ekalbara, Taluka Padra, District Vadodara, Gujarat. Total plot area is 18.539 m^2 + 10,629 m^2. No ecologically sensitive area, historical place, wildlife sanctuary is located within 10 km distance from the project site.

Bagfilter along with stack of adequate height will be provided to agro briquettes/FO fired boiler/thermic fluid heater. Total fresh water requirement from the ground water source will be increased from 135 m^3/day to 176 m^3/day after expansion. Industrial effluent generation will be increased from 80 m^3/day to 89 m^3/day after expansion. All tanks will have chilled water condensers. Industrial effluent and washing water will be sent to EICL (Common Effluent Treatment Plant), CETP at Padra for its further treatment and disposal. ETP sludge will be sent to TSDF. Distillation residue, spent carbon hyflo, process

waste will be sent to CHWI. Used oil /spent solvent and spent catalyst will be sent to authorised recyclers/re-processors.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs read with Generic TOR at Annexure-1 read with additional TORs at Annexure-2 for preparation of EIA-EMP:

(i) Details of Sodium Nitrate produced – proposed buyers and proposed use.
(ii) Confirmation from the CETP management of Padra whether capacity available to take additional quantity.
(iii) Compliance report of CTO required from GSPCB.

16.6.10 Expansion of Drugs & Chemicals Manufacturing Unit of M/s Phanicare Pharmaceuticals Pvt. Ltd., at Plot No. 73C/4, IDA, Anrich Industries Estate, Bollaram Jinnaram Mandal, Dist. Medak, A.P. (TOR)

Located in Bollaram Ind. Area. The proposal was not considered as ban reimposed in Bollaram Ind. Area as a CPA.

16.6.11 Expansion of Sugar Plant (from 4500 TCD to 12000 TCD), Distillery Plant (60 KLPD to 90 KLPD) and Power Plant (24 MW to 54 MW) of M/s Athani Sugars Ltd., at Vishnu Nagar, Tehsil Athani, District Belgaum, Karnataka (TOR)

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 Term of References for the preparation of EIA-EMP report. All molasses based distillery and cane juice/non-molasses based distillery (>30 KLD) are listed at S.N. 5(g) (i) (ii) under category 'A' and appraised at Central level.

M/s Athani Sugars Ltd. has proposed for expansion of Sugar Plant (from 4500 TCD to 12000 TCD), Distillery Plant (60 KLPD to 90 KLPD) and Power Plant (24 MW to 54 MW) (bagasse based) at Vishnu Nagar, Tehsil Athani, District Belgaum, Karnataka. Environmental clearance for distillery (60 KLPD) and Cogeneration Power Plant (24 MW) has been received vide MoEf's letter no. J-11011/189/2009-IA-II (I) dated 1st September, 2009. Total existing plot area is 120.5 acres. No additional land will be acquired. River Krishna is flowing at a distance of 13 Km. No ecological sensitive area is located within 10 km distance. Cost of expansion project is Rs. 161.53 crores.

Distillery will be operated for 240 days. Fresh water requirement from Krishna River during sugar cane season period will be increased from 850 m^3/day to 1298m^3/day after expansion. Fresh water requirement from Krishna River during off season period will be increased from 1367 m^3/day to 2839.4 m^3/day. Permission to use water from R. Krishna obtained. In order to reduce water requirement, air cooled condenser has been proposed. Spent wash generation will be 8 KL per KL of alcohol generation. Spent wash will be concentration in MEE followed by bio-composting. No effluent will be discharged outside the plant premises.

After deliberations, the Committee prescribed the following TORs read with Generic TOR at Annexure-1 and additional TORs at Annexure-4 for the preparation of draft EIA-EMP report:

(i) Odour Management Plan.
(ii) Spent wash lagoon of a capcity of 30 days (after evaporation + bio-methanation). Examine use of steel tanks for storage.
(iii) Monitoring Reports of RO is required.
(iv) Permission obtained to use water from River Krishna.

16.612 Manufacturing of Resin of M/s Vince Décor Pvt. Ltd., at Village Sampa Tehsil Dehgam District Gandhnagar Gujarat (TOR)

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 Term of References for the preparation of EIA-EMP report. All the Resin Units located outside the notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Vince Décor Pvt. Ltd. has proposed for Manufacturing of Resin at Village Sampa Tehsil Dehgam District Gandhnagar Gujarat. Total plot area is 2072 m^2. Cost of resin plant is Rs. 236 lakhs.

The following products will be manufactured:

S.N.	Product	Quantity
1	Phenol Formaldehyde Resin	1500 MTPM
2	Melamine Formaldehyde Resin	1000 MTPM
3	Urea Formaldehyde Resin	1500 MTPM
4	Polyvinyl Acetate	500 TPM

Bagfilter will be provided to coal/lignie/agrowaste fired steam boiler (2 x 5 MT). Water requirement from ground water source will be 63 m^3/day. Industrial effluent generation will be 10 m3/day and treated in ETP. Treated effluent will be evaporated in evaporator to achieve zero discharge. ETP sludge will be sent to TSDF. Used oil will be sent to registered recyclers. Power requirement from Uttar Gujarat Vij Company Ltd will be 600KVA. DG set (250 KVA) will be installed as a standby arrangement.

The EAC agreed to the baseline data collection for AAQ begun for Feb- April 2014.

After deliberations, the Committee prescribed the Generic TORs at Annexure-5 for the preparation of EIA-EMP report.

16.6.13 Exploratory drilling of 6 wells in PBS-1-1 Extension PML of M/s ONGC Ltd., Cauvery Offshore, Cauvery Basin (TOR)

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 Term of References for the preparation of EIA-EMP. All the projects related to offshore and onshore Oil and Gas exploration,

development and production are listed in para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at central level.

M/s ONGC Ltd. has proposed for exploratory drilling of 6 wells in PBS-1-1 Extension PML Cauvery Offshore, Cauvery Basin, Coast of Ramanthapuram District, Tamil Nadu. Approved PML area is 85.83 Km^2. The wells are at a distance of 0.75 km to 3.45km from coast. Cost of project is Rs. 240 crores. Details of locations of wells are as given below:

Location	Well Co-ordinates		Distance from Coast Line
LOC-1	$9^O22'31.50"$	$78^O58'39.37"$	2.05 Km
LOC-2	$9^O21'09.41"$	$78^O59'51.99"$	3.45 Km
LOC-3	$9^O21'01.38"$	$78^O02'32.41"$	1.83 Km
LOC-4	$9^O19'48.71"$	$78^O02'50.22"$	0.75 Km
LOC-5	$9^O18'58.67"$	$78^O03'23.02"$	1.85 Km
LOC-6	$9^O18'31.74"$	$78^O05'08.43"$	1.25 Km

Water depth varies from 2m to 7m. Depth of drilling varies from 3000 – 4000 m. Water based mud will be used. Water consumption will be 20-35 m3/day. Quantity of cutting generation will be 500 m^3 of wet drilling cuttings. DG sets will be installed to meet the power requirement. Fuel consumption will be 8-12 m^3/day.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs read with TORs given at Annexure-6 for preparation of EIA-EMP:

(i) Recommendation from CZMA is required.

16.6.14 Development Drilling of one well (BKDB)-A) of M/s ONGC Ltd., in Banaskandi PML Block of Cachar, A&AA Basin, Dist. Cachar, Assam (TOR)

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 Term of References for the preparation of EIA-EMP. All the projects related to offshore and onshore Oil and Gas exploration, development and production are listed in para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at central level.

M/s ONGC Ltd. has proposed for Development Drilling of one well (BKDB)-A) in Banaskandi PML Block of Cachar, A&AA Basin, Dist. Cachar, Assam. Cost of project is Rs. 30 Crores. Well will be connected to Banaskandi GCS. Gas production capacity of well is 25000 m^3/day. Water based mud will be used. Water consumption will be 25 m3/day. Waste water generation will be 15-20 m^3/day. Quantity of cutting generation will be 250 m^3 of wet drilling cuttings. DG sets will be installed to meet the power requirement.

After detailed deliberations, the Expert Appraisal Committee prescribed TORs as given in Annexure -3 for preparation of EIA-EMP.

16.6.15 Resin Manufacturing Unit of M/s Neptune Lamination Pvt. Ltd at Sy. No. 119/2, Veraval Padavala Road, Village Veraval, District Rajkot, Gujarat. (TOR)

MoEF vide letter no. J-11011/241/2012-IA –II dated 26th November, 20013 has issued TOR for the above mention project. Now, project proponent vide letter dated 18th December, 2013 has requested for following name change and correction in address:

S.N.	Subject	As per Old TOR	Amendment to be done
1	Name	M/s Neptune Lamination Pvt. Ltd.	M/s Neptune Laminates Pvt. Ltd.
2	Address	Sy. No. 119/2, Veraval Padavala main Road, Village: Veraval(Shapar), District Rajkot, Gujarat.	Sy. No. 119/2, Veravel Padavala main Road, Village Padavla, District Rajkot, Gujarat.

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After detailed deliberations, the Committee recommended the aforesaid amendment in TOR. In addition, the EAC also recommended P.H. for the project.

16.6.16 Bulk Drug & intermediated manufacturing unit of M/s YMS Laboratories Pvt. Ltd. at Plot No. 99-102, 105-108, Raichur Growth Center Industrial Area Village Chicksugur Tehsil Raichur District Raichur State Karnataka (TOR)

The project authorities and their Consultant (Team Labs) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP report. 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 10 km of interstate boundary, proposal is treated as category 'A' and appraised at Central Level.

M/s YMS Laboratories Pvt. Ltd. has proposed for setting up of Bulk Drug & intermediated manufacturing unit at Plot No. 99-102, 105-108, Raichur Growth Center Industrial Area Village Chicksugur Tehsil Raichur District Raichur State Karnataka. Total plot area is 2 acres of which greenbelt will be developed in 0.66 acres**.** The site is surrounded by KIADB roads in north and south, vacant industrial plots in both east and west directions. The nearest human settlement from the site is Chicksugur village, at a distance of 1km from the site in west direction. The interstate boundary of Andhra Pradesh and Karnataka is at a distance of 8.7 km in North direction. River Krishna is flowing at a distance of 7.4 km in north direction from the site. There are no national parks or sanctuaries within 15 km radius of the site. Total capital cost of the project is Rs. 2.5 crores. The following products will be manufactured:

S.No	Name of the Product	Capacity	
		Kg/day	TPM
Bulk Drugs			
1	Olanzapine	30	0.9
2	Quetiapine Fumarate	40	1.2
3	Sitagliptin	50	1.5
4	Zolmitriptan	50	1.5
	Total - I (Worst Case - 2 Products on campaign basis)	**100**	**3**
Intermediates			
1	(4-chlorophenyl)(4-hydroxy phenyl)methanone	70	2.1
2	5-Bromo indole	120	3.6
3	trans-2-(1-methylethyl)-1,3-dioxane-5-carboxylic acid	35	1.1
4	4-Amino pyridine	65	1.9
5	4-pyridine carboxaldehyde	70	2.1
6	5,6 -dimethoxy -2-(pyridine-4-yl methylene)-2,3-dihydroindene-1-one	100	3.0
7	2-(dibutylamino)-1-(2,7-dichloro- 9H-fluoren-4-yl)ethanol	75	2.3
8	methyl isonicotinate	150	4.5
9	3-hydroxy-2,3,4,9-tetrahydro-1H-carbazole-6-carbonitrile	150	4.5
10	Sodium Benzoate	100	3.0
11	1,7-dimethyl-2-propyl-1H,3H-2,5-bibenzo[d]imidazole	250	7.5
	Total - II (Worst Case - 3 Products on campaign basis)	**400**	**12**
	Grand Total (I+II)	**500**	**15**

List of Utilities

S.No	Utility	Proposed
1	Coal Fired Boiler	3 TPH
2	DG Sets*	320 KVA & 500 KVA

** DG Sets shall be used during load shutdown period only.*

The sources of air pollution from the proposed plant are from 3TPH coal fired boiler and stand by DG sets of capacity 320 KVA and 500KVA. It is proposed to provide Multi-cone cyclone separators as air pollution control equipment to the boilers, while effective stacks based on CPCB formula are provided for DG sets and boilers. The total water requirement will be 40.9 m3/day of which 28.9 m3/day will be sourced from ground water source/KIADB and remaining will be used from treated/recycled water. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. Process organic residue, solvent residue and spent carbon will be sent to TSDF/cement industries. Process Inorganic residue, evaporation salts and ETP sludge will be sent to TSDF. Fly ash will be sent to brick manufacturers.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TOR read with Generic TORs at Annexure-1 and additional TORs at Anenxure-2 along with conduct of P.H. for preparation of EIA-EMP report:

(i) Recommendation of SPCB is required whether the IDA can absorb the expansion in terms of pollution load.

16.6.17 Bulk Drug unit of M/s SMS Pharmaceuticals Ltd. (Unit-1)at Village Kazipally Tehsil Jinnaram (Mandal), District Medak District A.P (TOR)

The project authorities and their Consultant (Team Labs) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP. 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 Expert Appraisal Committee (I).

M/s SMS Pharmaceuticals Ltd. (Unit-1) has proposed for setting up of Drug Manufacturing unit at Sy. No. 180/2, IDA, Village Kazipally Tehsil Jinnaram (Mandal), District Medak District A.P. Environmental clearance for the existing unit was obtained vide MoEF's letter no J-11011/152/2005-IA-II (I) dated 07.07.2005. Cost of project is Rs. 30 Crore. Total plot area of the site is 11.98 acres of which greenbelt will be developed in 3.95 acres. No national park and sanctuary is located within 10 km distance. Kistaipalli RF (0.4 km in west direction), Kazipalli RF (0.5 km in southwest direction), Dundigal RF (0.6 km in east direction) and Wailalpur RF (1.7 km in northwest directions) respectively are located within 10 km distance. No ecologically sensitive areas like national parks, and sanctuaries are located within 10 km radius of the site. The site is located at a distance of 4 Km from the critically polluted area of Patancheru and Bollaram Industrial estates. The following products will be manufactured:

S.No	Name of the Product	Capacity (Kg/day)	
		Permitted	After Expansion
1	Ranitidine HCl	4000	10000
2	Cystofur (Int. of Ranitidine HCl)	---	6666.7
3	NMSM (Int. of Ranitidine HCl)	---	3333.3
4	Sildenafil Citrate	166.7	500
5	Lopinavir Intermidiate	133.3	333.3
6	Acyclovir	100	100
7	Pantoprazole Sodium	66.7	166.7
8	Sumatriptan Intermidiate II	66.7	66.7
9	Olanzapine	40	40
10	Famotidine	33.3	500
11	Losartan Potasium	33.3	33.3
12	Sumatriptan Intermidiate VI	33.3	33.3
13	Lansoprazole	16.7	16.7
14	Imatinibintermidiate	16.7	16.7

15	Imatinib Intermidiate	16.7	16.7
16	Gemicitabine HCl Inetrmidiate	6.7	6.7
17	Olanzapine	6.7	6.7
18	Ezitimibe Intermidiate	6.7	6.7
19	Perindopril Intermidiate	6.7	6.7
20	Aripiprazole	3.3	6.7
21	Rizatriptan Intermidiate	3.3	3.3
22	Almotriptan Intermidiate	3.3	3.3
23	Eletriptan Intermidiate	3.3	6.7
24	Zolmitriptan Intermiudiate	3.3	3.3
25	Capecetabine Intermiduate	3.3	3.3
26	Erlotinib Intermidiate	3.3	3.3
27	Ramipri Iintermidiate	3.3	3.3
28	Imdapri Iintermidiate	3.3	6.7
29	Perindopril Intermidiate	3.3	3.3
30	Esomeprazole Magnesium	2.7	2.7
	Total	**4486**	**21896**

List of Utilities

S.No	Utility	Permitted	Proposed
1	Coal Fired Boiler	8TPH; 3TPH* 2 x 2TPH#	8 TPH
3	DG Sets**	3x 320 KVA## 62.5 KVA	3 x 750 KVA

 # shall be removed

**Boiler shall be kept as standby*

*** DG set will be used during load shut down.*

 # one no. of 320 KVA DG set shall be removed

The sources of air pollution from the proposed expansion are 8TPH coal fired Boiler, and 3 x 750 KVA DG sets. The sources of air pollution from the existing plant site are 8TPH, 3TPH, 2 x 2TPH coal fired boilers and DG set of 3 x 320 and 62.5 KVA capacity. Bag Filter as air pollution control equipment to the boilers, while effective stacks based on CPCB formula is proposed for DG sets and boilers. Scrubber will be provided to control process emissions. Total fresh water requirement from APIIC water supply will be increased from 173.43 m^3/day to 249.4 m^3/day after expansion. Total effluent generation will be increased from 69.78 m^3/day to 147.99 m3/day after expansion. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. Process organic residue, solvent residue and spent carbon will be sent to TSDF/cement industries. Process Inorganic residue, evaporation salts and ETP sludge will be sent to TSDF. Fly ash will be sent to brick manufacturers.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TOR read with Generic TORs at Annexure-1 and additional TORs at Anenxure-2 for preparation of EIA-EMP report:

(i) Recommendation of APPCB is required whether the IDA can absorb the expansion in terms of pollution load.

16.6.17 Bulk Drug unit of M/s SMS Pharmaceuticals Ltd. at Village Kazipally Tehsil Jinnaram (Mandal), District Medak District A.P (TOR)

The project authorities and their Consultant (Team Labs) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP. 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 Expert Appraisal Committee (I).

M/s SMS Pharmaceuticals Ltd. (Unit-1) has proposed for setting up of Drug Manufacturing unit at Sy. No. 180/2, IDA, Village Kazipally Tehsil Jinnaram (Mandal), District Medak District A.P. Environmental clearance for the existing unit was obtained vide MoEF's letter no J-11011/152/2005-IA-II (I) dated 07.07.2005. The site is located at a distance of 4 Km from the critically polluted area of Patancheru and Bollaram Industrial estates. The Ind. Estate was established in 1996. Total plot area of the site is 11.98 acres of which greenbelt will be developed in 3.95 acres. No national park and sanctuary is located within 10 km distance. Kistaipalli RF (0.4 km in west direction), Kazipalli RF (0.5 km in southwest direction), Dundigal RF (0.6 km in east direction) and Wailalpur RF (1.7 km in northwest directions) respectively are located within 10 km distance. No ecologically sensitive areas like national parks, and sanctuaries are located within 10 km radius of the site. Cost of project is Rs. 30 crores.

The following products will be manufactured:

S.No	Name of the Product	Capacity (Kg/day)	
		Permitted	After Expansion
1	Ranitidine HCl	4000	10000
2	Cystofur (Int. of Ranitidine HCl)	---	6666.7
3	NMSM (Int. of Ranitidine HCl)	---	3333.3
4	Sildenafil Citrate	166.7	500
5	Lopinavir Intermidiate	133.3	333.3
6	Acyclovir	100	100
7	Pantoprazole Sodium	66.7	166.7
8	Sumatriptan Intermidiate II	66.7	66.7
9	Olanzapine	40	40
10	Famotidine	33.3	500
11	Losartan Potasium	33.3	33.3
12	Sumatriptan Intermidiate VI	33.3	33.3
13	Lansoprazole	16.7	16.7
14	Imatinibintermidiate	16.7	16.7
15	Imatinib Intermidiate	16.7	16.7
16	Gemicitabine HCl Inetrmidiate	6.7	6.7

17	Olanzapine	6.7	6.7
18	Ezitimibe Intermidiate	6.7	6.7
19	Perindopril Intermidiate	6.7	6.7
20	Aripiprazole	3.3	6.7
21	Rizatriptan Intermidiate	3.3	3.3
22	Almotriptan Intermidiate	3.3	3.3
23	Eletriptan Intermidiate	3.3	6.7
24	Zolmitriptan Intermiudiate	3.3	3.3
25	Capecetabine Intermiduate	3.3	3.3
26	Erlotinib Intermidiate	3.3	3.3
27	Ramipri Iintermidiate	3.3	3.3
28	Imdapri Iintermidiate	3.3	6.7
29	Perindopril Intermidiate	3.3	3.3
30	Esomeprazole Magnesium	2.7	2.7
	Total	**4486**	**21896**

List of Utilities

S.No	Utility	Permitted	Proposed
1	Coal Fired Boiler	8TPH; 3TPH* 2 x 2TPH#	8 TPH
3	DG Sets**	3x 320 KVA## 62.5 KVA	3 x 750 KVA

 # shall be removed

**Boiler shall be kept as standby*

*** DG set will be used during load shut down.*

 # one no. of 320 KVA DG set shall be removed

The sources of air pollution from the proposed expansion are 8TPH coal fired Boiler, and 3 x 750 KVA DG sets. The sources of air pollution from the existing plant site are 8TPH, 3TPH , 2 x 2TPH coal fired boilers and DG set of 3 x 320 and 62.5 KVA capacity. Bag Filter as air pollution control equipment to the boilers, while effective stacks based on CPCB formula is proposed for DG sets and boilers. Scrubber will be provided to control process emissions. Total fresh water requirement from APIIC water supply will be increased from 173.43 m^3/day to 249.4 m^3/day after expansion. Total effluent generation will be increased from 69.78 m^3/day to 147.99 m3/day after expansion. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. Process organic residue, solvent residue and spent carbon will be sent to TSDF/cement industries. Process Inorganic residue, evaporation salts and ETP sludge will be sent to TSDF. Fly ash will be sent to brick manufacturers.

After detailed deliberations, the Expert Appraisal Committee decided that P.H. is required for the project. The EAC prescribed the following TOR read with Generic TORs given at Annexure-1 and additional TORs at Annexure-2 for preparation of EIA-EMP report:

(i) Recommendation of APPCB is required whether the IDA can absorb the expansion in terms of pollution load.

16.6.18 Bulk Drug & intermediated manufacturing unit of M/s Enal Drugs Pvt. Ltd. at Village Phase-I, IDA, Jeedimetla Tehsil Qutubullapur Mandal District Rangareddy State Andhra Pradesh (TOR)

The project authorities and their Consultant (Team Labs) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP report. 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 10 km of interstate boundary, proposal is treated as category 'A' and appraised at Central Level.

M/s Enal Drugs Pvt. Ltd. has proposed for expansion of Bulk Drug & intermediated manufacturing unit at Village Phase- I, IDA, Jeedimetla, which is an old industrial estate located in Tehsil Qutubullapur Mandal District Rangareddy, Andhra Pradesh. Environmental clearance for the existing unit was obtained vide MoEF's letter no J-11011/80/2004-IA-II (I) dated 21.06.2005. Cost of project is Rs. 3 crores. Total plot area of the site is 0.7 acres of which greenbelt will be developed in 0.23 acre. No national park and sanctuary is located within 10 km distance. Dulapalle Reserve Forest (1.5 km), Gajularamaram RF (3.5 KmNW), Borampet RF (6.8 Km, NW), Suraram RF (6.2 Km, NW) and Pochampalli RF (7.5 Km) respectively are located within 10 km distance. The site is located at a distance of 9.6 Km from the critically polluted area of Patancheru and Bollaram Industrial estates. Following products will be manufactured:

Manufacturing Capacity

S.No	Name of the Product	Capacity (TPM)	
		Permitted*	After Expansion**
1	Omeprazole	0.05	1
2	Cypro Carbinol	0.1	--
3	Lansoprazole	--	2
4	Rabeprazole Sodium	--	1
5	Esomeprazole Magnesium	--	1
6	Betahistine Di Hydrchloride	--	0.5
7	Risedronate Sodium	--	0.5
	Total	**0.15**	**6**

List of Utilities

S.No	Utility	Permitted	Proposed
1	Coal Fired Boiler	---	3 TPH
2	Furnace Oil Fired Boiler	0.6 TPH	---
3	DG Set*	---	500 KVA & 125 KVA

** DG set will be used during load shut down.*

The sources of air pollution from the proposed expansion are 3TPH coal fired Boiler, and 500 KVA DG set and 125 KVA DG set. Bag Filter as air pollution control equipment to the boilers, while effective stacks based on CPCB formula is proposed for DG sets and boilers. Scrubber will be provided to control process emissions. Total fresh water requirement from APIIC water supply will be increased from 2 m^3/day to 35.03 m^3/day after expansion. Total effluent generation after expansion will be 28.08 m3/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. Process organic residue, solvent residue and spent carbon will be sent to TSDF/cement industries. Process Inorganic residue, evaporation salts and ETP sludge will be sent to TSDF. Fly ash will be sent to brick manufacturers.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs read with Generic TORs at Anenxure-1 read with additional TORs at Annexure-2 for preparation of EIA-EMP report:

(i) Recommendation of APPCB is required whether the IDA can absorb the expansion in terms of pollution load.

16.6.19 Expansion of Refinery from 9 MMTPA to 11.25 MMTPA of M/s HPCL-Mittal Energy Ltd. at village PhuloKheri, Tehsil TalwandiSaboo, District Bathinda, Punjab (TOR)

The project authorities and their Consultant (Cholamandlam) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP report. All the Petroleum Refinery Plants are listed at S.N. 4(a) under Category 'A' and appraised at the Central level.

M/s HPCL-Mittal Energy Ltd. has proposed for augmentation from 9 MMTPA to 11.25 MMTPA by debottlenecking. Environmental clearance was obtained vide MoEF letter no. J-11011/24/98-IA II (I) dated 6th November, 1998 for establishing grass root refinery. Subsequently environmental clearance was amended with MoEF's letter no. J-11011/275/2007-IA II (I) dated 16th July 2007 for modified refinery configuration and to process 9 MMTPA of crude. The 9 MTPA capacity existing unit is fully operational since April 2013. No additional land will be acquired. Sulphur dioxide emissions from process heaters and captive power plant will be reduced due to increase use of fuel gas instead of fuel oil. Augmentation of sulphur recovery unit is proposed. It is a zero-residue refinery. The Plant ahs covered yards and silos. Flyash is sold to Gujarat Ambuja and Jaypee Cement Plants. The refinery is land locked as crude is obtained from Mundra Port at a distance of 1117 km and all products from the refinery are transported to Mumbai. About Rs. 80 crores has been allocated for implementing various pollution control systems and environmental management programs under de-bottlenecking scheme.
The following are the existing and proposed products:

S.N.	Products	Existing Configuration @ 9 MMTPA	Proposed Configuration @ 11.25 MMTPA
1	LPG (TMTPA)	737	873
2	Naptha (TMTPA)	396	297.3

3	Gasoline (TMTPA)	Euro IV Reg 750 Euro IV PRE 250	EURO III REG 1161.7 Euro IV Reg 1161.7 Euro III PRE 50 EURO IV PRE 25
4	ATF (TMTPA)	500	500
5	Kerosene (TMTPA)	200	200
6	Diesel (TMTPA)	3692 (Euro IV)	Euro III 3715 Euro IV 1100
7	Sulphur (TMTPA)	198	207.3
8	Coke (TMTA)	904	950.7
9	Hexane (TMTPA)	5	5
10	Motor Turpentine oil (TMTPA)	25	25
11	Polypropylene (TMTPA)	358	514.3
12	Bitumen (TMTPA)	--	500

2 x 300 TPH CFBC steam generators will be installed to effectively utilize refinery by-product (pet coke as base fuel). The existing 4 x 240 TPH oil fired boilers will remain as standby. Imported coal (Indonesian coal) will be used as standby fuel in the proposed 2 x 300 TPH CFBC steam generators. Boiler limestone injection system will be adopted to capture more 90 % of sulphur in the pet coke fired steam generator. Sulphur recovery unit will be augmented. Total SO_2 emission from plant will be increased from 10.8 TPD to 23.6 TPD. Low NOx burner will be installed in all furnaces and boilers. Stack height will be provided. LDAR programs will be undertaken for monitoring fugitive emissions. Water requirement will be increased from 1800 m3/hr. to 2420 m3/hr after expansion. Effluent generation will be 360 m3/hr to 400 m3/hr after expansion and treated in ETP. Existing treated effluent is utilised for greenbelt. However, Committee insisted for recycle/reuse treated effluent for cooling tower make up.

The Committee decided that the proposal is covered under Clause 7 (ii) of the EIA Notification 2006 and is not an amendment to EC. After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs read with TORs given at Annexure -6 for preparation of EIA-EMP:

(i) Addition of lime to PET coke to reduce the Sulphur content.

16.6.20 Expansion of Project of M/s Emmennar Pharma Pvt. Ltd. at Sy. No- 10, IDA Gaddapotharam Jinnaram (Mandal), Medak District A.P (TOR)

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 Term of References for the preparation of EIA-EMP. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within 10 km distance nearest critically polluted area i.e., IDA, Patancheru, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Emmennar Pharma Pvt. Ltd. has proposed for expansion of Bulk Drug Intermediates Manufacturing Unit at Sy. No- 10, IDA Gaddapotharam Jinnaram (Mandal), Medak District A.P. Plot area is 8.5 acres of which greenbelt will be developed in 3.5 acres. Cost of project is Rs. 15 crore. Dundigal reserve forest and other 19 reserve forests are located within 10 km distance. Following is the existing and proposed products:

S.N.	Products	Quantity (Kgs/day)
1	Sucralose	50
2	L-Ectoine	50
	Total	100
Proposed		
1	Ciprofloxacine Hydrochloride	60
2	Tramadol Hydrochloride	90
3	Methyl Isothiocyanate	195.6
4	2-Nitro-1 (Methylamino)-1- (Methylthio) Ethane (NMSM)	90
5	Diethyl-D- Tartarate	33.75
6	Diethy-1,3-Acetone Dicarboxylic acid	27.3
7	R & D activity	0.15
	Total	496.8
	By-products	
1	Sulphur	108.0
2	60% Sulphuric Acid	493.5

Bagfilter will be provided to coal fired boiler (10 TPH). Fresh water requirement from ground water source will be increased from 16.7 m3/day to 194 m3/day after expansion. Effluent generation will be increased from 4.7 m3/day to 94.4 m3/day after expansion. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. DG set (1 x 750 KVA) will be installed. ETP sludge will be sent to cement industry. MEE salts and inorganic salt will be sent to TSDF. Spent paraffin and used oil will be sent to authorised recyclers. Fly ash will be sold to brick manufacturers.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs read with Generic TORs at Anenxure-1 read with Additional TORs at Anenxure-2 for preparation of EIA-EMP report:

(i) Recommendation of APPCB is required whether the IDA can absorb the expansion in terms of pollution load.

16.6.21 Bulk Drug & intermediated manufacturing unit of M/s Lee Pharma Limited at Village Gaddapotharam Tehsil Jinnaram (Mandal), District Medak District A.P (TOR)

The project authorities and their Consultant (KKB Enviro) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within 10 km distance nearest critically polluted area i.e., IDA, Patancheru, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Lee Pharma Limited has proposed for expansion of Bulk Drug & intermediated manufacturing unit at Village Gaddapotharam Tehsil Jinnaram (Mandal), District Medak District A.P. It was informed that Gaddapotharam IDA is exiting since 1996. Ban ahs been recently lifted. Plot area will be increased from 2.31 to 2.17 ha. The cost of expansion project is Rs. 43.7 crores. No wildlife sanctuaries/national parks are located within 10 Km. Water bodies namely, Gaddapotharam tank (0.6 Km), Bachupally pond (3.1 Km), Wailal pond (4 Km), Jangapet pond (5.9 Km) and Dundigal pond (3.4 Km) are located within 10 km. Reserve forest namely wailal RF, Jinnaram RF, Dundigal RF and Kazipalli RF are located within 10 Km. Ex-post facto Environmental clearance was granted vide MoEF letter no J-11011/163/2005 dated 11.08.2005. Subsequently, they obtained consent to operate. APPCB lifted ban vide GO Ms No. 64 dated 25/07/2013, originally imposed in 1997 and allowed the existing industries to apply for expansion. Subsequently on 17.09.2013 MoEF has re-imposed moratorium in Critically Polluted Area in IDA Patancheru-IDA Bollaram in the form of CEPI. Proposed project is located 13 Km from IDA Patancheru and 5 Km from IDA Bollaram. Following products will be manufactured:

Sl. No.	Product Name	Quantity (TPA)	Sl. No.	Product Name	Quantity (TPA)
Proposed Bulk Drugs on campaign basis (12 products at a time)					
1	Omeprazole	48	17	BalofloxacinDihydrate	3.6
2	Itraconazole	24	18	Duloxetine Hydrochloride	12
3	Lansoprazole	36	19	Rosuvastatin Calcium	24
4	Olanzapine	6	20	Prasugrel Hydrochloride	6
5	Sertraline Hydrochloride	24	21	Carvedilol	24
6	Pantoprazole Sodium	60	22	Trospium Chloride	0.6
7	Rabeprazole Sodium	24	23	Saxagliptin Hydrochloride	0.6
8	Esomeprazole Magnesium Trihydrate	48	24	Dronedarone Hydrochloride	12
9	Clopidogrel Hydrogen Bisulfate	36	25	Tapentadol Hydrochloride	12
10	Moxifloxacin Hydrochloride Monohydrate	24	26	Atorvastatin Calcium Trihydrate	60
11	Tamsulosin Hydrochloride	0.6	27	Cilnidipine	3.6
12	Venlafaxine Hydrochloride	12	28	Dapoxetine Hydrochloride	12
13	Voriconazole	6	29	Escitalopram Oxalate	12

14	Fesoterodine Fumarate	0.24	30	Ezogabine	12
15	Raltegravir	6	31	Ilaprazole	12
16	Amlodipine Besylate	36	32	LevocetirizineDihydrochloride	6
33	Linagliptin	0.6	49	Nicardipine Hydrochloride	2.4
34	Lornoxicam	24	50	Pitvastatin Calcium	1.2
35	Olmesartan Medoxomil	24	51	Varenicline	2.4
36	Pregabalin	48	52	Sitagliptin Phosphate	6.0
37	Prulifloxacin	24	53	Eletriptan	2.4
38	Tioconazole	6	54	Etoricoxib	24
39	Levetiracetam	12	55	Lacosamide	1.2
40	Lurasidone	3	56	Aliskiren	0.6
41	Azilsartan Medoxomil Potassium	12	57	Telmisartan	12
42	Linezolid	24	58	Valsartan	24
43	Dabigatran Etexilate Mesylate	2.4	59	Vildagliptin	6
44	Montelukast Sodium	2.4	60	Silodosin	2.4
45	Aripiprazole	6	61	Residronate Sodium Hemipentahydrate	0.6
46	Ibandronate Sodium Monohydrate	1.2	62	Quetiapine Fumarate	36
47	Asenapine Maleate	1.2	63	Fexofenadine Hydrochloride	36
48	Vardenafil	1.2	64	Candesartan	24
			65	Alogliptin	2.4
Maximum Tonnage 492 TPA (12 Products at a time)					

Total water requirement will be increased from 39.5 m3/day to 270 m3/day after expansion. Out of which fresh water requirement from ground water source and tanker supply will be 125 m^3/day. Effluent generation will be increased from 6.2 m3/day to 148 m3/day after expansion. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. Process residues will be sent to TSDF, Dundigal/cement plants for co-incineration in rotary kilns. ATFD salts, ETP sludge /cooling tower sludge will be sent to TSDF, Dundigal for secured landfill. Fly ash will be sent to brick manufacturers.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs read with Generic TOR at Annexure-1 and Additional TORs at Annexure-2 for preparation of EIA-EMP report:

(i) Recommendation of APPCB is required whether the IDA can absorb the expansion in terms of pollution load.

16.6.22 Proposed expansion Bulk Drug & intermediated manufacturing unit of M/s Benova Labs Private Limited at Village Gaddapotharam Tehsil Jinnaram (Mandal), District Medak District A.P. (TOR)

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 Term of References for the preparation of EIA-EMP. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within 10 km distance nearest critically polluted area i.e., IDA, Patancheru, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Benova Labs Private Limited has proposed for expansion of Bulk Drug & Intermediates manufacturing unit at Village Gaddapotharam, Tehsil Jinnaram (Mandal), District Medak District A.P. Gaddapotharam IDA exists since 1996. Unit established in 2002, however manufacture of drugs intermediate did not require an EC as the project was below Rs 100 crores. In 2012- the name was changed. Ban was lifted in 2013. Plot area is 4047 m^2 of which greenbelt will be developed in 1500 m^2. The cost of project is Rs. 1.85 crores. There are 19 reserve forests are located within 10 km distance. Water body namely, rainfed water tank is situated at 1.19 km. The following products will be manufactured:

S.N.	Product	Quantity (TPM)
1	Ketorolac Tromethamine	0.2
2	Linezolid	0.8
3	Telmisarten	1.0
4	Triethylamine hydrochloride (TEA HCl)	10.0
5	2 [4[4-(Methyl-6-(1-Methyl-1H-1,3-Benaodiazo-1-yl) Methyl]phenyl] benzoic acid methyl ester	0.9
6	N,N-Dimethyl-3-(naphthalene-1-yloxy)-1-phenylpropane-1-Amine,HCl	1.1
7	N-[(2'CyanoBiphenyl-40yl) Methyl)-N-Valeryl-(L)-Valine Methyl Ester	1.0
8	(S,S)-2,8-Diazabicyclo [4,3,0] Nonane	1.5
9	(2-Benzyl Acryloyl amino) Acetic Acid Benzyl ester	1.0
10	((S)-N-(1-amino-1-oxo butan – 2-yl) 4- Chloro butanamide	1.1
11	2,6-Dihydroxyl Acetophenone	1.4
Total		20.0
By-products		
Aluminium Hydroxide		9.53

Additional coal fired boiler (2.0 TPH) will be installed. Cyclone followed by bagfilteralong with adequate stack height Additional DG set (1 x 250 KVA) will be installed. Scrubber will be provided to control process emissions. Water requirement from tanker supply will be increased from 2.914 m3/day to 50.1 m3/day after expansion. Effluent generation will be increased from 0.9 to 24 m3/day after expansion. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent

streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. MEE salts, inorganic salts and ETP sludge will be sent to TSDF. Fly ash will be sent to brick manufacturers. Waste oil and spent aluminium chloride will be sent to authorised recycler/re-processors. Fly ash will be sent to brick manufacturers.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TOR read with Generic TORs at Annexure-1 and Additional TORs with Annexure-2 for preparation of EIA-EMP report:

(i) Recommendation of APPCB is required on whether the IDA can absorb the expansion in terms of pollution load.

16.6.23 Drug & intermediated manufacturing unit of M/s. Usha Vital Care Pvt Ltd. at Plot Nos. 189 & 190, Phase-II, IDA, Pashamylaram, Medak District Andhra Pradesh (TOR)

The project authorities and their Consultant (Rightsource) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within 10 km distance nearest critically polluted area i.e., IDA, Patancheru, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s. Usha Vital Care Pvt Ltd. has proposed for expansion of Drug & intermediated manufacturing unit at Plot Nos. 189 & 190, Phase-II, IDA, Pashamylaram, Medak District Andhra Pradesh. Total plot area of the site is 4530 m^2 of which greenbelt will be developed in 1500 m^2. No national park, sanctuary and reserve forest is located within 10 km distance. Cost of expansion project is Rs. 10 crores. Following products will be manufactured:

Name of the product	CAS No's	Therapeutic Category	Quantity in MT /Month
Amlodipine Besylate	111470-99-6	Antihypertensive	1.00
Ciprofloxacin Hydrochloride	86483-48-9	Antibiotic	2.00
Diltiazem Hydrochloride	33286-22-5	Antianginal	7.00
Levocetrizine Dihydrochloride	130018-87-0	Anti-allergic	2.00
Losartan Potassium	124750-99-8	Antihypertensive	2.00
Rosuvastatin Calcium	147098-20-2	Antilipemic	2.00
Sildenafil Citrate	171599-83-0	Anti-erectile dysfunction agent	3.00
Telmisartan	144701-48-4	Antihypertensive	1.00
Valsartan	137862-53-4	Antihypertensive	2.00
		Total	**22.00**

Bagfilter will be provided to proposed coal fired boiler (3 TPH) to control particulate emissions. Scrubber will be provided to control process emissions. Vent condensers will be installed to storage tank to prevent fugitive emissions. Primary and secondary condensers with chilled water and chilled brine circulation. Total fresh water requirement from APIIC water supply will be increased from 6.02 m3/day to 79.97 m3/day after expansion. Effluent generation will be 29.8 m^3/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. Power requirement from state electricity board will be 800 KVA. Additional DG set (2x 320 KVA) will be installed. Organic solid waste will be sent to cement industries. Inorganic solid waste, evaporation salts and ETP sludge will be sent to TSDF. Fly ash will be sent to brick manufacturers.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TOR read with Generic TORs at Anneuxre-1 and Additional TORs at Annexure-2 for preparation of EIA-EMP report:

(i) Recommendation of APPCB is required on whether the IDA can absorb the expn. in terms of pollution load.

16.6.24 New Proposal for Development of Raniganj CBM Block of M/s ONGC Ltd. at District Bardwan State West Bengal (TOR)

The above mentioned project was already considered in the 14th EAC meeting held during 19th TO 20th December, 2013 at item no. 14.5.26.

16.6.25 Drug & intermediate manufacturing unit of M/s Chemcube Pharma Pvt. Ltd. at S.No.233/E, Akyaipally Village, Amangal Mandal, Mahaboobnagar District A.P. (TOR)

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 Term of References for the preparation of EIA-EMP. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within 10 km distance nearest critically polluted area i.e., IDA, Patancheru, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Chemcube Pharma Pvt. Ltd. has proposed for setting up of Drug & intermediate manufacturing unit at S.No. 233/E, Akyaipally Village, Amangal Mandal, Mahaboobnagar District A.P. Cost of project is Rs. 10.4 Crore. Total plot area of the site is 20315.06 m^2 of which greenbelt will be developed in 6720 m^2. No national park, sanctuary and reserve forest is located within 10 km distance. Following products will be manufactured:

Name of the product	CAS No's	Therapeutic Category	Quantity in MT /Month
Amlodipine Besylate	111470-99-6	Antihypertensive	1.00
Ciprofloxacin Hydrochloride	85721-33-1	Anti-infective	2.00
Diltiazem Hydrochloride	33286-22-5	Anti anginal	3.50
Levocetrizine Dihydrochloride	130018-87-0	Anti Histamine	2.00
Losartan Potassium	124750-99-8	Antihypertensive	2.00
Naproxen	22204-53-1	Analgesic	1.50
Rosuvastatin Calcium	147098-20-2	Anti lipemic	1.00
Telmisartan	144701-48-4	Antihypertensive	2.00
		Total	**15.00**

Bagfilter will be provided to proposed coal fired boiler to control particulate emissions. Scrubber will be provided to control process emissions. Vent condensers will be installed to storage tank to prevent fugitive emissions. Primary and secondary condensers with chilled water and chilled brine circulation. Total fresh water requirement from ground water source will be 71.41 m^3/day. Effluent generation will be 30.34 m^3/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. Power requirement from state electricity board will be 500 KVA. Additional DG set (250 KVA + 150 KVA) will be installed. Organic solid waste will be sent to cement industries. Inorganic solid waste, evaporation salts and ETP sludge will be sent to TSDF. Fly ash will be sent to brick manufacturers.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TOR read with Generic TORs at Annexure-1 and Additional TORs at Annexure-2 for preparation of EIA-EMP report:

(i) Recommendation of APPCB is reqd. whether the IDA can absorb the expn. in terms of pollution load.

16.6.26 Expansion of synthetic organics of M/s Meghmani Finechem Ltd at Plot No.CH-1/CH- 2, GIDC Estate, Dahej, Taluka Vagra,a District Bharuch, Gujarat (TOR)

The project authorities and their consultant (M/s Team Labs and Consultants) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP. All units producing technical grade pesticides are listed at S.N. 5(b) under category 'A' and appraised at Central level.

M/s Meghmani Finechem Ltd has proposed for expansion of synthetic organics at Plot No.CH-1/CH-2, GIDC Estate, Dahej, Taluka Vagra, District Bharuch, Gujarat. Existing unit was taken in 2006 and is engaged in manufacturing of caustic soda and related products. Now, they are proposing to add agro/chemical intermediates /CPVC. Total plot area is 533470 m^2. EC has been obtained for the existing

Caustic Soda Plant and PP (65 MW). The cost of project is Rs. 400 crores. Following products will be manufactured:

S.N.	Product	Existing	Additional	Total after expansion
1	Di chloro Benzene (Ortho/Meta/Para)	Nil	6000	6000
2	Tri-chloro benzene (1,2,4/1,2,3)	Nil	1200	1200
3	3,4-Xylidine /2,6-Xylidine	Nil	120	120
4	Meta Phenoxy Benzaldehyde Alcohol	200	Nil	200
5	Captive Power Plant	65 MW	Nil	65 MW
6	Chloro Benzene and /OR Mono Chloro Acetic Acid and OR Tri chloro Acetyl Chloride	Nil	6000	6000
7	Epichlorohydrin	Nil	2500	2500
8	Epoxy Resins	Nil	2500	2500
9	Poly Aluminium chloride	Nil	2500	2500
10	Chlorinated PVC	Nil	2100	2100
11	Caustic soda	16800	16800	33600
12	Chlorine Gas	14885	14885	29770
13	Hydrogen Gas	420	420	840
14	Diluted Sulphuric Acid	653	653	1306
15	Diluted Sulphuric Acid	386	386	772
16	Hydrochloric Acid	7583	7583	15166
17	Sodium Hypochlorite	1458	1458	2916
By-products				
18	HCl (30 %)	Nil	18876	18876
19	Hypo Sodium Hypo Chlorite	Nil	4301	4301
20	Di-Chloro Acetic Acid /Mother Liquor (ML)	Nil	743	743
21	Low grade CPVC and PVC resin powder	Nil	25	25

ESP along with adequate stack height will be provided to coal fired boiler (530 TPD). Scrubbers have been provided to control process emissions viz. HCl and Cl_2. Bagfilter will be provided to Molten Salt heater (Flaker plant). Scrubbers have been provided to control process emissions viz. HCl and Cl_2. Fresh water requirement from GIDC water supply through Narmada Canal will be increased from 11849 m^3/day to 15470 m^3/day after expansion. Effluent generation will be increased from 4739 m^3/day to 6742 m^3/day after expansion. Effluent from the existing caustic /chlor- alkali unit & power plant will be treated in our existing ETP-1. Effluent from proposed caustic expansion + CVC + domestic will be treated in proposed ETP-2. Effluent from the proposed other new products 523 KLD will be treated in proposed ETP-3. The treated effluent from all ETPs (ETP-1 + ETP-2 + ETP-3) will be collected in a final holding tank

and finally will be discharged into GIDC drainage system. Brine sludge and ETP sludge will be sent to TSDF. Process waste/residue will be sent to common hazardous incineration facility (CHWIF). Fly ash will be sent to brick manufacturers, cement industries and dump off at low lying areas. It was noted that environmental clearance for the existing expansion project was grated vide MoEF's letter no J-11011/259/2011-IA II (I) dated 12.09.2012. EC for chlor alkali and other project was granted vide MoEF's letter no J-11011/6/2007-IA II (I) dated 9.08.2007.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs read with Generic TORs at Annexure-1 and Additional TORs at Anneuxre-2 for preparation of EIA-EMP:

(i) Risk Assessment, Disaster preparedness and Management Plan.

16.6.27 Expansion of Pesticide Manufacturing Unit of M/s GSP Crop Science P Ltd at Plot No. 1,15, & 16, GIDC Industrial Estate Nandesari, District Vadodara, Gujarat (TOR)

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

16.6.28 Product Mix Change for Manufacturing of manmade fibre of M/s WELSPUN Syntex Ltd. at Village Saily SilvassaU.T., Dadra& Nagar Haveli (TOR)

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

16.7. Any Other Matter

16.7.1 Exploratory drilling of 67 wells in 23 Blocks of Western Onshore Basin of M/s Oil and Natural Gas Corporation Ltd. (ONGCL), Baroda, Gujarat (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 28thMeeting of the Expert Appraisal Committee (Industry) held during 17th– 18thOctober, 2011 for preparation of EIA-EMP report.All the projects related to offshore and onshore Oil and Gas exploration, development and production are listed in para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at central level.

M/s Oil and Natural Gas Corporation Ltd. (ONGCL) has proposed for exploratory drilling of 67 wells in 23 Blocks of Western Onshore, in 3 districts – Vadodara (17), Bharuch (43) and Surat (4), Gujarat. The proposed project is located in Cambay basin. Total block area is 1800 Km^2. The 23 blocks are spread over three districts in Gujarat covering four Talukas in Vadodara District, five talukas in Bharuch district and two talukas in Surat districts. Drilling will be 3200-4000m bgl for collecting core samples of shale gas. No impact on the groundwater aquifers as the wells are cased and cemented. No

notified /protected ecologically sensitive area including national park, sanctuary, elephant /tiger reserves exists in the study area. Major water bodies in the study area include Mahi River, Dhadhar River, Narmada River, Kim River, Tapi River, Narmada Canal and Gulf of Cambay. The project does not involve CRZ; the nearest well to the shore is about 2km from coast. Cost of the project is Rs. 800 crores. Details of mining lease wise exploratory wells to be drilled are as given below:

S.N.	Name of Block (ML)	Area in Sq Km	No of wells
1	Dabka and Dabka Ext-I to V	39.2325	3
2	Umra and Umra Ext-I and II	52.795	4
3	Nada and Nada Ext-I	15.97	1
4	Gandhar and Gandhar Ext-I to XII	609.708	12
5	Dahej, Ext-I and South Dahej	136.42	3
6	Pkhajan and Pkhajan Ext I & II	72.246	4
7	Kudara	2.6	2
8	Sanaokhurd	23.29	2
9	Motwan	42.20	2
10	Kosamba and Kosamba Ext I & II	77.87	3
11	Olpad and Olpad Dandi Ext-I	97.150	2
12	Elav	10.37	1
13	Kasalabet	5.06	1
14	Kharach	0.7210	1
15	Kim and Kim Ext-I	74.437	3
16	Kural	83.485	2
17	Malpur	1.0	1
18	Padra and Padra Ext I to X	172.23	7
19	Degam	15.47	3
20	Jambusar – Dabka	48.00	3
21	Karjan	62.9	3
22	Matar	36.0	2
23	Karvan	127.0	2
	Total		67

PP informed the Committee that ambient air quality monitoring was carried out at 15 locations during December, 2012 and February, 2013 and submitted data indicates PM_{10} (63-122 ug/m^3), $PM_{2.5}$ (31-54 ug/m^3), SO_2 (9.9-10.8 ug/m^3) and NO_x (19.7- 31.8 ug/m^3). PM10 was observed to be higher at a few monitoring stations due to proximity to industrial, urbanized area and heavy vehicular movement around these locations. Incremental concentration due to proposed project was estimated to be PM (0.5 ug/m^3), SO_2 (0.5 ug/m^3) and NOx (53.83 ug/m^3). Air emissions from D.G. sets will be dispersed by providing adequate stack height. Fresh water requirement from Narmada River will be 27 m^3/day. Water based mud (WBM) will be used. Total wastewater generation will be around 11 m^3/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.

Used oil will be sent to authorised recyclers. 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 12th November, 2013 for **Surat** District. The issues raised were regarding rupture of casing and spreading of salty water, relief measures to be undertaken, appointment of Public Relation Officer to solve local problem, subsidence in area, CSR activity, etc.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 13th November, 2013 for **Baroda** District. The issues raised were regarding to construct bridge/culvert, compensation to be paid, plugging of drilled holes, etc.

After detailed deliberations, the Committee recommended the project for environmental clearance and stipulated following specific conditions along with 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 the Ministry.
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, methane & 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 27 m^3/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 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 H_2S release including all necessary aspects from evacuation to resumption of normal operations. The workers should be provided with personal H_2S 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. 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. Abandoned well inventory and remediation plan shall be submitted within six months from the date of issue of letter.

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 Bhopal.

xxiii. Under Enterprise Social Commitment (ESC), 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 the commitment made regarding issues raised during the public hearing/ consultation meeting held on 12th November, 2013 and 13th November, 2013 and shall be satisfactorily implemented.

xxvi. All personnel including those of contractors should be trained and made fully aware of the hazards, risks and controls in place.

xxvii. Company should have own Environment Management Cell having qualified persons with proper background.

xxviii. 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.

16.7.2 Viscose Fibers (80,000 TPA) Manufacturing Unit along with Captive Power Plant (16 MW) of M/s Lenzing Modi Fibers India Private Limited (LMI), at Plot No. M-1 & M-2 MIDC, Additional Patalganga Industrial Area, village Sarsai, Tehsil Panvel, District Raigad, Maharashtra– Compliance of Hon'ble NGT Order dated 28.11.2013 (regarding EC)

The MoEF had garnted an environmental clearance on 30th January, 2013 to M/s Lenzing Modi Fibers India Private Limited (LMI) for setting up of Viscose Fibers (80,000 TPA) Manufacturing Unit along with Captive Power Plant (16 MW). The Hon'ble NGT in its order dated 28thNovember, 2013 in Appeal No. 170 of 2013 in the matter of Nicholas H Almeida vs. Union of India & ors. had directed that "*the MoEF shall study the industrial air emissions and air dispersion, in the area of the proposed industry and Karnala Bird Sanctuary, in order to satisfy itself whether establishment of the industry is ecologically sustainable.* "

It was informed that the bird sanctuary is within 1.5 km (aerial distance) from unit and the distance of the entrance gate of the Bird Sanctuary to the proposed Plant (by road) is 5.5 km. The Committee noted that Project proponent vide letter dated 25th January, 2012 has submitted a authenticated copy of wildlife map indicating nearest distance 1.5 Km and farthest distance 5.5 Km from boundary of the wildlife bird sanctuary. They have also submitted a copy of NOC issued by Dy. Conservator of Forests & Wildlife Thane. They have also separately applied for clearance from wild life board. The project requires prior approval of the SCWL and the application is pending with the SCWL. The EAC noted that as per the wind rose presented, the predominant wind direction from the plant is not towards the Bird Sanctuary. After detailed deliberations, the Committee recommended the following to evaluate the impact of the proposed project on and around the Karnala Bird Sanctuary:

i. To study the impact of emissions of the unit on Bird Sanctuary two stations of AAQMs to be identified in the Karnala Bird Sanctuary of which one station should be at the nearest point and other station should be at elevation within the Sanctuary and two stations at either side of the Plant at a distance of about 2 km. Air quality modelling for the proposed plant for specific pollutants i.e. PM, SO_2, CS_2, H_2S and NOx need to be done using input data based on elevation of

the Sanctuary, plant location and hilly terrain characteristics of the area and data/report furnished would need to examined by EAC- Expert Member from IMD (Air Quality).

ii. Emissions (g/second) with and without the air pollution control measures.
iii. Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height) on hourly basis
iv. Model input options for terrain, plume rise, deposition etc.
v. Print-out of model input and output on hourly and daily average basis
vi. A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
vii. Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
viii. Graphs of monthly average daily concentration with down-wind distance
ix. 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.
x. CRZ Clearance.

The proposal was deferred till the aforesaid information was submitted.

16.7.3 Expansion of Refinery Plant of **M/s Reliance Industries Ltd**. by adding Refinery Unit (5th Crude Train), Coal Based Power Plant, Ethylene Propylene Diene Monomer Rubber, Poly Isoprene Rubber at Jamnagar Manufacturing Division, HSEF Dept, District Jamnagar, Gujarat– **Report of Site Visit undertaken on 11.01.2014 - Further consideration of TOR.**

Site Visit Report

As per the recommendation of the Reconstituted Expert Appraisal Committee (Industry) in its 10th meeting held during 29th– 31st July, 2013, a Sub-committee of EAC comprising Sh. M Raman, Sh. R. K. Garg, Shri Niranjan Raghunath Raje, Members, EAC along with Representatives from MoEF was to visit the project site to assess the existing environmental scenario and to suggest additional TORs for EIA studies. However, Shri M. Raman, Member and Representatives from MoEF Regional Office, Bhopal could not join the visit due to some unavoidable reasons.

A Site visit was undertaken by the Sub-Committee on 11.01.2014 and following officials were present:

(A) M/s Reliance Industries Ltd.

1.	Sh CVS Prasad	Chief Operations -Jamnagar
2.	Sh Udayabhaskar Gullapalli	Sr. VP Corporate Environment
3.	Sh M Kannan	VP Environment Jamnagar
4.	Sh Prashant Gogate	VP Corporate Environment
5.	Sh Hemant Narisetti	GM Corporate Environment
6.	Sh Anand Sutharia -	GM Environment Jamnagar
7.	Sh Dileep Upadhyaya	Sr. Manager Environment Jamnagar

(B) From GPCB

1. Shri D Vankani, Regional Officer, GPCB

(C) From Expert Appriasal Committee (I), MoEF

1. Sh. R. K. Garg, member
2. Shri Niranjan Raghunath Raje, member

(D) From MoEF

1. Shri A N Singh, Dy. Director

At the outset, M/s Reliance Industries Ltd. briefed the Sub-Committee about the refinery facilities (existing and under implementation), products storage facilities, air emissions status, effluent management system, fire & Safety management, oil transfer pipeline etc. The Sub-Committee visited the Refinery-I, Refinery-II, Ambient Air quality Monitoring Station, Control Rooms both Refineries (I & II), Greenbelt, and had general round of the plant area. Jetty for crude receipt and product dispatch was also visited. During site visit, following observations were made:

i. On the whole, plant area housekeeping was found good except pet coke storage area in the refinery area and sulphur storage site at jetty area. At present, coke storage and sulphur storage area is uncovered.

ii. It was informed that the total land acquired by RIL for the various projects implemented and proposed to be implemented is 7409 ha (including Main Tank Farm). The area of terrestrial greenery developed is 900 ha and 250 ha of mangroves. No additional land will be acquired.

iii. The emission of SO_2 from the complex permitted is 49 MT/day against which present operations of the complex emit depending on the crude & fuel quality. The estimated NOx emission for the present operation in the complex is 58 MT/day. The estimated NOx emission load for the EC granted in 2010 is 87 MT/day.

iv. The Committee was informed that some EC's were obtained in the name of other Group companies and again converted into Reliance Industry. Following environmental clearances have been obtained:

S.N.	Project Title	Date of EC	Remarks
1	18 MMTPA Refinery Complex at Motikhavdi/Sikka Jamnagar	15.09.1995	
2	Expansion of crude processing capacity from 18 to 27 MMTPA –with no additional pollution load (SO_2-24 TPD)	06.09.2000	
3	Environmental clearance for expansion (to 59.7 MMTPA) and modernization of Petrochemical Refinery Complex (SO_2 emission not to exceed 49 TPD)	03.08.2005	
4	Amendment of environmental clearance.	02.03.2006	Segregation of the production capacities in the name of: Reliance Industries Ltd. (33 MTPA); Reliance Petroleum Ltd. (26.7 MMTPA)
	Amendment in EC	11.02.2010	Entire refinery transferred in the

			name of Reliance Industries Ltd.
5	Petroleum and Petrochemical complex in Multiproducts special economic zone (SEZ) in District Jamnagar in Gujarat by M/s Reliance Jamnagar Infrastructure Ltd.-reg.	30.03.2010	Various petrochemical products added also additional 8.5 MMTPA Refinery & 2100 Power Plant
6	Petroleum and Petrochemical complex in Multiproducts special economic zone in District Jamnagar in Gujarat by M/s Reliance Jamnagar Infrastructure Ltd.-reg. change of name	18.10.2011	Change of name of the company from M/s Reliance Jamnagar Infrastructure Ltd. to M/s Reliance Industries Ltd.
7	Present proposal is for TOR for "*Expansion of Refinery Plant by adding Refinery Unit (5th Crude Train), Coal Based Power Plant, Ethylene Propylene Diene Monomer Rubber, Poly Isoprene Rubber*"		

v. The site is divided into two sections, one is SEZ and the other domestic terrif area (DTA).

vi. They have only one continuous ambient air quality monitoring station. Considering the large area, they should have at least 3 more AAQMS.

vii. It was informed that continuous stack monitoring system for SO_2 has been installed in SRU, H_2SO_4 and FCC Units.

viii. Total water requirement for refineries is 14000 m^3/hr, which is met from sea water desalination. Quantity of effluent generation is 2000 m^3/hr. Effluent is segregated into oily water stream, High TDS and Low TDS effluent streams. ETP consists of Oil and grease removal unit, bio tower, anoxic ASP followed by Dual Media Filter, Activated Carbon Filter and Reverse Osmosis. Treated effluent is being recycled to cooling tower make up.

ix. 450 MW CPP which was proposed as gas based earlier, now coal is proposed.

x. Movement of crude and products is mainly by sea route or pipeline.

Taking into consideration availability of land for expansion and environmental performance of existing operation and general environmental scenario of the area, the Sub-committee recommended the following specific TORs:

1. Total configuration of refinery and petrochemical plants as existing under implementation and after expansion to be provided.
2. Project proponent shall prepare integrated EIA and Risk assessment report considering existing refinery, proposed expansion as well as petrochemical complex under implementation. Study report shall include the bulk storages with storage quantities, details of safety systems, safeguards provided against domino effect. Details of management of solid waste including catalyst& oily sludge, steps for mitigation of SO_2 and NOx emissions, details of phosgene management (in case phosgene is to be produced) and model used for diffuser for discharge of saline water into sea.

3. Impact on emissions particularly in respect of SO_2, Particulate as a result of switching over to coal fired CPP (450 MW) in place of earlier gas based. Detailed plan for management/disposal of ash to be provided.
4. Details of Sulphur balance in the existing refinery unit. Additional SO_2 emissions due to the proposed expansion.
5. Requisite coal linkage documents indicating coal characteristics along with the logistics arrangement for transport of coal from place of import to the plant site.
6. Slag generated from gasification plant, characteristics and disposal. Recovery of metals to be explored.
7. Action plan to set up more continuous ambient air quality monitoring around the refinery.
8. Details of calibration protocol for the calibration of continuous stack as well as ambient air quality monitoring analyser installed in all existing stations at Refinery Complex.
9. Quantification of Oily sludge generation and its management and disposal plan.
10. Action plan to cover the pet coke storage in the refinery area and sulphur storage site at jetty area.

The Site Visit Report was considered by the EAC. The Committee noted that while granting EC to the Refinery Plant for expansion from 18 MT to 27 MT and for the EC granted in 2005 for further expansion to 59.7 MT, the SO2 emission load permitted for the 27 MT Plant was 24 T/d and was increased to a maximum of 49.7 T/d, when the Plant capacity was expanded to 59.75 MT. In addition, a separate stream of 8.5 MT unit was proposed by the PP, which was approved in 2010. The permission for the Refinery is for a maximum production of 68.25 MT consisting of 2 streams of which one was upgraded from 27 MT to 57.5 MT.

The present proposal is for (i) expansion of the refinery capacity from 68.25 MTPA to 88.25 MTPA by add a fifth crude train of 20 MT capacity and (ii) a change in the existing CPP of 2100 MW for which EC was granted in 2010 of which 450MW would switch to coal and (iii) introducing a new Polymer Plant with new products - Ethylene Propylene Diene Monomer Rubber, Poly Isoprene Rubber. Thus, the present proposal is for adding one more stream (5^{th} stream) of 20 MT and for expansion of the total capacity of the Plant to 88.25 MT.

The EAC desired that the expansion project requires being examined from the following criteria:

- Land availability
- Environmental performance
- Logistics due to transportation

The Committee noted that the plant presently has a CTO for 68.25 MT, for which the max. SO_2 load permitted is 49 MT. It was noted that the plant has sufficient land. The entire Plant area partially falls in SEZ and in non-SEZ area. The main storage area of 60 acres is on the other side of the road (closer to the sea). The Committee was of the view that it is desirable to stipulate unit/stack--wise emission standard for PM, SO_2, NOx, etc. The Committee was of the view that a cap of the SO_2 emissions requires being examined in a Regional context, this is especially in view of the fact that there are a few other industrial

units (ESSAR Refinery, Fertilizer Plant, etc, operating within a 25km distance). Thus, a Regional Impact Assessment (REIA) Study would be required to assess and cap the overall SO_2 emission load that could be permitted from the area.

The other aspect is regarding the proposed change in fuel usage. The Plant was fully gas based, however in the present proposal; a CPP of 450 MW is proposed with use of coal and PET coke. An assessment is required for changing from fully gas based unit to multi-fuel use of coal-cum-pet coke use in addition to gas. Infrastructural capacity, storage capacity is in place for 59.75 MT. The Plant would also require the following additional infrastructure for coal – Coal Terminal (for import) at jetty, CHP, Coal Berth, etc. CRZ clearance was obtained in 1995. In addition, PET coke is also proposed to be used, which is very high in S content and lime addition is necessary to reduce the SO2 levels. In addition, the 1.8 MTPA of imported coal (from Bedibandar Port) required for the 450 MW CPP would generate flyash and a Plan for Management, storage and utilisation of flyash would be required.

The Committee noted that in terms of infrastructure availability, the present jetty facilities are adequate to take the additional capacity. There are Very Large Capacity Tankers of 1 lakh tonne and 3 SBMs for handling the crude, which are sufficient. In addition, there are a network of pipelines stretching to 12-13 km which is adequate for transporting the crude and products. No additional pipeline is required. Desalination Plants of a capacity of 15,000 m3/h are existing. Brine water from the Desalination Plants is discharged through marine outfalls using modelling data. The Project has a Risk Assessment and Disaster Preparedness and Management Plan. In terms of safety and security, the area has a Naval Base and an Air Force Base.

After detailed deliberations, the Committee recommended the project for award of TOR along with additional TOR based on observations/suggestions made by the Committee for undertaking detailed EIA-EMP study:

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 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. Project Description and Project Benefits.
4. A separate chapter on environmental clearance accorded for all the existing plants along with point-wise compliance report.
5. A short 3-D video presenting the facilities and infrastructure installed/added with every EC obtained for the Refinery and also presented in tabular form.
6. Land details – Details of plant falling in SEZ and non-SEZ area.
7. Point-wise compliance report to the 'Consent to Establish' 'Consent to operate' and Authorization accorded by Gujarat Pollution Control Board for all the existing units along with all the necessary annexure.
8. Existing data for the last 2 years for all the relevant parameters should be included.
9. Site details including satellite imagery for 5 km around the site.
10. A list of industries within 10 km radius of the project.

11. Details of facilities along with utilities to be provided for the proposed project.
12. Manufacturing process details along with the chemical reactions and process flow diagram.
13. List of products along with the production capacities and list of solvents and its recovery plan.
14. Detailed list of raw material required and source, mode of storage and transportation.
15. Details of the storage and technical specifications with safety aspects & standards.
16. Is there additional storage required for the proposed products mix.
17. Proposal for safety buffer zone around the proposed site with map.
18. Details indicating National Park/Wild life Sanctuary/Eco-sensitive area/reserve forest within 10 Km.
19. Land use along with maps & cropping pattern, vegetation, ecology, flora & fauna
20. Demography & socio-economics of the area.
21. Baseline data collection for air, water and soil for the period of 3 months (except monsoon season) for:
    i. Ambient air quality monitoring for $PM_{2.5}$, PM_{10}, SO_2, NOx, CO.
    ii. Background levels of hydrocarbons (methane & non-methane HC) and VOCs.
    iii. Soil sample analysis.
    iv. Base line underground and surface water quality in the vicinity of project.
    v. Climatology & meteorology including wind speed, wind direction, temperature, rainfall etc.
    vi. Measurement of noise levels.
22. Give existing status of stack emission, raw water requirement, treated effluent quantity & quality data, noise pollution and solid waste management in the existing units.
23. Action plan to achieve smokeless flare should be included.
24. Details of Sulphur balance in the existing refinery unit. Additional SO_2 emissions due to the proposed product mix.
25. Unit-wise air pollution control devices to be installed.
26. Details of water consumption and source of water supply, waste water generation, treatment and utilisation of treated water generated from the facilities and effluent disposal and measures for release of effluent in case of fire. Water balance chart for the existing unit and proposed expansion.
27. Details of existing and proposed effluent treatment plant along with water quality of inlet and outlet of ETP.
28. Action plan to reduce wastewater discharge from the all existing units.
29. Detailed solid waste generation, collection, segregation, its recycling and reuse, treatment and disposal.
30. Note on compliance to the recommendations mentioned in the CREP for oil refineries and petrochemical industries.
31. A note on implementation of new refinery standards for refineries.
32. Quantification of oil sludge generation from the existing and proposed refinery including management of the oil sludge in the existing refinery. Details of temporary storage for the oil sludge.
33. Details of catalyst waste generated from the refinery along with temporary storage facility at site. Action plan for disposal of the catalyst solid waste.

34. Status of existing secured landfill sites. Design details as well as ground water monitoring around the project site.
35. Details of membership of TSDF for hazardous waste disposal.
36. Assessment of impact on air, water, soil, solid/hazardous waste and noise levels.
37. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
38. Details of proposed preventive measures for leakages and accident.
39. Details of Vapour Recovery System.
40. Earmarking of area for parking of Lorries at a remote location to avoid congestion.
41. Traffic management with adequate width of approach road to avoid congestion and to have safe exit in emergencies.
42. Type of seismic zone.
43. Full Quantitative Risk Assessment & Disaster Management Plan should include:
    a. Identification of hazards
    b. Consequence Analysis
    c. Determination of Individual Risk and Societal Risk
    d. List of last Major Refinery Incidents Globally in last 10 years
    e. Proposed measures for risk reduction.
44. 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 heath 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.
45. Details including existing green belt developed. Action plan for development of green belt in 33%.
46. Total capital cost and recurring cost/annum for environmental pollution control measures. Break up details should also be included.
47. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
48. 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.

49. Environmental monitoring programme including online stack monitoring system as well as continuous ambient air quality monitoring system. Method/System to be adopted to ensure correct calibration of automatic monitoring system.
50. Details of Corporate Social Responsibility (CSR) including sufficient budgetary provision for health improvement, education, water and electricity supply etc. in and around the project.
51. 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.
    (c) 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.
    (d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
52. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
53. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA-EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
54. A tabular chart indicating point-wise compliance of the TOR.

Additional TORs:

1. Total configuration of refinery and petrochemical plants as existing under implementation and after expansion to be provided.
2. Project proponent shall prepare integrated EIA and Risk assessment report considering existing refinery, proposed expansion as well as petrochemical complex under implementation. Study report shall include the bulk storages with storage quantities, details of safety systems, safeguards provided against domino effect. Details of management of solid waste including catalyst& oily sludge, steps for mitigation of SO_2 and NOx emissions, details of phosgene management (in case phosgene is to be produced) and model used for diffuser for discharge of saline water into sea.
3. Impact on emissions particularly in respect of SO_2, Particulate as a result of switching over to coal fired CPP (450 MW) in place of earlier gas based. Detailed plan for management/disposal of ash to be provided.
4. Details of Sulphur balance in the existing refinery unit. Additional SO_2 emissions due to the proposed expansion.
5. Requisite coal linkage documents indicating coal characteristics along with the logistics arrangement for transport of coal from place of import to the plant site.

6. Slag generated from gasification plant, characteristics and disposal. Recovery of metals to be explored.
7. Action plan to set up more continuous ambient air quality monitoring around the refinery.
8. Details of calibration protocol for the calibration of continuous stack as well as ambient air quality monitoring analyser installed in all existing stations at Refinery Complex.
9. Quantification of Oily sludge generation and its management and disposal plan.
10. Action plan to cover the pet coke storage in the refinery area and sulphur storage site at jetty area.
11. Impact on marine due to effluent discharge and desalination plant to be installed.

The following general points should be noted:

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

The EAC agreed to the baseline data collection from March-May 2014. 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 conducting public hearing/consultation. The issues emerged and response to the issues raised during public hearing should be incorporated in the EIA-EMP report and submitted to the Ministry for obtaining environmental clearance.

The Committee further decided that a Regional EIA Study would need to be carried out independently for all the Industries operating in the area; however, the EIA-EMP for the present project could be prepared while the REIA is undertaken. The PP committed that the recommendations from the REIA study would be implemented as when made available.

16.5.4 Proposed 60 KLPD Mollasses based Distillery of M/s Dayal Beverages at Plot No. 207/2, village Tapri, Tehsil & Dist. Saharanpur, (U.P.) – (TOR)

Documents were not received and the proposal was not considered.

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LIST OF PARTICIPANTS OF EAC (I) IN MEETING HELD ON 20th-21st FEBRUARY 2014

Expert Appraisal Committee (Industry) :			
1.	Shri M. Raman	Chairman	P
2.	Shri R.K. Garg	Vice-Chairman	P
3.	Prof. R.C. Gupta	Member	A
4.	Dr. Prem Shankar Dubey	Member	P
5.	Dr. R.M. Mathur	Member	P
6.	Dr. S. K. Dave	Member	P
7.	Dr. B.Sengupta	Member	P
8.	Shri Rajat Roy Choudhary	Member	A
9.	Dr. S.D. Attri	Member	A
10.	Dr. Antony Gnanamuthu	Member	A
11.	Prof. C. S. Dubey	Member	P
12.	Shri Niranjan Raghunath Raje	Member	P
MOEF Officials :			
13.	Dr. T.Chandini	Director & Member Secretary	
14.	Shri A.N. Singh	Deputy Director (29th & 30.01.2014)	
15.	Shri Sundar Ramanathan	Deputy Director (29.01.2014)	

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ANNEXURE -I

GENERIC TERMS OF REFERENCE (TOR)

1. Executive summary of the project along with justification for the project.
2. Photographs of the proposed and existing (if applicable) plant site.
3. A line diagram/flow sheet for the process and EMP.
4. In case of existing projects seeking expansion, (i) A certified copy of the Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30th May, 2012, on the status of compliance of the conditions stipulated in the environmental clearance and (ii) Status of compliance of Consent to Operate for the ongoing existing operation of the project from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
5. A toposheet of the study area and 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 of a circle of aradius of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with minimum 100/200m contours shall be included. A 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. MRL details of project site and RL of nearby sources of water shall be indicated.
6. 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 shall be used for land used/land-cover mapping of the area. Present land use – agricultural land, forestland, wasteland, water bodies, settlements, etc shall be prepared based on satellite imagery.
7. Topography of the area shall be given clearly indicating whether the site requires any filling. If so, details of filling, quantity of fill material required, its source, transportation etc. shall be given. In case the site is located on a hilly terrain, a 3-dimesional view of the location vis-à-vis major landuse features and locations such as Critically Polluted Area(s) and Eco-sensitive Area(s) found within the study area, indicating shortest distance from the site shall be provided.
8. Map showing location of Eco-sensitive Areas such as National Parks/Wildlife Sanctuary/Reserve Forests within 10 km. radius (study area) shall 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 and shortest (aerial) distance from critically/severely polluted area(s) and Eco-sensitive Areas.
9. Project site layout plan to scale using AutoCAD of the project site showing Plant details, raw materials, fly ash and other storage plans, ash pond and water harvesting structures, bore well or water storage, aquifers (within 1 km.), dumping, waste disposal, green belt (areas), water bodies, rivers/drainage passing through/near the project site shall be included.
10. Coordinates of the plant site with topo sheet co-ordinates shall also be included.
11. Details and classification of total land (identified and acquired) shall be included.
12. A copy of the mutual agreement for land acquisition signed with land oustees.
13. Proposal shall be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land shall be included.
14. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department, in case the project involves forestland.
15. If the project falls within 10km of an eco-sensitive area, present status/approval from the Standing Committee on Wildlife of the NBWL shall be furnished.
16. Rehabilitation & Resettlement (R & R) shall be as per the R&R Policy of the State Govt. and a detailed action plan shall be included.
17. A list of major industries with name and type within study area (10km radius) shall be incorporated.
18. List of raw material required, analysis of all the raw materials and source along with mode of transportation shall be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".

19. Action plan for excavation and muck disposal during construction phase.
20. Studies for fly ash, muck, slurry, sludge material disposal and solid waste generated from the plant operations and processes and environmental control measures. If the raw materials used have trace elements, an environment management plan shall also be included.
21. Manufacturing process details shall be included.
22. Mass balance for the raw material and products shall be included.
23. Energy balance data for all the components of steel plant including proposed power plant shall be incorporated.
24. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
25. One season data for gaseous emissions other than monsoon season is necessary.
26. Ambient air quality monitoring at 8 locations within the study area of 10 km, aerial coverage from project site with one AAQMS in downwind direction shall be carried out.
27. Suspended particulate matter present in the ambient air must be analysed for source analysis – natural dust/generated from plant operations (for eg. Cement dust)/flyash/etc. The SPM shall also be analysed for presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction, where applicable. Chemical characterization of RSPM.
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. In case the project is located on a hilly terrain/elevation, the AQIP Modelling shall be done using inputs of the specific terrain characteristics of the project for determining the potential impacts of the project on the AAQ.
29. Action plan to implement National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be included.
30. Ambient air quality modelling along with cumulative impact shall 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 shall 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.
31. A plan for the utilisation of waste/flue gases (if applicable) for generating power shall be presented.

32. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. The alternate method of raw material and end product transportation shall also be studied and details included.
33. 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.
34. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer shall be included.
35. If the site is within 1 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.
36. Details of water requirement, water balance chart for new unit or for existing unit as well as proposed expansion (if expansion). Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
37. Source of water supply and permission of withdrawal of water from Competent Authority.
38. 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 shall be included. Zero discharge effluent concepts to be adopted.
39. 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 shall also be included. Information regarding surface hydrology and water regime shall be included.
40. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
41. 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.
42. Ground water modelling showing the pathways of the pollutants shall be included
43. Action plan for rainwater harvesting measures at plant site shall 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.
44. A note on the impact of drawl of water on the nearby River particularly during lean season. Permission of competent authority for withdrawl of river/groundwater.
45. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations to be provided in and around the project site.
46. A note on treatment of wastewater from different plants, recycle and reuse for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards.
47. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
48. If the water is mixed with solid particulates, proposal for sediment pond before further transport shall be included. The sediment pond capacity shall be 100 times the transport capacity.
49. Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from any other source shall be included.
50. 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.

51. Action plan for solid/hazardous waste generation, storage, utilisation and disposal from all the sources and fly ash. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
52. 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. Copies of MOU regarding utilisation of ash shall also be included.
53. End use of solid waste and its composition shall be covered. Toxic metal content in the waste material and its composition shall also be incorporated.
54. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
55. 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. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated. All rooftops/terraces shall have some green cover.
56. Detailed description on flora and fauna (terrestrial and aquatic) exists in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
57. Risk Assessment and Disaster (Emergency) Preparedness and Management Plan including damage control needs to be addressed and included.
58. 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 heath 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.
59. 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 shall be detailed in the EIA report
60. 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.

61. 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.
62. 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 shall be included.
63. Plan for the implementation of the recommendations made for the Sector in the CREP guidelines must be prepared.
64. At least 5 % of the total cost of the project shall be earmarked for the initial 5 years towards the Enterprise Social Commitment and 2% of retain profit thereafter for life of the project towards CSR based on public hearing issues and item-wise details along with time bound action plan shall be included. Socio-economic development activities need to be elaborated upon.
65. A note on identification and implementation of Carbon Credit project shall be included.
66. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. 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, details thereof and compliance/ATR to the notice(s) and present status of the case.
67. A tabular chart with index for point wise compliance of above TORs.
68. The questionnaire for industry sector (available on MOEF website) shall be submitted while submitting EIA-EMP.
69. 'TORs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA-EMP report for the 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 shall be provided. The draft EIA-EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The issues raised in the Public Hearing and during the consultation process and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in the form of tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.
70. The TORs prescribed shall be valid for a period of two years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

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 in Regional languages shall be provided.
iv. The letter/application for environmental clearance 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 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.

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ANNEXURE-2

ADDITIONAL TORs FOR SYNTHETIC ORGANIC CHEMICALS INDUSTRY

1. Manufacturing process details along with the chemical reactions and process flow chart.
2. Name of all the solvents to be used in the process and details of solvent recovery system.
3. Design details of ETP, incinerator, if any along with boiler, scrubbers/bag filters etc.
4. The details of solid and hazardous wastes generation, storage, utilisation 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.
5. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
6. Material Safety Data Sheet for all the Chemicals are being used/will be used. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
7. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
8. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
9. 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) Liver function tests (LFT) during pre-placement and periodical examination.
10. A Toxic management Plan should be prepared.
11. A write up on "Safe Practice" followed for handling, storage, transportation and unloading of chemicals to be submitted.
12. What are onsite and offsite emergency plan during chemical disaster.
13. A write up on "Treatment of workers affected by accidental spillage of chemicals".

ANNEXURE-3

GENERIC TOR FOR ONSHORE OIL & GAS EXPLORATION, DEVELOPMENT & PRODUCTION

1. Executive summary of a project
2. Project description, project objectives and project benefits.
3. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing *I* existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
4. Site details within 1 km of the each proposed well, any habitation, any other installation/activity, flora and fauna, approachability to site, other activities including agriculture/land, satellite imagery for 10 km area. All the geological details shall be mentioned in the Topo sheet of 1:40000 scale, superimposing the well locations and other structures of the projects.
5. CRZ clearance/ recommendation from State Coastal Zone Management Authority, if applicable.
6. Details of forest land involved in the proposed project. A copy of forest clearance letter, if applicable.
7. Permission from the State Forest Department regarding the impact of the proposed project on the surrounding National Park/Wild life Sanctuary/Reserve Forest/Eco sensitive area, if any. Approval obtained from the State/Central Government under Forest (Conservation Act, 1980 for the forestland shall be submitted.
8. Distance from nearby critically/severely polluted area as per Notification, if applicable.
9. Does proposal involves rehabilitation and resettlement? If yes, details thereof.
10. Details of project cost.
11. Environmental considerations in the selection of the drilling locations for which environmental clearance is being sought. Present any analysis suggested for minimizing the foot print giving details of drilling and development options considered.
12. Baseline data collection for air, water and soil for one season leaving the monsoon season in an area of 10 km radius with centre of Oil Field as its centre covering the area of all proposed drilling wells.
    (i) Topography of the project site.
    (ii) Ambient Air Quality monitoring at 8 locations for PM10, SO2, NOx, VOCs, Methane and non-methane HC.
    (iii) Soil sample analysis (physical and chemical properties) at the areas located at 5 locations.
    (iv) Ground and surface water quality in the vicinity of the proposed wells site.
    (v) Climatology and Meteorology including wind speed, wind direction, temperature rainfall relative humidity etc.
    (vi) Measurement of Noise levels within 1 km radius of the proposed wells.
    (vii) Vegetation and land use; Animal resources
13. Incremental GLC as a result of DG set operation.
14. Potential environmental impact envisages during various stages of project activities such as site activation, development, operation/ maintenance and decommissioning.
15. Actual source of water and 'Permission' for the drawl of water from the Competent Authority. Detailed water balance, wastewater generation and discharge.
16. Noise abatement measures and measures to minimize disturbance due to light and visual intrusions in case coastally located.
17. Treatment and disposal of waste water.
18. Treatment and disposal of solid waste generation.
19. Disposal of spent oil and lube.
20. Storage of chemicals and diesel at site.
21. Commitment for the use of WBM only

22. Mud make up and mud and cutting disposal – all options considered shall be listed with selective option.
23. Hazardous material usage, storage accounting and disposal.
24. Disposal of packaging waste from site.
25. Oil spill emergency plans in respect of recovery/ reclamation.
26. H2S emissions control.
27. Produced oil handling and storage.
28. Details of scheme for oil collection system along with process flow diagram and its capacity.
29. Details of control of air, water and noise pollution in oil collection system.
30. Disposal of produced/formation water.
31. Whether any burn pits being utilised for well test operations.
32. Restoration and decommissioning plans which shall include mud pits and wastage restoration also and documentation and monitoring of site recovery.
33. Measures to protect ground water and shallow aquifers from contamination.
34. Risk assessment and disaster management plan for independent reviews of well designed construction etc. for prevention of blow out.
35. Environmental management plan.
36. Documentary proof of membership of common disposal facilities, if any.
37. Details of environmental and safety related documentation within the company including documentation and proposed occupational health and safety Surveillance Safety Programme for all personnel at site. This shall also include monitoring programme for the environmental.
38. Total capital and recurring cost for environmental control measures.
39. A copy of Corporate Environment Policy of the company as per the Ministry's O.M. No. J-11013/41/2006-IA.II(I) dated 26th April, 2011 available on the Ministry's website.
40. Any litigation pending against the project and or any direction/order passed by any court of law against the project. If so details thereof.
41. A tabular chart with index for point-wise compliance of above TORs.

The following general points 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) A 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 where the above issues have been incorporated.
(vii) 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.

The aforesaid TORs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA-EMP report for the 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 shall be provided. The draft EIA-EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The issues raised in Public Hearing and the commitments made by the project

proponent on the same shall be included separately in EIA-EMP Report in the form of tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. 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 (wherever stipulated).

ANNEXURE-4

ADDITIONAL TORS FOR DISTILLERY WITH CO-GENERATION UNIT

1. List of existing distillery units in the study area along with their capacity and sourcing of raw material.
2. Details of proposed products along with manufacturing capacity.
3. Number of working days of the distillery unit.
4. Details of raw materials, its source with availability of all raw materials.
5. Sources and quantity of fuel (rice husk/coal etc.) for the boiler. Measures to take care of SO_2 emission. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted.
6. Storage facility for raw materials, prepared alcohol, fuel and fly ash.
7. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
8. Details of the use of steam from the boiler.
9. Ground water quality around proposed spent wash storage lagoon and the project area.
10. Details of water requirement, water balance chart for existing unit as well as proposed expansion. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
11. Source of water supply and permission of withdrawal of water from Competent Authority.
12. Proposed effluent treatment system for molasses based distillery (spent wash and spent lees) as well as domestic sewage and scheme for achieving zero discharge.
13. Spent wash generation should not exceed 8 KL/KL of alcohol production. Details of the spent wash treatment for molasses based distillery based distillery.
14. Capacity for spent wash holding tank and action plan to control ground water pollution.
15. Layout for storage of bagasse/biomass/coal.
16. Details of solid waste management including management of boiler ash.
17. EMP should also include the concept of waste-minimization, recycle/reuse/ recover techniques, Energy conservation, and natural resource conservation.
18. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
19. Alcohol storage and handling area fire fighting facility as per norms. Provision of Foam System for fire fighting to control fire from the alcohol storage tank.

ANNEXURE-5

TORs FOR RESIN MANUFACTURE

1. Executive summary of the project
2. Justification of the project.
3. Photographs of proposed plant site.
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 along with total capital cost and recurring cost/annum for environmental pollution control measures.
10. Project site location along with 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. Details of land availability for the project along with supporting document.
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 along with the production capacities.
15. Detailed list of raw materials required and source, mode of storage and transportation.
16. Manufacturing process details along with 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, PM2.5, SO_2, 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. An action plan to control and monitor secondary fugitive emissions from all the sources.
27. 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.

28. Permission for the drawl of ground water from CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
29. Action plan for 'Zero' discharge of effluent shall be included.
30. Treatment of phenol in the effluent, if any.
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, utilisation 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. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
34. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
35. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
36. A write up on "Safe Practice" followed for methanol handling, storage, transportation and unloading to be submitted.
37. A write up on "Treatment of workers affected by accidental spillage of chemicals".
38. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
39. An action plan to develop green belt in 33 % area
40. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
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.
42. Details of occupational health surveillance programme.
43. Socio-economic development activities shall be in place.
44. 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.
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 has 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.

(c) 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.

(d) Does the company has 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 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.
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 prescribed the above TORs for preparation of EIA-EMP reports. The proponent should prepare EIA-EMP Report based on the above TORs as per the generic structure given in Appendix-III of EIA Notification, 2006 and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The issues raised in Public Hearing and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in the form of tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.replies during the Public Hearing/ Consultation should be incorporated in the EIA-EMP Report and the final EIA-EMP report 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 (wherever stipulated).

ANNEXURE-6

TORS FOR EXPLORATION & DRILLING OF OFF-SHORE WELLS

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 that no drilling would be carried within 1.0 Km of the coast.
6. Details of sensitive areas such as coral reef, marine water park, sanctuary and any other eco-sensitive area.
7. Details of land area, land use and status of land acquisitions fir land for on-shore facilities. Approval for the forest land from the State/Central Govt. under Forest (Conservation) Act, 1980, if applicable(for any facilities on shore).
8. CRZ clearance as per CRZ Notification dated 6th January, 2011, and/or for facilities on-shore.
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 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 proponent should prepare an 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 along with 'Certificate of Accreditation' issued by the QCI should be submitted to the Ministry for obtaining environmental clearance. Public Hearing is not required as project site is located in off-shore.

The TORs prescribed shall be valid for a period of two years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

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ANNEXURE-7

TORS FOR OIL REFINERY PROJECT

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. Project Description and Project Benefits.
4. A separate chapter on environmental clearance accorded for all the existing plants along with point-wise compliance report.
5. Point-wise compliance report to the 'Consent to Establish' 'Consent to operate' and Authorization accorded by Punjab Pollution Control Board for all the existing units along with all the necessary annexure.
6. Existing data for the last 2 years for all the relevant parameters should be included.
7. Site details including satellite imagery for 5 km around the site.
8. A list of industries within 10 km radius of the project.
9. Details of facilities along with utilities to be provided for the proposed project.
10. Manufacturing process details along with the chemical reactions and process flow diagram.
11. List of products along with the production capacities and list of solvents and its recovery plan.
12. Detailed list of raw material required and source, mode of storage and transportation.
13. Details of the storage and technical specifications with safety aspects & standards.
14. Is there additional storage required for the proposed products mix.
15. Proposal for safety buffer zone around the proposed site with map.
16. Details indicating National Park/Wild life Sanctuary/Eco sensitive area/reserve forest within 10 Km.
17. Land use along with maps & cropping pattern, vegetation, ecology, flora & fauna
18. Demography & socio-economics of the area.
19. Baseline data collection for air, water and soil for the period of 3 months (except monsoon season) for :
    i. Ambient air quality monitoring for $PM_{2.5}$, PM_{10}, SO_2, NOx, CO
    ii. Background levels of hydrocarbons (methane & non-methane HC) and VOCs.
    iii. Soil sample analysis.
    iv. Base line underground and surface water quality in the vicinity of project.
    v. Climatology & meteorology including wind speed, wind direction, temperature, rainfall etc.
    vi. Measurement of noise levels.
20. Give existing status of stack emission, raw water requirement, treated effluent quantity & quality data, noise pollution and solid waste management in the existing units.
21. Action plan to achieve smokeless flare should be included.
22. Details of Sulphur balance in the existing refinery unit. Additional SO_2 emissions due to the proposed product mix.
23. Unit-wise air pollution control devices to be installed.
24. Details of water consumption and source of water supply, waste water generation, treatment and utilisation of treated water generated from the facilities and effluent disposal and measures for release of effluent in case of fire. Water balance chart for the existing unit and proposed expansion.
25. Details of existing and proposed effluent treatment plant along with water quality of inlet and outlet of ETP.
26. Action plan to reduce wastewater discharge from the all existing units.
27. Detailed solid waste generation, collection, segregation, its recycling and reuse, treatment and disposal.
28. Note on compliance to the recommendations mentioned in the CREP for oil refineries and petrochemical industries.
29. A note on implementation of new refinery standards for refineries.

30. Quantification of oil sludge generation from the existing and proposed refinery including management of the oil sludge in the existing refinery. Details of temporary storage for the oil sludge.
31. Details of catalyst waste generated from the refinery along with temporary storage facility at site. Action plan for disposal of the catalyst solid waste.
32. Status of existing secured landfill sites. Design details as well as ground water monitoring around the project site.
33. Details of membership of TSDF for hazardous waste disposal.
34. Assessment of impact on air, water, soil, solid/hazardous waste and noise levels.
35. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
36. Details of proposed preventive measures for leakages and accident.
37. Details of Vapour Recovery System.
38. Earmarking of area for parking of Lorries at a remote location to avoid congestion.
39. Traffic management with adequate width of approach road to avoid congestion and to have safe exit in emergencies.
40. Type of seismic zone.
41. Full Quantitative Risk Assessment & Disaster Management Plan should include:
    a. Identification of hazards
    b. Consequence Analysis
    c. Determination of Individual Risk and Societal Risk
    d. List of last Major Refinery Incidents Globally in last 10 years
    e. Proposed measures for risk reduction.
42. 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 heath 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.
43. Details including existing green belt developed. Action plan for development of green belt in 33%.
44. Total capital cost and recurring cost/annum for environmental pollution control measures. Break up details should also be included.
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. Environmental monitoring programme including online stack monitoring system as well as continuous ambient air quality monitoring system. Method/System to be adopted to ensure correct calibration of automatic monitoring system.
47. Details of Corporate Social Responsibility (CSR) including sufficient budgetary provision for health improvement, education, water and electricity supply etc. in and around the project.
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.

(c) 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.

(d) 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. 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.

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

The following general points should be noted:

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

The aforesaid TORs 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 State Pollution Control Board for conducting public hearing/consultation. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The issues raised in Public Hearing and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in the form of tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.replies during the Public Hearing/ Consultation should be incorporated in the EIA-EMP Report and the final EIA-EMP report 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 (wherever stipulated).

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