

MINUTES OF 18th RECONSTITUTED EXPERT APPRAISAL COMMITTEE (INDUSTRY) HELD DURING 28TH APRIL 2014 TO 30TH APRIL 2014

VENUE: Scope Complex, Core 6, 5th Floor, IOCL Conference Room, Ministry of Petroleum and Natural Gas, Lodhi Road, New Delhi 110 003

18.1 Opening Remarks of the Chairman

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

18.2 Confirmation of the Minutes of the 17th Reconstituted Expert Appraisal Committee (Industry) held during 18-19th March 2014

The minutes of the 17th Reconstituted Expert Appraisal Committee (Industry) meeting held during 18-19th March 2014 were confirmed.

Monday, 28th April 2014

18.3 Environmental Clearance

18.3.1 Proposed 1.2 MTPA Cement Plant, 1.0 MTPA Clinkerisation plant and 23 MW Captive Power plant of **M/s Concast Cement Industries Limited (Formerly M/s. Satyam Mining and Minerals Limited)** at Village Manyuliang, P.O.Medo, P.S.Chowkham, Wakro Circle, District Lohit in Arunanchal Pradesh (EC)

All the Cement Plants (\geq 1.0 MTPA) are listed at S.No. 3(b) under Category 'A' of the schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MOEF.

Terms of Reference (TOR) to the aforesaid proposal was accorded by MOEF vide F.No.J-11011/407/2010-IA.II(I) dated 16.8.2011 in the name of M/s Satyam Mining and Minerals Limited. Thereafter, Ministry vide letter dated 3.5.2013 issued no objection for the change of company name from M/s Satyam Mining and Minerals Limited to M/s Concast Cement Industries Limited.

M/s Concast Cement Industries Limited vide letter dated 7.8.2013 submitted the final EIA-EMP report for consideration of the proposal for grant of Environmental Clearance. Ministry deferred the consideration of the proposal on the ground that the EIA-EMP report was prepared by M/s Min Mec Consultancy Private Limited which was a non-accredited consultant by QCI/NABET. M/s Concast Cement Industries Limited vide letter dated 12.2.2014 submitted an order of the Hon'ble High Court of Delhi dated 03.02.2014 in LPA 108/2014&C.M.No.2168/2014 stating that M/s Min Mec Consultancy Private Limited shall also be allowed to prepare and present Environment Impact Assessment (EIA) report to the Central and State Government Environmental Appraisal Committee till 14.3.2014 and the case was further re-notified on 13.5.2014. In view of this, proposal was placed before the EAC for consideration.

The project proponent (PP) and their consultant M/s Min Mec Consultancy Private Limited – New Delhi 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 26th meeting of the Expert Appraisal Committee (Industry -1) held on 21-22nd July 2011 for preparation of EIA-EMP report. The TOR was awarded by MOEF vide F.No. J-11011/407/2010-IA.II(I) dated 16.8.2011 for preparation of EIA-EMP report.

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 Concast Cement Industries Limited has proposed to set up 1.2MTPA Cement plant, 1 MTPA Clinkerisation plant and 23 MW Captive Power Plant at Village Manyuliang, P.O.Medo, P.S.Chowkham, Wakro Circle, District Lohit, Arunachal Pradesh. The land requirement for the proposed project is 120 acres (48.56 ha), which is tribal land and the land is under the possession of PP. PP has acquired the land through execution of lease deed with the land owners for a period of 50 years. No R&R issues are involved. The longitude and latitude of the project site is $93^{\circ} 12' 23''$ E to $96^{\circ} 12' 52''$ E and $27^{\circ} 45' 40''$ N to $27^{\circ} 46' 48''$ N respectively. No forestland is involved. No Defense Installation, and ecologically sensitive areas such as Biosphere Reserve, National Park/Wild Life Sanctuary, is located within 10 km radius of the project site. However, Kamlang Wildlife Sanctuary is situated at a distance of 18.30 km and Namdapha Tiger Reserve is situated at a distance of about 20km from the project site. A number of Schedule-I and Schedule-II fauna are found in the buffer zone of the project area. These include elephant, tiger, leopard, binturong, Chinese pangolin, and monitor lizard due to the proximity of the project site to the Tiger Reserve and WL Sanctuary. There are several schedule II species also found in the study area which include Rhesus macaque, Assamese macaque, Jungle cat, Checkered keelback and King cobra.

The nearest National Highway is NH-52 at 1.5 km north of project site. A number of water bodies/ rivers such as Kadum Hka (3.37 km, NE), Namgo Hka (0.97 km, S), River Champhai (4.81 km, SE), Tilai Nadi (11.41km, SE), Mate Hka (11.90 km, SSE), Lapon Hka (8.51 km, SSE), Nakni Hka (7.31 km, S), Ligaung Hka (6.73 km, S), Maithong Hka (5.64 km, SSW), Lunga Hka (5.86 km, SW), Tinko Hka (9.42 km, WSW), Nam Kamlaio (12.67 km, WSW), Teeng River (4.42 km, SW), Kharem Hka, Lai Nadi (5.41 kms, N), Kamlang River (6.97 kms, NW), Kadem Nadi (7.32 kms, N), Lohit River (8.55 kms, NW), Harrawn River (8.16 kms, N), Bauni Pani (11.10 kms, NW) and Belang River (12.8 kms, E) flow within 15 km radius of the proposed site. However, the proposed project site is outside the flood zone area. Tezu, the nearest town and district headquarter is at a distance of 17 kms towards NNW from the boundary. The site falls in Seismic zone-V. Total cost of the project is Rs. 905.65 crores. Rs. 13.48 crores and Rs.5.21 crores is earmarked for the capital cost and recurring cost per annum towards the environmental pollution control measures. The project does not involve R&R. Rs. 5.94 crores is earmarked towards the Enterprise Social Commitment based on Public Hearing issues. No court case/litigation is pending against the proposed project.

Raw material required for the project are Limestone (1.24 MTPA), Phyllitic Shale (0.21 MTPA), Sandstone/Quartzite (0.05 MTPA), Mill Scale (7593 TPA), Mineral Gypsum (0.06 MTPA), Fly Ash (0.15 MTPA) and coal (0.13 MTPA). Limestone, Phyllitic Shale, Sandstone/Quartzite will be sourced from Tidding limestone deposit located at a distance of 94km from the project site and brought to the plant site by tippers. A road is coming up in the next few years which reduce the transportation from the limestone mine to 34km. Mill scale will be procured from Guwahati –Assam and transported to the plant site by road. Coal will be purchased from Namchik-Namphuk Mines and transported to the plant site by road, which is at a distance of about 180km. A bridge is being constructed which would reduce the road length from the coalmine to the project to about 40km. Calorific value of the coal would be 5500 kcal/kg. The ash and sulphur content in the coal would be 21.15% and 4.47% respectively. Power requirement is 18.3 MW which will be sourced from the CPP. For the coal linkage, PP have submitted the letter obtained from M/s. Arunachal Pradesh Mineral Development & Trading Corporation Limited for the supply of 1,10,000 MT/annum on long term basis. The power requirement during construction phase shall be met by installing LT DG sets of 2 MW capacity. This shall also be used to meet the emergency power requirement during plant operation.

Ambient air quality monitoring has been carried out at 8 locations during post monsoon season of 2011 and the data submitted indicated: PM_{10} (35 to 44.6 $\mu\text{g}/\text{m}^3$), $PM_{2.5}$ (19.5 to 27.2 $\mu\text{g}/\text{m}^3$), SO_2 (<5 to 5.5 $\mu\text{g}/\text{m}^3$) and

NO_x (<5 to 8.4 µg/m³). AAQ sulphur study for point source emissions indicates that the maximum incremental GLCs would be 0.925 µg/m³, 2.27µg/m³ and 9.01 µg/m³ with respect to PM₁₀, SO₂ and NO_x respectively. To control air emissions, low Nox burners will be installed in pre-calculator, ESP will be provided for controlling the emissions from captive power plant and clinker cooler as multicyclone will not be able to maintain emission level below 50 mg/Nm³. During construction, emissions are fugitive in nature due to excavation, soil handling, sulphur and similar activities. The content of the emissions will be predominantly SPM, for which dust mask shall be provided to the workers. Water sprinkling will be done on roads, excavation sites and soil dump yards to reduce fugitive emissions.

The water requirement for project is estimated as 1000 KLD for cement plant & 2600 KLD for Captive Power Plant and will be obtained from Kamlang River at 9.6 kms north-west of project site. For the water drawl, PP has made an application to DC, Lohit District and the final approval in this regard is yet to be obtained by the PP. During operation phase there will be no generation of waste water from the operations in the cement plant. In power plant, in order to neutralise the effect of RO effluents, it is proposed to lead these effluents to a neutralising pit where acid or alkali shall be dozed depending upon the type and concentration of effluent. The treated effluent will be used for development/ maintenance of the green belt. Blow down water will be treated in neutralising pit located in the cooling tower area and used for sprinkling. Domestic effluent from the sanitation facilities in the plant as well as from the colony will be treated in the sewage treatment plant. Treated waste water will be utilized for green belt and plantation in the area.

No solid waste will be generated in cement manufacturing process. Dust collected from various pollution control equipments will be recycled back to the process. STP Sludge will be utilized as manure for green belt development within the plant premises. Out of the total plant area (i.e. 136.23 ha), 33% of total plant area will be developed under green belt. Used oil will be sold to registered recyclers.

The Committee deliberated on the issues raised during Public Hearing/Public Consultation conducted by Arunachal Pradesh Pollution Control Board on 26.6.2013 under the chairmanship of Deputy Commissioner at Village Manyuliang, District Lohit. The issues raised during Public Hearing are employment to the local people, pollution control equipment, construction of road and flood control systems etc which were addressed in the final EIA-EMP report.

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

- i. Status of environmental clearance for the limestone mines at Tidding limestone mine;
- ii. Wildlife Conservation Plan along with the map delineating the shortest (aerial) distance of Kamlang Wildlife Sanctuary and Namdapha Tiger Reserve from the project site, duly authenticated by the PCCF (WL) (Chief Wildlife Warden), Government of Arunachal Pradesh along with their comments on the WL Conservation Plan for conservation of Schedule I and II fauna existing in the study area;
- iii. Permission obtained for the water drawl from Kamlang River;
- iv. Detailed CSR Plan for the next 5 years;
- v. Copy of GO permitting use/lease of land to outsiders; and
- vi. Action plan for the transportation of coal and limestone.

18.3.2 Proposed Greenfield Integrated Steel Plant (6MTPA) of **M/s Jindal Steel and Power Limited** at Asanboni, Tehsil Potka, District East Singhbhum in Jharkhand (EC)

The Terms of Reference (TORs) to the aforesaid proposal was accorded by Ministry vide F.No. J-11011/322/2010-IA.II(I) dated 27.3.2012. M/s. Jindal Steel and Power Limited submitted the final EIA-EMP report to the Ministry vide letter no. Nil dated 14.3.2014. The details of the proposed units are given as below:-

Name of the Unit	Capacity
Iron Ore Beneficiation Plant & Pellet Plant	6.0 MTPA beneficiation plant and 4.5 MTPA Pellet
Sinter Plant	10.0 MTPA Sinter
Blast Furnace	6.2 MTPA Hot Metal / Pig Iron
Coke Oven	3.6 MTPA Coke
Steel Melting Shop	6.5 MTPA Steel BOF : 4 x 250 tons LRF : 4 x 250 tons VDU : 1 x 250 tons RH-OB 1 x 250 tons Billet Casters : 2 x 8-strands Slab Caster : 2 x 1-strand & 1 x 2- Strand
Rolling Mills	6.5 MTPA Rolled Steel Products Hot Rolling Mills : 4.5 MTPA Rebar Mill : 1.0 MTPA Structural Mill : 1.0 MTPA
Oxygen Plant	4 x 1300 TPD Oxygen
Lime and Dolime Plant	4 x 600 TPD Lime 2 x 600 TPD Dolime
Captive Power Plant	234 MW Electricity 2 x 50 MW using BF gas 2 x 50 MW power using heat from Coke Dry Quenching 2 x 17 MW power using Top Pressure Recovery Turbine

The Committee noted that the total land requirement for the project is 1417.01 acres ha (Government land – 198.63 acres; Private land – 1155.69 acres and Forest land – 62.69 acres). Of the 1417.01 acres, PP has acquired 181 acres of private land. With regard to forestland, an application has been made to DFO on 07.05.2013 for FC. The CPP is 234 MW and imported coking coal for the ISP. It was further noted that the project is situated within 10km of Dalma National Park and WL Sanctuary (5.85km from project site) and 0.5km from River Subarnarekha. Transportation of materials (raw and finished products would be by rail.

The Committee was of the view that it is premature to consider the proposal cited above as the PP is yet to acquire the land for the proposed project. The Committee deferred the consideration of the proposal cited above till PP acquires at least 60% of the total land required for the project. Further, the Committee requested the PP to collect the fresh one season baseline data as the data given in the report was of Dec 2010 – Feb 2011. The Committee also sought details of coal (CPP and ISP) and iron ore linkage for the project.

After detailed deliberations, the Committee recommended that the proposal may be placed before the EAC for fresh consideration, once the necessary documents indicating acquisition of 60% of the total land required for the project along with the fresh one season baseline data is submitted by the PP.

18.3.3 Expansion of Steel Plant to 1.5 MTPA along with Waste Gas based CPP (17 MW) of **M/s Uttam Galva Metallica Limited** at Village Barbadi, District Wardha, Maharashtra (EC)

M/s Uttam Galva Metallica Limited (UGML) (*herein after Project Proponent –PP*) and their EIA Consultant M/s. MECON Limited – Ranchi 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 6th meeting of the Reconstituted Expert Appraisal Committee (Industry) held on 5-7th March, 2013 for

preparation of EIA-EMP report. The TORs was awarded by MOEF vide F.No.J-11011/358/2012-IA II (I) dated 29.4.2013 for preparation of EIA-EMP report. PP had submitted the final EIA / EMP report vide letter no. UGML/MOEF/EXP/EC/2014 dated 6.1.2014 after conducting Public Hearing for grant of Environmental Clearance. All the steel plants are listed at S. No. 3(a) in primary metallurgical industry under Category 'A' of the Schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MOEF.

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

M/s Uttam Galva Metallics Limited is presently operating facilities for production of 0.47 MTPA of hot metal, 0.76 MTPA of sinters and 0.20 MTPA of metallurgical coke and 17 MW Captive Power Plant at village Barbadi and Inzapur, Taluka & District Wardha, Maharashtra and have proposed to expand the project to 1.5 MTPA along with waste gas based CPP (17MW) at the said location. The existing plant of UGML is located in an area of 140 ha. The existing plant obtained environmental clearance from MOEF vide letter no.J-11011/77/2005-IA.II(I) dated 4.10.2010. The proposed expansion will be carried out in the existing area of 140 ha and no additional land is required for the proposed expansion. No rehabilitation and resettlement issues are involved. The longitude and latitude of the project site is 78° 38' 15" E and 20° 42' 12" N respectively. No water bodies, rivers / drainage passing through the project site. No Forest land is involved. No defence installation, and ecologically sensitive areas such as Biosphere Reserve, National Park / Wildlife Sanctuary are located within 10 km radius of the project site. No court case / litigation are pending against the proposed project. The total cost of the expansion project is Rs.3727.30 crores and out of which Rs.260 crores is earmarked as capital cost for installation of pollution control and environmental monitoring equipment & Rs.107.35 crores / annum is earmarked as recurring cost for operation and maintenance of said equipments. Rs.145.05 crores and Rs.44.50 crores is earmarked towards the capital cost and recurring cost per annum towards the Enterprise Social Commitment (ESC) related activities based on local needs.

The capacity of proposed project activity has been tabulated below:

S.No.	Name of Product	Production Capacity		
		Existing	Proposed	Total After Expansion
a.	Sinter Plant	0.76 MTPA	0.76 MTPA	1.52 MTPA
b.	Blast Furnace along with 0.4 MTPA Pellet plant	0.47 MTPA	0.55 MTPA	1.02 MTPA
c.	Coke Oven	0.20 MTPA	0.60 MTPA	0.80 MTPA
d.	Coke oven gas based DRI (Surplus gas based) along with 0.4 Mtpa pellet plant	--	0.40 MTPA	0.40 MTPA
e.	Captive Power Plant (Surplus gas & kinetic energy based)	17 MW	17 MW	34 MW
f.	Converter / Electric Arc Furnace (Steel making)	--	60 Tonnes/Heat	60 Tonnes/Heat
g.	Caster & Mills for production of long products / blooms / billets	--	0.5 MTPA	0.5 MTPA

S.No.	Name of Product	Production Capacity		
		Existing	Proposed	Total After Expansion
	By – Product			
a.	Coal Tar	8400 TPA	25000 TPA	33400 TPA

The Environment Clearance for existing plant was accorded by the MOEF vide letter no. J-11011/77/2005 – IA.II(I) dated 4.10.2010. Regional Office of MOEF at Bhopal had sent the certified compliance report for the existing unit vide letter 5-34/2005(ENV)/893 dated 23.4.2014. The Committee noted that the as per the report furnished, compliance to the Environmental Clearance (EC) conditions were being met.

The raw materials required for the proposed expansion are iron ore (1609394 TPA), limestone (127675 TPA), dolomite (140260 TPA), burnt lime (44955 TPA), mill scale (116884 TPA), flue dust (143818 TPA), coke fines (107892 TPA), sinter fines (266251 TPA), lump ore (680372 TPA), quartzite (54000 TPA), Mn ore (28800 TPA), skip coke (504000 TPA), skip sinter (1545860 TPA), coal dust (180000 TPA), lime (52800 TPA), dolime (12000 TPA), DRI (81978 TPA), ferro alloys (6000 TPA) and coking coal (1123593 TPA). 60% - 80% of iron ore will be sourced from Jabalpur and the balance from Odisha /Karnataka. Iron ore will be transported to the plant site by rail/road. Coking coal will be imported from Australia for which PP has entered into a contract with Okay Creek Coal Sales Pre. Limited Singapore and BHP Billiton & Mitsubishi Alliance (BMA). Power requirement for the proposed expansion project is 32 MW. It was informed that the coke oven is based on wet quenching. The Committee was of the view that adoption of dry quenching of coke may be preferable.

Ambient air quality monitoring has been carried out at 8 locations on the basis of one full season baseline environmental data during March – June 2013 by field study. The data submitted indicated: PM₁₀ (49.10 to 68.60 µg/m³), PM_{2.5} (18.40 to 40.00 µg/m³), SO₂ 8.72 to 17.20 µg/m³ and Nox (14.80 to 26.30 µg/m³). AAQ sulphurg study for point source emissions indicates that the maximum GLCs would be 18.50 µg/m³ (at 10700, 10700), 9.10 µg/m³ (at 12500, 10000) and 8.10 µg/m³ (at 12500,10000) with respect to PM₁₀, SO₂ and Nox respectively due to expansion project. The BF and Sinter Plant will be equipped with bag filter arrangement with 99% efficiency. Bag filters and ESP in the steel plant and CPP will be installed, to control air emissions. Atomized water sprinkling system will be provided at coal handling area and unloading hoppers. Water spraying arrangements will be made, particularly raw material storage area, wagon tippler and truck tippler areas. Good housekeeping practices will be adopted to control the fugitive emissions.

The makeup water requirement for the project would be 20,616 m³/day which will be met from River Vena flowing at 33 kilometers away from plant site. Permission for the drawl of 8.76 Million m³/annum [24,000 m³/day] has been obtained from the office of the Chief Engineer, Water Resources Department; Govt. of Maharashtra vide letter dated 5.3.2010. The industrial waste water generated will be recycled and reused in a close circuit. Domestic waste water generated will be treated in the STP and the treated water will be utilized for Greenbelt Development. Rooftop Rainwater harvesting will be practiced within the plant premises.

The solid waste generated will be either sold to cement, bricks, paver blocks manufacturers or used in-house for land filling, construction of roads and making paver blocks. Dust collected from various pollution control equipments will be recycled back to the process. STP Sludge will be utilized as manure for green belt development within the plant premises. An estimated 33,400 tpa of coal tar generated would be sold to coal tar refiners. MOU has been entered with Cement Plant owners for use of slag; 70% of the BF slag presently generated is being sold to Ultra Tech Cement Ltd. and to a few other companies and SMS slag for road making activity. Out of the total plant area (i.e. 140.00 ha), 33% of total plant 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 sought details of iron ore and coal linkage documents. The Committee deliberated on the issues raised during Public Hearing/Public Consultation conducted by Maharashtra Pollution Control Board on 21.11.2013 under the Chairmanship of Additional District Magistrate, at 'Zilla Krida Sankul' ground, Taluka & District Wardha. The issues raised during Public Hearing are – development of infrastructure in terms of roads, drinking water, Gymnasium & Garden, pollution control equipment, employment to local youth and medical checkup facilities to the local villagers etc. In response to this, PP informed that the pollution / environment control technologies adopted in the proposed project are of the state of the art facilities and are considered Best Available Technology (BAT) for environmental control. Work has already commenced to up-grade the roads and school infrastructure in the surrounding villages. The Company is committed to provide more employment opportunities to local youths directly or indirectly and this will be continued. As on 30.09.2013, there were 1699 employees out of which 1251 employees (73.64 %) were from the surrounding areas. Free medical camps / health check-ups are being organized for the people of the area from the qualified medical practitioners / specialists. Free medicines have been provided in these camps. The Committee sought a Plan for Water Harvesting to store water for at least 20 days. The Committee desired that water consumption in the steel plant shall be as per CPCB norms. The Committee dry quenching only.

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

- i. Trace element analysis of iron ore;
- ii. Names of the iron ore suppliers and the status of environment clearances of the iron ore mines;
- iii. Coal linkage document along with the coal characteristics;
- iv. Action plan for rainwater harvesting in terms of the permission accorded by the Water Resources Department, Govt. of Maharashtra;
- v. Revised water balance diagram for the ISP project;
- vi. Note on de-sulphurisation in the coke oven plant;
- vii. Commitment for the use of dry quenching method in the coke oven;
- viii. Audiometric/spirometric test of the existing workers; and
- ix. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared over a period of ten years and shall be submitted.

18.4 Further Consideration of EC Cases

18.4.1 EC for Expansion of Integrated Cement Plant for production of Clinker (1.32 MTPA to 3.06 MTPA), Cement (1.52 MTPA to 3.52 MTPA), installation of 36 MW (2x18 MW), coal based captive power plant of **M/s KCP Ltd.** at village Multyala, Dist. Krishna, A.P. **(EC)**

The aforesaid proposal was considered by the Reconstituted Expert Appraisal Committee (Industry) in its 7th meeting held during 4-5th April, 2013 for grant of Environmental Clearance. After detailed deliberations, the Committee had sought following additional information from the proponent for reconsideration:

- I. Point wise compliance report to the following findings of the Regional Office, Bangalore
 - i) WHRB is yet to be installed.
 - ii) Fugitive emission control is not satisfactory. Laterite storage shed is yet to be erected. Black topping of internal roads are yet to be complied.
 - iii) STP yet to be installed. Reportedly, it will be installed by July, 2013.

- iv) Near packing plant and coal mill noise levels are close to permissible upper limits
 - v) Risk analysis reports and Disaster Management Plan are yet to be prepared
 - vi) Of the stipulated four AAQ stations only two are installed so far.
 - vii) Housekeeping has to be improved
 - viii) Data on AAQ has to be displayed near the main gate
 - ix) Central Ground Water Board suggestions are yet to be obtained for augmenting ground water
 - x) The company must approach State Forest Department to comply with the condition regarding conservation of wildlife.
 - xi) There is a pond on the company's own land and is in a Dilapidated State. Some water birds are sighted in this area. Project Proponent may take up development of this pond as part of eco-development work.
- II. Detailed note of court cases pending against the project and its present status along with requisite supporting documents.
 - III. Revised layout plan showing the green belt development area
 - IV. Coal linkage documents along with its analysis data
 - V. Copy of the Public Hearing Proceedings along with CD.
 - VI. Letter from Forest department regarding the impact on Reserve Forests due to the proposed expansion
 - VII. Rain water harvesting plan
 - VIII. MoU for hazardous waste utilization in kiln
 - IX. Actual data from the continuous online monitoring system for the existing unit
 - X. Time bound plan to reduce the drawl of water from Krishna river

The proponent vide letter No. KCP/U-II/PROC/2013-14 dated 22.6.2013 submitted the aforesaid additional information to the Ministry. The proposal was considered by the EAC in its 12th meeting held during 30th September 2013 – 1st October 2013 wherein the Committee had recommended that a fresh site visit to M/s The KCP Limited shall be undertaken by the Regional Office of the MOEF at Bangalore to verify the compliance of its findings and the report shall be submitted to the EAC for further consideration of the proposal.

Accordingly, officials of RO-Bangalore, MOEF had undertaken a site inspection on 27.11.2013 and submitted its report to the Ministry vide letter no.EP/12.1/860/AP dated 4.12.2013. Further, PP vide letter dated 9.12.2013 requested to consider their proposal. Proposal was placed before the EAC for consideration. PP and their EIA consultant – M/s B.S.Envi-Tech – Hyderabad made a presentation before the Committee.

The Committee found that as per the site inspection report of RO-Bangalore that the PP are complying with the findings referred above and after detailed deliberations the Committee recommended the project for environmental clearance and stipulated the following specific conditions along with other environmental conditions for accord of environmental clearance.

- i. Continuous stack monitoring facilities to monitor gaseous emissions from the process stacks shall be provided. After expansion, limit of PM shall be controlled within 50 mg/Nm³ by installing adequate air pollution control system. Electrostatic precipitators to clinker cooler, bag house to raw mill/kiln and bag filters to coal mill and cement mill. Low NO_x burners shall be provided to control NO_x emissions. Regular calibration of the instruments must be ensured.
- ii. Waste Heat Recovery Boiler (WHRB) for the proper and full utilization of gases generated from the kiln shall be installed and a compliance in this regard shall be submitted Regional Office at Bangalore within 3 months from the date of issue of the letter.
- iii. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- iv. Secondary fugitive emissions shall be controlled and shall be within the prescribed limits and regularly monitored. Guidelines / Code of Practice issued by the CPCB in this regard shall be followed.
- v. Arsenic and Mercury shall be monitored in emissions, ambient air and water.
- vi. The coal yard shall be lined and covered.

- vii. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash shall be transported in the closed containers only and shall not be overloaded. The company shall have separate truck parking area. Vehicular emissions shall be regularly monitored.
- viii. Total fresh water requirement after the proposed expansion of the cement and captive power plant shall not exceed 3196 m³/day which will be sourced from Krishna river/ bore wells/mine pit and recycling the wastewater. Prior permission shall be obtained from Central Ground Water Authority for the ground water drawl. A five year water management plan shall be made so as to achieve reduction in ground water withdrawal.
- ix. Efforts shall be made to further reduce water consumption by using air cooled condensers. All the treated wastewater shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge shall be adopted.
- x. 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.
- xi. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act, 1986 whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB.
- xii. All the bag filter dust, raw mill dust, coal dust, clinker dust and cement dust from pollution control devices shall be recycled and reused in the process and used for cement manufacturing. Spent oil and batteries shall be sold to authorized recyclers / reprocessors only.
- xiii. All the fly ash shall be utilized as per Fly ash Notification, 1999 subsequently amended in 2003 and 2008. Efforts shall be made to use fly ash maximum in making Pozzolona Portland Cement (PPC).
- xiv. A detailed study on chemical composition of coal used particularly heavy metal and radio activity contents shall be carried out through a reputed institute and report shall be submitted to Regional Office of the Ministry at Bangalore. Only after ascertaining its radioactive level shall fly ash be supplied for utilization in cement manufacturing.
- xv. Efforts shall be made to use low-grade lime, more fly ash and solid waste in the cement manufacturing.
- xvi. An effort shall be made to use of high calorific hazardous waste in the cement kiln and necessary provision shall be made accordingly.
- xvii. As proposed, green belt over 33 % of the total project area shall 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. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants shall be implemented.
- xix. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 4.7.2012 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bangalore.
- xx. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner

- xxi. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office at Bangalore, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xxii. To educate the workers, all the work places where 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.
- xxiii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, 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.

18.4.2 Proposed Integrated Cement Plant (Clinker:2.0MTPA, Cement – 2.5MTPA) along with 40MW coal based Captive Power Plant and WHRB 10 MW of **M/s UltraTech Cement Limited** at villages Tonki, Temberni, Sonudal & Gopalpura Tehsil Manawar, District Dhar in Madhya Pradesh (**EC**)

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 14th meeting held during 19-20th December 2013 wherein the Committee has recommended for the Environment Clearance subject to environmental safeguards. Thereafter, Ministry received a complaint from the gram panchayat on 26.12.2013 against the aforesaid project. The gist of the issues mentioned in the complaint is as below:-

- i. There are 27 villages affected due to the proposal cited above. However, in the EIA-EMP report only 4 villages mentioned;
- ii. There are 20 villages who will be directly affected due to illegal land acquisition;
- iii. In the land acquisition document, PP has obtained signature of illiterate scheduled tribes;
- iv. Most of the land is related to the Narmada Valley Development Authority. The canal in the said land is being used for agricultural purposes;
- v. PP informed that the Public Hearing (PH) was held on 12.11.2012. However, most of the people in that region do not have the information regarding PH;
- vi. Second PH held on 30.5.2013 wherein very less people have attended i.e. 3% of the people of 27 villages were participated;
- vii. ST population and the farmers are dependent upon the aforesaid land;
- viii. Land acquisition has been done on the old rule and not by the Land Acquisition Act, 2013;
- ix. PP reported in the EIA-EMP that they are having water withdrawal permission from CGWA. However, PP is yet to obtain the permission from CGWA; and
- x. Chief Minister, Madhya Pradesh on 26.10.2010 had an agreement with the PP stating that most of the project work will be done within three years otherwise the agreement will be cancelled.

Ministry had sought for the comments of PP on the complaint cited above. A copy of the complaint and the comments of PP were placed before the EAC for consideration. The Committee noted that the issues mentioned in the complaint do not have any merits as the proposed cement plant is being established in 4 villages and not in the 27 villages as mentioned in the complaint.

After detailed deliberations, the Committee recommended the project for environmental clearance subject to the specific conditions as stipulated in its 14th meeting held on 19-20th December 2013.

18.4.3 Expansion of existing 1x6 MVA Ferro Silicon Plant by addition of 2x9 MVA Submerged Arc Furnace to produce 35,000 TPA of Fe-Mn / Si-Mn and Fe- Chrome alloys of **M/s Ispat Alloys India Pvt. Limited** at Ambakata, P.S. Barkote, District Deogarh in Orissa (**EC**)

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 14th meeting held during 19-20th December 2013 for the grant of Environment Clearance, wherein the Committee had sought the following additional information for further consideration:

- i. TCLP test for Fe-Cr slag;
- ii. Work zone environment management plan including exposure specific health of the workers; and
- iii. Revised risk assessment and disaster management plan.

The proponent vide letter dated 8.2.2014 submitted the aforesaid additional information to the Ministry. The proposal was placed before the EAC for consideration. PP and their EIA consultant – M/s. Global Experts – Bhubaneswar made a presentation before the Committee.

The Committee found that as per the TCLP test of Ferro Chrome slag, the chromium level has been reported as 11.2 mg/lit. The Committee asked the PP to recheck the results of TCLP test. However, PP informed the Committee that now they will not be manufacturing Fe-Cr (10,000 TPA) and only Fe-Mn (15,000 TPA) and Si-Mn (10,000 TPA) will be manufactured.

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. No Ferro Chrome shall be manufactured without prior approval from the Ministry of Environment & Forests.
- ii. No charcoal shall be used as fuel. Pet coke shall be used as fuel instead of charcoal from unknown sources.
- iii. Continuous monitoring facilities for the process stacks and sufficient air pollution control equipments viz. fume extraction system with bag filters, ID fan and stack of adequate height to submerged arc furnace shall be provided to control emissions below 50 mg/Nm³.
- iv. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- v. Secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
- vi. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act, 1986 whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB.
- vii. The total water requirement shall not exceed 100 m³/day. The water requirement shall be met from ground water. The unit shall obtain ground water drawl permission from Central Ground Water Authority. 'Zero' effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises.
- viii. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- ix. Slag produced in Ferro Manganese (Fe-Mn) production shall be used in manufacture of Silico Manganese (Si-Mn). The Si-Mn slag and Fe-Si slag shall be used in the preparation of building materials.
- x. An action plan for control of Cr and As in air and water shall be prepared and submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xi. As proposed, green belt shall be developed in at least 33 % of the project area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.

- xii. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 7.12.2012 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bhubaneswar.
- xiii. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program shall be ensured accordingly in a time bound manner. The unit shall obtain panchayat clearance and copy shall be submitted to the Ministry's Regional Office at Bhubaneswar.
- xiv. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xv. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, 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.

18.4.4 Integrated Steel Plant (1.0 MTPA) along with Coal based Power Plant (200 MW) of **M/s Rashmi Cement Limited** at Village Hijalgarh Mouja, P.S-Jamuraia, District Burdwan, in West Bengal (**EC**)

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 12th meeting held during 30th September 2013 to 1st October 2013 for the grant of Environmental Clearance. As per the minutes of the meeting, the Committee sought following documents from the proponent for reconsideration of the proposal:

- i. Detailed Resettlement and Rehabilitation Plan;
- ii. Land acquisition documents;
- iii. Permission obtained from Central Ground Water Authority for the drawl of ground water;
- iv. Action Plan for Rain Water harvesting;
- v. Transportation pattern of incoming raw materials and outgoing finished products;
- vi. MoU made for the utilization of solid/hazardous generated from the ISP project;
- vii. Time bound action plan for five years towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with budgetary provision shall be submitted;
- viii. Occupational Health and Safety Management Plan along with budgetary provision shall be submitted and
- ix. Action plan for the storage and disposal of SMS slag.

The proponent vide letter dated 4.12.2013 submitted the aforesaid additional information to the Ministry. The proposal was placed before the EAC for consideration. PP and their EIA consultant – M/s Envirotech East (P) Limited – Kolkatta made a presentation before the Committee.

The Committee found that the R&R plan has been prepared based on the National R&R policy. Total no. of PAPs have been reported as 322 Nos and the cost of rehabilitation scheme would be Rs.1,25,10,000 to Rs.1,52,00,000. PP informed that out of the 515 acres of the land, 460 acres land is under the possession of the company and the balance 55 acres land is under advanced stage of negotiation. The Committee noted that as per Gazette Notification bearing No. West Bengal Act XVIII of 2005 dated 31st August, 2005", State Water Investigation Directorate is the Concerned Authority for allocation of water in West Bengal through the DLA (District Level Authority i.e. District Level ground water resources development authority) & SLA (State Level Authority i.e. West Bengal State Level ground water resources development authority). Accordingly, the water extraction permission from bed of River Ajay has been obtained from the department of the State Water Investigation Directorate through DLA (District Level Authority) & SLA (State Level Authority). Rain water

harvesting potential of the plant site would be 0.80 mcm. Bulk of the raw materials & finished products will be transported by rail and will be handled through the company's own railway siding, which will be located within the project site. The approval of the railway authority has already been obtained. A very small portion of the raw materials & finished products will be transported through trucks. As per an estimate, maximum 50 trucks per day will be required for this purpose. Granulated Blast Furnace Slag (1,57,500 TPA) generated from 0.42 MTPA capacity Blast Furnace & Fly ash (77,817 TPA) from the proposed 130 MW CFBC based Captive Power Plant will be used in own Cement Plant of 0.36 MTPA capacity at Jhargram, Paschim Midnapur, West Bengal. MoU has been signed for the utilisation of Slag & Fly ash. Rs. 55 crores is earmarked towards the Enterprise Social Commitment based on Public Hearing issues over a period of five years.

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

- i. Rehabilitation and Resettlement (R & R) Plan shall be prepared and submitted to the State Government of West Bengal. All the recommendations mentioned in the R & R Plan shall be strictly followed including suitable employment and other facilities to all the oustees. Compensation paid in any case shall not be less than the norms prescribed under National Resettlement and Rehabilitation Policy, 2007.
- ii. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), and bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm³ by installing energy efficient technology.
- iii. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- iv. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
- v. Dust suppression system and bag filters shall be installed to control the fugitive dust emissions at conveyor and transfer points, product handling, loading and unloading points.
- vi. Hot gases from the DRI kiln shall be passed through Dust Settling Chamber (DSC) to remove coarse solids and After Burning Chamber (ABC) to burn CO completely and used in Waste Heat Recovery Boiler (WHRB). The gas then shall be cleaned in ESP before dispersion out into the atmosphere through ID fan and stack. ESP shall be installed to control the particulate emissions from the WHRB.
- vii. Total make up water requirement shall not exceed 23160 m³/ day. The water consumption shall not exceed as per the standard prescribed for the sponge iron plants and steel plants.
- viii. Efforts shall further be made to use maximum water from the rain water harvesting sources. 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. Use of air cooled condensers shall be explored and closed circuit cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly.
- ix. All the effluent shall be treated and used for ash handling, dust suppression and green belt development. No effluent shall be discharged and 'zero' discharge shall be adopted. Sanitary sewage shall be treated in septic tank followed by soak pit.
- x. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or

described under the E(P) Act whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB.

- xi. The sulphur and ash content of coal shall not exceed <1% and 5-6 % respectively. All the char from DRI plant shall be utilized in FBC boiler of power plant and no char shall be disposed off anywhere else. FBC boiler shall be installed simultaneously along with the DRI plant to ensure full utilization of char from the beginning.
- xii. In case source of coal supply is to be changed at a later stage (now proposed imported coal from Indonesia) the project proponent shall intimate the Ministry well in advance along with necessary requisite documents for its concurrence for allowing the change.
- xiii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 and 2009. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding shall be submitted to the Ministry's Regional Office at Bhubaneswar.
- xiv. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xv. A detailed study on chemical composition of coal used particularly heavy metal and radio activity contents shall be carried out through a reputed institute and report shall be submitted to Regional Office of the Ministry at Bhubaneswar. Only after ascertaining its radioactive level shall fly ash be supplied for utilization in cement manufacturing.
- xvi. As proposed, green belt shall be developed in 33 % of plant area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xvii. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Sponge Iron Plants and Steel Plants shall be implemented.
- xviii. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program shall be ensured accordingly in a time bound manner.
- xix. The Company shall submit within three months their policy towards Corporate Environment Responsibility which shall inter-alia address (i) Standard operating process/ procedure to being into focus any infringement/deviation/violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.
- xx. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 3.8.2011 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bhubaneswar.
- xxi. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

18.5 Terms of Reference (TOR) Cases

18.5.1 Proposed Greenfield Integrated Steel Plant Complex of 7 MTPA capacity with 1320 MW Captive Power Plant and associated facilities of **M/s Jindal Steel and Power Limited** at Raigarh, Chhattisgarh (TOR)

The Terms of Reference (TOR) to the proposal cited above was accorded by MOEF vide F.No.J-11011/73/2009-IA.II(I) dated 3.1.2009. Thereafter, amendment to the TOR was accorded on 08.09.2011. Baseline data was collected by the PP during October – December 2011 and the draft EIA-EMP report was submitted to the Chhattisgarh Environment Conservation Board for conducting Public Hearing on 24.03.2012. PP vide letter dated 24.09.2013 requested the Ministry to extend the validity of the TOR dated 03.01.2009.

As per Ministry's O.M [No. J-11013/41/2006-IA.II (I)] dated 22.03.2010, the validity of the aforesaid TOR expired on 02.01.2013. In view of this, Ministry vide letters dated 26.09.2013 and 01.01.2014 informed PP to submit Form I and pre-feasibility project report for consideration of fresh TOR in accordance with the procedure stipulated in the EIA, Notification 2006. Accordingly, PP has submitted Form I and pre-feasibility project report to the Ministry vide letter dated 24.01.2014. Proposal was placed before the EAC for consideration of fresh TOR.

The PP along with their consultant – M/s EMTRC Consultants Private Limited – Delhi gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA-EMP report. The proposed project activity is listed at S.No. 3(a) in primary metallurgical industry under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MOEF.

M/s Jindal Steel and Power Limited have proposed to set up Greenfield Integrated Steel Plant Complex of 7 MTPA capacity with 1320 MW Captive Power Plant and associated facilities at villages Kalmi, Gorkha, Dhangarh, Bhaganpur, Jorapali, Parsada, Chiraipani, Khairpur, Patrapali, Gejamuda, District Raigarh, Chhattisgarh. Total land requirement for the proposed project is 1280 ha (Main steel plant – 912.611ha; coal conveyor ROW – 68.044 ha and CPP – 299.479 ha). Out of the total land of 1280 ha, 102.023 ha forest land (Main plant – 50.233 ha, coal conveyor – 20 ha and CPP – 31.79 ha) is involved. The main plant and the CPP falls within the villages namely – Baghanpur , Jorapali , Parsada , Chiraipani, Khairpur , Patrapali, Gorkha, Gejamuda , Dhanagar of Raigarh district, Chhattisgarh and the ROW for coal conveyor falls within the villages namely – Gare, Tamnar, Gorhi, Kasdol, Gorkhamuda, Ujjwalpur, Taraimal, Gerwani, Lakhs, Kishanpur, Khairpur, Gorkha, Patrapali, Chiraipani, Parsada of Raigarh district, Chhattisgarh. No national park/wild life sanctuary/ecologically sensitive area is located within 10 km radius of the project site. The historic Singhanpur caves is located within 15 km of the site. Kelo, Mand, Kurket and Pajhar rivers and their small tributaries are the main water courses exist within 15 km of the site. Raigarh town located about 4-5 km away from the steel plant site. The water requirement for the project is 100 MCM which will be sourced from River Mahanadi. The raw materials required are – iron ore (15 MTPA), coal (14 MTPA), coking coal (0.30 MTPA), dolomite (1 MTPA), limestone (1.8 MTPA), Mn ore (0.08 MTPA) and quartzite (0.02 MTPA). The iron ore will be sourced from the mines of PP located at Odisha and Chhattisgarh. Coal will be sourced from linkage coal (or) imported coal from South Africa and Mozambique. No court cases/litigation is pending against the project. Total cost of the project is Rs. 42,345 crores.

The details of the proposed production capacities are as below:

Sl. No.	Unit & Capacity	Capacity Proposed	Location Proposed
1.	Sinter Plant	650 m ² ; 6.60 MTPA	Raigarh
2.	Pellet Plant	8.00 MTPA	Raigarh
3.	Coke Ovens (recovery type)	2.20 MTPA	Raigarh

Sl. No.	Unit & Capacity	Capacity Proposed	Location Proposed
4.	Coal Gasifiers (18+3 Units)	600,000 Nm ³ /hr	Raigarh
5.	DRI Plant (Gas based)	6.0 MTPA (3x2.0 MTPA)	Raigarh
6.	Cogen Plant – for DRI units:	Cogeneration Power Plant from DRI Units 3 X 25 MW	Raigarh
7.	Coal pipe conveyor	Coal Handling & Coal transportation Systems(via pipe conveyor) in both directions: 50 km (approx.)	Gare Coal mines to Parsada via JPL Tamnar, Nalwa Steel & Power Ltd. (NSPL) Taraimal and JSPL, Raigarh
8.	Cogen Plant – Gasification units	5 X 16 MW	Raigarh
9.	Blast Furnace	5000 m ³ , 4 MTPA	Raigarh
10.	Desulphurization Unit	2 x 250 t	Raigarh
11.	Electric Arc Furnace	2 x 250 t	Raigarh
12.	Basic Oxygen Furnace	2 x 250 t	Raigarh
13.	Ladle Furnace	Ladle Furnace (single) 4 x 250 t	Raigarh
14.	Vaccum Degassing	2 x 250 t	Raigarh
15.	RH – TOP	RH- TOP (single) 2 x 250 t	Raigarh
16.	Slab caster	Slab Caster 4.0 MTPA	Raigarh
17.	Plate Mill/Structural Mill	Hot Strip Mill/ Plate Mill/ Structural Mill 4.0 MTPA	Raigarh
18.	Hot Strip Mill		
19.	Compact Steel Plant (C.S.P)	2 strand curved/vertical bend CSP with tunnel furnace and single hot strip mill of 3.5 MTPA	Raigarh
20.	C.R.M	1 x 2.0 MTPA	Raigarh
21.	C.G.L (Continuous Galvanizing Line)	1 X 1.0 MTPA	Raigarh
22.	Oxygen Plant	12000 tpd	Raigarh
23.	Lime plant & Dolime plant	5000 tpd	Raigarh
24.	Captive Power Plant	1320 MW (super critical)	Raigarh
25.	Utility, Electrical, RMH, etc.	As required to cater the above major production facilities	Mostly Raigarh & along the route of Coal Handling & Transportation System at S. No 7 above.
26.	Railway Siding, Infrastructure, Transport, etc.	As required to cater to above major production facilities	Mostly Raigarh & along the route of Coal Handling & Transportation System at S. No 7 above

The Committee consented to the use the baseline data generated during October 2011- December 2011 (Post monsoon season) for revising draft EIA report, which was submitted to the CECB before December 2013 for conducting Public Hearing. It was also mentioned that in case Public Hearing has not been conducted so far. The Committee recommended generated new baseline data and to revise draft EIA-EMP report for conducting Public Hearing.

After detailed deliberations, the Committee prescribed following specific TORs for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at **Annexure I**:

1. Iron ore and coal linkage documents
2. Air quality modelling for the proposed plant as well as the existing steel plant for specific pollutants needs to be done. APCS for the control of emissions from the kiln and WHRB shall also be included to control emissions within 50 mg/Nm³.
3. A note on the treatment, storage and disposal of all type of slag shall be included. Details of secured land fill as per CPCB guidelines shall also be included.
4. Land acquisition shall be 60% of the total land at the time of applying for Environmental Clearance
5. Power generated from the Captive Power Plant shall only be used for this project.
6. P.H. shall be conducted by the Chhattisgarh Environment Conservation Board as per the generic TOR.

18.5.2 Expansion of Ferro Alloy Production and proposal for MS Billets and TMT Bars production of **M/s Sai Durga Ferro Alloys Pvt. Limited** at Survey No. 199, 200, 203, 204 & 210 of Korlapahad Village, Kethepally Mandal, Nalgonda District, Andhra Pradesh (**TOR**)

The Terms of Reference (TOR) to the aforesaid proposal was accorded by MOEF vide F.No.J-11011/330/2010-IA.II(I) dated 20.10.2010. Public Hearing was held on 13.07.2012. Thereafter, PP vide letter dated 04.04.2013 submitted the final EIA-EMP report for grant of Environmental Clearance. As per the TOR awarded on 20.10.2010, the TOR is valid for a period of two years for submission of EIA-EMP report along with the Public Hearing proceedings. As the final EIA-EMP report was submitted to the Ministry after the expiry of the validity of the Terms of Reference (TOR), Ministry vide letters dated 07.08.2013 and 23.01.2014 informed PP to submit Form I and pre-feasibility project report for consideration of fresh TOR in accordance with the procedure stipulated in the EIA, Notification 2006. Accordingly, PP has submitted the form I and pre-feasibility project report to the Ministry vide letter dated 30.01.2014. Proposal was placed before the EAC for consideration of fresh TOR.

The PP along with their consultant – M/s Team Labs and Consultants, Hyderabad gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA-EMP report. The proposed project activity is listed at S.No. 3(a) in primary metallurgical industry under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MOEF.

M/s Sai Durga Ferro Alloys Pvt. Limited have proposed to enhance the Ferro Alloy Production and proposal for MS Billets and TMT Bars production at Survey No. 199, 200, 203, 204 & 210 of Korlapahad Village, Kethepally Mandal, Nalgonda District, Andhra Pradesh. Proposed expansion will be carried out in the existing plant area of 22.10 acres. No additional land is required for the proposed expansion. The longitude and latitude of the project site is 79°28' 20" E and 17°09' 35" N respectively. There are no National Park, Bird sanctuaries and biosphere reserve existing within 10 km radius of the project site. No Forest land is involved. Musi right flank canal and River Musi are located at a distance of 3.72 km and 6.5km respectively from the project site. Korlapahad village is located at a distance of 1.5km from the project site. National Highway (NH-9) is located at a distance of 0.3km from the project site. Power will be sourced from APTRANSCO. Water requirement after the proposed expansion would be 186 KLD which will be met from the ground water. Raw materials required for the proposed expansion are quartz, coke, iron scrap, electrode paste, Mn ore, Mn slag, sponge iron and metal scrap etc. No court cases/litigation is pending against the project. Total cost of the project is Rs.58 crores.

The details of the existing and the proposed expansion along with their Production capacity are given below:

S. No	Description	Capacity (TPA)				
		Existing	Proposed		Total	
		5 MVA	Existing 5 MVA	7.5 MVA		9 MVA
1	Ferro Silicon (Fe Si) *	3300	--	7000	8400	18700
2	Silico Manganese (Si Mn) *	--	9900**	14850	17820	42570
3	Ferro Manganese (Fe Mn) *	--	13200**	19800	23760	56760
4	MS Billets	--	72000			72000
5	TMT Bars	--	60000			60000

18.□.□ Ferro alloys are manufactured on campaign basis.

Proposed to utilize the existing 5 MVA furnace for the manufacture of Silico Manganese (Si Mn)* - 9900 TPA and Ferro Manganese (Fe Mn)* - 13200 TPA in addition to Ferro Silicon.

The existing and proposed plant capacity details are as given below:-

S. No	Facility	Capacity
Existing		
1	Submerged Electric Arc Furnace	5 MVA
Proposed		
1	Submerged Electric Arc Furnace	7.5 MVA
2	Submerged Electric Arc Furnace	9 MVA
3	Induction Furnace	2 x 15 T
4	Continuous Casting Machine	240 TPD
5	Rolling Mill	200 TPD

The Committee noted that Public Hearing for the aforesaid project was conducted on 13.7.2012 as per EIA Notification, 2006. It was informed that the reason for delay in conducting Public Hearing was due to Telangana agitation in the area and because of this there was a delay in submission of the final EIA-EMP report. In view of the above, the Committee decided to consider the project under 7 (ii) of the EIA Notification 2006 for exemption of Public Hearing for the expansion project.

The Committee noted that baseline data collected during October – December 2010 shall be revalidated by collecting fresh base line data collection for a period of one month. This data shall be used for the preparation of EIA-EMP report. The Committee agreed to it.

After detailed deliberations, the Committee prescribed following specific TORs for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at **Annexure I**:

1. 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.
2. Air quality modelling for the proposed plant as well as the existing plant for specific pollutants needs to be done.
3. P.H. is exempted under the provisions of the EIA Notification 2006

18.5.3 Proposed manufacturing of manganese Oxide, Manganese Dioxide and Various Ferro Alloys of **M/s Vidhi Alloys Private Limited** at village – Pipri, Tahsil-Kuhi, District-Nagpur, (Maharashtra) (**TOR**)

The PP did not attend the meeting. The Committee decided that the proposal may be placed before the EAC as and when requested by the PP.

18.5.4 Proposed Cement Grinding Unit 1.5 MTPA and CPP 10 MW of **M/s Emami Cement Limited** at Mouzas-Shibdih and Gangudih, Block- Chakda 1, District- Purulia, West Bengal (**TOR**)

The PP did not attend the meeting. The Committee decided that the proposal may be placed before the EAC as and when requested by the PP.

18.5.5 Proposed Iron, Steel billets, M.S Bars, Runner Riser, Miss Rolled Bars and Captive Power Plant of **M/s Gallant Metal Ltd.** at village Somakhilai, District Kutch, Gujarat (**TOR**)

The Terms of Reference (TOR) to the aforesaid proposal was accorded by MOEF vide F.No.J-11011/52/2013-IA.II(I) dated 13.6.2013. PP vide letter dated 17.5.2013 submitted the revised form I and pre-feasibility project report for the change in production capacities of various units and requested the Ministry for the grant of fresh TOR. Accordingly, the proposal was placed before the EAC for consideration of fresh TOR.

The PP along with their consultant [M/s Detox Corporation Private Limited] gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of References for the preparation of EIA-EMP report. The proposed project activity is listed at S.No. 3(a) in primary metallurgical industry under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MOEF.

M/s Gallant Metal Limited have proposed to expand their manufacturing unit at 175/1, 175/2, 176, 177, 178, 179/1, 179/2, 179/3, 182/1, 182/2, 183/1, 183/2, 184, 185/1, 185/2, 185/3 185/4, 185/5, Village :Samkhiyali, Taluka: Bhachau, Distt: Kutch, Gujarat by addition of sponge iron, steel billets, TMT bars and CPP of 8 MW capacity. The proposed expansion will be carried out within the existing plant premises of 116 acres. The existing plant obtained EC from MOEF vide letter no. J-13011/37/2007-IA-II(T) on 28.9.2007 and another EC vide letter no.J-11011/231/2009-IA.II(I) dated 8.6.2009. No forestland is involved. No National Park, Wildlife Sanctuary is exists within 10 km radius of the project site. Samakhiyali village is located at a distance of 1.5km from the project site. National Highway (NH-27) is located at a distance of 2.47km from the project site. The raw materials required for the proposed expansion are iron ore (79,200 TPA), coal (49,500 TPA), sponge (1,12,860 TPA), scrap (66,660 TPA) and MS billets (1,63,776 TPA). Coal requirement for the CPP would be 50,328 TPA. The water requirement for the proposed expansion will be 300 KLD which will be met from M/s. Gujarat Water Infrastructure Limited. No court cases/litigation is pending against the project. Project cost is Rs. 75 crores.

The details of the existing and proposed production capacities are as below:-

Product	Existing capacity	Proposed capacity	Total capacity
Sponge Iron	1,75,500 TPA	49,500 TPA	2,25,000 TPA
Steel Billets	1,78,200 TPA	79,200 TPA	3,36,600 TPA
TMT	1,71,963 TPA	1,58,037 TPA	3,30,000 TPA
Power Plant (AFBC)	17 MW	8 MW	25 MW
Power plant (WHRB)	8 MW	---	8 MW
Runner & Riser	891 TPA	---	891 TPA
Miss Rolled Bar	5,346 TPA	---	5,346 TPA

The details of the proposed equipment details are as below:-

Product	Equipment	Existing equipment	Proposed equipment
Sponge Iron	Rotary kiln	3 * 104.16 TPD 1 * 175 TPD	No additional kiln to be installed Pre heater technology to be installed in two kilns to enhance the capacity
Steel Billets	Induction furnace	3*15 MT	1 * 20 MT (TOR approved)
TMT	Rolling Mill	521 MT/ DAY	478.9 MT /DAY No reheating furnace to be installed. The use of existing reheating furnace also to be eliminated by directly feeding the hot billets
Power Plant	AFBC Boiler	1 no. of AFBC	1 nos. of AFBC with 32 TPH capacity
Power plant	WHRB	4 nos. Of WHRB	--

The Committee noted that the baseline data has been collected for the period March – May 2013 for the preparation of the EIA-EMP report. The Committee agreed to it.

After detailed deliberations, the Committee prescribed following specific TORs for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at **Annexure I**:

1. Iron ore and coal linkage documents
2. Air quality modelling for the proposed plant as well as the existing steel plant for specific pollutants needs to be done. APCS for the control of emissions from the kiln and WHRB shall also be included to control emissions within 50 mg/Nm³.
3. P.H. shall be conducted by the Gujarat Pollution Control Board as per the generic TOR.

18.5.6 Proposed Project of 3 MTPA Hot Strip Mill, 3.3 MTPA Beneficiation and 2 MT Pellet Plant and Special Plate Plant (3,000 TPA to 15,000 TPA) within the premises of Rourkela Steel Plant of **M/s SAIL** at village Rourkela Tehsil Rourkela, District Sundergarh, Odisha (**TOR**)

The PP gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of References for the preparation of EIA-EMP report. The proposed project activity is listed at S.No. 3(a) in primary metallurgical industry under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MOEF.

M/s Steel Authority India Limited have proposed to expand their integrated steel plant by the installation of 3 MTPA Hot Strip Mill, 3.3 MTPA Beneficiation and 2 MT Pellet Plant and Special Plate Plant (3,000 TPA to 15,000 TPA) at village Rourkela Tehsil Rourkela, District Sundergarh, Odisha. The proposed expansion will be carried out within the existing plant premises itself and no additional land is required for the proposed expansion. The latitude and longitude of the project site is 20° 12' 39.29" N & 84° 52' 1.71" E respectively. No Forest land is involved. No National Park, Wildlife Sanctuary is exists within 10 km radius of the project site. RF/PF exists in 15 Km radius area are: Durgapur R. F.: 1.8 km N, Reun R.F. : 8 km N, Patpahar R.F.: 9 km N, Bamnipahar R. F.: 7.5 km NNW, Mudrapahar R.F.: 9 km NNW, Reun R.F.: 9.5 km NW, Kamarpahar R.F.: 8 km NW, Vedvyas

P.F.: 7 km WNW Balanda P.F.: 8 km WSW, Rutkupiri R.F.: 5 km SW, Hatnibandha R.F.: 4 km S, Lathikata P.F.: 8.5 km SSE, Karalakhman P.F.: 8 km SE, Ergeda R.F.: 9 km SE, Sonaparbat R.F.: 3.5 km E, South Chirobeda R.F.: 7.5 km SE and North Chirobeda R.F. 6.5 km ESE. The water requirement for the proposed expansion will be 32880 KLD which will be met by recycling of treated waste water of existing Rourkela Steel Plant. The power demand for the proposed project is estimated as 210MW which will be met from NSPCL, OPTCL & Captive Power. No court cases/litigation is pending against the project. The raw materials required are Iron ore fines, Ferruginous solid waste, Coke Breeze, Limestone & Dolomite and Bentonite, etc. Project cost is Rs. 5419.11 crores.

After detailed deliberations, the Committee prescribed following specific TORs for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at **Annexure I**:

1. Iron ore and coal linkage documents
2. Air quality modelling for the proposed plant as well as the existing steel plant for specific pollutants needs to be done. APCS for the control of emissions from the kiln and WHRB shall also be included to control emissions within 50 mg/Nm³.
3. P.H. shall be conducted by the Odisha Pollution Control Board as per the generic TOR.

18.5.7 Setting up of a new production line of 1MTPA clinker and 1.13 MTPA cement production of **M/s Tamil Nadu Cements Corporation Limited (A Tamil Nadu Government Enterprise)**, at Kairulabad village, Dist. Ariyalur, Tamil Nadu (**TOR**)

The PP along with their consultant (M/s B.S.Envi-Tech Private Limited – Hyderabad) gave a detailed presentation on salient features of the project and proposed environmental protection measures to be undertaken along with draft Terms of Reference for preparation of EIA-EMP Report. The proposed activity is listed at S.No. 3(b) under Category 'A' of the schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MOEF.

M/s Tamil Nadu Cements Corporation Limited (TANCEM) is operating a 0.5 MTPA cement plant at Kairulabad village, district Ariyalur, Tamil Nadu since 1979. TANCEM have proposed to enhance the production by setting up a new production line with a capacity of producing 1 million tonne of clinker per year, Clinker capacity- 3000 TPD i.e., 1 MTPA and the total cement ulphurg-1.13 MTPA at Kairulabad village, district Ariyalur, Tamil Nadu. Proposed expansion will be carried out within the existing area of 67.15 ha. There is no National Park, Bird sanctuaries and biosphere reserve exists within 10 km radius of the project site. No Forest land is involved. The water bodies exists in the study area are Kallar river (1.5km SE), Marudaiyar river (4.6km SW) and Kundiyar river (8.7 km WSW). Nearest villages are Pallakaveri (0.4 km – N), Kallamkurichi (1.7 km – E), Kairulabad (1.2 km – S) and Ravuttanpatti(0.8 km – W). The raw materials required are Limestone 1.5 MTPA, river sand (0.01 MTPA), gypsum (0.05 MTPA), dry fly ash (0.13 MTPA) and coal (0.15 MTPA). The limestone will be procured from Existing & Applied ML Area at Kallankurichi, Kairalabad, Periyagalur and Ameenabad etc. Coal will be sourced from SCCL. The water requirement is estimated to be about 1560 m³/day. Water demand will be met from existing minepit/ Ground Water. The requirement of power is estimated to 17 MVA which will be availed from Grid. No court cases/litigation is pending against the project. Total cost of the project is Rs.542,52 crores.

The major sources of pollution in a cement plant are the stacks attached to the process units. All major sources of air pollution will be provided with bag house, bag filters & ESP to maintain particulate matter emissions within permissible limit. No solid waste will be generated in cement manufacturing process. Dust collected from various pollution control equipments will be recycled back to the process. Green belt will be developed in 33% of the cement plant area.

The Committee requested the PP to submit the consent (CTE and CTO) obtained from TNPCB for the existing cement plant operations.

After detailed deliberations, the Committee prescribed following specific TORs for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at **Annexure I**:

1. Limestone and coal linkage documents
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. Air quality modelling for the proposed plant as well as the existing plant for specific pollutants needs to be done. APCS for the control of emissions from the kiln and WHRB shall also be included to control emissions within 50 mg/Nm³.
4. P.H. shall be conducted by the Tamil Nadu Pollution Control Board as per the generic TOR.

18.5.8 Proposed enhancement of existing production capacity of casting by addition of one continuous caster, addition of new product (i.e Heavy Engineering Equipment and Components) and installation of Coal Gasifier of **M/s L&T Special Steels and Heavy Forgings Pvt. Ltd.** at Hazira Manufacturing Complex, Surat – Hazira Road, Hazira notified Area, Village Suvali, District – Surat, Gujarat (**TOR**)

The PP along with their EIA consultant – M/s. Eco Chem Sales and Service – Surat gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of References for the preparation of EIA-EMP report. The proposed project activity is listed at S.No. 3(a) under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MOEF.

M/s L&T Special Steels and Heavy Forgings Private Limited is presently operating Steel Melting Shop (SMS), Forge Shop & Machine Shop producing high quality, special grade, alloy steels & stainless steel components at Hazira Manufacturing Complex, Surat – Hazira Road, Hazira Notified Area, Village: Suvali, District: Surat, Gujarat. Environment Clearance (EC) was granted to the existing Unit, vide Letter No: F.No.J-11011/193/2009-IA-II(I) dated 20.10.2009.

M/s L&T Special Steels and Heavy Forgings Private Limited have proposed to add continuous caster to utilize the melting capacity of furnaces, addition of new product-lines (viz. Fabrication of Heavy Engineering Equipment, Components, etc.) and installation of Coal Gasifier at Hazira Manufacturing Complex, Surat – Hazira Road, Hazira Notified Area, Village: Suvali, District: Surat, Gujarat. The proposed expansion will be carried out within the existing plant premises of 90 acres and no additional land is required for the proposed expansion. The latitude and longitude of the project site is 21° 09' 19" N & 72° 40' 07" E respectively. No Forest land is involved. No National Park, Wildlife Sanctuary exists within 10 km radius of the project site. Tapi Estuary exists at a distance of 0.15km SE from the project site. Mora village is located at a distance of 2.42km from the project site. The water requirement for the proposed expansion will be 1571 KLD which will be fulfilled by reusing treated effluent from ETP followed by UF & RO. Hence for the proposals, no additional fresh water will be required. The power demand for the proposed project is estimated as 3.5 MW which will be met from Dakshin Gujarat Vij Co. Ltd (DGVCL)". The raw materials required are iron ore, pig iron, lime, dolomite, Fe-Mn, Fe-Si, Fe-Va, Fe-Ti, DRI and coal etc. No court cases/litigation is pending against the project. Project cost is Rs. 325 crores. Rs. 56.97 crores and Rs.1.14 crores is earmarked for the capital cost and recurring cost per annum towards the environmental pollution control measures.

The details of existing and proposed production capacities are as below:-

Product	Existing Quantity	Proposed Quantity	Total Quantity
Forgings	60,000 MT/Annum	NIL	60,000 MT/Annum
Steel Ingots, Castings & Liquid Steels	80,000 MT/Annum	4,50,000 MT/Annum	5,30,000 MT/Annum
Heavy Engineering Equipment & Components	NIL	15,000 MT/Annum	15,000 MT/Annum
Coal Gas	NIL	770 Lacs SCM/Annum	770 Lacs SCM/Annum

After detailed deliberations, the Committee prescribed following specific TORs for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at **Annexure I**:

1. Iron ore and coal linkage documents
2. Action plan for Tar and fly ash management
3. Air quality modelling for the proposed plant as well as the existing steel plant for specific pollutants needs to be done. APCS for the control of emissions from the kiln and WHRB shall also be included to control emissions within 50 mg/Nm³.
4. P.H. shall be conducted by the Gujarat Pollution Control Board as per the generic ToR.

18.5.9 Proposed Billet Casting Unit (20,000 TPM) and Co-generation Power Plant (10 MW) of **M/s Kanishk Steel Industries Ltd.** at Village Papankuppam, Taluk Gummidipoondi, District Thiruvallur, Tamil Nadu **(TOR)**

The Committee noted that the proponent vide their letter dated 24.4.2014 expressed their inability to attend the meeting due to some unavoidable circumstances. The Committee decided that the proposal may be placed before the EAC as and when requested by the proponent.

18.5.10 Proposed Expansion of the Cement Grinding Unit from 0.6 MTPA to 1.8 MTPA at ACC LTD Damodhar Cement Works, of **M/s ACC Ltd.** Madhukunda Village, Raghunathpur Taluk Purulia District West Bengal **(TOR)**

The Committee noted that above proposal is listed at S.N. 3(b) under category 'B' and has to be appraised by the SEIAA/SEAC concerned. Member Secretary – Industry Sector apprised the Committee that SEIAA/SEAC for West Bengal is in existence in accordance with the EIA Notification, 2006. In view of this, the Committee recommended that aforesaid proposal along with the project file concerned shall be transferred to the SEIAA/SEAC – West Bengal for taking action as appropriate.

18.6 Any Other Items

18.6.1 Proposed Zinc Smelter Complex Zinc Smelter (0.25 MTPA), Captive Power Plant (90 MW) along with the 0.25 MTPA Phosphoric Acid Plant (PAP) of **M/s Hindustan Zinc Ltd** at Village Zanwar, Tessil Girwa and Sarda, District Udaipur in Rajasthan **(Amendment in TOR)**

Terms of Reference (TOR) to the above proposal was accorded by MOEF vide letter no. J-11011/555/2011-IA II (I) dated 10.01.2012. PP vide letter dated 08.11.2013 requested MOEF for amendment in the ToR dated 10.1.2012. PP made a presentation before the Committee.

It was submitted by the PP that the location of PAP was revised and later shifted by us to Debari, district Udaipur as part of 0.55 MTPA Ammonium Phosphate Fertilizer Plant. TOR for Ammonium Phosphate Fertilizer

Plant was issued by MOEF vide Letter No. J-11011/261/2013-IA II (I) dated 28.1.2014. In view of this, PP have requested for the deletion of PAP as well as the TOR conditions no. 19, 36, 58, 60 & 61 pertaining to PAP from the TOR dated 10.1.2012.

After detailed deliberations, the Committee recommended for the deletion of PAP as well as the TOR conditions no. 19, 36, 58, 60 & 61 pertaining to PAP from the TOR dated 10.01.2012.

Further, during the meeting, PP requested for the extension of validity of TOR and the reasons given by the PP for the validity extension are as below:-

- i. Baseline study has been completed for the period December, 2011 to February, 2012 and March – May, 2013. All other studies as per ToR dated 10.1.2012 has been completed.
- ii. Draft EIA-EMP report to be submitted to the Rajasthan State Pollution Control Board for the purpose of Public Hearing.

After detailed deliberations, the Committee recommended for the extension of validity of TOR for a period of one year with effect from 9.1.2014.

18.6.2 Copper Smelter Plant –II (1200 MTPD Copper) in the Special Economic Zone of **M/s Sesa Sterlite Limited (Formerly M/s. Sterlite Industries (India) Limited)** at SIPCOT Industrial Complex, Therkku Veerapandia Puram Village, Ottapidaram Taluk Tuticorin, Tamil Nadu (**Extension of validity of EC**)

Environmental Clearance (EC) to the above proposal was accorded by MOEF vide letter no. J-11011/431/2008-IA II (I) dated 1.1.2009. As per the EC accorded, the proposal was exempted from conducting Public Hearing as per Section (iii) Stage 3, para 1 (b) of EIA Notification, 2006, on the ground that the project is located in the notified SIPCOT Industrial area. PP vide letter dated 26.12.2013 along with the updated Form I requested MOEF for extension of validity of EC. The Committee also requested the proponent to separately apply to the Ministry for transfer of TOR from M/s Sterlite Industries (India) Limited to M/s Sesa Sterlite Limited as the original EC is in the name of M/s Sterlite Industries (India) Limited.

PP submitted that the aforesaid project could not be established within validity period of the granted Environmental Clearance mainly because of:-

- i. Writ Petition No. 13810 of 2009 was filed before the Madurai Bench, Madras High Court against grant of EC dated 01.01.2009. In the said W.P., the petitioner has challenged the EC dated 01.01.2009 mainly on the ground that PH has not been conducted before granting EC and other issues regarding environmental pollution.
- ii. Matter has been heard extensively and no interim order has been passed in this matter. All the Respondents, MOEF, TNPCB, SIPCOT and the Industry have filed their respective Affidavits. Matter is yet to be listed thereafter.
- iii. PP yet to obtain Consent to Establish from TNPCB and no construction works has been started so far.

It was clarified that P.H. has not been held neither for the unit nor for SIPCOT Industrial Estate, where it is located. Land has been acquired for Phase-II, however, equipment has not been installed. On 29.03.2013, the existing unit was asked to close down by TNPB due to episodal emissions of SO₂. Existing Unit is in operation vide Order of NGT, which has been appealed against by TNPCB in the Hon'ble SC.

After detailed deliberations, the Committee desired that the EIA-EMP Report be updated with the following details:

- (i) One season baseline data.

- (ii) Conduct of P.H.
- (iii) Details of episodal SO₂ stack emissions.
- (iv) Changes in land use of SIPCOT Industrial Area
- (v) Status of compliance of CTO for existing unit.
- (vi) Status of disposal of HW in existing unit.

18.6.3 Integrated Cement Plant (Cement 3.00 MTPA; Clinker 2.00 MTPA), Captive Power Plant (2x18 MW) and Limestone Mine (3.2 MTPA, 624 ha) of **M/s Shree Cement Ltd.** at Village Gothra, Tehsil Nawalgarh, District Jhunjhunu, Rajasthan (**Extension of validity of EC**)

Environmental Clearance (EC) to the above proposal was accorded by MOEF vide letter no. J-11011/1173/2007-IA II (I) dated 15.7.2009. The Project Proponent (PP) vide letter dated 28.10.2013 along with the updated Form I requested MOEF for extension of validity of EC. PP made a presentation before the Committee.

PP submitted that the aforesaid project could not be established within validity period of the granted Environmental Clearance mainly because of:

- i. Of a total land area of 776.5 ha, only 735 ha land will be acquired. Rest 41.5 ha is non mineralized zone.
- ii. Of 735 ha land area, 249.73 ha has been acquired. The balance is under acquisition with mutual agreement with villagers.
- iii. Rs. 107 crores has been spent so far on land ulphurng.

After detailed deliberations, the Committee recommended for the extension of validity of EC by a period of three years with effect from 14.7.2014 subject to environmental safeguards.

18.6.4 Proposed expansion of writing and printing paper Manufacturing unit from existing 300 Tons/Month to 1200 Tons/Month (from Waste Paper and ready pulp without bleaching) of **M/s Aaditiya Aswin Paper Mills Pvt. Ltd.** at S.F.No. 65, Village- Ikkaraithathapally, Taluk- Sathyamangalam, District- Erode, Tamil Nadu- (**Clarification regarding applicability of EC**)

M/s Aaditiyaaswin Paper Mills Private Limited (M/s APMPL) have proposed to expand the Writing and Printing Paper Manufacturing Unit (from Waste Paper and ready pulp without bleaching) from existing 300 TPM to 1200 TPM at Sathyamangalam, Erode district, Tamil Nadu. The Tamil Nadu Pollution Control Board vide letter dated 10.05.2013 had sought a clarification from MOEF whether the aforesaid activity is covered under the EIA Notification 2006. In this regard, MOEF vide letter dated 25.07.2013 had sought details from TNPCB regarding involvement of bleaching activity and asked to send the process flow chart for the expansion proposal. In response to this, TNPCB vide letter dated 24.10.2013 informed Ministry that M/s. APMPL may be asked to make official presentation before MOEF so as to decide the applicability of the EIA Notification 2006 for the proposed expansion. Accordingly, the proposal was placed before the EAC for consideration. PP along with their consultant M/s.J.M.EnviroNet Private Limited – Gurgaon made a presentation before the Committee.

The Committee noted that, as per the EIA Notification 2006, manufacturing of paper from waste paper and ready pulp without bleaching is exempted under the provisions of the EIA Notification 2006. PP informed the Committee that their paper mill operations do not have facilities to bleach the pulp. PP informed that they have also sought expert advice from M/s Central Pulp and Paper Research Institute (An autonomous organization of M/o Commerce and Industry, Govt. of India) regarding involvement of bleaching in the paper manufacturing operations. Site inspection was carried out by the officials of M/s Central Pulp and Paper

Research Institute on 18.02.2014 and it was certified by CPPR that M/s APMPL is not using any bleaching chemical and do not have facilities to bleach the pulp.

After detailed deliberations, the Committee stated that the proposal of M/s Aaditiya Aswin Paper Mills Pvt. Limited for expansion of writing and printing paper Manufacturing unit from existing 300 Tons/Month to 1200 Tons/Month (from Waste Paper and ready pulp without bleaching) at S.F.No. 65, Village- Ikkaraithathapally, Taluk- Sathyamangalam, District- Erode, Tamil Nadu does not come within the purview of the EIA Notification 2006.

18.6.5 Integrated Project – Cement Plant 4.8 MTPA, Clinker 3 MTPA, Limestone 663.46 Ha. (4.4 MTPA Production) and Thermal Power Plant – 48 MW of **M/s Prism Cement Limited** at Kotapadu & Kalvatala Villages, Kolimigundla Mandal, Kurnool District, Andhra Pradesh (**Extension of validity of EC**)

Environmental Clearance (EC) to the above proposal was accorded by MOEF vide letter no. J-11011/166/2008-IA II (I) dated 27.3.2009. The Project Proponent (PP) vide letter dated 28.10.2013 along with the updated Form I requested MOEF for extension of validity of EC.

PP submitted that the aforesaid project could not be established within validity period of the granted Environmental Clearance mainly because of:

- i. Delay in allotment of Govt. Land area over an extent of 1000 acres for establishment of Plant which was granted and handed over to the company on Feb 2012.
- ii. Commencement of project construction activities delayed due to other pending statutory clearances like allocation of the coal Linkage, Railway line etc.
- iii. Delay in Obtaining Clearance from Town & Country Planning and Gram Panchayat which was received by the company on 22.04.2013.
- iv. Sluggish & Highly Saturated Market for Cement in A.P.

After detailed deliberations, the Committee recommended for the extension of validity of EC by a period of two years with effect from 26.3.2014 subject to environmental safeguards.

18.6.6 Clarification for Aluminum Foundry expansion project of **M/s Tata Motors Limited** at Chinchwad Works, Pune (**Clarification regarding applicability of EC**)

M/s Tata Motors Limited at Chinchwad Works, Pune is having in house foundry facilities for automobile manufacturing. M/s. Tata Motors Limited obtained requisite consents from Maharashtra Pollution Control Board for manufacture of (1) GI/SGI Castings, (2) Aluminium castings, (3) Machined and heat treated components and (4) Mine Protected Vehicles/Defense kits at Chinchwad Works, Pune. These products are manufactured in separate Shops / Buildings which are housed within our Chinchwad Works. The details of the various production facilities at Chinchwad Works, Pune are as below:-

Name of product	Production Quantum / Year	Unit
• GI/SGI castings	40,000	MT
• Aluminium castings	2,500	MT
• Machined components – (Ancillary Product Division & Rear Axle Tube Production)	4,80,000	Nos.
• Heat treated components – (Heat Treatment Shop)	1,300	MT

Name of product	Production Quantum / Year	Unit
• Mine Protected Vehicles	60	Nos.
• Supply of kits for Armoured Fighting Vehicles / Infantry Combat Vehicles / Main Battle Tanks and variants	1,200	Nos.

M/s Tata Motors Limited has sought clarification from MOEF whether the aforesaid manufacturing of aluminium castings is covered under the purview of the EIA Notification 2006. PP made a presentation before the Committee.

The Committee noted that as per the EIA Notification 2006, in case of secondary metallurgical processing industrial units, those projects involving operation of furnaces only such as induction and electric arc furnace, submerged arc furnace and cupola with capacity more than 30,000 tonnes would require environment clearance. In the present proposal under consideration, the total capacity of the manufacturing of GI/SGI Castings and Aluminium castings exceeds the threshold quantity mentioned in the EIA notification i.e more than 30,000 TPA. Therefore, the manufacturing of GI/SGI Castings and Aluminium castings by M/s. Tata Motors Limited at Chinchwad Works, Pune would require environmental clearance from the SEIAA/SEAC concerned as per the EIA notification 2006.

After detailed deliberations, the Committee recommended that the proposal of manufacturing of GI/SGI Castings and Aluminium castings by M/s. Tata Motors Limited at Chinchwad Works, Pune would require environmental clearance from the SEIAA/SEAC concerned as per the EIA notification 2006.

18.6.7 Modification cum expansion from existing 75,000 TPA Integrated Steel Plant and 14 MW Power Plant to 500,000 TPA Integrated Steel Plant and 84 MW Power Plant of **M/s OCL Iron and Steel Limited** at village Lamloi, Tehsil Rajgangpur, Sundargarh Odisha (**Amendment in TOR**)

TOR to the above proposal was accorded by MOEF vide letter no. J-11011/126/2013-IA II (I) dated 25.9.2013. The Project Proponent (PP) vide letter dated 1.2.2014 along with the Form I and PFR requested MOEF for amendment in the TOR for installing mini blast furnace, sinter plant, oxygen plant, lime plant and the increase in power generation.

It was submitted by the PP following are the proposed amendments in the production capacities:-

Unit	Configuration as per approved ToR dt. 25.09.2013	Capacity as per approved ToR	Amendment proposed in approved ToR	Capacity as per amendment	Change in capacity after amendment
Coal Washery	1x50 TPH (Existing) 1X300TPH(Inp ut rate)	0.5 MTPA	1x50 TPH (Existing) 1X300TPH	0.5 MTPA(Out put of only Prime Grade Coal, Excluding Middling and Rejects)	No change
DRI Kiln	4x100 TPD (Existing) 2x350 & 1x300	4,20,000 TPA	4x100 TPD (Existing) 2x350 TPD	3,30, 000 TPA	Reduction by 90,000 TPA

Unit	Configuration as per approved ToR dt. 25.09.2013	Capacity as per approved ToR	Amendment proposed in approved ToR	Capacity as per amendment	Change in capacity after amendment
	TPD				
I F	2x12 T (Existing) 1x15T	1,00,000 TPA	2x12T (Existing) 1X12T	92,160	Reduction by 7,840 TPA
E A F, LF, VOD & AOD	1x14 T LF (Existing) 1x100T	4,25,000 TPA	1x 14 T LF 1x65T (EAF,LF, VOD) No AOD	4,25,000 TPA	No change
Billet Caster	1x2 Strand (Existing) 1x4 strand	525,000 TPA	1x2 Strand (Existing) 1x4 strand	5,17,160TPA	No change
Rolling Mill	0.125 MTPA TMT +0.375MTPA Alloy Rounds	0.125 MTPA TMT +0.375MTPA Alloy Rounds	One Rolling mill 0.5 MTPA	0.5 MTPA(Alloy steel bar)	No change
Power plant (WHRB)	4x(10 TPH/2MW) (Existing) 2x (38 TPH/10MW)	28MW	4x(10TPH/2MW) (Existing) 2x(38TPH/7MW)	22MW	(-)6 MW
Power plant (AFBC)	6MW (Existing)	6MW	6 MW (Existing)	6 MW	No change
Power plant (CFBC)	50 MW	50MW Total Power=84MW	1x(230TPH/56MW)	56 MW Total Power=84MW	(+)6MW No change in total Power
M B F	Nil	Nil	130m ³	1,30,000 TPA	Additional
Sinter plant	Nil	Nil	18m ²	2,10,000TPA	Additional
Dolo-Lime plant	Nil	Nil	150 TPD	45,000 TPA	Additional
Oxygen plant	Nil	Nil	100TPD	30,000 TPA	Additional

In addition, PP informed that there will be no change in the TOR approved capacity of 0.5 MTPA steel and there will be no change in the captive power generation of 84 MW.

After detailed deliberations, the Committee recommended for the amendment in the subject matter of the TOR dated 25.9.2013 as mentioned above.

18.6.8 Change in Production capacity of existing steel Plant from 3.25 MTPA to 3.60 MTPA of **M/s Jindal Steel & Power Limited** through Renovation & Modernisation at Raigarh, Chhattisgarh (**Amendment in EC**)

The Ministry of Environment and Forests vide letter no. J-11011/799/2008-IA II (I) dated 4.11.2009 accorded Environmental Clearance to M/s Jindal Steel & Power Limited for the expansion of Steel Plant (0.45 MTPA to 1.25 MTPA) at Village Patrapalli, Tehsil & District Raigarh, Chhattisgarh. As per the EC accorded, the capacity of the SMS is 3.25 MTPA. PP vide letter dated 27.12.2013 along with the Form I and PFR requested MOEF for amendment in the EC dated 4.11.2009 for the change in the production capacity from 3.25 to 3.60 MTPA through Renovation & Modernisation (R&M). PP along with their consultant M/s EMTRC Consultants Private Limited – Delhi made a presentation before the Committee.

It was submitted by the PP following are the proposed enhancement by R&M in the EC dated 4.11.2009 in terms of the production capacities:

S.No.	Name of Existing Operational Unit	Existing Capacity	Proposed Capacity Enhancement by R&M
1.	Blast Furnace Unit I	0.42 MTPA	0.42 to 0.525 MTPA (0.105 MTPA increase)
	Blast Furnace Unit II	1.25 MTPA	1.25 to 1.60 MTPA (0.35 MTPA increase)
2.	SMS Unit I	1.25 MTPA	No change
	SMS Unit II (A)	0.75 MTPA	0.75 to 1.10 MTPA (0.35 MTPA increase)
	SMS Unit II (B)	1.25 MTPA	No change
3.	Sinter Plant	2.50 MTPA	2.5 to 2.85 MTPA (0.35 MTPA increase)
4.	DRI Plant I	0.60 MTPA	No change
	DRI Plant II	0.72 MTPA	No change
5.	Coke Oven	0.80 MTPA	No change
6.	Rail & Universal Beam Mill	0.75 MTPA	No change
7.	Plate Mill	1.00 MTPA	No change
8.	Medium & Light Structural Mill	0.70 MTPA	No change
9.	Oxygen Plant	37683 Nm ³ /hr	No change
10.	Lime and Dolome Plant	0.4165 MTPA	No change
11.	Ferroalloy Plant	0.06 MTPA	No change
12.	Producer Gas Plant	79200 Nm ³ /Hr.	No change
13.	Captive Power Plant	353.6 MW	No change

PP informed that proposed R&M activity requires no additional land and shall be within the existing plant area of 1913 acres. The additional water requirement of 63 KL/ hour shall be met through treated wastewater. The additional power requirement of 50 MW shall be met through existing Captive Power Plant. The Proponent submitted that the additional iron pellets will be transported from the proponent's own Pellet Plant in Barbil by rail and Coal for Pulverised Coal Injection will be imported. Remaining raw materials are available in-house. The proponent submitted that there will be no increase in emission load due to the proposed R&M activity, waste water will be recycled and reused and no wastewater will be discharged outside plant. The additional solid waste generated will be utilised within the plant. Total cost of the proposed R&M activity is Rs. 450 crores.

Due to the aforesaid R&M, the comparative statement on the pollution load presented by the PP is as below:

S.N.	Parameters	Existing	Proposed	Remarks
1.	Land Area (acres)	1913	1913	No change in land area and in plant layout
2.	Water consumption (kl/hr)	632	695	Increase by 63 kl/h. Will be met by treating wastewater
3.	Power Consumption (MW)	500	550	Additional power will be met from CPP
4.	Air Pollution Load	PM – 237 kg SO ₂ – Traces Nox- 255 kg	PM – 205 kg SO ₂ – Nil Nox- 252 kg	Air pollution would be reduced by more efficient air pollution devices.
5.	Water Pollution Load (kl/h)	97	111.5	Additional 14.5l/h would be treated and recycled and reused.
6.	Solid Wastes (Load)			
	Blast Furnace slag (TPA)	5,34,400	6,80,000	1,45,600 TPA increase. Consumed in own cement plant and also sold to other cement plants.
	Dust and Sludge from Treatment plant (TPA)	28,390	36,125	7,735 TPA increase. Entire amount would be consumed in sinter plant.
	SMS Slag (TPA)	8,93,750	9,90,000	96,250 TPA increase. Shall be 100% converted into slag balls and sold.
	SMS dust (TPA)	78,000	86,400	8,400 TPA. Shall be 100% consumed in Sinter Plant.
	Scales from CCM (TPA)	1950	2300	350 TPA increase. Shall be 100% consumed in Sinter Plant.

After detailed deliberations, the Committee sought following additional information from the PP for further consideration of the proposal cited above:

- i. Detailed report on CSR undertaken in the existing plant
- ii. Certified copy of EC compliance from RO, MOEF shall be submitted as per MOEF Office Memorandum dated 30-05-2012.

18.6.9 Cement plant (4.0 MTPA), Clinker (2.6 MTPA) and Captive Power Plant (40 MW) of M/s Dalmia Cement (Bharat) Limited at Yadwad, Gokak, Belgaun, Karnataka (Extension of validity of Environment Clearance)

Environmental Clearance (EC) to the above proposal was accorded by MOEF vide letter no. J-11011/119/2007-IA II (I) dated 24.6.2008. The PP vide letter dated 28.3.2013 along with the updated Form I requested MOEF for extension of validity of EC. PP made a presentation before the Committee.

PP submitted that the aforesaid project could not be established within validity period of the granted Environmental Clearance mainly because of:

- ❖ Delay in 6(1)B relaxation of the associated captive limestone mine and change in extent of Mining Lease allocated by State Government requiring revision in Mining plan.
 - If the ML area exceeds ten square Kilometers in a state (Karnataka), it requires 6(1)B relaxation from Ministry of Mines as per the Provisions of the Mines and Minerals (Development & Regulation) Act, 1957 –**Obtained 6(1)b relaxation on 17th August, 2011.**
 - Change in extent of ML area after inclusion of some interspersed land which were deleted earlier (within the same lease boundary). Revised LOI for an area of 1228.63 ha in place of 1157.26 ha issued by State Gov. vide letter no. DMG:MLS:384AML07:11-12 dtd. 24th Feb 2012.

- Mining plan had to be revised as per the revised ML area and submitted to IBM on 24th May 2012 which was approved on 12th July 2013.

Thus, having been assured of raw material, in 2012, construction at site was started.

After detailed deliberations, the Committee recommended for the extension of validity of EC by a period of three years with effect from 23.6.2013 subject to environmental safeguards.

18.6.10 Expansion of Sponge Iron Plant (1,20,000 TPA) by installation of Pig Iron Plant (1,81,500 TPA), Induction Furnace (Steel Billets, 2,50,000 TPA) and Captive Power Plant (WHRB, 10 MW & AFBC, 22 MW) of **M/s Shri Ganesh Metaliks Ltd** at Village Chadrihariharpur, Kuarmunda, District Sundergarh, Orissa (**Amendment in EC**)

The PP did not attend the meeting. The Committee decided that the proposal may be placed before the EAC as and when requested by the PP.

18.6.11 Expansion of Cement Plant from 1 MTPA to 1.15 MTPA Cement production and setting up a 15 MW cogeneration captive power plant of **M/s Kalyanpur Cements Limited** at Village Banjari, Tehsil & District Rohtas in Bihar (**Extension of validity of TOR**)

The Terms of Reference (TOR) to the above proposal was accorded by MOEF vide letter no. J-11011/366/2011-IA II (I) dated 9.9.2011. PP vide letter dated 20.8.2013 requested MOEF for extension of validity of TOR. PP made a presentation before the Committee.

It was submitted by the PP following are the reasons for seeking extension of validity of TOR:

- PP had complied all conditions of TOR issued by MOEF and the Draft EIA-EMP Report was submitted to the Bihar State Pollution Control Board (BSPCB), Patna on 02.05.2012 for conducting Public Hearing.
- BSPCB, Patna has successfully conducted Public Hearing on 15.07.2012 at Primary School, Baknaura, Banjari, Dist. Rohtas, Bihar
- As per TOR condition at Sl. No. 10, a map showing the location of plant and Kaimur Wildlife Sanctuary along with distance to be authenticated by Chief Wildlife Warden, Bihar is required.
- PP submitted the application for No Objection Certificate & Map Authentication to DFO, Rohtas, Bihar on 18.11.2011. NOC will be issued by the Chief Wildlife Warden only after Gazette Notification of Eco Sensitive Zone by the MOEF.

After detailed deliberations, the Committee recommended for the extension of validity of TOR for a period of one year with effect from 08.09.2013.

18.6.12 Mill Growth Plan (MGP) comprising addition of 5,00,000 TPA paper and board production and 5,00,000 BD TPA Bleached Pulp, a new 1,50,000 BD TPA BCTMP Pulp and 190 MW Captive Co-generation Power of **M/s ITC Limited** at Village Sarapaka, Tehsil Burgampahad, District Khammam in Andhra Pradesh (**Extension of validity of TOR**)

The Terms of Reference (TORs) to the above proposal was accorded by MOEF vide letter no. J-11011/09/2012-IA II (I) dated 23.3.2012. PP vide letter dated 05.03.2014 requested MOEF for extension of validity of TOR. PP made a presentation before the Committee.

The following reasons for seeking extension of validity of TOR:

- i. Proposal for allotment of land was forwarded by Government of Andhra Pradesh to MOEF in February 2011.
- ii. After series of reviews by State Govt and MOEF, PCCF, Govt of AP recommended to scale down area to **300 ha** (against the original requisition of **445 ha**) and forwarded proposal to MOEF in November 2013.
- iii. Additional PCCF, MOEF, Bangalore inspected the site on 23.01.2014 and held discussions with officials of APIIC and ITC on 30.01.2014. Further communication is awaited
- iv. Due to the long processing time (from 2011) in allotment of land, ITC could not proceed with Public Hearing
- v. Change in EIA consultant from M/s. Vimta Labs – Hyderabad to M/s. Cholamandalam MS Risk Services Limited as M/s. Vimta Labs was not accredited QCI/NABET for pulp and paper sector

After detailed deliberations, the Committee recommended for the extension of validity of TOR for a period of one year with effect from 22.03.2014.

ONGC PROPOSALS

18.6.13 Exploratory Drilling of 8 wells in NELP-VI Block of **M/s ONGC**, KG Offshore A.P. (**EC**)

The project proponent and their consultant (Asian Consulting Engineers Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) 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.

MOEF has granted Environmental Clearance for drilling of eight wells in the said block vide F.No. J-11011/541/2007-IA II (I) dated 3rd June'2009 (Seven wells) and F.No. J-11011/218/2012-IA II (I) dated 2nd May'2013 (One well). Drilling of all eight exploratory wells were completed during phase-I minimum work programme (MWP) commitment. The wells drilled in the block and the results there off are tabulated below:

S N	Well	Status	Brief Results
1	KGOSN041NACS#1	Gas	Q gas :172000m3/d from object-1 Q gas : 127116m3/d from Object-II
2	KGOSN041NAAL#1	Gas	Q gas : 144780m3/d from Object:1
3	KGS041NASA#1	Gas	Q gas : 409453m3/d from Object-II Q gas : 315001m3/d from Object-IV
4	KGS041NANL#2	Gas	Q Gas : 150034m3/d from Object-I
5	KGS041NANL#1	Gas	Q gas : 261268m3/d from object-II+ 41 bopd of water
6	KGS041NARV#1	Gas Indication	Minor Gas in MDT
7	KGS041NANL#3	Gas	Q gas : 289190m3/d from Object-I
8	KGS041NAMA#1	Gas Indication	Qgas : 4921m3/d + QW: 43bopd

M/s ONGC has proposed for exploratory drilling of additional 8 wells in NELP –VI Block, KG-OSN-2004/1, KG offshore basin. The block KG-OSN-2004/1 awarded to ONGC and BGEPI under NELP-VI licensing round with ONGC being operator. Block KG-OSN-2004/1 covers an area of 1131 Km². Total of 8 wells will be drilled and depth varies from 1930-2600 m. Water depth varies from 60 m to 322 m. Total cost of the project is Rs. 600 crores. Distance of the wells from the coastline varying between approx.. 17 to 28 Km. No eco-sensitive areas or forest or wild life sanctuaries are located within 10 km distance from the wells. It is reported in the EIA report that CRZ clearance will be obtained. During meeting, further PP clarified that the proposed wells are away from CRZ area and does not require a clearance under CRZ Notification.

The proposed drilling operations will require a four number of DG sets with the capacity of 1430 KVA to cater to the power requirement. Stack height 30 m will be provided to DG set. Predicted value of ground level

concentration due to proposed project is SO₂ (0.148 ug/m³) and Nox (0.161 ug/m³). The resultant concentrations are within the NAAQS. Water requirement will be 20 m³/day.

Water based mud system will be used for drilling of these wells. However, in case of specific down hole problems, low toxic Synthetic Oil Base Mud (SOBM) having aromaticity of <1% will be used. Thoroughly washed drill cuttings will be discharged to sea with proper dilution @ 50 bbl/hr. intermittently as per GSR 546(E) dated 30th August, 2005 guidelines. All the drilling mud additives will be having low toxicity and bio-degradable. All the safety guidelines issued by the OISD, MOEF will be followed.

The Committee also discussed the compliance status report on the conditions stipulated in the existing environmental clearance, which were monitored by the Ministry's Southern Regional Office, Bangalore. It is reported that the KG basin Project Authority have initiated Marine environmental studies. Guidelines for disposal of solid waste, drill cuttings and drilling fluids for offshore drilling operations notified vide GSR-546 € dated 20.08.2005 was complied with during their drilling process. No water is generated. Oil contingency plan exists with them. DG sets were housed in the deck with acoustic enclosure. DG sets have adequate stack height. The Committee found compliance report satisfactory. The Committee exempted the preparation of EIA-EMP report and Public Hearing under 7 (ii) of EIA Notification, 2006.

After detailed deliberations, the Committee based on the additional information furnished and presentation made recommended the project for environmental clearance 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 m³/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 housekeeping 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 viz 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's Regional Office 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 Bangalore.
- xxiv. Petroleum and Natural Gas (Safety in Offshore Operations) Rules 2008 of OISD shall 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. Petroleum and Natural Gas (safety in Offshore Operations) Rules 2008 of OISD shall be strictly adhered to.

18.6.14 Drilling of 350 Development Wells of M/s Oil & Natural Gas Corporation Ltd. (ONGCL) in Mehsana Asset in District Mehsana, Patan, Gandhinagar, Ahmedabad, Gujarat (EC)

The project proponent and their consultant (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 30th Meeting of the Expert Appraisal Committee (Industry) held during 15th-16th December, 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 & Natural Gas Corporation Ltd. (ONGCL) has proposed for drilling of 350 Development Wells in Mehsana Asset in District Mehsana, Patan, Gandhinagar, Ahmedabad, Gujarat. Total area of the mining lease under Mehsana Asset is 941.796 sq. Km. The 45 Mining Leases are located in the state of Gujarat with in Mehsana, Patan, Gandhinagar and Ahmedabad District. ONGC proposes drilling of Development Wells with an average target depth of 1600 m. No national park, Wildlife Sanctuary or Eco sensitive area is located in the study area. Total cost of project is Rs. 1667.7 crores. Water based mud will be used.

Fields	PML	Wells	Total
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Balol Bechraji Jotana Santhal Langhnaj & others Lanwa Linch N Kadi Nandasan Sobhasan	Balol, Balol Ext1, Santhal, Bechraji, Dedana, Jotana South, Jotana ExtI, Jotana ExtII, Jotana South, Jotana-Warosan, Linch Ext2, Kadi Ext2(Revised), Charada Balol Ext-I Langhnaj, Nandasan-Langhnaj, Langhnaj-Wadasama, Lanwa, Chanasma, Kadi Asjol, Lanwa Ext1, Nandasan Ext1, Linch, Linch Ext1, Jakasana, Kadi Ext1, Kadi-Asjol, Mehsana City, Mehsana City Ext II, N.Sobhasan Part A & B, N.Sobhasan Ext1, N.Sobhasan ExtII, Geratpura, Sobhasan, W.Sobhasan, E. Sobhasan, W. Mewad, Sangapur, Mansa, Mansa ExtI, S.Patan, Chandrora, Bechraji Ext I, Kamboi, Patan Tharad, W.Patan	110	88	52	51	49	350
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ML wise break-up of the 350 wells to be drilled during year 2012-2017 is as given below:

S.N	Name of ML	District	No of wells to be drilled	Wells to be connected with existing GGS/CTF
1	Sobhasan	Mehsana, Patan & Gandhinagar	60	Sobhasan
2	Santhal	Mehsana	93	Santhal
3	Nandasan	Mehsana	61	Nandasan
4	Linch	Mehsana	22	Linch
5	North Kadi	Mehsana & Ahmedabad	48	North Kadi
6	Jotana	Mehsana & Patan	07	Jotana
7	Balol	Mehsana & Patan	46	Balol
8	Lanwa	Patan	04	Lanwa
9	Bencharaji	Mehsana & Ahmedabad	09	Bencharaji
Total			350	

Additionally, PP informed the Committee that ambient air quality monitoring was carried out at 14 locations during Summer, 2012 and submitted baseline data indicate ranges of concentrations of PM₁₀ (58 µg/m³ to 76 µg/m³), PM_{2.5} (19 µg/m³ to 34.00 µg/m³), SO₂ (9 µg/m³ to 10.9 µg/m³) and Nox (16.1 µg/m³ to 12.4 µg/m³) respectively. Levels of AAQMS are within the NAAQS.

Flare stack of 9 m height will be provided. Adequate stack will be provided to DG set to disperse air emissions. Total water requirement from tanker water supply will be 45 m³/day. Effluent will be treated in effluent treatment plant (ETP) comprising equalization, chemical coagulation, flocculation and clarification by settling and residual unusable mud will be collected in lined pits and solar evaporated. Drill cutting (DC) will be separated from water based mud (WBM) and washed properly and unusable drilling fluids (DF) will be disposed off in well designed lined pit with impervious liner for solar drying. Disposal of drill cuttings and drill mud will be carried out in accordance with the GSR 546 (E) dated 30th August, 2005. Used oil will be sent to authorized recyclers. Mehsana assets has already established hydrocarbon producing asset and having 26 GGSs/CTFs for handling of hydrocarbons. Existing produced water generation is in the range of 13443 m³/day to 14819 m³/day. ONGC has 7 existing ETPs in Mehsana. Under Mehsana Asset redevelopment plan, 3 new ETP one each at Bechraji, Sobhasan and North Kadi Field were proposed of 6000 m³/day. Treated effluent will

be injected back by closed pipeline into the effluent disposal well below 1000 m from GL as per recommended code of practice. The waste oil and oily waste generated from the equipments will be brought onshore and sent to authorized recycler/re-processor.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 21st May, 2013 for Gandhinagar District, 24th May, 2013 for Patan District and 7th June, 2013 for Ahmedabad District. The issues raised during Public Hearing were regarding compensation for land, poor road quality, accident, leakage and accident, compensation against damage, land acquisition, training and employment for their children etc. Public Hearing issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

The Committee also discussed the compliance status report on the conditions stipulated in the existing environmental clearance, which were monitored by the Ministry's Western regional office, Bhopal. It is reported that the compensation amount paid to the owners from whom land was acquired for acquisition of Private Land as per Central /State Government norms. An impervious lining pit are provided for collecting drill cuttings & wastewater and were disposed off as per said order. PA has not uploaded the status of compliance of the stipulated EC conditions, including results of monitored data on its website as per condition. The Committee desired that M/s ONGC shall comply the conditions, which are yet to be complied and action plan shall be submitted.

After deliberations, the Committee desired the following additional information:

- (i) Compliance report/action plan to the observations made by Regional Office, Bhopal in their Monitoring report dated 27.01.2014.
- (ii) Action plan for need based enterprises social commitment considering 5 % of project cost over five years to be submitted.

The proposal was deferred until the desired information was received. The above information shall be provided with the uploading of minutes on the website.

18.6.15 Exploratory Drilling (2 wells) of **M/s Oil & Natural Gas Corporation Ltd. (ONGCL)** in Purnea Basin, West Bengal Onshore Block PA-ONN-2005/2, West Bengal under NELP-VII (EC)

The project proponent gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 27th Meeting of the Expert Appraisal Committee (Industry-2) held during 21st-22nd September, 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 & Natural Gas Corporation Ltd. has proposed for exploratory drilling (2wells) in Bengal Onshore Block WB-ONN-2005/2, West Bengal under NELP-VII. The block WB-ONN-2005/2 is situated in central part of the Bengal basin in the state of West Bengal. Block area is 2550 Km² and spread across Malda District. 2 wells will be drilled. Target depth varies from 2000 m to 3800 m. Cost of project is Rs. 60 crores. Major water bodies include Kalindri, Mahanandha, Sarju, Purnabhaha Rivers. No notified /protected ecologically sensitive area including national park, sanctuary, elephant/tiger reserves exists in the study area. Co-ordinates of the Block: WB-ONN-2005/2 are as follows:

Point	Longitude			Latitude		
	Deg	Min	Sec	Deg	Min	Sec
A	88	5	0	25	31	0

B	88	18	0	25	31	0
C	88	18	0	25	25	0
D	88	39	0	25	25	0
E	88	39	0	25	17	0
F	88	20	0	25	3	0
G	88	20	0	25	3	0
H	88	54	0	25	27	0
I	88	54	0	25	27	0

Drilling activity using rigs will be carried out for 2-3 months. Emission will be generated for D.G. sets. Stack of adequate height will be provided. Total surface water requirement from authorized agency nearby town will be 20-22 m³/day. Effluent Treatment Plant (ETP) will be installed in the rig. Treated waste water will be recycled. Drilling fluid will be recycled. Drill cuttings (150-600 MT) will be generated. Domestic solid waste (300 kg/month) and sewage sludge (0.3-1.2 MT/well) will also be generated. Solid waste will be washed and used for road filling. Waste will be sold to authorized recyclers/reprocessors. Power requirement/rig will be 2.43-3.64 MW. D.G. sets (4x12.5 KVA) will be installed. HSD (6-8 KLPD) will be in D.G. sets.

The PP informed the Committee that ambient air quality monitoring was carried out at 10 locations during December, 2012 – February, 2013 and submitted data indicates PM₁₀ (27-88 ug/m³), PM_{2.5} (20-52 ug/m³), SO₂ (6-20 ug/m³) and NO_x (8- 15 ug/m³). Air emissions from D.G. sets will be dispersed by providing adequate stack height. Fresh water requirement from surface water source will be 20-22 m³/day. Water based mud (WBM) will be used. Total wastewater generation will be around 16 m³/day. Drill cutting (DC) will be separated from water based mud (WBM) and washed properly and unusable drilling fluids (DF) will be disposed off in well designed lined pit with impervious liner for solar drying. Disposal of drill cuttings and drill mud will be carried out in accordance with the GSR 546 (E) dated 30th August, 2005. Used oil will be sent to authorized recyclers. HSD (250 LPH) will be used as fuel in rig and D.G. sets during drilling period. DG sets (4 x 1250 KVA) will be installed. 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 West Bengal State Pollution Control Board on 7th October, 2013 for Malda District. The issues raised were regarding impact of project on health, employment, scholarships, etc. All the issues have been satisfactorily responded by the project proponent and incorporated in the final EIA-EMP report.

After detailed deliberations, the Committee based on the documents furnished and presentation made 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. The present EC is for Exploratory Drilling only. In case Development drilling is to be done in future, prior environmental clearance must be obtained from the Ministry.
- ii. Ambient air quality shall be monitored near the closest human settlements as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for PM₁₀, PM_{2.5}, SO₂, NO_x, CO, methane & Non-methane HC etc.
- iii. Mercury shall also be analyzed in air, water and drill cuttings twice during drilling period.
- iv. Approach road shall be made pucca to minimize generation of suspended dust.
- v. The company shall make the arrangement for control of noise from the drilling activity. Acoustic enclosure shall be provided to DG sets and proper stack height shall be provided as per CPCB guidelines.

- vi. Total water requirement shall not exceed 22 m³/day and prior permission shall be obtained from the concerned agency.
- vii. The company shall 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 shall be created for oil contaminated and non-oil contaminated. Effluent shall be properly treated and treated wastewater shall conform to CPCB standards.
- viii. Drilling wastewater including drill cuttings wash water shall be collected in disposal pit lined with HDPE lining evaporated or treated and shall comply with the notified standards for on-shore disposal. The membership of common TSDF shall be obtained for the disposal of drill cuttings and hazardous waste. Otherwise, secured land fill shall 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 shall be submitted to Ministry's Regional Office at Bhubaneswar.
- ix. Good sanitation facility shall be provided at the drilling site. Domestic sewage shall be disposed off through septic tank/ soak pit.
- x. Oil spillage prevention scheme shall be prepared. In case of oil spillage/contamination, action plan shall be prepared to clean the site by adopting proven technology. The recyclable waste (oily sludge) and spent oil shall be disposed of to the authorized recyclers.
- xi. The company shall comply with the guidelines for disposal of solid waste, drill cutting and drilling fluids for onshore drilling operation notified vide GSR.546(E) dated 30th August, 2005.
- xii. The Company shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. Possibility of using ground flare shall be explored. At the place of ground flaring, the overhead flaring stack with knockout drums shall be installed to minimize gaseous emissions during operation.
- xiii. The company shall develop a contingency plan for H₂S release including all necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal H₂S detectors in locations of high risk of exposure along with self containing breathing apparatus.
- 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 shall be installed to prevent well blowouts during drilling operations. BOP measures during drilling shall focus on maintaining well bore hydrostatic pressure by proper pre-well planning and drilling fluid logging etc.
- xvi. Emergency Response Plan (ERP) shall be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- xvii. The company shall take measures after completion of drilling process by well plugging and secured enclosures, decommissioning of rig upon abandonment of the well and drilling site shall be restored to the original condition. In the event that no economic quantity of hydrocarbon is found a full abandonment plan shall be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations.
- 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 shall be carried out as per the prevailing Acts and Rules.
- xx. In case the commercial viability of the project is established, the Company shall prepare a detailed plan for development of oil and gas fields and obtain fresh environmental clearance from the Ministry.
- xxi. Restoration of the project site shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office at Bhubaneswar.
- xxii. Oil content in the drill cuttings shall be monitored by some Authorized agency and report shall be sent to the Ministry's Regional Office at Bhubaneswar.
- xxiii. Under Enterprise Social Commitment (ESC), sufficient budgetary provision shall be made for health improvement, education, water and electricity supply etc. in and around the project.
- xxiv. An audit shall be done to ensure that the Environment Management Plan is implemented in totality and report shall 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 shall be trained and made fully aware of the hazards, risks and controls in place.
- xxvii. Company shall have own Environment Management Cell having qualified persons with proper background.
- xxviii. Company shall prepare operating manual in respect of all activities. It shall cover all safety & environment related issues and system. Measures to be taken for protection. One set of environmental manual shall be made available at the drilling site/ project site. Awareness shall be created at each level of the management. All the schedules and results of environmental monitoring shall be available at the project site office.

18.6.16 Exploratory drilling of 10 wells in NELP-IV, Block CY-ONN-2002/2 of **M/s ONGC Ltd** at District Nagapatnam, Tamil Nadu **(EC)**

The aforesaid proposal was already considered in the last EAC meeting and has been inadvertently included in the agenda.

18.6.17 Development of Vashishta and S-I of KG Offshore, Eastern Offshore Asset at Kakinada and expansion of Odalarevu Onshore Terminal of **M/s ONGC** in East Godavari Dist., A.P. **(Further consideration of EC)**

Project proposal was considered in the 15th Expert Appraisal Committee (Industry) meeting held during 10th-11th June, 2013 and the Committee desired following information:

- 1 Details of forest land involved in the proposed pipeline facility and Terminal facility.
- 2 Status of stage 1 forest clearance.
- 3 Certified compliance report from regional Office.
- 4 Details and Status of court cases.
- 5 Details of CSR plan to be provided.

After detailed deliberations, the Committee desired that a sub-committee of EAC (I) and a representative from MOEF shall visit the unit to assess the pollution control measures being adopted in the existing project area and suggest additional pollution control measures to be adopted in the proposed project, if any.

The proposal is deferred till the desired information is submitted and site visit is conducted by the Sub-committee of EAC (I). The above information shall be provided with the uploading of minutes on the website.

18.6.18 24 wells in Onshore PEL Block II of M/s ONGC in Nagapattinam-Pudukottai Cauvery Basin, TN (Amendment of EC)

Environmental clearance was granted to M/s ONGC on 21st August, 2013 for exploratory drilling (24 additional wells) in On –shore PEL Block L-II of Cauvery Basin, District Nagapattinam, Tamil Nadu. PP vide letter no. ONGC/CHSE/EIA/2013-14 dated 4th February, 2014 has requested for following amendments as three wells surface position needed shift due to reinterpretation of seismic data:

- i. For VNAB: Taluk Trivavur and District Trivavur of VNAB, which is renamed as KZAH, be read as Taluk Kivelur and District Nagapattinam.
- ii. For B-CY-NKK-5: Taluk Mannargudi of B-CY-NKK-5, which is renamed as MDDA, be read as Taluk Thiruthirapoondi.

PP informed that the Public Hearing has been already conducted for Nagapattinam District covering villages of Kivelur Taluk and the villages of Thiruthirapoondi Taluk of Trivavur district.

After detailed deliberations, the committee recommended the proposal for the aforesaid amendment.

18.6.19 Development Drilling of Eight wells of M/s ONGC in Namer East Lakhbari and Khoraghat Oil and Gas Field in Golaghat District Assam (TOR)

The aforesaid proposal was already considered in the last EAC meeting and has been inadvertently included in the agenda.

18.6.20 Exploratory Drilling of 4 wells of M/s ONGC in NELP-VIII Block, VN-ONN-2009/3, Son Valley, Vindhyan, M.P Frontier Basin. (TOR)

The project proponent gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of Reference for the preparation of EIA-EMP. All the Offshore and Onshore oil and gas exploration, development and production projects are listed at S.N. 1(b) under Category 'A' and appraised at the Central level.

M/s ONGC has proposed for exploratory drilling of 4 wells in NELP-VIII Block, VN-ONN-2009/3, Son Valley, Vindhyan, MP. Block area is 1250 Km². The exploration block VN-ONN-2009/3 was awarded to ONGC in the NELP-VIII with 100 % equity participation of ONGC. PSC was signed on 30.06.2012. The PEL was granted w.e.f. 12.10.2011 for a period of 7 years distributed in two phases, Phase-I of 4 years & Phase II of 3 years duration respectively. Depth of well will be 2800 m. Following are the coordinates of the blocks:

VERTEX	LATITUDE	LONGITUDE
A	24°20'00"N	79°20'00"E

B	24°20'00"N	79°40'00"E
C	24°00'00"N	79°40'00"E
D	24°00'00"N	79°20'00"E
A	24°20'00"N	79°20'00"E

Water based mud will be used. Fresh water requirement from ground water source/ tanker supply will be 20 m³/day. The quantity of drill cuttings will be 200 m³. The Quantity of wastewater produced will be about 2-3 m³/day. The rig will be provided with solid handling system comprising shale. Quantity of drilling fluid will be generated around 1000 m³. Quantity of cuttings generation will be 2-3 m³/day. Quantity of drilling waste will be 600 m³/day. The waste residual muds and drill cuttings which contain clay, sand, etc will be disposed into the waste pit.

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

29th April 2014

18.7 Consideration of EC cases

18.7.1 Expansion of Refinery by Debottlenecking (6 MMTPA to 7.5 MMTPA crude processing) of M/s Bharat Oman Refineries Limited (BORL) at Village Agasode, Tehsil Bina, District Sagar, Madhya Pradesh (EC)

The project proponent and their consultant (Engineers India Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 10th Meeting of the Expert Appraisal Committee (Industry) held during 29th to 31st July, 2013_for 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 Bharat Oman Refineries Limited (BORL) have proposed for expansion of Refinery by Debottlenecking (6 MMTPA to 7.5 MMTPA crude processing) at Village Agasode, Tehsil Bina, District Sagar, Madhya Pradesh. Environmental clearance was granted vide MOEF letter No. J-11011/21/94-IA II (I) dated 16th February, 1995 to M/s Bharat Oman Refineries Limited for 6 MMTPA Refinery. No additional land is required. The cost of project is Rs. 2500 crores. With the proposed modifications by 2017-18, Euro-III specifications fuel will not be produced thereafter and fuel will meet Euro-IV auto-fuel norms, The project includes utilization of available design margins in the existing facilities with minor modifications in equipment such as change of internals of pumps, compressors & columns, addition or replacement of equipments like exchangers, vessels, etc. within the existing plant battery limits. The project also includes addition of a new Sulfur Recovery Unit and up-gradation of existing units for better environment management and suitable augmentation of utility & storage facilities. Total plot area is 773 ha. No additional land is required for the project. The proposed debottlenecking will be carried out within the existing refinery premises only. Out of which, 255 ha of land has been earmarked for greenbelt development. No national park/wild life sanctuary/eco-sensitive area/ reserve forest is located within 10 km distance. Following is the configuration of the existing refinery and after debottlenecking:

Unit	Existing Capacity (MMTPA)	Estimated Post Project Capacity(MMTPA) considering 333 days annual operation	Estimated Post Project Capacity(MMTPA) considering 345 days annual operation

Crude/Vacuum Distillation Unit	6.0	7.5	7.8
Hydrocracker/ Diesel Hydrotreater	1.952/1.637	2.537/2.128	2.625/2.202
Delayed Coker Unit	1.357	1.76	1.822
Hydrogen Unit	0.077	0.096	0.098
Naphtha Hydrotreater	1.0	1.40	1.45
CCR Reformer Unit	0.54	0.76	0.787
Isomerization Unit	0.31	0.387	0.56
Sulfur Recovery Unit	2 x 180 MTPD	3 x 243 MTPD	3 x 243 MTPD

Existing & Proposed Product Pattern:

Products	Existing Quantity (MMTPA)	Estimated Post Project Quantity (MMTPA) at 7.8 MMTPA capacity	Estimated Post Project Quantity(MMTPA) at 7.8 MMTPA capacity
LPG	0.22	0.26-0.32	0.344
Naphtha	0.24	0.19-0.23	0.189
Euro-III equivalent MS	0.39	-	-
Euro-IV equivalent MS	0.40	1.00-1.22	1.242
Aviation Turbine Fuel (ATF)	0.55	0.50-0.60	0.722
Superior Kerosene Oil (SKO)	0.49	0.63-0.77	0.396
Euro-III Equivalent HSD	1.61	-	-
Euro-IV Equivalent HSD	1.18	3.15-3.85	3.641
Sulfur	0.11	0.12-0.15	0.152
Pet-coke	0.41	0.45-0.55	0.523

Production of Euro-IV/V fuels will be maximized in the debottlenecking project. The entire HSD will be capable of meeting Euro-V specifications. The entire MS will also meet Euro-V specifications with respect to sulphur. However, products will be manufactured as per the local and national market demand. There are total 80 existing storage tanks i.e. 31 tanks (Crude + Intermediates) and 49 tanks (finished products). A total of 8 nos. of additional tanks in crude and other intermediates product service are considered as part of the debottlenecking project.

Ambient air quality monitoring was carried out at 6 locations during September – November, 2013 and submitted data indicates as PM10 (57–73ug/m³), PM2.5 (32–44ug/m³), SO₂ (8 – 11.7 ug/m³) and NO₂ (11.8-16.1 ug/m³). Predicted value of ground level concentration due to proposed project is SO₂ (29.12 ug/m³) and Nox (4.86 ug/m³). The resultant concentrations are within the NAAQS. SO₂ emission will be increased from 28.25 TPD to 29.25 TPD after expansion (7.5 MMTPA). Nox emissions will be increased from 4.71 TPD to 5.20 TPD after expansion. Low Nox burners & online analyzers for continuous monitoring of stack emissions (SO₂, Nox), stack temperature and excess oxygen (to monitor furnace efficiency, and optimize fuel consumption) have been provided in BORL to reduce environmental impact. In addition, ESP, cyclone separators in CPP are installed to control the air emissions due to particulate matter. Total fresh water requirement will be 6.26 MGD, which includes additional 0.66 MGD for debottlenecking project and will be met from Betwa River. Effluent generation will be increased from 200 m³/day to 250 m³/day after expansion. Design capacity of ETP is 375 m³/hr., which is adequate for post debottlenecking stage. No effluent will be discharged outside refinery after proposed expansion. The treated effluent will be recycled to RODM plant and balance used for horticulture purpose. BORL has implemented rain water harvesting schemes at 10 locations in township each having an area of approximately 2200 m² & developed one pond in an area of 10000 m² in township. BORL is also developing one pond in an area of 6 acres in refinery for GWR. BORL has 18 natural water bodies/ponds existing within their refinery having total area of approximately 2 lac sq.m. Spent catalysts are stored in sealed

drums with tags and disposed off to authorized TSDF agency i.e. M/s Ramky Environ Engineers Ltd. or to approved recyclers. Oily sludge generated in ETP is reprocessed in the DCU/bio-remediation.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the MP Pollution Control Board on 19.02.2014. The issues raised during Public Hearing were regarding local employment, pollution, tree plantation, pollution control equipments, social development work, etc which have been incorporated in the final EIA-EMP report.

The Committee also discussed the compliance status report on the conditions stipulated in the existing environmental clearance, which were monitored by the Ministry's Western regional office, Bhopal. It is reported that the existing project of 6 MMTPA grassroot refinery was monitored on 19.06.2012 and it was recorded that majority of the conditions have been complied. It is also reported that CPCB had issued directions under section 5 of EPA vide letter dated 8.8.2012 for higher PM emissions, smoky flare, storage of coal & pet coke in open area. Subsequently, PP has submitted reply vide letter dated 4.9.2012 to CPCB. PA has been submitting six monthly compliance reports regularly to the Regional Office which do not show any violation of the norms stipulated in the EC. The Committee found compliance report satisfactory.

After deliberations, the Committee desired following additional information:

- i. SO₂ emissions appears to be very high in AQIP prediction sulphur and the data furnished requires to be rechecked by CPCB.
- ii. HC analysis from RRL, Bhopal.
- iii. Benzene seems to be higher side. Benzene levels to be rechecked by repeat monitoring. Mitigation measures for Benzene to be proposed.
- iv. Commitment for 100 % recycling of effluent.
- v. CSR plan to be submitted based on existing Public Hearing.
- vi. Covered Pet coke storage shall be provided.
- vii. Health assessment to be conducted.
- viii. A 30day water reservoir for rainwater harvesting requires to be constructed.

The proposal was deferred until the aforesaid information was submitted. The PP shall provide the aforesaid information with the uploading of minutes on the website.

18.7.2 Conversion of Catalytic Reforming Unit (CRU) to Isomerization Unit and Revamp of existing Naptha Hydro Desulphurization Unit (NHDS) of **M/s Bharat Petroleum Corporation Limited (BPCL)** at Refinery Mahul, Survey No.234/482, Village Anik/Mahul, Town Mumbai Suburban, Maharashtra (EC)

The project proponent and their consultant (Engineers India Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 13th Meeting of the Expert Appraisal Committee (Industry) held during 18th to 20th November, 2013 for 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 Bharat Petroleum Corporation Limited (BPCL) have proposed for Conversion of Catalytic Reforming Unit (CRU) to Isomerization Unit and Revamp of existing Naptha Hydro Desulphurization Unit (NHDS) at Refinery Mahul, Survey No.234/482, Village Anik/Mahul, Town Mumbai Suburban, Maharashtra. No National Park / Wild life Sanctuary / Eco sensitive area / reserve forest is located within 10 Km from BPCL Mumbai Refinery. Environmental clearance was granted on 12th June, 2013 for Construction of a New Crude Distillation Unit and New Vacuum Distillation Unit of Mumbai Refinery is currently implementing CCR reformer project which includes a new Naptha Hydrotreating Unit. Consequently existing CRU and NHDS units at MR would be redundant. Proposed ISOM project has the following components:

- (1) Revamp of Naphtha Hydro Desulphurization (NHDS) Unit
- (2) Conversion of Catalytic Reforming Unit (CRU) to Isomerization Unit
- (3) Associated Utilities & Off sites.

Existing CRU unit will be converted to Isomerization unit while reusing maximum number of existing equipments (Recycle Gas Compressor, furnace, pumps etc). The feed to the ISOM unit would comprise of streams from existing units (Hydrocracker Light Naphtha, CCR Light Reformate) and the modified CRU Reformate Splitter top cut. Existing NHDS with minor modifications will be utilized for desulphurizing stabilized naphtha (of high sulphur origin) from Crude Distillation Unit along with Reformer Feed Preparation unit Splitter I top. Conversion of CRU to isomerization will enable Mumbai Refinery to produce 100% BS IV MS (from 0.9 MMTPA post CCR to 2.3 MMTPA Post Isomerization). Cost of project is Rs. 250 crores. With these changes, 20-25% of the fuel produced would be to meet Euro-V auto-fuel specifications. Total land area of BPCL-Mumbai Refinery is 453 acres. No additional land will be required. As the proposed project is revamp/modernization project and no additional land is required, there is no additional area available for green belt development. LNG will be used as fuel. No additional storage is envisaged.

Product yield pattern after commissioning of the proposed project:

PRODUCT	POST CCR (MMTPA)	CCR + Isomerisation (MMTPA)
BS III MS	1	0
BS IV MS	0.9	2.3
TOTAL MS	1.9	2.3
Naptha Export	0.8	0.2

Ambient air quality monitoring was carried out at 5 locations during January – March, 2013 and submitted data indicates as PM10 (45.2–75.1 ug/m³), PM2.5 (15.9–27.0 ug/m³), SO₂ (8 – 14.0 ug/m³) and NO₂ (14.2-22 ug/m³). Predicted value of ground level concentration due to proposed project is SO₂ (7.5 ug/m³) and Nox (5.45 ug/m³). The resultant concentrations are within the NAAQS. There is no additional SO₂ emissions due to proposed ISOM project. A new 125 m high demounted smokeless flare system is being installed. Annual fugitive hydrocarbon emission monitoring survey as per Leak Detection and repair (LDAR) program is in place in refinery. Total raw water demand post CCR & CDU-4 project will be around 16500 m³/day. There is no additional raw water requirement for the proposed ISOM project. For ISOM project, fuel requirement in the existing boilers will increase due to the increase in steam demand. However, there will be a reduction in fuel consumption of CRU modified to ISOM. The fuel used in the boilers will be a mix of low sulphur fuel oil, LSHS and 'Nil' sulphur refinery fuel gas. The proportion of gas and oil firing will be maintained to ensure that there is no net increase in SO₂ emissions post ISOM. From proposed ISOM project, 91 MT of nickel, molybdenum and platinum based spent catalyst will be generated. Spent catalyst offloaded from units will be stored temporarily in secure drums. The same will be sold to authorized Recyclers. For non hazardous waste and or in case no buyers are available, the spent catalysis will be disposed off to authorized waste Management associations. BPCL Mumbai Refinery is member of Mumbai Waste Management Limited and Trans Thane Creek Waste Management Association. All statutory rules / guidelines of MOEF / CPCB will be complied prior to recycle, reclamation or sale of spent catalyst. There is no additional generation of crude tank bottom sludge or any oily sludge, as the existing storage and offsite facilities will be used.

Certified compliance report dated 7th January, 2013 by the Ministry's Regional Office at Bhopal was discussed. It was reported that online monitoring facilities for SO₂ emissions have been installed. SO₂ emission levels from refinery were found to be within the prescribed limits. The treated effluent from ETP and flue gases from stacks are meeting the standards. Benzene vapour recovery system has been installed at loading gantry since 2004. The treated effluent is being recycled for cooling tower make up water thereby conserving fresh water.

Disposal of hazardous waste is being carried out to authorized recyclers. Compliance of the EC's conditions has been reported satisfactorily.

Public Hearing/consultation was conducted by the State Pollution Control Board on 25th September, 2012 for the existing project. The Committee exempted the Public Hearing under 7 (ii) of the EIA Notification, 2006 as there is no significant increase in pollution load.

After detailed deliberations, the Committee on the basis of documents furnished and presentation made 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. M/s BPCL shall comply with new standards/norms for Oil Refinery Industry notified under the Environment (Protection) Rules, 1986 vide G.S.R. 186(E) dated 18th March, 2008.
- ii. Continuous on-line stack monitoring for SO₂, Nox and CO of all the stacks shall be carried out. Low Nox burners shall be installed.
- iii. Fugitive emissions of HC from product storage tank yards etc. must be regularly monitored. Sensors for detecting HC leakage shall be provided at strategic locations. Leak Detection and Repair programme shall be implemented to control HC/VOC emissions.
- iv. SO₂ emissions after expansion from the plant shall not exceed 10.44 TPD.
- v. As proposed, record of sulphur balance shall be maintained at the Refinery as part of the environmental data on regular basis. The basic component of sulphur balance include sulphur input through feed (sulphur content in crude oil), sulphur output from Refinery through products, by-product (elemental sulphur), atmospheric emissions etc.
- vi. Total raw water requirement from Municipal Corporation of Greater Mumbai water supply shall not exceed 16500 m³/day. Industrial effluent will be treated in the effluent treatment plant. Treated effluent shall be recycled/reused recycled as make up for the raw water cooling tower. Domestic sewage shall be treated in sewage treatment plant (STP).
- vii. Oil catchers/oil traps shall be provided at all possible locations in rain/ storm water drainage system inside the factory premises.
- viii. The membership of common TSDF shall be obtained for the disposal of hazardous waste. Copy of authorization or membership of TSDF shall be submitted to Ministry's Regional Office at Bhopal. Chemical/inorganic sludge shall be sent to treatment storage disposal facility (TSDF) for hazardous waste. Spent catalyst shall be sent to authorised recyclers/re-processors.
- ix. Green belt shall be developed at least in 45 acres 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. Thick greenbelt with suitable plant species shall be developed around unit. Selection of plant species shall be as per the CPCB guidelines.

18.7.3 Fertilizer capacity Enhancement of **M/s The Fertilizers and Chemicals Travancore Ltd. (FACT)**, at Ambalamedu, Kochi, Kerala (EC)

The project proponent and their consultant (Asian Consulting Engineers Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 22nd Meeting of the Expert Appraisal Committee (Industry) held during 29th to 30th April, 2011 for preparation of EIA-EMP report. All the Fertilizer plants are listed at S.N. 5(a) under Category 'A' and appraised at the Central level.

M/s The Fertilizers & Chemicals Travancore (FACT) Ltd. has proposed for the Capacity enhancement of Complex Fertilizer Production at Ambalamedu, Kochi, Kerala. Capacity of the fertilizer complex will be

enhanced by 1000 TPD (Fertilizer NP 20:20 Grade). Capacity enhancement will be carried out in the existing campus only. Additional new stream of 1000 TPD N.P. plant and ammonia storage of 5000 MT will be installed. Additional phosphoric acid storage of 6500 MT and improvement in rail transportation facilities are also proposed. Total FACT plant area includes 340 acres (plant area), 415 acres (Township area), 200 acres (Reservoir area), 247 acres (area for future expansion) and 300 acres (green cover). Area required for proposed expansion will be 4000 m², which is within existing factory premises. Total cost of the expansion project is Rs. 211 crores. It is reported that no eco-sensitive area /national park/wildlife sanctuary is located within 10 km of project site.

Ambient air quality monitoring was carried out at 8 locations November, 2011 –January, 2012 and submitted data indicates as PM10 (38.3–68.4 ug/m³), PM2.5 (15.9–32.3 ug/m³), SO₂ (5.4 – 12.7 ug/m³), Nox (15.1-29.9 ug/m³) and ammonia (5-12 ug/m³). Predicted value of ground level concentration due to proposed project is PM10 (11.05 ug/m³), SO₂ (5.81 ug/m³), Nox (4.78 ug/m³) and NH₃ (16 ug/m³). The resultant concentrations are within the NAAQS.

The dust laden air from cooler and dryer compartments will be treated through cyclone followed by cooler scrubber (Venturi scrubber). Prior to discharge of treated air into atmosphere, it will be passed through knockout chamber where droplets of phosphoric acid are removed. Scrubber will be installed to dryer chamber. The fumes arising out of the pre-neutralizer/granulator will be sent to fume scrubber and then will be released into the atmosphere. Dilute phosphoric acid will be used as scrubbing solution for all the three scrubbers (cooler scrubber, dryer scrubber and fume scrubber). Total water demand will be increased from 7150 m³/day to 7850 m³/day after expansion and met from existing rain water collecting reservoir, which is connected to Boothathanketu dam for supply of water during dry season. Effluent generation from the existing unit is 120 m³/day and no additional effluent will be generated from the proposed expansion. During maintenance or cleaning of the proposed unit, the wastewater generated will be treated in already existing NP ETP capacity of 280 m³/hr. Treated effluent is passed through ammonia stripper. Treated effluent from stripper will contain ammoniacal nitrogen less than 50 ppm. No effluent will be discharged outside the plant premises and 'Zero' effluent discharge condition will be followed. The ETP sludge will be disposed in the secured landfill available at FACT premises.

It was informed that a Disaster Preparedness and Management Plan is in place at the district level, keeping in view that a number of hazardous industries are located in proximity. There are two ammonia tanks of 10,000MT capacity of which one is a standby.

It was noted that there was an error in the ambient air quality monitoring table of EIA report. Minimum value has been reported as maximum and maximum value has been reported as minimum value in the table. The Committee requested that the table may be corrected and submitted as part of the EIA – Report. The Committee also discussed the compliance status report dated 9th July, 2013 on the conditions stipulated in the existing environmental clearance, which were monitored by the Ministry's regional office, Bangalore. It is reported that the ammonia bearing fumes from the reactor and granulator of the complex fertilizer plant are scrubbed with dilute phosphoric acid in venture-cum-cyclonic scrubber. Effluent from complex fertilizer plant is treated in ETP and pollutants namely phosphate and fluoride are removed as calcium salts by the treatment with lime slurry and ammonia is removed in the ammonia strippers. Treated effluent is recycled/utilized in knock out chambers of cooler and drier scrubbers. Gypsum is the main solid waste generated in the unit and this is disposed off by the dry mode consisting of transportation by tipper trucks and heaping at a location earmarked for the purpose. A good quality of the gypsum is being sold to Cement manufacturing unit. To prevent land pollution and ground water pollution, a secured landfill system was installed in 2008 for the disposal of hazardous wastes like sulphur muck and ETP sludge. For the disposal of hazardous waste like spent catalyst from sulphuric acid plant, an arrangement was signed by the project proponent with the common TSDF-Kerala Enviro Infrastructure Ltd. Committee was satisfied with the response of the Project proponent.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Kerala State Pollution Control Board on 7th February, 2013 under the Chairmanship of Additional District Magistrate. The issues raised during Public Hearing were regarding noise pollution, impact on rivers – Kadambayar and Chithrapuzha, transportation of ammonia, local employment etc. Public Hearing issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

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

- i) All the conditions stipulated in environmental clearance J-11011/24/89-IA (II) dated 30th January, 1991 accorded for the existing projects shall be implemented.
- ii) Ammonia bearing fumes from the reactor and granulator of the Complex Fertilizer shall be scrubbed. Scrubbing shall have interlocking system with main plant.
- iii) The gaseous emissions (SO₂, Nox, NH₃, HC and Fluoride) and particulate matter from various process units shall conform to the norms prescribed by the CPCB/SPCB from time to time. At no time, the emission levels shall go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Stack emissions shall be monitored regularly.
- iv) CPCB will independently monitor SO₂ in 2-3 locations.
- v) Fluoride monitoring through continuous fluoride analyzer shall be carried out in ambient air as well as stack.
- vi) Total fresh water requirement from ground water source shall not exceed 11 m³/day and prior permission shall be obtained from CGWA/SGWB and a copy submitted to the Ministry's Regional Office at Lucknow.
- vii) As proposed, industrial effluent shall be treated in effluent treatment plant (ETP) and recycled back in the process.
 - i) No effluent shall be discharged outside the premises and 'Zero' effluent discharge shall be ensured.
 - ii) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
 - iii) Total water demand shall not exceeds 7850 m³/day after expansion and prior permission shall be obtained from concerned Authority and a copy submitted to the Ministry's Regional Office at Bangalore.
 - iv) Industrial effluent shall be treated in effluent treatment plant (ETP) and recycled back in the process.
 - v) No effluent shall be discharged outside the premises and 'Zero' effluent discharge shall be ensured.
 - vi) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- vii) The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes. Measures shall be taken for fire fighting facilities in case of emergency.
- viii) Spent catalysts and used oil shall be sold to authorised recyclers/re-processors only.

- ix) The company shall strictly follow all the recommendations mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP).
- x) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the OISD 117 norms.
- xi) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- xii) Green belt shall be developed in 33 % of the plant area. Selection of plant species shall be as per the CPCB guidelines.
- xiii) Storage of ammonia shall not be more than 5000 MT at a time.
- xiv) Remote operated valve placed on NH₃ line to avoid leakage/equipment check shall be performed to ensure that remote operated valve (ROV) is all time is functional.

18.7.4 Capacity Augmentation of existing DAP/NPK Plant of M/s Gujarat State Fertilizers & Chemicals Ltd, Jamnagar, Gujarat (EC)

The project proponent and their consultant (Bhagvathi Ana Labs Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 6th Meeting of the Expert Appraisal Committee (Industry) held during 5th to 7th March, 2013 for preparation of EIA-EMP report. All the Fertilizer plants are listed at S.N. 5(a) under Category 'A' and appraised at the Central level.

M/s Gujarat State Fertilizer and Chemicals Limited have proposed for augmentation of existing DAP/NPK Plant at Sikka, Village Moti Khadvi, District Jamnagar, Gujarat. Total plot area 104000 m². The marine national park is located at a distance of 7 km from the project site. Total plot area is 235.2 ha of which greenbelt will be developed in 33.86 ha. Project cost is Rs. 900 crores. The environmental clearance for the DAP/NPK plant A,B trains and DAP/NPK plant C trains was obtained from MOEF on 31.7.1990 and 11.12.2001 respectively. Marine National Park (Gulf of Kutch) is located at a distance of 7 Km. Following are the details of the existing and proposed products details.

Main facilities

S.No.	Product details	Existing Capacity MTPA	Proposed Capacity MTPA	Total MTPA
1.	DAP/NPK	9.846 Lakhs	5.4 Lakhs	15.246 Lakhs

Associated facilities (Isolated storages details)

- i. Installation of three phosphoric acid and two ammonia tanks of 10000 MT capacity at Sikka Shore Terminal
- ii. Installation of one ammonia tank and one phosphoric acid tank of 10000 MT capacity within the plant premises
- iii. Laying of ammonia and phosphoric acid pipeline (10 Km) on the existing over head structure from Sikka shore terminal to plant site.

Transportation of liquid raw material (ammonia & Phosphoric acid) by overhead pipeline from Jetty to Sikka Shore Terminal and Sikka Shore Terminal to plant site. Ammonia will be transported by tail tankers.

Transportation of sulphuric acid and furnace oil will be by road tanker. Finish product will be transported by truck and rail wagon.

Ambient air quality monitoring was carried out at 9 locations March, 2013 –May, 2013 and submitted data indicates as PM10 (40–80 ug/m³), PM2.5 (17–33 ug/m³), SO₂ (8.6 – 14.6 ug/m³), Nox (9.7-20.46 ug/m³) and ammonia (10-28 ug/m³). Predicted value of ground level concentration due to proposed project is PM10 (11.27 ug/m³), SO₂ (0.06 ug/m³), Nox (0.04 ug/m³) and NH₃ (6.83 ug/m³). The resultant concentrations are within the NAAQS. Bagfilter with extraction system will be provided at raw material handling area. Scrubber system shall be installed at product bagging area. Venturi scrubber and cyclone will be provided in the process plant. Fresh water requirement from ground water source will be increased from 1500 m³/day to 2160 m³/day after expansion. Effluent generated will be treated in Effluent Treatment Plant and treated effluent will be recycled/reused in the process. No effluent will be discharged outside the plant premises and Zero effluent discharge concept will be followed. A copy of Environmental clearance letter dated 21.07.1990 for the existing DAP Plant has been submitted. A copy of Environmental clearance letter no. J-11011/26/2001 IA II (I) dated 11.12.2001 for the existing DAP Plant augmentation has been submitted. A copy of letter no 8-254/88-FC/2025/M dated 12.06.2001 regarding diversion of 4.61 ha of forest land for construction of Jetty/ approached road is submitted. A copy letter no WLP/57/32/B/871-73/2009-10 dated 5th June, 2009 issued by Principal Chief Conservator of Forests Wildlife & Chief Wildlife Warden , Gujarat State regarding regularization under Section-29 of the Wildlife (Protection) Act-1972 for 12.47 ha land in Marine Sanctuary has been submitted.

The Committee also discussed the compliance status report dated 26th February, 2014 on the conditions stipulated in the existing environmental clearance, which were monitored by the Ministry's regional office, Bhopal. It is reported that total water requirement of the unit is around 1.7 MLD. However, PA has constructed check dams as well as water harvesting recharging system for conserving the sub soil water resources. Two dust extraction unit, one attached to the screen house and conveyer belts and another to the bagging plant have been installed and operating regularly. Average 175 m³/day effluent is generated, which is reused in the process. Sewage is treated in Sewage treatment plant.

The Committee noted that there are 2 storage tanks of 2x 3000MT in the plant and decided that there would be 2 storage tanks of 10,000 MT capacity and storage at any time will not exceed 16,000 MT of a total capacity of 26,000MT. It was clarified that their jetty and transportation pipelines there from do not fall within the ecologically sensitive area of the Marine National Park. The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 17th January, 2014 under the Chairmanship of District Magistrate. The issues raised during Public Hearing were safety training, local employment, operation and maintenance of the pipeline, CSR etc. Public Hearing issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

After deliberations, the Committee desired following additional information:

1. Copy of CRZ clearance/SCZMA to be submitted.
2. GSFC to furnish authenticated map by the Wildlife warden indicating plant location, jetty location, marine national park with marking of within /outside area of Eco sensitive zone.
3. Status of WL Clearance from PCCF (WL) on location of jetty and pipelines from Marine National park.
4. Detailed need based Enterprise Social Responsibility Plan for 5 % of project cost.
5. Health analysis data to be submitted.
6. Details of existing greenbelt and proposed action plant to be submitted.
7. Details of Marine Research funding to be submitted.
8. Google image showing mangrove plantation.
9. Confirm whether old ammonia tanks are updated as per latest technology.
10. Whether NIO study Marine Research has been carried out.

11. Employment status of land losers for the existing project to be submitted.
12. Details of Arsenic storage to be submitted.
13. Plan for online monitoring for ammonia analyzer.
14. Safety issues regarding transportation of ammonia via pipelines.

The proposal was deferred until the aforesaid information was submitted. The aforesaid information shall be provided by the PP with the uploading of minutes on the website.

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

The project proponent and their consultant (Team Labs and Consultants) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 2nd Meeting of the Expert Appraisal Committee (Industry) held during 29th to 31st October, 2012 for preparation of EIA-EMP report. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Creative Organics has proposed for setting up of Synthetic Organic (Bulk Drugs & Intermediates) Manufacturing unit at Sy. No. 113, Village Chennavelly, Mandal Balanagar, District Mahaboob Nagar, Andhra Pradesh. Total plot area is 9.625 acres of which greenbelt will be developed in 3.21 acres. Project cost is Rs. 5.0 crores. No forest land is involved. Tigeralapalli RF and Appannapalli RF are located within 10 Km distance. No national park/sanctuary is location within 10 Km from the project site.

The following products would be manufactured:

S.N.	Product	Capacity (Kg/Day)	(TPM)
1	Aliskiren Hemifumarate	50	1.5
2	Allopurinol	50	1.5
3	BisoprololFumerate	350	10.5
4	Dabigetrin	50	1.5
5	Fexofenidane	100	3
6	Fingolimod	20	0.6
7	Irbesartan	50	1.5
8	Letrozole	20	4.5
9	Levothroxin	20	0.6
10	Linogliptan	50	0.6
11	Linozolid	150	1.5
12	Metoprolol Succinate	200	6
13	Olanzapine	200	6
14	Olapatidine	100	3
15	Olmesartan Medoxomil	150	4.5
16	Parsugrel HCl	200	6
17	Prosaconazole	200	6
18	Ranolazine	250	7.5
19	Valgancyclovir	50	1.5
	Sub-total Phase I	600	18
	Sub-total Phase II	400	12
	Total	1000	30
Note	Phase I: At any point of time only 2 products shall be manufactured		
	Phase II: At any point of time only 2 products shall be manufactured		

S.N.	By-Product	Capacity (Kg/Day)
1	4-Iodo Methoxy Benzene	9.7
2	Methane Sulphonate	70.9
3	Tri Phenyl Phosphine HBr	70.9
4	Trityl Alcohol	69.9
5	Trityl Chloride	146.1

Ambient air quality monitoring has been carried out at 6 locations during December, 2012- March, 2013 and the data submitted indicated: PM₁₀ (25 to 38 µg/m³), PM_{2.5} (9 to 11 µg/m³), SO₂ (7 to 12 µg/m³) and NO_x (8 to 15 µg/m³). AAQ ulphurg study for point source emissions indicates that the maximum incremental GLCs would be 0.97 µg/m³, 2.68µg/m³ and 8.5 µg/m³ with respect to PM₁₀, SO₂ and NO_x respectively.

It is proposed to provide Multi-cone cyclone separators as air pollution control equipment to the coal fired boilers (2x 3 TPH), 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 water requirement will be 85.8 m³/day. Out of which fresh water requirement from ground water source will be 50 m³/day and remaining quantity 35 m³/day will be sourced from treated effluent. Total effluent generation will be 40.1 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.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Andhra Pradesh Pollution Control Board on 25th September, 2013. The issues raised were regarding proposed unit in farm land, impact on agriculture, water supply, chemical pollution etc. Most of people have opposed the project. The Committee noted that the proposed unit is based on zero effluent discharge concept, unit will be equipped with pollution control device, solid wastes will be sent to TSDF.

After detailed deliberations, the Committee, on the basis of the additional information provided and presentation made recommended the project for environmental clearance and stipulated following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i. Multi-cyclone followed by bag filter shall be provided to the coal fired boiler to control particulate emissions within permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/APPCB guidelines.
- ii. Scrubber shall be provided to control process emissions. The scrubbing media shall be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. At no time, the emission levels shall go beyond the prescribed standards.
- iii. Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emissions shall conform to the limits imposed by APPCB. Odour management plan shall be implemented.
- iv. Total fresh water requirement from ground water source shall not exceed 50 m³/day and prior permission shall be obtained from the CGWA/SGWA.
- v. Trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD shall be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream shall be treated in ETP and then passed through RO system. Condensate and

recover water will be recycled/reused within factory premises. 'Zero' effluent discharge shall be adopted and no effluent will be discharged outside the premises.

- vi. All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.
- vii. As proposed, process organic residue and spent carbon shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF. The ash from boiler shall be sold to brick manufacturers/cement industry.
- viii. The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from APPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. Measures shall be taken for fire-fighting facilities in case of emergency.
- ix. 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.
- x. Solvent management shall be as follows :
 - Reactor shall be connected to chilled brine condenser system
 - Reactor and solvent handling pump shall have mechanical seals to prevent leakages.
 - The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
 - Solvents shall be stored in a separate space specified with all safety measures.
 - Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.
- xi. Entire plant where solvents are used shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.
- xii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- xiii. All the issues raised during the Public Hearing/consultation meeting held on 25th September, 2013 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xiv. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner.
- xv. As proposed, green belt over 33 % of the total project area shall 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.

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

The project proponent and their consultant (ABC Techno Labs Pvt. Ltd, Chennai) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 2nd Meeting of the Expert Appraisal Committee (Industry) held during 29th to 31st October, 2012 for preparation of EIA-EMP report. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Arudaa Vis Labs Pvt. Ltd. has proposed for setting up of pharmaceutical advanced Intermediates Manufacturing Facility at Sy. No 105/3D, 105/3B, 105/7B, Village Chennivakkam, Tehsil Ponneri, District Thiruvallur, Tamil Nadu. Plot area is 4860.64 m² of which greenbelt will be developed in 1614 m². No forest land is pending against the project. Erumaivettipalam RF and Palavakkam RF are located at 6.0 km and 13.0 km respectively. Koratliyar River, Arani River and sholarvarm Lake are located at 3.0 Km, 5.5 km and 5.8 km respectively. No national parks/wildlife sanctuaries are located within 15 km. project cost is Rs. 2.6 crores. Rs. 57.05 lakhs and Rs. 14.5 lakhs are earmarked towards capital cost and recurring cost per annum. Following products will be manufactured:

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

Ambient air quality monitoring has been carried out at 6 locations during December, 2012- February, 2013 and the data submitted indicated: PM₁₀ (40 to 66 µg/m³), PM_{2.5} (17 to 31 µg/m³), SO₂ (5 to 8.3 µg/m³) and NO_x (10.5 to 19.2 µg/m³). Scrubber will be provided to control process emissions. Double condensers with Chilled brine water will be used to control solvent loss. Total fresh water requirement from ground water source will be 6 m³/day. Effluent generation will be 4.09 m³/day and treated in ETP. Treated effluent will be dried in solar evaporation tank. No effluent will be discharged outside the plant premises. ETP sludge, process and distillation residue will be sent to TSDF. Spent oil will be sent to Authorized recycler/re-processors.

Total power requirement from Tamil Nadu Generation and Distribution Corporation LTd. will be 250 HP/170 KW. DG set (180 KVA) will be installed.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Tamil Nadu Pollution Control Board on 7th November, 2013 under the Chairmanship of District Collector. The issues raised during Public Hearing were regarding local employment, air & water pollution etc. Public Hearing issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

After detailed deliberations, the Committee on the basis of the additional information provided and presentation made 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) Scrubber shall be provided to control process emissions. 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.
- ii) Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emissions shall conform to the limits imposed by TNPCB. Odour management plan shall be implemented.
- iii) Total fresh water requirement from ground water source shall not exceed 6 m³/day and prior permission shall be obtained from the CGWA/SGWA.

- iv) Effluent generation shall not exceed 4.09 m³/day and treated in ETP. 'Zero' effluent discharge shall be adopted and no effluent will be discharged outside the premises.
- v) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.
- vi) 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 TNPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. Measures shall be taken for fire-fighting facilities in case of emergency.
- vii) 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.
- viii) Solvent management shall be as follows :
 - Reactor shall be connected to chilled brine condenser system
 - Reactor and solvent handling pump shall have mechanical seals to prevent leakages.
 - The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
 - Solvents shall be stored in a separate space specified with all safety measures.
 - Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.
 - Entire plant where solvents are used shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.
- ix) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- x) All the issues raised during the Public Hearing/consultation meeting held on 7th November, 2013 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xi) At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner.
- xii) As proposed, green belt over 33 % of the total project area shall 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.

18.7.7 Expansion of existing Sugar Plant (6500 TCD with 22.5 MW CPP) by setting up Distillery Plant (60 KLPD) of **M/s GEM Sugar Ltd.** at Parts of Survey Nos. 125 to 134, 325 to 328, village Kundargi, Taluka Bilagi, District Bagalkot, Karnataka (**EC**)

The project proponent and their consultant (B S Envi-Tech (P) Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 36th Meeting of the Expert Appraisal Committee (Industry) held during 11th to 12th June, 2012 for preparation of EIA-EMP report. All the molasses based Distillery Units are listed at S.N. 5(g) under Category 'A' and appraised at the Central level.

M/s GEM Sugar Ltd has proposed for setting up of Molasses based Distillery Plant (60 KLPD) & CPP (2 MW) in the existing sugar plant (6500 TCD) along with Cogeneration Power Plant (22.5 MW) .at Parts of Survey Nos. 125 to 134, 325 to 328, Village Kundargi, Taluka Bilagi, District Bagalkot, Karnataka. Total plot area of the

existing unit is 242.15 acres of which, the proposed distillery unit will be installed in 13 acres of land. Existing Greenbelt Area is spread over an area of 75.78 acres. Total project cost is Rs. 70 Crores. Ghataprabha River is flowing at a distance of 5.5 km. Almatti Reservoir is located at a distance of 1.6 Km. Reserve Forest is near Arakeri village at 0.5 KM. It is reported that no wildlife sanctuary/national park/elephant /tiger reserve is located within 10 Km distance from the project site. Distillery will be operated for 300 days.

Ambient air quality monitoring was carried out at 6 locations March, 2011 –May, 2011 and submitted data indicates as PM10 (48.6–53 ug/m³), PM2.5 (21.8–26.0 ug/m³), SO₂ (7.8 – 9.6 ug/m³) and Nox (9.5-11.4 ug/m³). Predicted value of ground level concentration due to proposed project is PM10 (1.137 ug/m³), SO₂ (9.19 ug/m³) and Nox (3.41 ug/m³). The resultant concentrations are within the NAAQS. Wet scrubber will be provided to coal/bagasse/concentrated spent wash fired incineration boiler (22 TPH). However, the Committee insisted for installing bagfilter instead of wet scrubber. Fresh water requirement from River Ghataprabha will be 643 m³/day for distillery and CPP. Spent wash generation will be 480 m³/day. Spent wash will be evaporated in MEE and concentrated spent wash will be incinerated in the boiler. Condensate will be recovered at the tune of 409 m³/day. Spent lees will be treated through RO. RP permeate will be recycled back to process. RO rejects will be treated in ETP of Sugar plant. No effluent will be discharged outside the plant premises. Boiler ash will be sent to farm as soil conditioning. Fermented sludge will be used as cattle feed.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Karnataka State Pollution Control Board on 29th October, 2013 under the Chairmanship of Dy. Commissioner. The issues raised during Public Hearing were regarding early payment of sugar cane price, greenbelt, to install latest pollution control equipments, Zero discharge etc. Public Hearing issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

After deliberations, the Committee desired following additional information:

- 1 Copy of environmental clearance of the existing Sugar unit and Cogeneration power plant to be submitted (reasons, if not obtained).
- 2 Copy of Consent to establish issued by the SPCB for the existing unit.
- 3 Valid consent to operate issued by the SPCB for the existing unit.

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

18.7.8 Expansion of Synthetic Organic Manufacturing Unit of **M/s Vaishnavi Enterprise** at Survey No. 101/P/1, Kardej Taluka & District Bhavnagar, Gujarat (EC)

The project proponent and their consultant (Precitech Laboratories Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 11th Meeting of the Expert Appraisal Committee (Industry) held during 26th to 27th August, 2013 for preparation of EIA-EMP report All Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Vaishnavi Enterprise has proposed for expansion of Synthetic Organic Manufacturing Unit at Survey No. 101/P/1, Kardej Taluka & District Bhavnagar, Gujarat. Total existing plot area is 31161 m². No additional land will be required for the proposed expansion. Total cost of the expansion project is Rs. 168.7 Lakhs. Nari lake is located at a distance of 6.35 Km. It is reported that no national park/wildlife sanctuary is located within 10 km distance. Patches of reserve forest exist within 5 Km periphery.

Following product will be manufactured:

S.N.	Products	Existing (TPM)	Proposed (TPM)	Total (TPM)
1	Benzoic Acid (only purification from crystallization)*	100	400	500
2	Benzyl Beenzotate	0	100	100
3	Benzyl Acetate	0	100	100
4	Sodium Benzoate	0	400	400

GPCB had issued consent to establish to M/s Vaishnavi Enterprise on 8.10.12 for Benzoic Acid (only purification from crystallization). The said activity does not require EC.

Ambient air quality monitoring was carried out at 6 locations October, 2013 –December 2013 and submitted data indicates as PM10 (58–98 ug/m³), SO₂ (9 – 22 ug/m³) and Nox (10-23 ug/m³). The ambient air quality levels are within the NAAQS. Bagfilter will be provided to coal fired boiler. DG set (200 KVA) will be installed. Bagfilter will be provided to spray dryer. No solvent will be used. Fresh water requirement from GWIL will be increased from 12 m³/day to 25 m³/day after expansion. The Industrial effluent generated is 2 KLD from existing operations, which is sent to evaporator. For the proposed expansion, 11 KLD industrial effluent will be passed through RO system. Permeate from RO @8.5 KLD will be used in process and boiler. RO reject @2.5 KLD will diverted to Evaporator along with 1.5 KLD from washings, 0.7 KLD from boiler and 1.0 KLD from cooling. Hence, total 5.7 KLD wastewater will be sent to evaporator. Approximately 37.5 KLD of water will be recycled within the process of Benzoic acid purification in subsequent batches. Moreover, water of reaction generated from process of Benzyl Acetate will be reused in the process of Benzyl Benzoate and the wastewater generated from Benzyl Benzoate will be reused in Sodium Benzoate. The total wastewater from Sodium Benzoate will be lost in evaporation during Spray drying. Hazardous wastes are generated in the form of Process waste from Process, Evaporation sludge from evaporator, which will be sent to TSDF Site of Saurashtra Enviro Projects Pvt. Ltd. (SEPPL, Kutch).

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 24th January, 2013 under the Chairmanship of District Magistrate. The issues raised during Public Hearing were regarding local employment, environment management system etc. The Committee noted that the issues raised in the Public Hearing issues have been responded to by the project proponent and incorporated in the final EIA-EMP report.

After detailed deliberations, the Committee on the basis of the additional information provided and presentation made, 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) National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21st July, 2010 and amended time to time shall be followed by the unit.
- ii) Bagfilter along with stack of adequate height shall be provided to spray dryer to control particulate emissions.
- iii) Total fresh water requirement from GWIL shall not exceed 25 m³/day.
- iv) Total industrial wastewater generation shall not exceed 11 m³/day. Industrial effluent shall be treated in ETP followed by Reverse Osmosis. RO permeate shall be recycled/reused in the process. RO rejects shall be evaporated in evaporator. No effluent shall be discharged outside the plant premises and Zero effluent discharge condition shall be maintained.
- v) All the issues raised during the Public Hearing/consultation meeting held on 24th January, 2013 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.

- vi) At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.
- vii) As proposed, green belt over 33 % of the total project area shall 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.

18.7.9 Expansion of Synthetic Organics Chemicals of **M/s Ideal Cures Pvt. Ltd** at Survey no. 194/4, Lunej Road, Village Sokhada, Tehsil Khambhat, District Anand, Gujarat (EC)

The project proponent and their consultant (Precitech Laboratories Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 3rd Meeting of the Expert Appraisal Committee (Industry) held during 3rd to 5th December, 2012 for preparation of EIA-EMP report All Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Ideal Cures Pvt. Ltd. Has proposed for expansion of Synthetic Organics Chemicals Manufacturing Unit at Survey no. 194/4, Lunej Road, Village Sokhada, Tehsil Khambhat, District Anand, Gujarat. No forest land is involved. Total plot area of the existing site is 2400 m² of which a total of 485 m² is earmarked for green belt. No additional land will be required for proposed expansion. The total cost of proposed expansion project is Rs.12.00 Lakhs out of which Rs. 6.50 Lakhs will be allocated for EHS. A budgetary provision of Rs. 2.60 Lakhs per annum will be made for EHS expenses. There is no national park/wildlife sanctuary/ reserve forest is located within 10 Km distance. Following products will be manufactured:

Sr. No.	Product	Existing Scenario (MT/M)	Proposed Scenario (MT/M)
1.	Methacrylic acid co-polymer L-55 (Ecopol L 100 – 55)	10	360
2.	Methacrylic acid co-polymer L-30 D (Ecopol L 30 D 55)		4
3.	Methacrylic acid co-polymer L-100/ (Ecopol L 100)		32
4	Methacrylic acid co-polymer S-100 (Ecopol S 100)	-	4
	TOTAL	10	400

PP informed that EC has not been obtained for the existing unit as the unit already had a valid CC & A, when it was purchased. The proponent proposed new portfolio by way of product replacement /change in product mix such that there is no increase in pollution load and no increase in the total production capacity.

Ambient air quality monitoring was carried out at 6 locations December, 2012 –February 2013 and submitted data indicates as PM10 (54–86 ug/m³), SO₂ (9 – 19 ug/m³) and Nox (13-21 ug/m³). Predicted value of ground level concentration due to proposed project is PM10 (2.10 ug/m³), SO₂ (3.63 ug/m³) and Nox (1.299 ug/m³). The ambient air quality levels are within the NAAQS.

The utility emissions will be from existing agrowaste fired Boiler (800 kg/Hr) and D.G. Set (113 kVA). No additional utilities are proposed. Water requirement from the private water supplier will be increased from 3 m³/day to 15 m³/day. Industrial effluent generation will be increased from 1.0 m³/day to 1.6 m³/day and

treated in ETP. Treated effluent will be used for gardening. Used / Spent Oil is sold to CPCB registered recyclers, Discarded containers/ bags/ liners are reused/sold to GPCB approved after decontamination and ETP Sludge is Disposal to TSDF of M/s. NECL, Nandesari. Fly ash is sold to Brick manufactures. Existing power requirement of 97 kVA is sourced from MGVC (Madhya Gujarat Vij Company Ltd.). The total power requirement after the proposed expansion project will remain same which will be sourced from MGVC. Agro waste @ 40 Kg/Hr is used as primary fuel and this quantity will remain same after expansion. After Proposed expansion, HSD will be used @ 18 LPH.

PP informed that GPCB vide letter no. PC/NOC/KH-487/17878 dated 26 May, 1998 has issued NOC to M/s Pacific Organic Chemicals for manufacturing Magnesium Stearate. CTO was granted vide letter no PC/KH-336/8308 dated 12.03.1999. CTO consent order no. 35875 dated 06.01.2010 in the name of Pacific Organic Chemicals. Further unit was transferred in the name M/s Ideal Cures Pvt. Ltd and consent to Establish was issued by GPCB vide letter no GPCB/CTE-KH-388/ID:11510/78654 dated 30.04.2011. CTO order no. 43567 dated 26.09.2011 issued to M/s Ideal Cures Pvt. Ltd for manufacturing of Methacrylic acid.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 8th October, 2013 under the Chairmanship of District Magistrate. The issues raised during Public Hearing were regarding ground water extraction, rain water harvesting, local employment, health & safety etc. Public Hearing issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

After detailed deliberations, the Committee on the basis of the additional information provided and presentation made recommended the project for environmental clearance and stipulated following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i) National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21st July, 2010 and amended time to time shall be followed by the unit.
- ii) Total fresh water requirement from tanker water supply shall not exceed 15 m³/day.
- iii) Total industrial wastewater generation shall not exceed 1.6 m³/day. Industrial effluent shall be treated in ETP. Treated effluent shall be reused for gardening after achieving desired water quality standards. No effluent shall be discharged outside the plant premises and Zero effluent discharge condition shall be maintained.
- iv) All the issues raised during the Public Hearing/consultation meeting held on 8th October, 2013 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- v) At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.
- vi) As proposed, green belt over 33 % of the total project area shall 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.

18.7.10 Proposed Expansion of Aliphatic Amines and its derivatives Manufacturing unit of **M/s Balaji Amines Ltd.** at Village Tamalwadi Tehsil Tuljapur District Osmanabad, Maharashtra (EC)

The project proponent and their consultant (Equinox.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 3rd Meeting of the Expert Appraisal Committee (Industry) held during 3rd to 5th December, 2012 for preparation of EIA-EMP report All Synthetic Organic Chemicals Industry located

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

M/s Balaji Amines Ltd. has proposed for expansion of Aliphatic Amines and its Derivatives Manufacturing Unit at Gat No. 197, Tamalwadi, Tehsil Tljapur, District Osmanabad, Maharashtra. The total capital investment of existing unit is Rs 118.11 Crore and the proposed expansion project is Rs 8.70 Crore. Total land acquired by BAL is 1,09,882.58 m². No forest land is available. It is reported that no reserve forest/ protected forest/ National Park/ Wildlife Sanctuaries /ecological sensitive area. CPP (2.5 MW) is already installed in the existing premises for environmental clearance is obtained from SEIAA vide letter no. EC (Balaji)-2009/57/CR.18/09/TC2 dated 17th February, 2010. A copy of NOC accorded by the Environment Department, Govt. of Maharashtra vide letter no. Env. 2003/263/Cr.25/2003/TC.III dated 5th August, 2003 for the existing unit is submitted.

The following products will be manufactured:

S.N.	Products	Quantity (MTPM)		Total
		Existing Capacity	Expansion Capacity	
1	Mono Methyl Amine (MMA)	240	360	600
2	Di Methyl Amine (DMA)	800	648	1448
3	Tri Methyl Amine (TMA)	160	144	304
4	Mono Methyl Amine (MEA)	40	43.2	83.2
5	Di Ethyl Amine (DEA)	80	93.6	173.6
6	Tri Ethyl Amine (TEA)	180	216	396
7	Di Methyl Amine Hydro Chloride (DMAHCL)	600	660	1260
8	Di methyl Acetamide (DMAC)	125		125
9	Choline Chloride (CC)	150	--	150
10	Di Methyl Amino Ethanol (DMAE)	125	180	305
11	Di Ethyl Amino Ethanol (DEAE)	100	216	316
12	Mono Methyl Urea (MMU)	150	--	150
13	Try Ethyl Benzyl Ammonium Chloride (TEBAC)	100	--	100
14	Dimethyl Urea (DMU)	300	--	300
15	Methyl Di-Ethanol amine (MDEA)	125	--	125
10	Morpholine	150	180	330
11	Absolute Alcohol	3000 KLPM	--	3000 KLPM
12	Choline Chloride 50 % on Corn cobs (C.C 50%)	500	--	500
13	Choline Chloride 60 % on Corn cobs (C.C 60%)	500	--	500
14	N – Methyl -2- Pyrrolidone(NMP)	300	504	804
15	Gama Butyro Lactone	--	1008	1008
16	2-Pyrrolidone/N-Etyhl-2-Pyrrolidone	--	504	
17	Mono Ethyl Amine Hydrochloride MEAHCL) / Di Ethyl Amine Hydrochloride (DEAHCL)/Tri Ethyl Amine Hydrochloride (TEAHCL)	--	72	72
18	Tri Methyl Amine Hydrochloride (TMAHCL) / Mono Methyl Amine (Hydrochloride (MMAHCL)	--	72	72
By-products:				
1	Hydrogen Gas		49.32	49.32
2	Higher Amines		170.28	170.28

Ambient air quality monitoring was carried out at 6 locations October, 2012 –December 2012 and submitted data indicates as PM10 (44.3–30.2 ug/m³), PM2.5 (12.8-10 ug/m³), SO₂ (19.7 – 10.1 ug/m³) and Nox (20.8-11.8 ug/m³). Since the required input for GLC model run towards Sulphur content, SO₂ and SPM concentration in the stack emission are not obtainable in case of hydrogen gas as fuel in proposed expansion. The ambient air quality levels are within the NAAQS.

Bagfilter is installed in the existing coal fired (14 TPH) boiler and thermic fluid heater. ESP is installed in the existing coal fired (35 TPH) boiler. Bagfilter will be provided to TFH Stack (10 m) is installed in the existing oil fired boiler. Stack (30 m) and Stack (10 m) will be provided H₂ gas fired thermic fluid heater. Water scrubber is installed in the existing plant -1 (NMPA), plant -4 and Plant -5. Scrubber with water and alcohol media is installed in the existing ethyl amines plant -2. DMAHCL. Scrubber with Methanol media is provided in the existing methyl amines plant -8. Scrubber with Di-ethylene glycol (DEG) and water is provided to Morpholine Plant-10.

Total fresh water requirement from ground water will be increase from 757.4 m³/day to 1343.1 m³/day after expansion. Addl. Water requirement will 585.1 m³/day. Effluent generation will be increased from 180.5 m³/day to 327.98 m³/day after expansion. Effluent generated from the proposed expansion activities will be segregated in two different streams viz stream –I and stream –II. Stream-I comprising process effluent (66.82 m³/day and washing effluent 3.2 m³/day will be evaporated in forced evaporation system. Stream II comprising cooling blow down and boiler blow down, back wash of filter, DM plant and softner regeneration. Cooling and boiler blow down will be given primary treatment followed by RO. Permeate of RO will be reused for boiler feed. DM plant and softener will be given primary treatment and will be evaporated in MEE system. MEE condensate will be reused/recycled for cooling tower make up. No effluents will be discharged outside the factory premises.

STP sludge, salts left over after evaporation in MEE & Forced evaporation, drums cleaning chemical containing residue from decontamination, filter material will be sent to CHWTSDF. Process residue waste will be incinerated in an incinerator installed in Unit III. Spent catalyst (Nickel) from ethyl amines plant, Alumina from methyl amines plant and copper from GBL will be sent to CHWTSDF or sale to authorized party. Fly ash will be sent to brick manufacturers.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Maharashtra Pollution Control Board on 20th March, 2013 under the Chairmanship of Addl. District Magistrate. The issues raised during Public Hearing were regarding discharge of effluent, agriculture affected due to pollution, local employment, source of water supply, local employment, etc. Public Hearing issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

After deliberations, the Committee sought the following additional information:

- 1 Status and Copy of latest order of High court case.
- 2 Certified compliance report to the conditions stipulated in the existing EC by the MOEF' Regional office at Bhopal.
- 3 Odour management plan to be submitted.
- 4 CSR plan to be submitted.
- 5 Occupation health management plan to be submitted.
- 6 VOC monitoring report to be submitted
- 7 Safety system for handling and storage of hazardous chemicals.

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 Reply will be discussed internally without calling project proponent.

18.8 Reconsideration Cases:

18.8.1 Proposed Expansion of Dyes & Dye Intermediate of **M/s Clariant Chemicals Ltd.** located at Village Kudikadu, Taluka& District Cuddalore, Tamil Nadu – (**Further consideration of EC**)

Project proposal was considered in the 14th Expert Appraisal Committee (Industry) meeting held on 19th to 20th December, 2013 wherein the Committee desired following information:

- 1 Carry out baseline study for one month.
- 2 VOC monitoring data to be rechecked.
- 3 Source of water supply.
- 4 Ground water table of the project site for last five years.
- 5 Reduce fresh water requirement. Recycled/reused treated effluent by installing RO.
Details of rain water reservoir to be constructed for water conservation

Project proponent vide letter dated 25th February, 2014 has submitted above information.

The PP informed that water requirement after expansion will be 1602 m³/day, of which 1202 m³/day of water would be from groundwater source. 400 m³/day effluents will be recycled. RO will be installed to reuse the treated water.

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

- i) National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21st July, 2010 and amended time to time shall be followed by the unit.
- ii) Total fresh water requirement from ground water source/Industrial Estate Water supply shall not exceed 1200 m³/day. Unit shall create rain water collection reservoir to cater water requirement for 20 days at least.
- iii) Total industrial wastewater generation shall not exceed 1249 m³/day. Industrial effluent shall be treated in ETP and treated effluent will be discharged to sea. Effluent will be pumped through 8 inch HDPE pipe line of length 2631 m into sea.
- iv) At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.
- v) As proposed, green belt over 33% of the total project area shall 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.

18.8.2 Sugar Plant (5000 TCPD), Distillery (45 KLPD) and Cogeneration Power Plant (34 MW) of **M/s R. K. Powergen Pvt. Ltd.** (Formerly known as **M/s R.K. Cogen and Distilleries Private Limited.**) at S.F. Nos. 76/2-17, 77/1,2,4-8, 10, 80/2, 80/6, 80/7,80/9-12, 105/1&2, 106/1, 107, Village Madikechilur, Tehsil & District Shimoga, Karnataka **(EC)**

The above mentioned project proposal was considered in the 4th REAC meeting held during 8th -9th January, 2013 and the Committee recommended the project proposal for environmental clearance.

While processing the project proposal, it was observed that part of plant area i.e. Survey Nos 105, 106 and 107 have been declared forestland under section 4 as per Karnataka Forest Act 1963. The Ministry vide letter dated 14th August, 2013, had requested the PP to furnish a copy of final notification under Section (20) indicating that the said land (i.e. Survey Nos 105, 106 and 107) does not form part of reserve forests. However, PP has

not provided the necessary information. Further, project proponent has proposed to restrict the installation of project within revenue land i.e. Sy. Nos. 75/6, 76/2, 3, 76/6-17, 77/1,2, 77/4-10, 80-2, 80/6,7, 80/9-10, 80/13.

Accordingly, MOEF had sought following clarifications:

- i. The total area referred earlier for setting up the plant was 18.82 ha. It has now been proposed to restrict the installation of project within revenue land. Therefore, you are requested to provide the area of their remaining land (involving revenue lands only) for setting up the proposed project.
- ii. The revised layout clearly indicating the area to be occupied by each unit of the proposed project shall be submitted. The condition suggested by the EAC regarding development of greenbelt over 33% of the plot area shall be kept in view while working on revised lay out plan.

Now, M/s R K Cogen has proposed to drop forest land at Survey Nos 105, 106 and 107. They have procured additional land area of 54749 m² to maintain the greenbelt area.

After detailed deliberations, the Committee based on the information provided and presentation made, 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. ESP along with stack of adequate height shall be provided to bagasse/coal fired boiler to control particulate emission within 50 mg/Nm³.
- ii. Company shall follow good management practices viz. collection of waste yeast sludge from fermentation section in a closed system and proper disposal, reduced volume of effluent by adopting strategic approaches, closed drains carrying spent wash to the treatment units; minimization of fugitive emissions from anaerobic treatment; proper collection & handling of excess sludge generated from the anaerobic & aerobic treatment units; minimum retention of treated & untreated spent wash in the lagoons; effective composting of the spent wash by controlled effluent spraying through mechanical system to avoid spillages & over application, blending of sludge in correct proportion with press mud; and properly finished compost and green belt development with suitable plantation in and around the treatment units to mitigate odour from the distillery unit.
- iii. Pucca approach road to project site shall be constructed prior to commencing construction activity of the main distillery to avoid fugitive emissions.
- iv. Total fresh water requirement from River Thungabhadra shall not exceed 3120 m³/day and prior permission for drawl of water shall be obtained from the concerned proponent. No ground water shall be used.
- v. Spent wash generation from molasses shall not exceed 8 Kl/Kl. Spent wash from molasses based distillery shall be concentrated in MEE and sent to an incinerator boiler for incineration to achieve zero effluent discharge. Spentlees, effluent from utilities and cogeneration unit shall be treated in effluent treatment plant (ETP) and water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB and recycle/ reuse.
- vi. Spent wash shall be stored in impervious lagoon with HDPE lining as per CPCB guidelines and shall be kept in proper condition to prevent ground water pollution. Storage capacity of spent wash lagoon shall be for 5 days.
- vii. Wastewater generation from the sugar unit shall not exceed 100 litres per tonne of cane crushed. Effluent from sugar unit shall be treated in the effluent treatment plant.

- viii. As proposed, no effluent from sugar, distillery and co-generation power plant shall be discharged outside the premises and Zero discharge shall be adopted.
- 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.
- x. Baggase storage shall be done in such a way that it does not get air borne or fly around due to wind.
- xi. Boiler 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. Bagasse ash and coal ash shall be stored separately.
- xii. Occupational health surveillance programme shall be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre shall be strengthened and the regular medical test records of each employee shall be maintained separately.
- xiii. 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.
- xiv. All the issues raised during the Public Hearing/consultation meeting held on 7th June, 2012 shall be satisfactorily implemented.
- xv. At least 5 % of the total cost of the project shall be earmarked towards the environment social commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner.
- xvi. The Company shall submit within three months their policy towards Corporate Environment Responsibility which shall inter-alia address (i) Standard operating process/procedure to being into focus any infringement/deviation/violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.
- xvii. As proposed, green belt over 33 % of the total project area shall 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.

18.8.3 Expansion of Grain Based Distillery (25 KLPD to 60 KLPD) of M/s Adlers Bioenergy Limited Located at Sy. No. 284(B), Subhash Nagar, A/P Gargaon, TalukaKallamb, District Osmanabad, Maharashtra (EC)

The project proposal was considered in the 15th Expert Appraisal Committee (Industry) meeting held on 10th-11th June, 2013 wherein the Committee had decided that the compliance of existing project shall be discussed internally without the requirement of the proponent. The EAC had also sought a copy of the agreement with vendors in Bellary for obtaining coal from Indonesia.

The project proponent vide letter dated 12th March, 2014 had submitted above information, which was considered.

The MOEF RO certified compliance report dated 7.02.2014 had been submitted. Partly complied report were discussed. A copy of letter 21.12.2012 from M/s Sunder Enterprises had been received regarding supply of coal with ash value less than 7 percent and sulphur less than 0.5 %. PP also submitted the action plan for partially complied activities.

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

- i. Distillery unit shall be based on Grain (60 KLPD) based only and no Molasses based distillery unit shall be operated.
- ii. Bag filter along with stack of adequate height shall be provided to coal/rice husk fired boiler to control particulate emission within 50 mg/Nm³.
- iii. Pucca approach road to project site shall be constructed prior to commencing construction activity of the main distillery so as to avoid fugitive emissions.
- iv. Total fresh water requirement from MIDC water supply shall not exceed 600 m³/day for distillery and prior permission shall be obtained from the Competent Authority.
- v. Water consumption shall be reduced by adopting 3 R's (reduce, reuse and recycle) concept in the process.
- vi. Spent wash generation shall not exceed 6 Kl/Kl of alcohol. Spent wash shall 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 bottle washing, utilities and cogeneration unit shall be treated in effluent treatment plant (ETP) and water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB and recycle/reuse.
- vii. No effluent from distillery and co-generation power plant shall be discharged outside the premises and Zero discharge shall be adopted.
- viii. 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.
- ix. No storage of wet cake shall be done at site. An additional dryer shall be installed so that at any time wet cake is not sold then wet cake shall be converted into dry cake by operating additional dryer.
- x. Coal storage shall be done in such a way that it does not get air borne or fly around due to wind.
- xi. Boiler 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. Occupational health surveillance programme shall be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre shall be strengthened and the regular medical test records of each employee shall be maintained separately.

- xiii. 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.
- xiv. As proposed, green belt over 33 % of the total project area shall be developed within plant premises with at least 7-10 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.
- xv. All the commitment made regarding issues raised during the Public Hearing/consultation meeting held on 23rd November, 2012 shall be satisfactorily implemented.
- xvi. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise social responsibility based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.
- xvii. The Company shall submit within three months their policy towards Corporate Environment Responsibility which shall inter-alia address (i) Standard operating process/procedure to bring into focus any infringement/deviation/violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.

18.8.4 Augmentation of Hydrocarbon Production (2 lakh bopd to 3 lakh bopd) in RJ-ON-90/01 Block of **M/s Cairn India** located in districts Barmer and Jalore, Rajasthan (**EC**)

Project proposal was considered in the 15th Expert Appraisal Committee (Industry) meeting held during 10th-11th June, 2013 wherein the Committee had sought the following information:

- 1 Break up of small, medium and large farmers from whom the land is being acquired. If small farmers are involved, a detailed R&R plan.
- 2 Post project ground water monitoring
- 3 Impact on environment due to use of synthetic oil mud
- 4 Wildlife conservation plan for schedule 1 species.
- 5 Detailed need based Enterprise Social Responsibility Plan for 5 % of project cost.
- 6 Authenticated English translation of the P.H.
- 7 Monitoring report of RO, Lucknow on the compliance status of earlier EC along with status of implementation of earlier commitments made in the P.H.
- 8 Detailed CSR Plan for 2% of retain profits as per provisions of Companies Act 2013, providing details of village-wise activities of various sectoral socio-economic measures – already under implementation in the existing project and that proposed for the expansion project. The CSR Plan shall be drawn up in consultation with the local district administration and panchayats (s) of the villages concerned falling within the study area.
- 9 Groundwater issues: Map of area – cross section showing aquifers and fresh water regions.

Project proponent vide letter dated 13th March, 2014 had submitted above information, which was considered internally. It was noted that PP has earmarked fund of Rs. 300 crores for next five years under Enterprise Social Responsibility.

After detailed deliberations, the Committee based on the information provided 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. Compliance to all the specific and general conditions mentioned in environmental clearance letters nos. J-11011/382/2005-IAII (I) dated 21st March, 2006, J-11011/174/2007-IAII(I) dated 12th

March, 2008, J-11011/98/2019-IAII(I) dated 23rd November, 2010, 16th October, 2012 and J-11011/108/2012- IA II (I) dated 14th June, 2013 shall be ensured.

- ii. The stack emissions from various units shall conform to the standards prescribed under the Environment (Protection) Act. At no time, the emission levels shall go beyond the stipulated standards. In the event of failure of pollution control system(s) adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency of the pollution control device has been achieved. Low NO_x burner shall be installed in the Captive Power Plant alongwith flue gas recirculation to reduce NO_x emission.
- iii. Leak Detection and Repair programme shall be prepared and implemented to control HC/VOC emissions. Focus shall be given to prevent fugitive emissions for which preventive maintenance of pumps, valves, pipelines are required. Proper maintenance of mechanical seals of pumps and valves shall be given. A preventive maintenance schedule for each unit shall be prepared and adhered to. Fugitive emissions of HC from product storage tank yards etc. must be regularly monitored. Sensors for detecting HC leakage shall be provided at strategic locations.
- 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 RSPCB. The levels of PM₁₀, SO₂, NO_x, CO and non-methane hydrocarbon in ambient air and emissions from the stacks shall be monitored and/ displayed at a convenient location near the main gate of the company and at important public places.
- v. Total saline ground water requirement from Thumbli aquifer, Fatehgarh aquifer shall not exceed 51500 m³/day, 15000 m³/day and 2175 m³/day respectively. Clearance from CGWA shall be obtained and submitted to the Regional Office, Lucknow.
- vi. Treated wastewater (produced water/desalination rejects/CPP blow down/ formation water/sanitary sewage) shall comply with the standards notified under the Environment (Protection) Act, 1986. As proposed, the produced water generated shall be treated in the produce water treatment plant to separate solids and oil traces through induced gas floatation process. No water shall be discharged outside the facility boundary. Produced water shall be treated in inject wastewater treatment plant and treated water will be injected in ground.
- vii. Domestic wastewater shall be treated in Sewage Treatment Plant (STP) and recycle/reuse entire treated wastewater for green belt development and various activities at the site.
- viii. Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- ix. Adequate numbers of ground water quality monitoring stations by providing piezometers around the captive landfill site and project area shall be set up. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to Rajasthan Pollution Control Board and this Ministry.
- x. The drill cutting (DC) wash water shall be treated to conform to limits notified vide GSR.546(E) dated 30th August, 2005 under the Environment (Protection) Act, 1986 before disposal of solid waste, drill cutting and drilling fluids for onshore drilling operation. The treated effluent shall be monitored regularly.
- xi. 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 RSPCB shall be obtained for disposal of solid / hazardous waste in the TSDF.

- xii. Additional Incinerator comprising primary and secondary chamber shall be designed as per CPCB guidelines. SO₂, NO_x, HCl and CO emissions shall be monitored in the stack regularly.
- xiii. Green belt shall be developed at least in 33 % of the plant area in and around the plant premises to mitigate the effects of fugitive emissions all around the plant as per the CPCB guidelines in consultation with DFO. Thick greenbelt with suitable plant species shall be developed around unit. Selection of plant species shall be as per the CPCB guidelines.
- xiv. All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.
- xv. As proposed, an amount of Rs. 300 crores has been earmarked towards the Enterprise Social Commitment based on locals need, issues raised during the earlier public hearing meeting and item-wise details along with time bound action plan. A mechanism shall be developed to follow up the monitoring of implementation and copy of compliance report shall be submitted to the Ministry's Regional Office at Lucknow. Implementation of such program should be ensured accordingly in a time bound manner.

18.9 Consideration of TORs

18.9.1 Expansion of Chemicals manufacturing unit of **M/s Stahl India Pvt. Ltd.** at 84 Vaanapadi Road, Ranipet, District Vellore Tamilnadu **(TOR)**

The project proponent and their consultant (M/s Perfect Enviro 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 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 Stahl India Pvt. Ltd. has proposed for expansion of chemicals manufacturing unit at 84 Vaanapadi Road, Ranipet, District Vellore Tamil Nadu. Existing unit was established in 1999 and commissioned in 2000. Unit has proposed to increase the production capacity from 5150 MTPA to 23400 MTPA. Total plot area is 58500 m² of which greenbelt will be developed in 46000 m². Cost of expansion project is Rs. 350 lakhs.

The following products will be manufactured :

S.N.	Product	Quantity (MTPA)
1	Acrylic Resin	2800
2	Water based blendings/ dispersions	7500
3	Shoe Blendings	2500
4	Polyurethanes Resins	3100
5	Solvent based blendings /Dispersion	5000
6	Dry Formulation	2500
	Total	23400

Stack will be provided to DG sets (1 x 350 KVA + 1 x 500 KVA) and boiler (3 TPH). Scrubber will be provided to control emissions from process stacks. Fresh water from municipal supply will be increased from 132 m³/day to 250 m³/day after expansion. Effluent generation will be increased from 24 m³/day to 60 m³/day after expansion. Effluent will be treated in ETP. Treated effluent will be recycled/reused for cooling tower make up and gardening. Hazardous waste will be disposed to TSDF site.

After detailed deliberations, the Expert Appraisal Committee prescribed TORs as given in Annexure-2 for preparation of EIA-EMP report.

18.9.2 Pesticide Manufacturing Unit (1800 TPA) of **M/s Shakti Insecticides Industries** at Village Ityara, Taluka & District Meerut, UP (**TOR**)

The project proponent and their Consultant (Eqms) 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 Pesticides plants are listed at S.N. 5(b) under Category 'A' and appraised at the Central level.

M/s Shakti Insecticides Industries has proposed for setting up of Pesticide Manufacturing Unit (1800 TPA) at Village Ityara, Taluka & District Meerut, UP. Total plot area is 5350 m² of which greenbelt will be developed in 1765.5 m². Cost of project is Rs. 10 crores.

The following products will be manufactured :

S.N.	Product	Capacity (MTPA)
Agrochemical Technical		
1	Thiophante Methyl	50.00 MT
2	Thiamethoxam	200.00 MT
3	Butachlor	100.00 MT
4	Easter	50.00 MT
5	Coldinafop	10.00 MT
6	Glyphosate SI	450.00 MT
7	Bifenthrin	10.00 MT
8	Atrazine	20.00 MT
9	Pretilachlor	100.00 MT
10	Lamda Cyhalothrin	60.00 MT
11	DDVP	140.00 MT
12	CPP	200.00 MT
13	2,4D Salt	200.00 MT
14	Sulfosulfuron	10.00 MT
15	Glyphosate Tech.	200.00 MT
	Total	1800 MT

Scrubber will be provided to control process emissions. Charcoal bed adsorption column will be provided to control odour. Boiler (2 TPH) will be required for process steam generation. Bio-briquette/husk/furnace oil/HSD/renewable source of energy will be used as fuel in boiler. Fresh water from ground water source will be 20 m³/day. Effluent generation will be 1.6 m³/day and treated in ETP. Only waste oil will be sent to authorized re-processors.

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

18.9.3 Expansion of existing Unit of **M/s Tytan Organics Pvt. Ltd.** by incorporating Agro Chemical Manufacturing Facilities at Plot No. C-146, MIDC, TTC Industrial Area, Pawane, Thane, Maharashtra (**TOR**)

The project proponent 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 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 Tytan Organics Pvt. Ltd. has proposed for expansion of Chemical Manufacturing unit by incorporating Agro Chemical Manufacturing Facilities at Plot No. C-146, MIDC, TTC Industrial Area, Pawane, Thane, Maharashtra. Plot area is 2214 m². Cost of the project is Rs. 30 lakhs.

The following are the existing products :

S.N.	Existing Product	Capacity (MTPM)
1	Dispersion Agent	300
2	Binder& Synthetic Resins	200
3	Tanning Agents	120
4	Leather Auxiliaries	100 MTPM
5	Textile Auxiliaries	100 MTPM
	Proposed	
1	Propanil	84 MTPM

Natural gas will be used as fuel. Water requirement from MIDC water supply will increased from 86.5 m³/day to 90.5 m³/day after expansion. Effluent generation will be increased from 7.5 m³/day to 7.9 m³/day after expansion. Effluent will be treated in ETP and Treated effluent further treated in CETP. ETP sludge will be sent to TSDF. No solvent will be used.

After detailed deliberations, the Expert Appraisal Committee prescribed TORs given in Annexure-2 for preparation of EIA-EMP.

18.9.4 Bulk Drugs & Intermediates Manufacturing Unit of **M/s Apex Drugs & Intermediates Ltd.** at Sy. No. 10, IDA Village Gaddapartharam, Mandal Jinnaram, District Medak, A.P. (TOR)

The project proponent and their Consultant (M/s Pridhvi Envirotech (P) 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 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 Apex Drugs & Intermediates Ltd. has proposed for expansion of Bulk Drugs & Intermediates Manufacturing Unit (from 15 TPM to 28.5 TPM by changing from recovery to manufacturing) at Sy. No. 10, IDA Village Gaddapartharam, Mandal Jinnaram, District Medak, A.P. Total plot area is 3.0 acres of which greenbelt will be developed in 0.9 acres of land. Cost of proposed expansion is Rs. 22 Crore. There are 19 RFs are located within 10 km distance.

The following products will be manufactured:

(A) Existing Products and Capacity

S.N.	Name of the Product	Quantities in (TPM)
1	Spent solvent distillation	10
2	Recovery of Piperazine	5.0
	Total	15.0

(B) Proposed Products and Capacity

S.N.	Name of the Product	Production Capacity (TPM)	Product Description Drug/Intermediate/Multipurpose chemicals
1	Clopidogrel Hydrogen Silfate	10.00	Bulk Drugs
2	Nimesulide	10.00	Bulk Drugs
3	Cetirizine Dihydrochloride	3.00	Bulk Drugs

4	Levocetirizine Dihydrochloride	0.50	Bulk Drugs
5	Pantprazole Sodium Sesquihydrate	5.00	Bulk Drugs
	Total		
By Products			
1	Ammonium Tartrate	5.5 TPM	
2	Piperizine Di-hydrochloride	1.15 TPM	

Bagfilter along with stack height of 30 m will be provided to coal fired boiler (4 TPH). Scrubbers will be provided to control process emissions viz. HCl, H₂ and CO₂. Water requirement from public suppliers and road tankers will be increased from 24 m³/day to 81.4 m³/day after expansion. Effluent generation will be increased from 2 m³/day to 38.8 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. Additional DG sets (1x500 KVA) will be installed.

After detailed deliberations, the Expert Appraisal Committee prescribed TORs as given in Annexure-2 for preparation of EIA-EMP report.

18.9.5 Expansion of Bulk Drugs Manufacturing Unit of **M/s Nakoda Chemicals Ltd.** at Plot No. 64/A, Phase I, IDA Jeedimetla, District Ranga Reddy, A.P. (TOR)

The project proponent and their Consultant (Pridhvi Envirotech (P) 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., IDA, Patancheru, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Nakoda Chemicals Ltd. has proposed for Expansion of Bulk Drugs Manufacturing Unit at Plot No. 64/A, Phase I, IDA Jeedimetla, District Ranga Reddy, A.P. Total plot area is 5083 m² of which greenbelt will be developed in 600 m². Cost of expansion project is Rs. 1.25 crores. Shapur nagar reservoir is at distance of 0.7 Km. There are 8 reserve forests are located within 10 km distance.

The following products will be manufactured :

S.N	Product Name	Production Capacity (in TPA)	Product Description Drug/Intermediate/Multipurpose Chemicals
1	Norfloxacin	12.0	Drug
2	Pefloxacin mesylate	8.04	Drug
3	Acetazolamide	54.0	Drug
4	Lomefloxacin HCl	3.0	Drug
5	Famotidine	15.0	Drug
6	Ecabet sodium	20.04	Drug
7	Menatetrenone	0.48	Drug
8	Prolonium iodide	0.24	Drug
9	Stearic hydrazide	0.24	Drug

10	Azelastin -1	0.12	Drug Intermediate
11	2(2-Methoxy phenoxy) ethyl amine (Anisole)	20.04	Drug Intermediate
12	n-Benzyl-n-ethyl-3-acetanilide	0.96	Multipurpose Chemicals
13	n-(3-ethyl(phenyl methyl) butyranilide	6.0	Multipurpose Chemicals
14	1,2,3,9-tetrahydro-4H-carbazol-4-one	1.0	Drug Intermediate
	Total	141.16	
	By Products		
1	Weak acid	320.4	
2	Gum Residue	41.64	

Cyclone separator will be provided to coal fired boiler (3 TPH). Scrubbers will be provided to control process emissions viz. HCl. Water requirement from public suppliers and road tankers will be increased from 36.5 m³/day to 58.68 m³/day after expansion. Effluent generation will be increased from 17 m³/day to 23.91 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. Addl. DG sets (1 x 300 KVA) will be installed.

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

18.9.6 Expansion of Synthetic Organic Chemicals of **M/s VJ Sai Chem** at Sy No. 240/B & 248, Dothigugem Village, Pochampally Mandal, Nalonda District, A.P. (TOR)

The project proponent 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 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 VJ Sai Chem has proposed for expansion of Synthetic Organic Chemicals at Sy No. 240/B & 248, Dothigugem Village, Pochampally Mandal, Nalonda District, A.P. Total plot area is 1.36 acres of which greenbelt will be developed in 0.44 acres of land. Cost of proposed expansion is Rs. 5 Crore. Chinna Musi River is flowing at a distance of 6.7 km. Malkapuram Reserve Forest and Hafizapura RF are located within 10 km distance.

The following products will be manufactured:

Manufacturing capacity-Permitted

S.N.	Name of the Product	Capacity (TPM)
1	Recovery of Piperzone Anhydrous (99%) from Piperzine ML's	4.5
2	Recovery of N-Ethyl Piperzine (98%) from Piperzine ML's	4.5
	Total	9

Manufacturing capacity-After Expansion

S.No	Name of the Product	Capacity (TPM)
1	Amlodipine Besylate	2
2	Clopidogrel Bisulfate	2.5

3	Lansoprazole	3
4	Rabeprazole Sodium	2
5	Valsartan	2.5
Total		12

Bagfilter along with stack height of 30 m will be provided to coal fired boiler (5 TPH). Scrubbers will be provided to control process emissions. Water requirement will be increased from 8 m³/day to 43.8 m³/day after expansion. Out of which, fresh water (28.8 m³/day) will be met from ground water source and remaining will be met from recycled water. Effluent generation will be increased from 3.3 m³/day to 16.3 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. Additional DG sets (1x500 KVA + 250 KVA) will be installed.

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

18.9.7 Setting up of 120 KLD Grain based Distillery Plant with 5 MW Power Plant of M/s Madhusala Distilleries Pvt Ltd. at village Karia, PS Bagnan, Dist. Howrah, WB (TOR)

The project proponent along with their consultant (M/s J M Environet Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of References for the preparation of EIA-EMP report. All the Distillery Units (30 KLPD and above) are listed at S.N. 5(g) of Schedule of EIA Notification, 2006 as Category 'A' and have to be appraised at the Central level.

M/s Madhusala Distilleries Pvt Ltd. has proposed for setting up of Grain based Distillery Plant (120 KLD) with 5 MW Power Plant at Dag. No. of Mouza Karia 280, 321-328, 332, 333, 336-339, 347-353, 357-361, 367, 369-375, 379-388, 394-399, 419-421, 424, 439, 443, Dag No. of Mouza, Khuleperiya 226, 293, 294, 295, Village Karia, PS Bagnan, Dist. Howrah, WB. Total plot area is 43.27 acres of which plant will be constructed in 25 acres of land and remaining land of 18.37 acres will be kept for future expansion. There are no national parks/ sanctuaries/ reserve forests/protected forests within 10 Km distance of the project. River Roopnarayan & River Damodar flow at a distance of 3.5 kms and 3.2 kms from the project sites.

Grain (damaged/broken), Broken rice /maize, sorghum & other starch bearing grain) (330 TPD) will be sourced from local areas through covered trucks by road/ railway tracks. Indian coal (210 TPD) from SECL through rail/ covered trucks or Imported coal (170 TPD) from Indonesia/south Africa through Sea/ Rail/ covered trucks by road or biomass (260 TPD) from local areas through covered trucks by road will be used as fuel. ESP will be provided to boiler to control particulate emissions. Total fresh water requirement from ground water source/ River Damodar will be 1200 m³/day. Spent wash will be decanted. Thin slop will be concentrated. Concentrate will be mixed with wet cake to form DWGS. DWGS will be dried to form DDGS. No effluent will be discharged outside the plant premises and 'Zero effluent discharge concept will be followed. DDGS will be sold as cattle feed/fish/prawn feed. Ash generated will be given to brick manufacturers/cement plant. ETP sludge will be used as manure.

After deliberations, the Committee prescribed TORs given in Annexure-4 for the preparation of draft EIA-EMP.

18.9.8 Manufacture of Fertilizers (SSP) and Sulphuric Acid Unit of **M/s Geminy Acid & Fertilizers (P) Ltd.** at village Harijiana, The. Garhshankar, dist. Hoshiarpur, Punjab (**TOR**)

The project proponent 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 SSP Fertilizer are listed at S.N. 5(a) under Category 'B' and appraised at the Central level. However, applicability of general condition due to project location within 10 km distance nearest inter-state boundary i.e. Punjab-HP, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Geminy Acid & Fertilizers (P) Ltd. has proposed for setting up of Manufacture of Fertilizers (SSP) and Sulphuric Acid Unit at village Harijiana, The. Garhshankar, dist. Hoshiarpur, Punjab. Single Super Phosphate (300 MTPD) including powder and granular grades will be produced. Total plot area is 10 acres of which plan will be constructed in 4200 m². Cost of project is Rs. 830 lakhs. The Committee observed that information provided regarding project is insufficient. Toposheet of project area is not legible. There is no information about project setting/ environmental setting. Complete plant configuration is not submitted. The Committee noted that proposal is premature and is deferred for consideration after submission of the revised prefeasibility report with complete details.

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

18.9.9 Modernization and Expansion of Ammonia-Urea Fertilizer Plant of **M/s Kanpur Fertilizer and Cement Ltd** at Udyog Nagar Industrial Area, Panki Kanpur, U.P. (**TOR**)

The project proponent and their Consultant (EQMS) 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 Chemical Fertilizer Plants are listed at S.N. 5(a) under Category 'A' and appraised at the Central level.

M/s Kanpur Fertilizer and Cement Ltd has proposed for Modernization and Expansion of Ammonia from 1245 MTPD to 1800 MTPD and Urea Fertilizer Plant from 2046 MTPD to 3033 MTPD to produce 1.05 MTPA of Urea within existing premises. At Udyog Nagar Industrial Area, Panki Kanpur, U.P. At present the existing Ammonia – Urea Fertilizer Complex is under operation with three trains of Ammonia Plant having 1245 MTPD capacity & Urea Plant with 2046 MTPD capacity (0.72 MTPA). The self contained and integrated fertilizer complex has 12 MW coal based CPP, railway siding for transportation of raw materials and finished product as well as water supply from lower Ganga canal, Kanpur. For restarting the plant, requisite Air and Water Consent for operation was renewed by Uttar Pradesh State Pollution Control Board. New coal based CPP of 95 MW (1x 60 + 1 x 35 MW) capacity is being proposed to meet the entire requirement of Fertilizer Complex. Cost of modernisation and expansion of Fertilizer plant is estimated as Rs. 583 crores and CPP is Rs. 500 crores. No forest land is involved. No national park and wildlife sanctuary is located within 10 km from the plant site. Ganga River is flowing at a distance of 8.91 Km. Pandu Nadi and Lower Ganga Canal is at 1.38 Km and 1.82 Km from the project site. Total land is available around 243.4387 acres and no additional land is required. Water requirement for fertilizer unit and CPP will be increased from 16700 m³/day to 21600 m³/day after expansion. Water allocation of 15 cusecs by lower Ganga Canal, Kanpur vide 3116A/13-12-2011. ESP will be provided to coal fired boiler to control particulate emissions. Greenbelt will be developed in 33 % of plant area.

After detailed deliberations, the Expert Appraisal Committee prescribed TORs given in Annexure-2 along with the TOR given below for preparation of EIA-EMP Report.

(i) Ambient air quality monitoring and stack emission data for the relevant parameters including PM₁₀, PM_{2.5}, SO₂, NO_x, CO, NH₃, HC (Methane and Non-methane) and VOCs for all the stacks for the existing fertilizer plant.

18.10 Any Other Items

18.10.1 Manufacture of Biaxially oriented Polypropylene (BOPP) Films and Coated/Laminated film of M/s Cosmo Films at MIDC SEZ Industrial Area, Aurangabad, Maharashtra (Applicability of EC)

Project proposal was considered in the 12th Expert Appraisal Committee (Industry) meeting held during 30th-1st October, 2013 and the Committee had sought the following information:

- I. Details of raw materials to be used.
- II. Details of manufacturing process along with chemical reactions.
- III. Details of all the associated units to be installed.
- IV. Since built up area of industrial building is 65000 m², view of construction project sector may be obtained.

Infrastructure Sector had clarified that as per present practice if the built up area of the building is more than 20,000 m² then environmental clearance is required to be obtained as applicable.

PP presented the additional Information before EAC(I). After detailed deliberation, the committee recommended that the proposed activity does not fall under 5 (f) of schedule of EIA Notification, 2006.

18.10.2 Expansion from Manufacturing of Fine Chemicals Unit of M/s Cetex Petrochemicals Ltd. at Chinna Sekkadu Village, Ambattur, Trivallur District, Tamil Nadu (Extension of validity of EC)

MOEF vide letter no. J-11011/1113/2007-IA –II dated 10th September, 2008 has issued EC for the above mentioned project. Project proponent, vide letter no. Cetex/MOEF/EC Extn/01/13 dated 2nd September, 2013 has requested for extension of validity of EC for another 5 years.

After detailed deliberations, the committee recommended for the extension of validity of EC for a period of three years with effect from 10.09.2013.

18.10.3 Chemical Manufacturing Plant of M/s Eshyasi Pharma Ltd. at Sy. No. 590A & 592A. ETP Road, P.O. Luna, Taluka Padra, District Vadodara, Gujarat (Extension of validity of TOR)

MOEF vide letter no. J-11011/396/2011-IA –II dated 4th November 2011 has issued TOR for the above mentioned project. Project proponent vide letter dated 11th September, 2013 has requested for extension of validity of TOR for one more year as Public Hearing has to be conducted.

After detailed deliberations, the committee recommended for the extension of validity of TOR for a period of one year with effect from 4.11.2013.

18.10.4 Proposed Synthetic Organic Chemicals Manufacturing unit of M/s Agrocel Industries Ltd at 442- 444 near Village Avania, Taluka Bhavnagar, Gujarat (Extension of validity of EC)

MOEF vide letter no. J-11011/485/2008-IA –II dated 11th September 2009 has issued EC for the above mentioned project. Project proponent vide letter dated 12th February, 2014 has requested for extension of validity of EC for another 5 years. They informed that project implementation got delayed due to sudden drop in market demand and difficulty aroused on execution of the project.

After detailed deliberations, the committee recommended for the extension of validity of EC for a period of three years with effect from 11.09.2014.

18.10.5 Establishment of 240 KLPD Distillery Unit, 240 KLPD Ethanol, 10000 TCD Sugar and 30 MW Bagasse based Cogeneration Power Plant of **M/s Shree Renuka Sugars Ltd.** at Nadur Village, Mangalwedha Taluka of Solapur District Maharashtra (**Extension of validity of EC**)

MOEF vide letter no. J-11011/493/2006-IA –II dated 22nd December 2008 has issued EC for the above mentioned project. The project proponent vide letter dated 10th December, 2013 has requested for extension of validity of EC for another 5 years. They informed that they have initiated erection and commissioning of the unit and would require one more year for completion of the same. PP informed that sugar unit has been installed and commissioned. They have also requested for change in the name of the unit from Shree Renuka Sugars Ltd. to Fabtech sugar Pvt. Ltd.

After detailed deliberations, the committee recommended for the extension of validity of EC for a period of one year with effect from 22.12.2013. Regarding name change, PP has to submit requisite documents and Ministry shall process the case without referring to the Committee.

18.10.6 Expansion of Sugar Mill Capacity from 500 TCD to 11000 TCD and expansion of distillery capacity from 54 KLPD to 84 KLPD and Co-generation Capacity from 41 MW to 52 MW of **M/s Hiranyakeshi Sahakari Sakhare Karkhana Niyamit** at Sankesh, District Belgaon, Karnataka (**Extension of validity of EC**)

MOEF vide letter no. J-11011/54/2009-IA –II dated 9th April 2009 has issued EC for the above mentioned project. Project proponent vide letter dated 28th January, 2014 has requested for extension of validity of EC for another 5 years.

After detailed deliberations, the committee recommended for the extension of validity of EC for a period of three years with effect from 9.04.2014.

8.10.7 Amendment to TOR dated 30.04.2013 of M/s Bharat Petroleum Corp Ltd – Issue of dropping of JV – LG Chem from the Kochi Refinery project. (**Amendment to TOR**)

MoE vide letter no. J-11011/26/2013 dated 30th April, 2013 has issued TOR to Joint venture of M/s BPCL Kochi Refinery and LG Chem, South Korea for preparation of EIA-EMP report . Now, PP has informed that LG Chem has since withdrawn from the JV proposal and the same is now being developed as a BPCL project. Now, they have requested for change in name.

After detailed deliberations, the committee recommended the proposal for change in name.

18.10.8 Proposed Coal fired HTF Heaters within existing site of **M/s Alok Industries** at Plot No. 521/1, 17/5/1, village Rakholi and Sayli, Silvassa, UT of Dadr & Nagar Haveli (**Amendment in EC dated 22.03.2011**)

EC was granted to M/s Alok Industries on 22nd March, 2011 regarding expansion of partially oriented yarn (POY) and fully drawn yarn (FDY). Now, PP vide letter no. nil and dated nil received in the Ministry on 6.02.2014 has submitted an application for change of fuel.

After detailed deliberations, the committee desired following addl. Information:

- i. A confirmation in writing from PCC, Union Territory of Diu Daman that there is no moratorium on usage of coal based HTF heater
- ii. MoU with the coal supplier along with details of coal characteristics.
- iii. Fly ash management plan.
- iv. The details of air pollution control equipment.
- v. GLC based on dispersion modelling with respect to emissions.

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

30th April 2014

18.11.1 Residue Upgradation and Distillate Yield Improvement project with 11 MMTPA Crude Processing of **M/s Indian Oil Corp. Ltd.** at Mathura Refinery, Mathura, U.P. (EC)

The project proponent and their consultant (Engineers India Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 3rd Meeting of the Expert Appraisal Committee (Industry) held during 3rd– 5th December, 2012 for 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 Indian Oil Corporation Ltd. have proposed for Residue Up-gradation and Distillate Yield Improvement Project with 11.0 MMTPA Crude Processing" at Mathura Refinery. The benefits from the project are facilitate crude processing from 8 MMTPA to 11 MMTPA; Processing of high sulphur crude will be maximized; Up-gradation of bottom of barrels to maximize distillate yield from HS crude; production euro-IV MS and diesel will be maximised. Cost of the project is Rs. Is Rs. 8668 crores. Land requirement is 60 acres within existing plant premises.

New Process unit proposed under expansion project are as follows:

S.N.	Process Units	Capacity
	Crude Capacity (from 8 MMTPA to)	11 MMTPA
1	Resid Hydrocracking Unit	2.3 MMTPA
2	New Hydrocracker unit	2.0 MMTPA
3	Hydrogen Unit	110 TMTPA
4	Sulphur Recovery Unit (SRU) with TGTU	3 x 300 TPD
5	Additional VDU	2.5 MMTPA
6	DHDT revamp	2.4 MMTPA
7	Sour Water Stripper (SWS)	50 TPH
8	Amine Regeneration Unit	600 TPH
9	Nitrogen unit	1200 NM ³ /hr

S.N.	Utilities Related Facility	Capacity
1	Gas Turbo Generator	2x30 MW/hr
	Steam Turbine Generator	1x20 MW/hr
2	Cooling Tower for Process cooling water	5x2500 m ³ /hr
3	Air compressor and Drier	2x5000 NM ³ /hr
4	RO Plant for DM water	1x200 m ³ /hr
5	RO Plant for ETP effluent	1x250 m ³ /hr
6	Storage tanks	3x30 TKL+2x25 TKL
7	Mounded bullets-LPG	1x2500 m ³

Product Pattern after expansion are as given below:

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

Ambient air quality monitoring was carried out at 15 locations during November, 2012 – January, 2013 and submitted data indicates as PM10 (41–109ug/m³), PM2.5 (24–68.4 ug/m³), SO₂ (13.2 – 30 ug/m³) and NO₂ (19–33 ug/m³). Predicted value of ground level concentration due to proposed project is SO₂ (7.80 ug/m³) and Nox (8.13 ug/m³). The resultant concentrations are within the NAAQS except particulate matter. SO₂ emissions will be maintained below the prescribed limit (450 Kg/hr.).

Present level of SO₂ emissions rate ranging from 311 to 440 Kg/hr. With 90 % High Sulphure Crude processing and lesser sulphur in products, the SO₂ emission shall be maintained within 450 Kg/hr limit with following measures:

- Maximizing gaseous fuel (FG and NG).
- Use of fuel oil with low 'S' content < 0.60%.
- Installation of SRU's with standby SRU & minimum 99.5 % efficiency.
- Hydro-treated feed to FCCU (low 'S' feed).

Hydro-processed feed to FCC shall be maximized to the extent possible, thereby resulting in reductions in SO₂ emissions from FCCU stack. Use of natural gas as fuel in the new furnaces/GT's. New Sulfure recovery units with tail gas treatment facilities will be introduced for maximum sulphur recovery from Refinery acid gases. Low Nox burners will be provided in all the new furnaces to control the emissions of Oxides of Nitrogen (Nox). Total

water requirement will be increased from 830 m³/hr. to 1130 m³/hr. after expansion. Out of which water demand of 500 m³/hr will be met from treated effluent/recycled water and balance 630 m³/hr. fresh water requirement will be met from Koyala & Keetham water bodies. Industrial effluent generation will be increased from 506 m³/day to 665 m³/day after expansion. Refinery has a full-fledged Effluent Treatment Plant (ETP) of 750 m³/hr dry weather and 1050 m³/hr. wet weather capacity for treatment of wastewater generated. Tertiary treatment plant of 450 m³/dhr has been installed during modernization. A RO plant of 150 m³/hr permeate for recycle and reuse as DM plant feed was commissioned in 2010. Treated effluent of 251 m³/hr. will be discharged to the River Yamuna. Waste oil and Spent Catalyst will be sent to authorized recyclers/re-processors.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the UP Pollution Control Board on 23.12.2013. The issues raised during Public Hearing were regarding pollution due to enhancement in production, local development, patients treatment in Swarn Jayanti Hospital etc. Public Hearing issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

The Committee also discussed the compliance status report on the conditions stipulated in the existing environmental clearance, which were monitored by the Ministry's Western regional office, Lucknow. It is reported that the refinery has 4 SRUs of 60 Tons per day each (3 working /one standby) with efficiency > 99 % with tail gas treatment unit (TGTU). The SO₂ emission is maintained below stipulated limit of 450 Kg/hr. Amine is being treated in refinery fuel gas before burning in heater. Flare gas recovery system has been installed. Secondary seal has been installed tanks for controlling VOC emission. Continuous online SO₂/Nox analyzer have been provided in the existing & new stacks. The treated effluent meets MINAS concentration based standards as well as load based standards under EP rules. Part of treated effluent is recycled for make up to fire water, cooling tower and green belt development. A total of 2,87, 170 trees planted. Ecological park within refinery has been developed. The Committee found compliance report satisfactory. After deliberations, the Committee sought the following additional information:

1. To carry out comprehensive social impact assessment study indicating the past and present social status and developmental indicators in the 5 Km area around Mathura Refinery by any reputed party.
2. To include time series data for greenbelt development with support of area development and satellite imageries.
3. To get ambient air quality modelling data verified by IMD specialist. The inputs in terms of stack wise emission data, sulphur balance, metrological data and ambient air quality data to be provided to IMD specialist.
4. To recheck water quality analysis for BOD, DO, COD at Yamuna River.
5. Recheck the ambient air quality data in terms of methane and non methane HCs. The AAQ data need to compare with historical data available with Mathura Refinery.
6. To submit the final recommendation of risk assessment report enclosed by IOCL.
7. Details of national parks/wildlife sanctuaries/reserve forests within 10 km distance.
8. Details of water bodies within 10 km distance.
9. Reasons for exceeding AAQM values in respect of particulate matters. Management plan to be proposed.
10. Details of air pollution control equipments to be installed.
11. As per TOR compliance table of EIA report "prediction of impact of air emissions in TTZ Region Agra by conducting air quality modelling" is incorporated as Annexure – XVII. However, Annexure –XVII is not enclosed with EIA report.

The proposal was deferred until the aforesaid information was submitted. The aforesaid details shall be provided with the uploading of minutes on the website.

18.11.2 Proposed Dimerisation Unit of **M/s Indian Oil Corp. Ltd.** at Mathura Refinery, Mathura, UP (EC)

The project proponent and their consultant (Engineers India Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 11th Meeting of the Expert Appraisal Committee (Industry) held during 26th-27th August, 2013 for 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 Indian Oil Corp. Ltd. has proposed for installation of Dimerisation Unit at Mathura Refinery, Mathura, UP. Mathura Refinery supplies EURO-IV gasoline to the NCR region. The demand of EURO-IV gasoline is gradually increasing. Production of EURO-IV gasoline requires blending components having high octane (RON-91) and low aromatic component (<35% v/v). At present, Catalytic Reforming Unit is the only source for producing high octane blending component (RON>95), but has high aromatics content (>75% (v/v) and restricts EURO-IV gasoline production. To eliminate the above constraint partially, Mathura Refinery explored options and chosen the Dimerization Process suitable for present scenario, for producing of MS blending components having high RON and low aromatics. The unit will dimerize C-4 alkene into C-8 branched alkenes using simple process. Hence, it is proposed to put up a Dimerization unit. Total land requirement is 600 m², which is within existing refinery premises. No national park/wildlife sanctuary/reserve forest is located within 10 Km distance.

Ambient air quality monitoring was carried out at 15 locations during February, 2012 – January, 2013 and submitted data indicates as PM₁₀ (41–134ug/m³), PM_{2.5} (24.5–80.6 ug/m³), SO₂ (5.3 – 22.5 ug/m³) and NO₂ (8.8-30.5 ug/m³). The resultant concentrations are within the NAAQS except particulate matter. Additional SO₂ emission will be 0.009 Kg/hr due to proposed project. Additional Nox emission will be 0.73 Kg/hr will be 0.73 Kg/hr. No additional water requirement is envisaged. Source of water supply is Koyal River, Keetham lake and Gokul barrage. Total allocated water quantity is 2383 m³/hr. List of Environmental Clearance granted by the MOEF is as given below:

S.N.	Project	Environmental Clearance	Date
1	Revamp of FCCU Unit	J-11011/283/2006-IA-II (I)	22 nd March 2007
2	MSQU & DHDT Units	J-11011/6/2000 IA – II (I)	30 th April, 2001
3	DHDS	J-11012/65/96 IA – II (I)	5 th December 1996
4	OHCU	J-11011/15/94 IA – II (I)	19 th January 1995
5	CCRU, PRU	J-11011/9/89 IA – II (I)	28 th June, 1990

The Committee had exempted the Public Hearing under 7 (ii) of the EIA Notification, 2006 as there is no significant increase in pollution load.

After detailed deliberations, the Committee on the basis of documents furnished and presentation made 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. M/s IOCL shall comply with new standards/norms for Oil Refinery Industry notified under the Environment (Protection) Rules, 1986 vide G.S.R. 186(E) dated 18th March, 2008.
- ii. Continuous on-line stack monitoring for SO₂, Nox and CO of all the stacks shall be carried out. Low Nox burners shall be installed.

- iii. Fugitive emissions of HC from product storage tank yards etc. must be regularly monitored. Sensors for detecting HC leakage shall be provided at strategic locations. Leak Detection and Repair programme shall be implemented to control HC/VOC emissions.
- iv. SO₂ emissions after expansion from the plant shall not exceed 450 Kg/hr.
- v. As proposed, record of sulphur balance shall be maintained at the Refinery as part of the environmental data on regular basis. The basic component of sulphur balance include sulphur input through feed (sulphur content in crude oil), sulphur output from Refinery through products, by-product (elemental sulphur), atmospheric emissions etc.
- vi. As proposed no additional water will be required for proposed project.
- vii. Oil catchers/oil traps shall be provided at all possible locations in rain/ storm water drainage system inside the factory premises.
- viii. The membership of common TSDF shall be obtained for the disposal of hazardous waste. Copy of authorization or membership of TSDF shall be submitted to Ministry's Regional Office at Lucknow. Chemical/inorganic sludge shall be sent to treatment storage disposal facility (TSDF) for hazardous waste. Spent catalyst shall be sent to authorized recyclers/re-processors.

18.11.3 Drilling of Development well (4 Nos.) and Exploratory Well (3 Nos.) at Jorajan Area, District Tinsukia, Assam by M/s Oil India Ltd. (Amendment of EC)

EC was granted vide MOEF's letter no J-11011/252/2007-IA II (I) dated 1st November, 2011 to M/s Oil India. PP vide letter no OIL/CORP/HSE/EC-Drilling /MOEF/29/301 dated 20th February, 2014 has requested to amend the following condition stipulated in the EC:

“Specific condition no. (ii): No drilling of well and any construction work shall be carried out in Forest land.”

After detailed deliberation, the Committee decided that the PP submit fresh form-1 along with stage-1 forest clearance for the wells located in forest land. The proposal was deferred until the aforesaid information was submitted. The aforesaid information shall be provided with the uploading of minutes on the website.

18.11.4 Drilling of Exploratory Well (6 Nos.) of M/s Oil India Ltd. at Mechaki Area, District Tinsukia, Assam (Amendment of EC)

EC was granted vide MOEF's letter no J-11011/1260/2007-IA II (I) dated 2nd November, 2011 to M/s Oil India Ltd. PP vide letter no OIL/CORP/HSE/EC-Drilling /MOEF/29/300 dated 20th February, 2014 has requested to amend the following condition stipulated in the EC :

“Specific condition no. (ii) : No drilling of well and any construction work shall be carried out in Forest land.”

After detailed deliberation, the Committee decided that the PP submit fresh form-1 along with stage-1 forest clearance for the wells located in forest land. The proposal was deferred till the desired information is submitted. The aforesaid information shall be provided with the uploading of minutes on the website.

LIST OF PARTICIPANTS OF EAC (I) IN MEETING HELD ON 28th-30th APRIL 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	A
8.	Shri Rajat Roy Choudhary	Member	A
9.	Dr. S.D. Attri	Member	P (2 nd Day)
10.	Dr. Antony Gnanamuthu	Member	A
11.	Prof. C. S. Dubey	Member	P
12.	Shri Niranjana Raghunath Raje	Member	P
MOEF Officials :			
13.	Dr. T.Chandini	Director & Member Secretary	
14.	Shri A.N. Singh	Deputy Director (19.03.2014)	
15.	Shri Sundar Ramanathan	Deputy Director (18.02.2014)	

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 and SPCB 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 with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours shall be included. 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. Present land use shall be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
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-dimensional 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 national parks/wildlife sanctuary/reserve forests within 10 km. radius 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 showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site shall be included.
10. Coordinates of the plant site as well as ash pond 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.
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 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 and incorporating of RSPM data.
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, the AQIP Modelling shall be done using inputs of the specific terrain characteristics 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 :
31. Emissions (g/second) with and without the air pollution control measures
32. Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height) on hourly basis
33. Model input options for terrain, plume rise, deposition etc.
34. Print-out of model input and output on hourly and daily average basis
35. A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
36. Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
37. 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.
38. No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
39. Graphs of monthly average daily concentration with down-wind distance
40. 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.
41. Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
42. A plan for the utilisation of waste/fuel gases in the WHRB (if applicable) for generating power shall be presented.
43. 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.
44. 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.
45. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer shall be included.
46. 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.
47. 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.

48. Source of water supply and permission of withdrawal of water from Competent Authority.
49. 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.
50. 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.
51. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
52. 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.
53. Ground water modelling showing the pathways of the pollutants shall be included
54. Column leachate study for all types of stockpiles or waste disposal sites at 20°C-50°C shall be conducted and included, if the project is of metallurgy industry/involves use/production of metals and the pH of the soil in the project and impact zone is acidic in nature.
55. 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.
56. A note on the impact of drawl of water on the nearby River during lean season. Permission of competent authority for withdrawal of groundwater.
57. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations to be provided.
58. 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.
59. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
60. 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.
61. Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from any other source shall be included.
62. 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.
63. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly such as slag from all the sources, char and fly ash. Copies of MOU regarding utilization of ash shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
64. 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.
65. 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 particularly of slag.
66. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
67. 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.

68. 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.
69. Disaster Preparedness and Management Plan including Risk Assessment and damage control needs to be addressed and included.
70. Occupational health:
- a) Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
 - b) Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
 - c) Annual report of health status of workers with special reference to Occupational Health and Safety.
 - d) Action plan for the implementation of OHS standards as per OSHAS/USEPA.
 - e) Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
71. Corporate Environment Policy
- 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 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.
 - c) 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.
 - d) 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
72. 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.
73. 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.
74. 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.
75. Plan for the implementation of the recommendations made for the Sector in the CREP guidelines must be prepared.
76. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be included. Socio-economic development activities need to be elaborated upon.
77. A note on identification and implementation of Carbon Credit project shall be included.
78. 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.
79. A tabular chart with index for point wise compliance of above TORs.
80. The questionnaire for industry sector (available on MOEF website) shall be submitted while submitting EIA-EMP.

81. '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.
82. 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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TERMS OF REFERENCE (TOR) FOR MANUFACTURING OF SYNTHETIC ORGANICS

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30th May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
2. Executive summary of the project
3. Justification of the project.
4. Promoters and their back ground.
5. Regulatory framework.
6. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the APPCB.
7. Copy of NOC/Consent to Establish for the existing unit.
8. Compliance to the conditions stipulated in the NOC granted by the SPCB.
9. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s).
10. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
11. A map indicating location of the project and distance from severely polluted area.
12. Project location and plant layout.
13. Infrastructure facilities including power sources.
14. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
15. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
16. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
17. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
18. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
19. Details of the total land and break-up of the land use for green belt and other uses.
20. List of products alongwith the production capacities.
21. Detailed list of raw material required and source, mode of storage.
22. Manufacturing process details alongwith the chemical reactions and process flow chart.
23. Action plan for the transportation of raw material and products.
24. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
25. 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.
26. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM_{2.5}, PM₁₀, SO₂, NO_x, CO, NH₃ including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
27. Details of water and air pollution and its mitigation plan
28. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
29. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
30. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
31. Name of all the solvents to be used in the process and details of solvent recovery system.
32. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.

33. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16th September, 2009.
34. Source and permission from Competent Authority for the drawl of 80 m³/day water. Water balance chart including quantity of effluent generated recycled and reused and effluent discharge.
35. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
36. Zero discharge effluent concepts to be adopted.
37. 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).
38. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
39. Material Safety Data Sheet for all the Chemicals are being used/will be used.
40. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
41. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
42. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
43. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
44. Details of occupational health programme.
 - a) To which chemicals, workers are exposed directly or indirectly.
 - b) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - c) What measures company have taken to keep these chemicals within PEL/TLV.
 - d) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - e) What are onsite and offsite emergency plan during chemical disaster.
 - f) Liver function tests (LFT) during pre-placement and periodical examination.
 - g) Details of occupational health surveillance programme.
45. Socio-economic development activities shall be in place.
46. 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.
47. Note on compliance to the recommendations mentioned in the CREP guidelines.
48. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
49. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
50. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 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. 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 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.

54. The TORs prescribed shall be valid for a period of two years from date of issue 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.

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 / 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).

TORS FOR DISTILLERY WITH CPP/CO-GENERATION UNIT

1. Executive summary of the project.
2. Justification of the project
3. Detailed break-up of the land area along with latest photograph of the area.
4. Present land use based on satellite imagery and details of land availability for the project along with supporting document.
5. Details of site and information related to environmental setting within 10 km radius of the project site.
6. Information regarding eco-sensitive areas such as national park/wildlife sanctuary/ biosphere reserves within 10 km radius of project area.
7. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
8. A copy of lease deed or allotment letter, if land is already acquired.
9. List of existing distillery units in the study area along with their capacity and sourcing of raw material.
10. Details of proposed products along with manufacturing capacity.
11. Number of working days of the distillery unit.
12. Details of raw materials, its source with availability of all raw materials including cereal grains requirement.
13. Manufacturing process details of distillery and CPP along with process flow chart.
14. Sources and quantity of fuel (rice husk/coal etc.) for the boiler. Measures to take care of SO₂ emission. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted.
15. Storage facility for raw materials, prepared alcohol, fuel and fly ash.
16. Action plan to control ambient air quality as per NAAQES Standards for PM₁₀, PM_{2.5}, SO₂ and NO_x as per GSR 826(E) dated 16th November, 2009.
17. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, PM_{2.5}, SO₂, NO_x and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
18. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
19. An action plan to control and monitor secondary fugitive emissions from all the sources.
20. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
21. Details of boiler and its capacity. Details of the use of steam from the boiler.
22. Ground water quality around proposed spent wash storage lagoon and the project area.
23. 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.
24. Source of water supply and permission of withdrawal of water from Competent Authority.
25. Proposed effluent treatment system for grain/molasses based distillery (spent wash and spent lees) along with utility wastewater including CPP/Co-gen Unit (wherever applicable) as well as domestic sewage and scheme for achieving zero discharge.
26. Spent wash generation should not exceed 8 KL/KL of alcohol production. Details of the spent wash treatment for molasses based distillery based distillery.
27. Capacity for spent wash holding tank and action plan to control ground water pollution.
28. Layout for storage of bagasse/biomass/coal.
29. Proposed effluent treatment system for grain based distillery (spent wash and spent lees) along with utility wastewater including CPP and scheme for achieving zero discharge.
30. Capacity for spent wash holding tank and action plan to control ground water pollution.
31. Dryer shall be installed to dry DWGS.
32. Layout for storage of rice husk/biomass.
33. Details of solid waste management including management of boiler ash.
34. Details of solid waste management including management of boiler ash.
35. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
36. Alcohol storage and handling area fire fighting facility as per norms. Provision of Foam System for fire fighting to control fire from the alcohol storage tank.
37. 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.
38. List of flora and fauna in the study area.
39. Noise levels monitoring at five locations within the study area.
40. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
41. EMP should also include the concept of waste-minimization, recycle/reuse/ recover techniques, Energy conservation, and natural resource conservation.

42. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
43. Details of occupational health surveillance programme.
44. Details of socio-economic welfare activities.
45. Transportation of raw materials and finished products for the project (proposed/expansion) in respect of existing traffic, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
46. Action plan for post-project environmental monitoring.
47. Corporate Environmental Responsibility
48. (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. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
50. Total capital cost and recurring cost/annum for environmental pollution control measures.
51. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.
52. The EIA-EMP report for the project shall be based on the aforesaid TORs 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.
53. 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:

- ix. All documents shall be properly indexed, page numbered.
- x. Period/date of data collection shall be clearly indicated.
- xi. Authenticated English translation of all material in Regional languages shall be provided.
- xii. The letter/application for environmental clearance shall quote the MOEF file No. and also attach a copy of the letter.
- xiii. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- xiv. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report
- xv. 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.
- xvi. 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. 'Certificate of accreditation' issued by QCI to the environmental consultant should be included.