MINUTES OF 15th MEETING OF RECONSTITUTED EXPERT APPRAISAL COMMITTEE (INDUSTRY) HELD ON 29th-30th JANUARY, 2014

29th January, 2014

15.2 Consideration of the EC Projects

15.2.1 Proposed Iron ore Beneficiation Plant (1.5 MTPA), Pellet Plant (1.2 MTPA), Producer gas plant (480 TPD or 75,000 Nm³/hr) and Coke Oven Plant (0.225 MTPA) along with 15 MW WHRB based Captive Power Plant of M/s Orissa Metaliks Private Limited, located at Village Gokulpur, Tehsil Kharagpur, District Paschim Medinipur, West Bengal **(EC based on TOR granted on 09.08.2012)**

All steel plants are listed at S.No. 3(a) in primary metallurgical industries (ferrous & non ferrous) under category 'A' of Schedule of EIA Notification, 2006 and are appraised by the Expert Appraisal Committee (Industry) of MoEF.

The Proposal was considered for Terms of Reference (TOR) in the 37th meeting of the Expert Appraisal Committee (Industry-1) held on 14-15th June 2012 for preparation of EIA-EMP report. TOR was awarded by MoEF vide F. No. J-11011/182/2012-IA II (I) dated 9.8.2012 for preparation of EIA-EMP report. The PP had submitted the final EIA-EMP report vide letter dated 19.11.2013 after conducting Public Hearing for environmental clearance.

The salient points of the proposed project as per the final EIA-EMP report submitted and presentation made to the EAC are given below:

(i) M/s Orissa Metaliks Private Limited have proposed to set up an Iron ore Beneficiation Plant (1.5 MTPA), Pellet Plant (1.2 MTPA), Producer Gas Plant (480 TPD or 75,000 Nm³/hr) and Coke Oven Plant (0.225 MTPA) along with 15 MW WHRB based Captive Power Plant at village Gokulpur, Mouja Nandar Chalk & Dhekia, Tehsil Kharagpur, District Paschim Medinipur in West Bengal. The land requirement for the proposed project is 78 acres of private land, which has been acquired. No agricultural or forest land land is involved. No National Park, Wildlife Sanctuary & Reserve Forest, etc exist within 10 km radius of the Project Site. River Kangsavati flows at a distance of 4.5 km from the project site. Total cost of the project is Rs. 420 crores. An amount of Rs. 21 crores and Rs.2.96 crores is earmarked for the capital cost and recurring cost per annum towards the environmental pollution control measures based on Public Hearing issues over a period of five years. No court case/litigation is pending against the proposed project.

(ii) The capacity of proposed project activity has been tabulated below:

SL. NO.	UNIT	PROPOSED CAPACITY
1.	Iron Ore Beneficiation Plant	15,00,000 TPA
2.	Pellet Plant (2x0.6 MTPA)	12,00,000 TPA
3.	Producer Gas Plant (10x7500 Nm³/hr)	480 TPD (or) 75,000 Nm³/hr
4.	Coke Oven Plant	2,25,000 TPA
5.	Captive Power Plant	15 MW (WHRB based)

(iii) The major raw materials required are Iron Ore Fines (1,500,000 TPA), Bentonite (40,000 TPA), Limestone (26,000 TPA), Non-coking Coal (1,20,000 TPA) and Coking Coal (300,000 TPA) for the proposed project. Iron Ore will be sourced from Barbil, Banspani & Jaruli (Orissa), limestone will be sourced from Birmitrapur (Orissa) & Raipur (Chhattisgarh), Bentonite from Kutch-Gujarat and the Coal will be sourced from South Africa. As per the MoU submitted, the ash and sulphur content in the coal will be 9-11% and 0.65% respectively. Calorific value of the coal will be 5700 kcal/kg. Coal is to be sourced form mine(s) in South Africa and will be transported to Haldia Port and to the project site by rail-cum-road transport. It was stated that the project is adjoining a railway siding of its sister concern – namely M/s Rashmi Metaliks Private Limited. It is possible to use the existing railway siding to transport ore and coal by rail to site for which they can enter into an agreement with M/s Rashmi Metaliks Private Limited for use of railway siding for life of project.

(iv) Raw materials – iron ore and coal will be received by rail and transported to the plant site by conveyor. The power requirement is 10MW which will initially be met from West Bengal State Electricity Distribution Company Limited and after commissioning, from 15 MW WHRB based CPP.

(v) Ambient air quality monitoring had been carried out at 8 locations during October-December 2012. The Beneficiation Plant and Pellet Plant will be equipped with bag filters and Electrostatic Precipitator (ESP) arrangement with 99.9% efficiency. There will be Dust Extraction / Dust Suppression Systems / Foggy Dust Arresters to control fugitive emissions, raw material handling section and various other facilities inside the plant. Good housekeeping practices will be adopted to control the fugitive emissions.

(vi) The water requirement for the project would be 660 KLD and it will be met from their sister concern M/s. Rashmi Metaliks Private Limited, a sister concern, whose unit adjoins the present proposed unit. An agreement has been entered by M/s. Orissa Metaliks Private Limited with M/s. Rashmi Metaliks Private Limited, a copy of which was furnished. The permission for withdrawal of water (Source: borwells & River Kansai) has been obtained by M/s. Rashmi Metaliks Private Limited from State Water Investigation Department (SWID), Govt. of West Bengal The plant is designed on a zero-discharge concept. There will be no effluent discharge outside the plant boundary. Treated wastewater will be re-used in process, gardening & dust suppression purpose. Domestic effluents from the various buildings/sheds of the plant is conveyed through separate drains to septic tanks. The effluent from the septic tank is disposed of through soil percolation by providing dispersion trenches/soak pits. However, efforts will be made to harvest rainwater in the plant. Run-off water from the office areas, shop roofs will be collected and stored for use (estimated as 75 days' plant requirement).

(vii) Tailings from Beneficiation unit (0.3MTPA) will be used for brick making/land filling. Dust as collected in the de-dusting system from Pellet Plant will be used in the palletizing mix. Coke breeze from Coke Oven Plant (18,885 TPA) will be used in the pellet plant. Tar from producer gas plant will be stored in drums and will be sold to vendor registered with WBPCB. Out of the total plant area (i.e. 78 acres), 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.

(viii) The Committee noted that the levels of S (0.4-0.6) and ash content (10%) in the coal to be used are low. The Committee observed that levels of Ni. appears to be high and

monitoring of SPM, SPM in the ambient air and from stack emissions shall be carried out. The Committee desired that a firm linkage shall be entered with coal company from South Africa for long-term supply of coal, along with details of calorific value, source of mine, etc. The Committee desired that similar to FSA for coal supply, agreements are required for source of mine (iron ore), quantity, grade of ore supply period, etc. The Committee desired that details of water supply, source and quantum shall be furnished along with MOU entered with M/s Rashmi Metalliks Ltd. for ground water usage of 10 m3/d and permission for use of 66 m3/d of river water.

(ix) The Committee noted that the project does not involve any displacement of population. The Committee sought details of land losers, including landless labourers and details of compensation.

(x) The Committee deliberated on the issues raised during Public Hearing/Public Consultation conducted by West Bengal Pollution Control Board on 17.9.2013 at Barkala Gram Panchayat Office, under the chairmanship of Shri Basab Banerjee, Additional District Magistrate, District Paschim Medinipur. The Committee noted that complaints have been raised on pollution due to effluents of iron ore fines of Iron Ore Beneficiation Plant of adjoin sister concern – M/s Rashmi Metaliks. The Committee desired that the Plant of M/s Rashmi Metalliks shall be made a closed circuit unit. In addition, a large pond/reservoir acting as a water harvesting structure shall be created for ensuring that no episodal spillages outside the project area occurred in future. The Committee sought a specific plan for solid waste management.

(xi) The Committee considered the issues raised during Public Hearing such as adequate compensation of land, developmental work for near-by villages, employment to the locals, plantation & maintenance of trees, facilities for education & health, water conservation, road development, more plantation, etc. The Committee desired that the PP prepare a detailed CSR Plan for Rs 21 crores earmarked 5 years for CSR, giving village-wise details of the various developmental works/ activities that will be taken up for life of the project (along with capital and revenue costs). The Committee further desired that skill development of the local communities for taking up contract jobs in the plant shall also be taken up. The PP agreed to prepare in consultation with local administration for preparation of development plan, which is need-based and complementary to LADPs. The PP assured that a road will be constructed at the side of plant boundary, preventive measures will be taken to reduce the pollution load due to the discharge of the effluents from M/s. Rashmi Metaliks Limited and local people will be given preference in employment.

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

i. Action Plan for transportation of iron ore and coal by rail and then to the plant site by conveyor. Undertaking from PAs stating that no road transportation will be done;
ii. MoU with a sister concern M/s. Rashmi Metaliks Limited for utilizing their railway siding;
iii. Iron ore linkage documents along with the status of environmental clearance for the iron ore mines;
iv. Specific agreement with the coal mines of South Africa for the long-term supply of coal along with details of coal quality and quantum;
v. Socio-economic survey and R&R action plan
vi. Action plan for the management of solid and hazardous waste;

vii. Status of water intake approvals obtained by M/s. Rashmi Metaliks Limited and clarification from the State Govt whether merchant sale of water to M/s. Orissa Metaliks Private Limited is allowed;
viii. Detailed CSR Plan with details as in para (xi).
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 village wise action plan with financial and physical breakup/details shall be prepared over a period of ten years and shall be submitted;
x. Occupational Health and Safety action plan; and
xi. Status of implementation of earlier Public Hearing proceedings on the project.

15.2.2 Proposed 0.5 MTPA Integrated Steel Plant along with 110 MW Captive Power Plant, 1.2 MTPA Iron Ore Beneficiation Plant, 1.2 MTPA Pelletisation Plant, 0.3 MTPA Non-recovery Coke Oven Plant of **M/s. SPS Ispat and Power Limited,** located at village Chutardanga, P.O. Mejia, District Bankura in West Bengal **(EC)**

Steel plants are listed at S.No. 3(a) in primary metallurgical industries (ferrous & non ferrous) under category 'A' of Schedule of EIA Notification, 2006 and appraised by Expert Appraisal Committee (Industry) of MoEF.

(i) M/s SPS Ispat & Power Limited have proposed to establish a Greenfield project for an integrated steel plant of 0.5 MTPA capacity, 1.2 MTPA iron ore beneficiation plant, 1.2 MTPA pelletisation plant, 0.3 MTPA Non-recovery coke oven plant along with 60 MW Captive Power Plant at village Chutardanga, P.O. Mejia, District Bankura in West Bengal. The total land area is 320 acres.

(ii) The aforesaid proposal was considered for TOR in the 22nd meeting of the Expert Appraisal Committee (Industry -1) held on 18th-19th April, 2011 and TOR was granted by MoEF vide F.No. J-11011/159/2011-IA.II (I) dated 13.5.2011 for preparation of EIA-EMP report. The PP submitted the final EIA-EMP report which was considered for EC in the 8th meeting of the Reconstituted Expert Appraisal Committee (Industry) held on 16-17th May 2013, wherein the Committee deferred the consideration of the proposal on the ground that the EIA-EMP report was prepared by M/s Global Experts – Bhubaneshwar, which is a non-accredited consultant as on date. The Ministry vide letter dated 26.6.2013 deferred the proposal till the EIA-EMP report was validated by a QCI/NABET accredited consultant and submitted to Ministry. The project proponents vide letter no. SPSIPL/ENV-01/2013-14 dated 30.8.2013 submitted the revalidated EIA-EMP report prepared by M/s Global Experts – Bhubaneshwar which is accredited by QCI/NABET. The said EIA-EMP report has been placed before the EAC for consideration of EC.

(iii) The salient points of the proposed project as per the final EIA-EMP report submitted by the proponent and presentation made thereon are given below:

a) The land acquired for the proposed project is 320 acres of private which is already acquired by the PAs. It was informed that the 320 acres are barren land (as per records of WB Land Reforms dept. letter dated 08.11.2012), of which Raiyati land is 191.86 acres, vested land 73.11 acres, 24.22 acres land with company, 18.29 acres is Patta land. No ecologically sensitive areas such as Biosphere Reserves, National Parks/Wild Life Sanctuaries, exist within 10 km radius of the project site. No Forest land is involved. Gangajalghati RF is about 8km away and Bharinath Parbat RF is about 5km away from the project site. Total cost of the project is Rs 1988 crores. An estimated Rs. 79.52 crores and Rs.6.25 crores are earmarked for the capital

costs and recurring costs per annum towards the environmental pollution control measures. An estimated Rs. 99.40 crores is earmarked towards the Enterprise Social Commitment based on Public Hearing issues over a period of five years. No court case/litigation is pending against the proposed project.

b) The proposed project includes establishing a billet manufacturing unit to produce 0.5 MTPA steel billet for internal use. The Billet manufacturing plant will be through:

i. 1.2 MTPA Iron ore beneficiation plant
ii. 1.2 MTPA pellet plant
iii. 1X70m^2 sinter plant
iv. 0.3 MTPA Non-recovery coke oven plant
v. 1x550m^3 mini blast furnace
vi. 55Tenergy optimizing furnace
vii. 55T ladle refining furnace
viii. 0.524 MTPA continuous caster machine
ix. 300 TPD Oxygen plant
x. 200TPD Lime plant and
xi. 60MW CPP (WHRB – 32 MW; CFBC – 28 MW)

S.N	Plant	Capacity	Product	Quantity
1	Beneficiation Plant	1.22 MTPA	Beneficiated iron	1.14 MTPA
2.	Pelletisation plant	1.2 MTPA	Pellets	1.2
3.	Non- Recovery Coke Oven Plant	0.3 MTPA	Coke	0.3
4.	Sinter Plant	1x70 m2	Sinter	693,000
5	Blast Furnace	1x550m3	Pig Iron & Hot Metal	519,800
6.	Energy Optimising Furnace	1x55 T	Liquid Steel	528,000
7.	Ladle Furnace	1x55T	Hot Metal	534,900
8.	Billet Caster	0.524 MTPA	Billet	524,200
9.	Lime Plant	20 TPD	Lime	56,500
10.	Oxygen Plant	300 TPD	Oxygen	300 TPD
11	Captive Power plant	60 MW	Power	32 MW WHRB + 28 MW CFBC

c) The major raw materials required are Iron Ore Fines (24,86,700 TPA), Bentonite (12,500 TPA), Limestone/dolomite (27500 TPA), Limestone fines (55,200 TPA), dolomite fines (57,200 TPA), hard coking coal (1,78,000 TPA), soft coking coal (1,78,000 TPA), non-coking coal (89,900 TPA), coal for CPP (2,33,000 TPA) and heavy oil (16,800 TPA) etc for the proposed project. Iron Ore will be sourced from Barbil (Orissa), limestone/dolomite will be sourced from Gotan - Rajasthan & Paradip – Odisha, Limestone fines from Birmitrapur (Orissa) & Satna (Madhya pradesh), heavy oil from Haldia, West Bengal and coal for CPP from Raniganj/Kalidaspur.

A coal block has not been allocated. Coal will be obtained from Sonepur Bazari Coalmine of M/s ECL located in Raniganj Coalfields. The power requirement will be met from the CPP. Coal is required for the Blast Furnace and for CPP, iron ore fines, for sinter plant and Beneficiation Plant and iron ore, limestone and dolomite would be by rail. Vehicles used would be high capacity trucks (16-T) (to reduce the number) which are covered and are env. compliant.

d) Ambient air quality monitoring carried out at 8 locations during November 2011-February 2012 indicates that the levels of PM10, PM 2.5, SO2 and NOx are within prescribed limits. AAQ Modelling indicates that the levels of AAQ parameters with maximum GLCs are also within the limits. Air pollution control measures include water scrubber/bag filter/ESP arrangement with 99.9% efficiency for the Sinter plant, dry type dust extraction system at lime & dolo plant, water spraying arrangements, particularly in raw material storage area, and truck tippler areas. Good housekeeping practices will be adopted to control fugitive emissions. Out of the total plant area (i.e. 320 acres), 33% of total plant area will be developed under green belt/plantation in consultation with forest department around the plant boundary, roadside, office buildings and stretches of open land.

e) Total water requirement Is 2,50,784 m3/d of which 2,44,437 m3/d is from recycled and treated water and make up water of 7157 m3/d from River Damodar/Rainwater harvesting structure. Application has been made to Damoday Valley Reservoir Regulatory Committee (DVRRC) on 05.12.2012 for the allotment of 800 m^3/hr of water and approval is awaited. The wastewater generated will be treated and reused for process and balanced wastewater will be utilised for greenbelt Development & for dust suppression. A Rainwater harvesting pond of 20 acres (80,920 m2) and a depth of 5.6m will be created which will meet the partial water req. Of unit for 7200 m3/d for 63 days (2 months) during lean period. Excess rainwater/stored water will be sent for recharge of groundwater table. Ground water will not be used. Ground water level is in the range of 6.35 – 8m bgl.

f) Solid Waste management include: Wastes from construction would be used for levelling and for building roads, pavements, etc. No wastes will be disposed outside the plant premises. Scrap from SMS will be used recycled in the SMS process. SMS slag and dust from SMS with electric arc furnace will be used in levelling and road making. Coke fines will be used in sinter plant. Thickener/mid will be used in land filling. Flyash would be sold to M/s DS Brick Works, Raniganj, and M/s Suas Nirmal Pvt. Ltd, Durgapur @ 220 TPD and 50 TPD respectively and for which MOUs have been signed. Selling of slag and BF mud to cement industries is being explored. Non-recovery coke oven with dry quenching of coke will be done. Coke oven gas will be vented through ESP, after waste heat recovery & lime scrubbing. Coke oven gas will be sent to WHRB and after desulphurisation sent to ESP. CFBC flue gas will also be similarly sent to desulphriser to ESP. The proponent informed that an energy audit will be done after commissioning of the plant to determine all the processes and areas which can reduce energy consumption further. The blast furnace slag (161100 TPA) will be taken to slag granulation unit (SGU), and the granulated slag produced is a useful raw material for cement plant & is in great demand by cement manufacturers. SMS slag and dust from SMS with electric arc furnace (EAF) are non-toxic waste & hence will be used as road making and land filling in low lying area. Fly ash will be sold to concrete & cement manufacturing, building materials like bricks, tiles, structural landfills & embankments, soil conditioner for agriculture purpose.

(iv) The Committee noted that a nala passes through the leasehold and shall not be disturbed. The average ground level of the project site is 3m above the high flood level. A minimum 100m distance shall be maintained along with development of green belt between the plant and the nala, along the stretch flowing within the lease and along the plant side Approval for water requirement of 7200 m3/d to be drawn from River Damodar through a pipeline shall be furnished. The Committee sought details of a firm coal linkage with M/s ECL and source of coal (name of coal mine, quantity and supply period) through an FSA.

(v) The Committee deliberated on the issues raised during Public Hearing/Public Consultation conducted by West Bengal Pollution Control Board on 14.08.2012 under the chairmanship of Addl. DM, Bankura, at office of the Block Development Officer, Mejia, Bankura district, West Bengal. The major issues raised during Public Hearing include pollution control measures, employment to local people, and providing electricity and water facility to the nearby villages. PP had informed that land users/ land donors will be given preference in employment, skill development programs for local youths and CSR program will be carried out in consultation with the local administration.

3. After detailed deliberations, the Committee deferred the proposal as there was no firm coal linkage and further sought the following additional information for further consideration:-

i. Iron ore linkage documents along with the status of environmental clearance for the iron ore mines;
ii. Firm coal linkage document along with the coal characteristics;
iii. Socio-economic survey and R&R action plan;
iv. Revised plant lay out excluding the nallah passing through the plant site
v. Action plan for the management of solid and hazardous waste;
vi. Action plan for the transportation of incoming raw materials and outgoing finished products;
vii. Status of water intake approval and
viii. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and village wise action plan with financial and physical breakup/details shall be prepared over a period of ten years and shall be submitted.

15.2.3 Expansion in Clinker Production from 2.78 MTPA to 3.043 MTPA of M/s. My Home Industries Limited, located at Village and Mandal Mellacheruvu, District Nalgonda in Andhra Pradesh **(EC)**

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

1. The proposal of M/s My Home Industries Limited is to increase the clinker production from 2.78 to 3.043 MTPA by optimisation of production in unit-II (which is expanding from 0.92 to 1.183 MTPA) of their Cement Plant located at Village and Mandal Mellacheruvu, District Nalgonda in Andhra Pradesh. The proposal was considered for Terms of Reference (TOR) in the 36th meeting of the Expert Appraisal Committee (Industry -1) held on 24-25th May, 2012. TOR was granted by MoEF vide F.No. J-11011/172/2012-IA-II(I)dated 15.6.2012 for preparation of EIA-EMP report. The PP has submitted the final EIA-EMP report vide letter no. MHIL/MOEF/U2/1/2013 dated 18.9.2013 after conduct of Public Hearing for grant of Environmental Clearance.

2. The project proponents and their EIA consultant M/s. B.S.Envi-Tech (P) Limited – Hyderabad gave a detailed presentation. The salient points of the proposed project as per the final EIA-EMP report submitted by project authorities and presentation made are given below:

a) The proposed expansion will be carried out in the existing plant area of 160 ha which is completely owned by the PAs. Of the total project area of 160 ha, area for cement plant

with CPP is 65 ha, colony is 15 ha, Railway Siding 6 ha, Parking 5 ha, greenbelt of 62 ha in cement plant and 7 ha in colony. No additional area is required. An area of 69 ha (43%) of the total project area is under green belt. No forestland is involved. No ecologically sensitive areas such as Biosphere Reserves, National Parks/Wild Life Sanctuaries are located within 10 km radius of the project site. Yepalmadhavaram is the nearest forest to the Cement plant and located at a distance of about 1.7 km in the southern direction. No rivers/major water bodies are found within 10 km radius of the project site. The total cost of the project is Rs. 50 crores. An estimated Rs. 5.8 crores and Rs.4.80 crores is earmarked for the capital cost and recurring cost (for total plant) per annum towards the environmental pollution control measures. Rs. 2.50 crores is earmarked towards the Enterprise Social Commitment based on Public Hearing issues over a period of ten years. No court case/litigation is pending against the proposed project.

b) The capacity of existing and proposed project activity has been tabulated as below:

Cement Plant	Present approved Capacity as per MoEF EC (MTPA)		Capacity after proposed enhancement (MTPA)	
	Clinker	Cement	Clinker	Cement
Unit –I	0.66	0.792	0.660	0.792
Unit –II	**0.92**	**1.108**	**1.183**	**1.108**
Unit –III	1.20	2.000	1.200	2.000
Total	**2.78**	**3.900**	**3.043**	**3.900**

c) The existing cement plant obtained environmental clearance from the Ministry vide letter no. J-11011/1014/2007-IA.II (I) dated 11.6.2008. Regional Office of MoEF, Bangalore has monitored the status of compliance of the EC and a certified compliance report for the existing unit has been received. The Committee noted that the status of compliance to the EC conditions is satisfactory. The cement plant is based on the dry process technology for cement manufacturing with pre-heater and pre-calciner technology.

d) The raw materials required after the proposed expansion are limestone (4.43 MTPA), coal (0.53 MTPA), iron ore (0.11 MTPA), bauxite (0.06 MTPA), gypsum (0.17 MTPA) and fly ash (0.64 MTPA). Limestone will be transported by closed conveyor from captive mines. Coal is to be transported by road/rail from SCCL. Clinker produced is also sent by rail to grinding units at Mulakapalli and elsewhere. Iron Ore will be sourced from YSR Kadapa District by road. Bauxite will be procured from Rajahmundry by road. Gypsum will be from Coramandel Fertilizers Limited and flyash for PPC from thermal power stations.

e) All the installed pollution control equipment for processes/transfer points are storage of flyash in silos and pneumatic handling system designed to meet 50mg/ nM3 of fugitive dust emissions. The dust collected is recycled into the process. Raw material transfer by conveyors with non-asbestos sheets. Roads/open areas are cemented/concreted. Ambient air quality monitoring has been carried out at 9 locations during December 2011 – February 2012. The cumulative impacts of the cement plant, CPP and mines located within 2km on the AAQ was assessed and predicted levels of AAQ parameters of PM10, So2 and NOx was found to be within limits. 98% limits AAQ parameters of PM10 PM 2.5, SO2 and NOx are well

within limits. The coal mill, cement mill and the packer units will be equipped with bag filter arrangement with 99.9% efficiency. To control air emission in the cement plant/CPP, bag house, bag filters and ESP were installed. Atomized water sprinkling system will be provided at the limestone and coal unloading hopper and handling area. Water spraying arrangements will be made, particularly raw material storage area, wagon tippler and truck tippler areas. Good housekeeping practices are adopted to control the fugitive emissions.

f) The present water consumption of the plant including colony is about 1260 m^3/day. Water for the plant is sourced from Borewells. Groundwater is in the range of 32-40m bgl. No additional water is required for the enhancement of clinker production. MHIL has obtained necessary permission from Ground Water Department for water drawl at the rate of 1500 m^3/day. Permission has been obtained for drawl of 1500 m3/d of g/w from Ground Water Dept. for use in cement plant (950 m3/d), TPP (250 m3/d) and colony (160 m3/d), blowdown water from CPP recycled for dust suppression and gardening. Rainwater harvesting is being done within the plant premises. A rainwater storage pond has been created at NE corner of cement plant, which is also used for storing mine water from captive mine. No river water is to be drawn. No industrial waste water will be generated in the Cement Plant. Domestic waste water generated from Cement Plant is being treated in the STP. The treated water will be utilised for greenbelt development.

g) No solid waste will be generated in cement manufacturing process. STP Sludge is utilized as manure for green belt development within the plant premises. It is proposed to utilise 6000 T/month of hazardous waste (spent solvents) as secondary fuel with coal in cement kilns.

h) Public Hearing/Public Consultation was conducted by Andhra Pradesh Pollution Control Board on 30.04.2013 under the chairmanship of Additional Joint Collector near the Industry premises at Mellacheruvu Village, and Mandal, Nalgonda District, Andhra Pradesh. The main issues raised during Public Hearing are regarding employment, medical facilities, road development, educational facilities and supply of drinking water. The Company representatives agreed to give preference to the local people in employment, informed about details of pollution control equipment that have been installed to meet the norms of CPCB/MOEF and earmarking of Rs 250 lakhs for the implementation of social welfare measures raised during the Public Hearing.

i) The Committee deliberated on the issues raised during P.H and how they would be addressed by the PP along with capital and revenue costs. The Committee desired that a CSR Plan with approval of local administration & village panchyats shall be drawn up for measures that complement LADP. The Committee desired that employment be given to the locals as mentioned in the P.H and if need be skill development and vocational training shall be provided. Since the area is backward, issues of education, skill development, health facilities, etc shall be given attention. The Committee noted that F levels in groundwater of wells in the study area are found to be within the permissible range. It was clarified that although issue of F is significant in Nalgonda district, it is not prevalent in the area. However, 3 units of RO Plant have been installed in 2 villages and to be provided in the 3rd village also to meet their drinking water needs. Water harvesting structures are also to be developed to recharge groundwater level and for meeting water needs.

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

i. Copy of the EC for corresponding limestone mine EC expansion from 3.96 to 4.43 MTPA.
ii. Permission for withdrawal of ground water of 1500 m^3/day;
iii. Report regarding decrease in crop productivity in the surrounding villages due to the cement plant operations; and
iv. Details of CSR plan to be internally considered.
v. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and village wise action plan with financial and physical breakup/details shall be prepared in consultation with village panchayats and the same shall be submitted.

The Committee requested the PP to circulate the aforesaid information to the Committee members and the proposal shall be considered by the EAC internally without calling the PAs.

15.2.4 Expansion of Chrysotile Fibre Cement Sheeting Plant (from 0.12 MTPA to 0.25 MTPA) of **M/s. UAL-Uttar Pradesh Industries Limited,** located at Village Bramanpur, Dist. Jaunpur, Uttar Pradesh **(EC)**

All the Asbestos milling and asbestos based products are listed at S.No. 4 (C) under Category 'A' of the schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

1. M/s. UAL Industries Limited have proposed to expand the Chrysotile Fibre Cement Sheeting Plant production capacity from 1,20,000 TPA to 2,50,000 TPA at Baramanpur village, Jaunpur District, Uttar Pradesh. The proposed expansion will be carried out in an existing plant area of 6.81 ha. Hence no additional land is required for the expansion project. The proposal for TOR was considered in the 14th meeting of the Expert Appraisal Committee (Industry-1) held on 23-25th September, 2010. TOR was awarded vide MOEF letter F. No. J-11011/386/2010-IA.II (I) dated 21.10.2010 for preparation of EIA-EMP report. The PP submitted the final EIA-EMP report after conduct of Public Hearing vide letter No. Nil dated 10.9.2012 for grant of Environmental Clearance. The aforesaid proposal was deferred by the Ministry vide letter No.J-11011/386/2010-IA.II(I) dated 16.1.2013 with a request to re-validate EIA-EMP report by the QCI/NABET accredited consultant as the consultant (M/s EMTRC Consultants Private Limited) engaged by the proponent was not accredited by the QCI for the Asbestos milling and asbestos based products. The proponent vide letter no. UAL-UP/2013-14 dated 22.4.2013 submitted the EIA-EMP report through the QCI/NABET accredited consultant – M/s. B.S.Envi-Tech Private Limited, Hyderabad. The Committee in its meeting held in July 2013 deferred the consideration of the proposal as the data contained in the EIA-EMP report was not revalidated by the M/s. B.S.Envi-Tech Private Limited, Hyderabad. Further, the Committee requested the consultant (M/s. B.S.Envi-Tech Private Limited, Hyderabad) to conduct one month fresh AAQ monitoring to verify the data provided by the M/s EMTRC Consultants Private Limited, New Delhi. Further, the Committee asked the proponent to submit the stack emission data on asbestos fibre count and the data on fibre concentration monitored in the work zone. PP vide letter dated 9.10.2013 submitted the one month fresh AAQ data along with the stack emission data on asbestos fibre count and the data on fibre concentration

monitored in the work zone. The details received and the revalidated EIA-EMP report has been considered in this meeting.

2. The salient points of the proposed project as per the final EIA-EMP report submitted and presentation made thereon are as given below:

a) The proposal is for expansion of Chrysotile Fibre Cement Sheeting Plant from 0.12 MTPA to 0.25 MTPA by adding a new line 0.13 MTPA by Hatschek Process for manufacturing of roofing sheets. The total project area is 8.81 ha. Out of the total plant area (i.e. 6.81 ha), 33% of total plant area was developed under green belt/plantation. No Forest land is involved. There are no ecologically sensitive areas such as Biosphere Reserves, National Parks/Wild Life Sanctuaries, existing within 10 km radius of the project site. There are no forests within 10 km radius of project area. River Gomati flows at distance of 4.1 km in NE direction from the project site. Capital cost of the project is Rs 20 crores, of which Rs. 1 crore and Rs. 0.40 crore is earmarked for the capital cost and recurring cost per annum towards the environmental pollution control measures. Rs. 100 lakhs is earmarked towards the Enterprise Social Commitment based on Public Hearing issues. No court case/litigation is pending against the project. The existing plant had obtained environmental clearance from the Ministry vide letter no. J-11011/8/2006-IA.II (I) dated 30.5.2006. Regional Office of MoEF, Lucknow has forwarded the certified compliance report vide letter no. IV/ENV/UP/IND-82/202/2006 dated 18.6.2013 for the existing unit.

b) Cement (1,12,500 TPA), Chrysotile fibre (20,000 TPA), paper and pulp (1250 TPA) and flyash (65,000 TPA) are the major raw material for manufacturing ACC sheets. Cement will be purchased from nearby cement plant. Chrysotile fibres are imported from Brazil, Russia, Kazakstan, Zimbawe, and Canada (Size 1-4 mm). Flyash will be obtained from the nearest thermal power plant. Raw materials will be transported by road. Power requirement is 800 KVA which will be met from the State Electricity Board. DG set of 1010 KVA is envisaged as a standby arrangement.

c) Ambient air quality monitoring has been carried out at 5 locations during December 2010 - February 2011. The Ambient air quality data was recollected as per the advice of EAC (Industry) at 5 locations during September, 2012 and the data submitted indicated: PM_{10} (50 to 56 $\mu g/m^3$), $PM_{2.5}$ (27 to 32 $\mu g/m^3$), SO_2 (6.10 to 7.5 $\mu g/m^3$) and NO_x (10.20 to 12.5 $\mu g/m^3$). The fibre bag opening and shredding will be carried out using fully automatic bag opening machine inside closed chamber kept at negative pressure. Pulse jet bag filter will be provided for Automatic Chrysotile Fibre Handling System, Cement and Fly ash Handling System and Moulding Section with 99.9% efficiency. For control of fugitive dust, Fibre Dust Extraction system, Dust extractor with bag filters for flyash mixing system, Bag filter for Cement handling systems, Shop floor cleaning by using vacuum cleaners will be provided.

d) It was informed that the Fibre count from various work places was well within limits 0.2 fibre/CC of air based on CPCB's Comprehensive Industry Documents. The samples were got analysed from JR Labs, which is the only lab in the country with the necessary expertise to undertake this. The details of lab analyses of samples collected from different locations is presented below:

S.N	AREA OF WORK	LEVEL (fibre/cc of air)
1	Fibre Godown	0.040
2	Process fibre Godown	0.016
3	E R Mill- Bag opening device	0.088
4	Edge Runner Mill	0.008
5	MG Filling	0.016
6	Cutter Off- sheet forming drum	0.096
7	Salving section	0.056
8	Ambient air near canteen	0.056
	Limit for fibre count	**0.1**

e) Measures being taken for the occupational safety and health of workers include:

- Mode of import = Impermeable sealed bags in compressed form.
- Transport of fibre bag units Forklift trucks.
- Storage : closed cemented floor godown.
- Bag opening: fully automated bag opening device.
- Manual handling: completely avoided.
- Asbestos in process: fully automatic bag opening deice, lump breaker, screw conveyor, bag shredder and mill are completely closed integrated unit.
- Bag opening is carried out in enclosed chamber maintained under negative pressure. No silica sand and no silver containing chemicals are used as raw materials.
- Regular health including chest x-ray and lung function tests are being conducted.

Solid waste generated during cutting and trimming operations of sheets are hazardous in nature. The solid waste from cutting and trimmings of green sheets is recycled back to fibre mixer. The 100 % waste generated from the plant will be reused.

f) The total requirement of water is estimated to be 150 m^3/day and will be met from bore wells. Permission for water drawl of 156 m^3/day (for existing unit) has been obtained from CGWA. Permission for the drawl of additional water from bore well water has been submitted to the Central Ground Water Authority. No industrial waste water will be generated in the Plant. Domestic waste water generated from Plant will be treated in the Septic tank. The company has implemented Rainwater harvesting measures within the plant premises.

The Committee deliberated on the issues raised during Public Hearing/Public Consultation conducted by Uttar Pradesh Pollution Control Board on 18.07.2011 under the chairmanship of District Magistrate inside premises of M/s. UAL Industries Limited at Baramanpur village, Jaunpur District, Uttar Pradesh. No issues were raised during Public Hearing. UAL has allotted Rs 100 lakhs for implementation of various CSR activities, a village-wise and activity-wise details of which will be submitted to the Ministry for record. The Committee noted that compliance to the EC conditions is satisfactory. The Committee sought a copy of the test result of JR lab for record of the Ministry.

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

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

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

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

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

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

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

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

viii. All monitoring transfer points shall be connected to dust extraction system.

ix. Leakages or dust from machines and ducts shall be plugged.

x. Floor shall be cleaned by vacuum cleaner only.

xi. Enclosed belt conveyer shall be used instead of manual transportation of asbestos within the premises.

xii. Quarterly monitoring of pollutant (PM_{10}, asbestos fibre count) in the work zone area and stack(s) shall be undertaken by the Project proponents. In addition, the asbestos fibre count including the fugitive dust in the work zone area shall be monitored by an Independent monitoring agency like NIOH/ITRC/NCB or any other approved agency

on six monthly basis and reports shall be submitted to the Ministry's Regional Office at Lucknow, SPCB and CPCB.

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

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

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

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

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

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

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

xx. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 18.7.2011 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 Lucknow.

xxi. 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.

xxii. 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 Lucknow. Implementation of such program shall be ensured accordingly in a time bound manner.

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

15.2.5 Proposed Greenfield 1.2 MTPA Pelletisation Plant of M/s Essel Mining & Industry Limited located at village Nuagaon, Tehsil Bonai, Sub-division Bonai, District- Sundergarh, Odissa **(EC)**

The proposed project activity is covered under Category (A) and listed at S.N.3(a) of the Schedule of the EIA notification 2006 and have to be appraised at the Central level.

M/s Essel Mining and Industries Limited have proposed to set up a 1.2 MTPA Iron-ore pelletisation plant at village Nuagaon, Tehsil Bonai, sub-division Bonai, district Sundergarh, Odisha. The proposal for Terms of Reference (TOR) was considered in the 6th meeting of EAC (I) held on 5-7th March, 2013. TOR was granted by MOEF vide F.No. No. J-11011/378/2012-IA II(I) dated 25.4.2013 for preparation of EIA-EMP report. The final EIA-EMP report was submitted vide letter no. EMIL/EC/PELLET/2013 dated 4.12.2013 after conduct of Public Hearing for environmental clearance.

The project proponents and their EIA consultant M/s. B.S.Envi-Tech (P) Limited – Hyderabad gave a detailed presentation. The salient points of the proposed project as per the final EIA-EMP report submitted by PP and presentation made thereon are given below:

a) The land requirement for the proposed project is 17.843 ha, which is entirely Govt. land. No R&R is involved. No private (agricultural) land or forestland is involved. An area of 5.8 ha will be under greenbelt. There are no ecologically sensitive areas such as Biosphere Reserves, National Parks/Wild Life Sanctuaries located within 10 km radius of the project site. A number of Reserved Forests exist in the study area - Kathmala RF (2.7km), Mendharmaruni RF (5.6 km), Karo RF (4.9km), Sarkanda RF (3.1km) and Torah RF (4.4km). Elephant corridor is at a distance of 22 km. The nearest water body is Karo Nala flowing at 0.15 km (SW) of plant site. A 100m distance will be maintained between the nala. Total cost of the project is Rs. 379.68 crores. Capital cost of Rs 846 lakhs and recurring costs of 85 lakhs per annum has been earmarked for capital cost and recurring cost per annum towards the environmental pollution control measures. An amount of Rs. 393.64 lakhs and Rs. 456.06 lakhs have been earmarked towards the Enterprise Social Commitment based on Public Hearing issues for a period up to 31.3.2014 and 2014-15 respectively. No court case/litigation is pending against the proposed project.

b) Iron ore is to be obtained from Kasia Iron Ore Mine of EMIL located at 500m from Plant. Iron ore is (1.24 MTPA) to be transported by piped conveyor. The other raw materials

required are bentonite (0.01 MTPA), coal or coke breeze (0.018 MTPA), dolomite/ limestone (0.012 MTPA) and furnace oil (0.03 KL/annum). Bentonite will be sourced from Kutch & Bhuj, Gujarat. Coal (54/T), limestone/dolomite and furnace oil will be procured from open market. Balance raw material of 0.07 MTPA and finished product of 1.2 MTPA will be transported by road. The present project is to make a value added product of the fines into pellets. Prior to this, the fines were being sold or exported. The pellets will be used in company's own plant. Pelletisation process involves Raw material grinding facilities, Mixing and balling facilities and Straight grate induration in furnace. The power requirement is 15 MW which will be met from WESCO Limited.

c) Ambient air quality monitoring carried out at 9 locations during September – November 2012 indicates that the (98% percentile values) major AAQ parameters are within prescribed limits. AAQ modelling study carried out considering the emissions of both Koira pellet plant and adjacent Koira mine also indicates that the emissions would be within prescribed limits. A number of pollution control measures such as control of fume dust in an ESP from solidification and firing system, flue gas emissions after purification, control of fugitive dust emissions by water sprinkling of raw material yard, Dry Fog System for Ground Hopper, Pulse jet type bag filter, centrifugal fan and motor, duct work including suction hoods, duct supports, stack, dust hopper, rotary air lock valves, dust conditioner, Bag Filter for Silo & Mixer, Scrubber for Pellet unloading end, Fuel gas & dust extraction system, and hot gases from Grate Furnace and Pulse jet type, Bag filter for Hearth Layer Separation Building etc would ensure that the levels of emissions of particulates are within the 50mg/nM3 limit. Dust collected from various pollution control equipments will be recycled back to the process. After commissioning of the unit, the company will explore implementation of Carbon Credit project based on heat recovery options.

d) Water requirement for the project would be 960 KLPD and will be met from proposed Rain water Harvesting reservoir of storage capacity of 3,50,000m3. No ground water will be tapped. No industrial waste water will be generated in the Plant except cooling water blow down. Wastewater of 58 m3/d from cooling blowdown and domestic use will be reused for greenbelt dev. and dust suppression. No solid waste will be generated in manufacturing process. Domestic waste water generated from Plant will be treated in Septic Tank followed by Soak Pit. Slurry will be stored in a lined (with HDPE lining) water storage system. Column leachate study will be carried out when plant comes into operation. The levels of Cr+6 are presently within prescribed Limits (measured with ICPMS).

e) The Committee desired that a boundary wall be created between the nala and plant. The Committee desired that a letter may be obtained from Collector (revenue dept) that the entire land is Govt. land. The Committee desired that occupational health study shall be carried out periodically.

The Committee deliberated on the issues raised during Public Hearing/Public Consultation conducted by Odisha Pollution Control Board on 26.09.2013 under the chairmanship of Addl District Magistrate at Play field of Nuagaon primary school under Koira Tehsil, Sundargarh District, Odisha. The major issues raised during Public Hearing include providing employment to local people, construction & repair of road, upliftment of women in education, health care, women empowerment, environmental protection, drinking water supply, electrification. It was noted that preference in employment will be given to the local people, better roads will be made in consultation with the local people, ambulance facility

and mobile health campus will be organized on regular basis and supply of drinking water supply to the local people, etc. Management has committed that a CSR Plan will be implemented in consultation with local representatives.

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

i. Letter from District Collector regarding status of possession of the 17.843 ha of government land.

ii. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and village wise action plan with financial and physical break-up/details shall be prepared in consultation with village panchayats and the same shall be submitted.

iii. The Committee sought a CSR Plan for life of the project – village-wise and activity-wise for internal consideration.

The Committee decided that the proposal will be considered internally after receipt of the aforesaid information.

15.2.6 Expansion of Steel Plant from 0.20 MTPA to 0.50 MTPA of M/s Rungta Mines Limited located at Village Chaliyama, Bankasai and Kuju in Saraikela, Kharwan District, Jharkhand **(EC)**

Steel Plants are listed at S.No. 3(a) under Primary Metallurgical Industries under "Category A" of the Schedule of EIA Notification 2006 and appraised at the Central level.

1. M/s. Rungta Mines Limited has proposed to expand their integrated steel plant from 0.20 MTPA to 0.50 MTPA at Village Chaliyama, Bankasai and Kuju in Saraikela, Kharwan District, Jharkhand. The Environment Clearance for the existing steel plant was accorded by the MoEF vide letter no.J-11011/838/2007-IA.II(I) dated 04.11.2008. The land requirement for the proposed expansion would be 592.16 acres.

The proposal was considered for TOR in the 5th meeting of the Expert Appraisal Committee (Industry) held on 31st January 2013 to 1st February 2013. TOR was granted by MoEF vide F.No. J-11011/305/2012-IA.II(I) dated 18.3.2013 for preparation of EIA-EMP report. The final EIA-EMP report was submitted vide letter dated 12.09.2013. The proponents vide letter no.RML/CSP/13-14/2013 dated 12.9.2013 submitted the final EIA-EMP report for the grant of Environment Clearance. The Ministry vide letter dated 14.11.2013 deferred the proposal as the EIA-EMP report was prepared by M/s. MinMec Consultancy Private Limited, which was a non-accredited consultant by QCI/NABET and sought a Monitoring Report from Regional Office of MoEF at Bhubaneshwar on the compliance report submitted by PP on the EC granted to the existing unit, which has been received. The revalidated EIA-EMP report has been submitted by CTRAN Consultancy Ltd.

2. The salient points of the proposed project as per the final EIA-EMP report and presentation made thereon are given below:

a) Of the total project area of 592.16 acres (239.364 ha), 244.105 acres is private land and has been purchased and 164.965 acres of private land and 183.880 acres of govt. land

are yet to be acquired. Pvt. Land is at advanced stage of purchase. No Forest land is involved. There are no ecologically sensitive areas such as Biosphere Reserves, National Parks/Wild Life Sanctuaries, etc within 10 km radius of the project site. Nearest villages are Chaliyama, Bankasai and Kuju. A river flows all along the west side of the project site – HFL of river is 192 mRL and plinth of plant is 198.15 mRL. The total cost of the project is Rs. 1237.02 crores. An amount of Rs. 18.14 crores and Rs.3.96 crores has been earmarked for capital cost and recurring costs per annum towards the environmental pollution control measures. An amount of Rs. 3 crores is earmarked towards the Enterprise Social Commitment related activities. No court case/litigation is pending against the proposed project.

b) Following are the existing and proposed production capacities:

PLANT/ FACILITY	**EXISTING (0.2 MTPA)**	**PROPOSED EXPANSION (0.5 MTPA)**	**TOTAL AFTER EXPANSION**
DRI plant	0.21 MTPA	0.24 MTPA	0.450 MTPA
Mini blast furnace	0.383 MTPA	-	0.383 MTPA
Steel melting shop, Induction Furnace Ladle Furnace EAF	0.20 MTPA 15Tx4 20Tx1	0.30 MTPA 15 T X 4 30 T X 2 30 TX 1	0.50 MTPA
Rolling Mill	0.20 MTPA	-	0.20 MTPA
Billets/ slab/ bloom caster		0.30 MTPA	0.30 MTPA
Continuous Casting machine	1x3 strand	2x3 strand	3x3 strand
Flats/ Round/ Structural mill	-	0.30 MTPA	0.30 MTPA
WHR based CPP	14 MW	18 MW	32 MW
Coal based CPP	25 MW	62 MW	87 MW
Total	39MW	80 MW	119 MW
Pelletisation Plant	-	1.2x2 MTPA	2.4 MTPA
Coal Washery	-	1.26 MTPA	1.26 MTPA
Oxygen Plant	-	1X30 TPD	1X30 TPD (69,30,000 m^3/annum)
Lime Plant	-	1X90 TPD	1X90 TPD (29,700 m^3/annum)
Vaccum Degassing	-	1X30 T	1x30 T

c) AAQ monitoring carried out during March to May 2013 at 8 locations indicates that levels of PM_{10} (55.9-84.2 µg/m^3), SO_2 (7.2-18.0 µg/m^3) and NO_x (9.1-26.4µg/m^3) are within prescribed limits. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs would be 2.24 µg/m^3, 3.37 µg/m^3 and 0.24 µg/m^3 with respect to PM_{10}, SO_2 and NO_x respectively, which is within the limits. Hot gases from sponge iron kiln will be successively passed through dust settling chamber (DSC), after burning chamber (ABC), WHRB and then cleaned in ESP before venting to atmosphere through the chimney. In the

DRI plant, dust extraction system with bag filters will be provided to kiln inlet area, crushing unit, cooler outlet area to suppress PM level below 50 mg/Nm^3. Pollution control devices will effectively trap 99% of the trace metals. In addition, dolomite will be added to kiln, EAF and boiler which additionally absorbs trace elements. Trace metal analysis has been carried out of flyash, solid wastes, slurry, etc and found that trace metals are found to be less than 1% by mass. Flue gases from WHRB and AFBC boiler will be routed to a stack through an ESP. Bag filters and dust collectors will be provided to pelletization plant. Flue gases from coke oven will be passed through a stack of adequate height. The emissions from induction furnace and ladle furnace will be collected by hood and passed through bag filters and discharged through a stack of adequate height. Bag filters will be provided to stock house. Fugitive emissions will be controlled through water sprinkling and dust extraction system.

d) Power will be met from own PP. In addition to the existing 7x100 TPD WHRB, 2x350 TPD kiln and 1x100 TPD WHRB is proposed to be installed. In addition to existing 14 MW power, an additional 16 + 2 MW power will be generated. The existing unit is registered as a CDM project under the UNFCC. Proposed 18 MW WHRB will be based on exhausted flue gases from rotatry 350 TPD kiln and 10 TPH for 100 TPD kiln of steam. A CDM project will be prepared for the proposed WSHRB also.

e) The raw materials required are iron ore (26,32,800 TPA), iron ore lump (5,74,500 TPA), Bentonite (36,000 TPA), Dolomite (105220 TPA), Coke breeze (40,800 TPA), Coal (13,58,368 TPA), Quartzite (19,916 TPA), scrap (19,916 TPA), BF coke (2,33,630 TPA), finished product (2,15,522 TPA), Pellets (1,72,5000 TPA), TMT (2,00,000 TPA) and flat structural (3,00,000 TPA). The iron ore will be sourced from company's mines in Jharkhand/Odisha and the Coal will be sourced from their own mines. The power requirement will be 96.97 MW (Existing – 32.96 MW and Expansion – 64.01 MW) which will be met from the CPP.

e) Details of Transport of raw Materials to the Plant:

S.N.	Operation	Quantity (TPA)	Quantity(TPD)	Transport	No/day (One-way)
1	Iron Ore Fines	2,632,800	8228	Truck	411
2	Iron Ore Lumps	574500	1795	Truck	90
3	Bentonite	36000	113	Truck	6
4	Dolomite	105220	329	Truck	16
5	Coke Breeze	40800	128	Truck	6
6	Coal	1358368	4245	Truck	212
7	Quartzite	19,916	62	Truck	3
8	Scrap	19916	62	Truck	3
9	BF coke	23,3630	730	Truck	37
10	Finished product- Pig Iron	215522	674	Truck	34
11	Pellets	1725000	5391	Truck	270
12	TMT	200000	625	Truck	31
13	Plat/structural	300000	938	Truck	47
	TOTAL	7,461,318	23,318		1166

f) Total water requirement after the proposed expansion will be 1483 m^3/hr (Existing – 420m^3/hr; proposed – 1063m^3/hr). Water will be sourced from River Kharkai. The proponent informed that necessary permission has been obtained from the State Govt for the withdrawl of water. Cooling tower blow down, DM Plant wastewater and service water effluents will be collected in a sump and utilized for dust suppression and ash handling. Wastewater streams

comprising of boiler blow down and pre-treatment wastewater will be collected in another sump and utilized for horticulture and greenbelt development. Sewage and sanitary wastewater will be treated in septic tank followed by septic tank. The run-off from coal, iron ore and solid waste handling and storage areas will be guided through suitably designed drains in to the reservoirs so that most of the solids will be settled and the remaining suspended solids settle down in reservoirs. Coal washery effluent will be treated in a thickener. The thickened tailing will be dewatered in a belt press while the clarified water will be recycled back in the process circuit. Water req. 1483 m3/h of which existing is 420 m3/h and proposed 1063 m3/h. Source of water is River Kharkhai. Drawl of water from River Kharkhai will not have effect even during lean season as quantum of flow in Kharkai river is 3.702cumecs (13,327.2 m3/h) and the plant withdrawal is 11.1% of this. The maximum discharge is 295.7 cumecs (106,4520 cum/h) of which plant withdrawal is 0.13% only. No groundwater to be used in the expn. project. Water table is about 6-10m bgl during pre-monsoon. Three rainwater harvesting ponds have been created for storage of treated wastewater and rainwater for reuse. No effluent discharge from plant and plant operates on a zero-discharge concept.

g) Solid Waste Management:

Coal and char will be used as fuels in FBC power plant. Fly ash from FBC power plant will be sent to cement plants and brick manufacturing units for cement and brick making and unused fly ash and bottom ash for filling up low lying areas and raising plinth. Granulated BF slag will be sold to cement plants. CPP fly ash will be used in brick/cement manufacturing plants. Oil and lubricant will be sold and the DM resin will be disposed in properly constructed pit as per CPCB norms. Sewage sludge will be used as compost/manure. Green belt will be developed in 33% of total plant area. CREP Guidelines for DI of reducing agents in BF, 100% utilisation of BF scarp material will be recycled as raw material in induction material. Use of HW from nearby industries will be explored. Monitoring of PAHs in AAQ shows levels of PAHs to be in the range 2.8 ng/m3-4.5 ng/m3 in SPM.

h) Iron ore linkage is from two mines - Ghatkini (Jharkhand) and Jhajang mine (Orissa). Coal linkage – Bundu Coal block for which the EAC has recommended EC. A Coal washery is also established of 1.26 MTPA capacity which produces 0.63 MTPA of clean coal, 0.535 MTPA middling and 94,500 TPA of coal rejects.

i) A total of 187 land losers from villages of Chaliyama (114), Banksai (11), Kuju (62). No displacement of people. Jharkhand R&R Policy 2008 will be followed. Employment to marginal land losers on priority. Land losers not opting for employment will be provided skill development and training for contract jobs. Compensation for fixed assets will be as per market rates. Peripheral development Will be implemented through a CSR Plan with Rs 3 crores (capital) and Rs 53.55 lakhs/y (recurring).

The Committee sought copy of Stage-I FC for Bundu Coal mine and also the status of ECs of captive/linked Iron ore mines - Ghatkini (Jharkhand) and Jhajang mine (Orissa). In this regard, the committee sought a clarification on the quantum of generation of coal and iron ore and the projects they will cater to. The Committee sought details of use of coal washery rejects. The Committee sought details of approvals obtained for using water from River Kharkhai. The Committee noted that the entire transportation is to be by 1166 trucks/day (one-way), which will lead to very high emissions and desired that a plan for transport of raw

materials (Coal and iron ore) by rail to the nearest railway siding and then transported by trucks be explored and details furnished. The number of trucks should also be minimised by using high tonnage trucks. Similarly, a plan for transport of finished goods should be prepared.

The Committee noted that the Monitoring Report on the status of compliance of EC for the existing unit forwarded by Regional Office of MoEF at Bhubaneswar indicates non-compliance/partial compliance on many issues. These include:

a) Monitoring of gaseous emissions of all the stacks shall be done regularly and monitoring report shall be submitted to the Regional Office six monthly.
b) To inventorise all the vulnerable areas anticipating high dust generation and based on the study report, priority may be given to carry out proper control measures in those areas. Concreting of haul roads, the working environment of the shop floor, etc. shall be made to minimize dust generation
c) The project authority needs to prepare a time bound management plan regarding generation, disposal and usage of different solid waste generated in the plant.
d) Immediate action is to be taken for TCLP test before any of the solid waste generated form IF and LRF units and then shall be used for land filling.
e) Annual return as per the Fly Ash Notification shall be submitted to the Regional Office.
f) The project authorities shall prepare a green belt development plan covering 33% of area and the implementation of the plan shall be made in a time bound manner.
g) Monitoring of Ambient Air Quality as per the NAAQS is not being done.
h) Drainage system has been constructed to discharge plant effluent including surface run off into the nearby nallah. The tank as constructed is not sufficient to receive the plant effluent as well as surface run off.
i) The project informed that all the safety gadgets are being provided to all the permanent and contractual workers. However, during the visit only few were found wearing gloves either in one hand or in both the hands. No safety shoes were also seen wearing by any workman while on work. It is suggested to create awareness among the workers so that the safety gadgets be regularly used by them to avoid any healthy hazardous.
j) There is no rainwater harvesting structures to harvest rainwater from either rooftop or ground surface. Action shall be initiated to harvest rainwater and proposed for recharging the ground water table.
k) The six monthly compliance report is not being submitted regularly.

The Committee noted that in the original EC proposal, PP had not proposed for a Coal Washery. However, in the expansion proposal under consideration for EC, PP has provided details of an established washery. The Committee sought details of EC obtained for the Coal Washery since it is a Category A project requiring EC from MOEF. The Committee requested the proponent to initiate necessary actions for the effective compliance of the aforesaid findings as reported by the RO- Bhubaneshwar. The Committee recommended that a site inspection should be undertaken by the RO- Bhubaneshwar and the inspection report shall be sent to the Ministry for further consideration of the proposal.

The Committee deliberated on the issues raised during Public Hearing/Public Consultation conducted by Jharkhand Pollution Control Board on 4.9.20132 at B.L Newatia Girls High School Chaliyama, block Rajnagar, District Seraikela - Kharsawan under the Chairmanship of Shri C.K.Singh ADC, Saraikela - Kharswa. The issues raised during Public Hearing are employment, pollution control, CSR activities and formation of Paryavaran Samiti etc which were addressed in the final EIA-EMP report.

3. After detailed deliberations, the Committee deferred the proposal as there is no firm iron ore/coal linkage and in addition to the above, sought the following additional information for reconsideration:-

i. Iron ore linkage documents along with the status of environmental clearance for the iron ore mines;
ii. Firm coal linkage document along with the status of environmental clearance for the coal mines;
iii. Socio-economic survey and R&R action plan;
iv. Note on land holding details;
v. Action plan for the transportation of incoming raw materials and outgoing finished products;
vi. Status of water intake approval;
vii. At least 2 % of the net retain profit shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and village wise action plan with financial and physical break-up/details shall be prepared over a period of ten years and shall be submitted; and
viii. Point wise compliance of the aforesaid findings as reported by the RO- Bhubaneshwar along with the fresh site inspection report of RO- Bhubaneshwar.

15.3 Reconsideration of EC Cases

15.3.1 Expansion of pulp production capacity from 500 TPD to 650 TPD by modernization and debottlenecking the process of **M/s. Andhra Pradesh Paper Mills Limited** located at Sreeram Nagar, Rajahmundry, East Godavari District, Andhra Pradesh **(Further consideration of EC)**

The aforesaid proposal was considered in the 32nd meeting of the Expert Appraisal Committee (Industry) held during 27-28th January 2012 wherein the Committee sought OHS data analysis of workers and flood hazard management plan for River Godavari. Further, taking into account the issues raised in Public Hearing, the Committee also recommended for a site visit by a Sub-Committee of EAC (Industry). The site inspection report was considered by the Expert Appraisal Committee (EAC) in its 10th meeting held during 29-31st July, 2013. The proposal was further considered based on response of proponent dated 12.09.2013 and a personal hearing held in MOEF on 22.11.2013, whereby the following details were sought:

i. Certified compliance report to the conditions of the Environment Clearance accorded to M/s Andhra Pradesh Paper Mills Limited from Regional Office of MoEF at Bangalore;
ii. Compliance to the consent conditions of the Andhra Pradesh Pollution Control Board;
iii. Pollution load details [air emissions, wastewater treatment and solid /hazardous waste generation] in tabular form [Old sheeter machine Vis-a-Vis new sheeter machine]; and
iv. Compliance to the observations of the visit report of the Sub-Committee of EAC (Industry)

The proponent vide letters dated 3.12.2013, 17.12.2013 and 1.1.2014 furnished the aforesaid information, which were further considered. The PP also made a presentation before the Committee.

The proponent informed that 75% of the stake is owned by International Paper with US$ 400 million and the balance 25% by A.P. Paper Mills, since the last two years. International Paper is a Fortune $500m company. International Paper has been investing substantially since then for technical, environmental Safety and reliability improvements at the two paper mills in A.P. The total land area 123.86 ha of which green belt 27.90 acres. River Rajahmundry flows art a dist. of 1km. River Godavari flows 700m (w) of the site. The site has never been inundated due to floods of R. Godavari as the MSL of the river is 9.14m and that of the site is 26.21 m. No effluents will be discharged into the river. There are no emissions of dioxins or furans as the process does not use elemental Cl2 process nor HCs. Online H2S monitoring system has been installed in the Pulp Mill Area. Levels of mercaptans are in the range of 0.25-0.62 ug/m3. Effluent load of BOD, COD TSS, phosphate and nitrates are within limits based on CREP norms. Lime sludge is burnt in rotary lime kilns to produce lime and reused in the process. Solid wastes such as PVC/HDPE/polythene are being disposed off to authorised scarp dealers after detoxifixtaion and ETP sludge to paper board manufactures.

It was noted that ECs had been obtained for the following:

S.No.	Products	EC obtained from MoEF dated 31.01.2005	EC obtained from SEIAA, Andhra Pradesh dated 26.2.2010	Proposed expansion (Present proposal)	Total Capacity
1.	Pulp (TPD)	500	--	From 500 to 650 TPD	650
2.	Paper (TPD)	330	593	--	593
3.	CPP (MW)	34	46	--	46

It was noted that installation of new sheeter machine was part of the expansion in capacity of the paper production for which EC was obtained from SEIAA, Andhra Pradesh through modernization by replacing an earlier machine with a new sheeter machine at a cost of Rs.90 crores. Thus, installation of the said machine was taken up as part of the modernization as per the EC obtained from SEIAA on 26.02.2010 and is not a violation.

The Committee after deliberations noted that the other additional information furnished by the proponent to be adequate and recommended the following specific conditions be stipulated along with other environmental conditions while considering for accord of environmental clearance:

i. Compliance to all the specific and general conditions stipulated for the existing plant by the Central/State Government shall be ensured and regular reports submitted to the Ministry and its Regional Office at Bangalore.

ii. The project authority shall install multi cyclones, wet scrubbers with the boilers to achieve the particulate emission below 50 mg/Nm^3. The emissions from chemical recovery section shall be controlled through primary and secondary venturi scrubbers.

iii. Data on ambient air, stack and fugitive emissions shall be regularly submitted online to Ministry's Regional office at Bangalore SPCB and CPCB as well as hard copy once in six months and display data on PM_{10}, $PM_{2.5}$, SO_2 and NOx outside the premises at the appropriate place for the general public.

iv. In case of treatment process disturbances/failure of pollution control equipment adopted by the unit, the respective unit shall be shut down and shall not be restarted until the control measures are rectified to achieve the desired efficiency.

v. The total water requirement (including existing) shall not exceed 49,100 m^3/day. The industry shall ensure the compliance of the standards for discharge of the treated effluent from the unit as stipulated under the EPA rules or SPCB whichever is more stringent. The company shall make efforts to limit the water consumption upto 75 m^3/tonne of product. Adequate steps including use of modern RO/UF based technologies shall be used to increase recycling and reduce water consumption.

vi. Adequate number of influent and effluent quality monitoring stations shall be set up in consultation with the State Pollution Control Board and regular monitoring shall be carried out for all relevant parameters to maintain the effluent treatment efficiency. Online flow meter, pH meter, conductivity meter etc. shall be installed. The report shall be submitted to Ministry's Regional Office at Bangalore, SPCB and CPCB.

vii. Ground water quality study in and around the project area shall be conducted and report submitted to Ministry's Regional Office at Bangalore, SPCB and CPCB.

viii. The company shall install Oxygen Delignification (ODL) Plant and shall maintain AOX below 1 kg/tonne of paper production.

ix. The company shall submit the comprehensive water management plan along with monitoring plan for the ground water quality and the level, within three months from date of issue of this letter.

x. The project authority shall dispose of hazardous waste as per the provision of Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008.

xi. The company shall develop green belt in 33% of the total land as per the CPCB guidelines to mitigate the effect of fugitive emissions.

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

xiii. The company shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling.

xiv. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the pulp and paper secto shall be strictly implemented.

xv. All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 21.9.2011 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 Bangalore.

xvi. The proponent shall adopt a 'Model Village" under CSR. At least 2 % of the net retain profits 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.

xvii. 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.

15.4 Cases for Terms of Reference (TOR)

15.4.1 Proposed manufacturing of sponge Iron (14000 MT/ Month), Billets/Ingots (22000 MT/ Month), Rolled Product (22000 MT/ Month) and Power Plant (12 MW) of **M/s. ASR Steels & Power Pvt. Limited** located at Village- Lakadiya, Tehsil- Bhachau, District- Kutch, Gujarat **(TOR)**

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

M/s. ASR Steels & Power Private Limited have proposed to manufacture sponge Iron (12000 MT/ Month), Billets/Ingots (22000 MT/ Month), Rolled Product (22000 MT/ Month) and Power Plant (12 MW) at Survey no. 537, 538, 539, 540/1/p1/, 540/1/p2, 542/p3, 544, 545, 546, 547, Village: Lakadiya, Taluka: Bhachau, District: Kutch, Gujarat. The total land requirement is 71 acres consisting of barren land. No Forest land is involved. No national park/wild life sanctuary/ecologically sensitive area is located within 10 km radius of the project site. Pirapati and Gharana villages are located at a distance of 2.27 km and 2.36 km from the project site respectively. Samkhiyali railway station is located at a distance of 3.42km from the project site. NH 15 and NH 8A are located at a distance of 0.30 km and 2.30 km respectively from the project site. The water requirement is 1028 KLD which will be supplied by Gujarat Water Infrastructure Limited (GWIL). No ground water will utilised for the proposed project activity. The power requirement is 30 MW which will be met from Captive Power Plant and Gujarat Electricity Board (GEB). Total cost of the project is Rs.200 crores. No court cases/litigation is pending against the project.

The details of the equipment and production capacities are as below:

S.No.	Particulars	Unit Configuration	Production Capacity
1.	Rotary Kiln	2 x 200 TPD	12000 MT/ Month
2.	Induction furnace	4 Nos	22000 MT/ Month
3.	Reheating furnace	2 Nos	

4.	Rolling Mill	2 Nos	22000 MT/ Month
5.	AFBC Boiler	1 Nos	4 MW
6.	WHRB Boiler	1 Nos	8 MW

Raw materials including iron ore/pellets, coal/char for Power plant, coal for sponge, scrap, sponge, billets/ingots, dolomite/limestone would be obtained either from within the country or imported and the mode of transportation would be by sea/rail-road. DRI kilns and the FBC boiler will be equipped with Electro Static Precipitator. Fume Extraction system with bag filters will be provided to the reheating furnace and induction furnace. Stack of adequate height will be provided. Used oil will be sold to registered recyclers.

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 steel plant for specific pollutants needs to be done. APCS for the control of emissions from the kiln and WHRB should also be included to control emissions within 50 mg/Nm^3.
3. A note on the treatment, storage and disposal of all type of slag should be included. Details of secured land fill as per CPCB guidelines should also be included. R&D plan to explore use of SMS slag may be submitted.
4. A P.H. shall be got conducted by the Gujarat Pollution Control Board vide Generic TOR at

15.4.2 Proposed expansion of existing steel plant from 24,000 TPA (Ingot) to 1,38,000 TPA (TMT bars & Structure) by addition of 2x12 Tonne Induction Furnace, 1 Ladle Furnace of capacity 15 Tonne, 4/7 radius Continuous Casting Casting Machine & 22 TPH Reheating Furnace of **M/s. D.S. Rolling Mills Private Limited**, located at village: Dayalpur, Khanpur Block, Tehsil: Lakshar District: Haridwar, Uttarakhand **(TOR)**

The project proponents along with their consultant M/s. Grass Root Research & Creation India Private Limited – New 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 is listed at S.No. 3(a) under Category 'B' However, applicability of general condition due to project site is located within 3km interstate boundary (Uttarakhand & Uttar Pradesh), the proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s. D.S. Rolling Mills Private Limited have proposed to expand the existing steel plant from 24,000 TPA (Ingot) to 1,38,000 TPA (TMT bars & Structure) by addition of 2x12 Tonne Induction Furnace, 1 Ladle Furnace of capacity 15 Tonne, 4/7 radius Continuous Casting Machine & 22 TPH Reheating Furnace at village: Dayalpur, Khanpur Block, Tehsil: Lakshar District: Haridwar, Uttarakhand. The proposed expansion will be carried out in an existing plant area of 2.592 ha. The latitude and longitude of the project site is 29^0 38' 10.53" N to 29^0 38' 17.36" N and 77^0 59' 48.08" E 77^0 59' 56.07" E respectively. No Forest land is involved. No national park/wild life sanctuary/ecologically sensitive area located within 10 km radius of the project site. Tugalpur village is located at a distance of 0.5km from the project site. Major water bodies found in the study area include – River Banganga (4km ESE), River Ganga (5km

ESE), Bodi nadi (4km NE), River Solani (5km NW) and Rohalki nala (8km N). The cost of the project is Rs. 32 Crores. No court cases/litigation is pending against the project.

The status of existing and proposed expansion units are as given below:-

Existing units:

S.No	Facility	Production Capacity
1.	1 no. of Induction Furnace (8 Ton)	24000 TPA

Proposed units:

S.No	Facility	Capacity
1.	2 no. of Induction Furnace	12 Ton
2.	1 no. of Ladle Furnace	15 Ton
3.	Continuous Casting Machine (4/7 radius)	2 Strand
4.	Reheating Furnace	22 TPH
5.	Rolling mill	Roughing group Rolling Mill – 1 Rolling Mill -2
6.	Annual Capacity (Bars and Stucture)	1,38,000 TPA

Note: The existing 8 Ton induction furnace will be dismantled after expansion.

The water requirement after the proposed expansion is 103 KLD (Existing: 9.5 KLD; Additional: 93.5 KLD - of which industrial water is 90 (additional 82 m3/d), 3.5 m3/d drinking water (2 m3/d additional), which will be met from ground water. Ground water is 'safe' category. The power requirement is 14000 KVA which will be met from Uttarakhand Power Corporation Limited.

Adequate stack height will be provided to ensure wider dispersion of emissions. Water sprinkling system will be installed at various locations to control fugitive emissions. The material handling system i.e. Belt Conveyors, Transfer points, Feeders, Hoppers, Junction points will be equipped with Bag Filters & Cyclones for de-dusting. All conveyors will be covered and will have water fogging system for dust suppression. In order to conserve water and minimize the makeup water requirement, it is proposed to adopt re-circulating systems for equipment cooling.

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. Photographs of the existing plant area.
2. Air quality modeling for all the plants for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm^3 should be included.
3. Occupational health:
   a. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,

b. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
c. Annual report of heath status of workers with special reference to Occupational Health and Safety.
d. Action plan for the implementation of OHS standards as per OSHAS/USEPA.
e. Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.

4. Public Hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA-EMP Report in the form of tabular chart.
9. Copy of Notification of MIDC (date of establishment).

It was decided that 'TORs' prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation should be provided. The draft EIA-EMP report shall be submitted to the Uttarakhand Environment Protection and Pollution Control Board for Public Hearing. The issues raised in Public Hearing issues 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.

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

The Committee noted that the proponent vide their email communication dated 24.1.2014 expressed their inability to attend the meeting due to some unavoidable circumstances and requested to consider the proposal in the next EAC meeting. The Committee decided that the proposal may be placed before the EAC in the next EAC meeting.

15.4.4 Proposed manufacturing of 2400 TPA Metallothermic Ferro Alloys of **M/s. Vibhuti Alloys Private Limited,** located at B17/1 Butibori Industrial Area, Nagpur, Maharashtra **(TOR)**

The project proponent along with their consultant M/s. Pollution and Ecology Control Services – Nagpur 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 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. Vibhuti Alloys Private Limited has proposed to manufacture 2400 TPA of Metallothermic (Carbon and low carbon) Ferro Alloys and 2400 TPA of Mn. Dioxide at Plot no. B17/1, MIDC Butibori, which is a notified Industrial Area, in Taluka Hingna, District Nagpur, Maharashtra. The total land available is 10000 sq ft. The latitude and longitude of the project site is 20°55'33.12"N and 78°57'27.84"E respectively. No critically polluted areas are found within 15km. No nalah, water bodies within the MIDC. Chichkotha Village is located at a distance of 1km from the project site. No R&R involved. No Forest land involved. No national park/wild life sanctuary/ecologically sensitive area located within 10 km radius of the project site. Reserved Forest exist in the study area are - Degma Reserved Forest 9.0 km(NW), Dongargao Reserved Forest 5 km (SE) and Junapani Reserved Forest 7 km(S), and Bid Sukli RF (1km N). Vena River, Krishna nala (3km ES), Wakeshwar lake and Khadki lake are located at a distance of 2.5km(E), 3km (SE), 9.6km and 10km(NW) respectively from the project site. No court cases/litigation is pending against the project. Cost of the project is Rs.3 crores.

Mn ore, lime, Aluminium powder, Si-Mn, Flurospar and Coal oil are the raw materials that will be used. Products to be produced are: Medium Carbon Ferro Mn and Low carbon ferro-Mn (200MT/month), and MnO2 (200 MT/month). Raw materials required include Mn ore (7500 MT/month), Lime (780 MT/m), Aluminium powder/turnings (1320 MT/m), Silico Mn (2184 MT/m), Flourspar (84 mT/m) and Coal (600 MT/m). The details of the proposed units are as given below:

Products	Quantity	Grade	Specification
Medium Carbon Ferro Manganese	200 MT / Month	70-75 % & 75-80 %	Manganese - 70-75 % &75-80 %
			Carbon - 3 % Max
			Size 25 - 150mm or 10 -50mm
Low Carbon Ferro Manganese		75- 80 %	Manganese - 75-80 %
			Carbon - 1 % max
			Size : 25 - 150mm or 10 -50mm
Manganous Oxide (MnO)	200 MT / Month	55-62 %	Manganese - 55-62 %

Make up water requirement will be 5KLD and met from MIDC water. Water from jigging/quenching process will be reused. Domestic effluents will be discharged into the MIDC sewer line. Manpower requirement is 40. The power requirement is 125 HP which will be supplied by the State Electricity Board. Air emissions are mainly from production of ferro alloys and Mno and dust generated due to crusher/pulveriser, raw material storage and handling and during transportation. Solid waste generation is slag (100 mt/M) which is non-toxic from Aluminothermic reduction process and coal ash from MnO process. Will be used as lining and hearth of reaction vessels and the rest backfilled in and also used in road construction.

Adequate stack height will be provided to ensure wider dispersion of emissions. Water sprinkling system will be installed at various locations to control fugitive emissions. Proper care will be taken by installing Bag filters followed by Stack to control source emission. It is estimated that total effluent generation from the proposed installation will be from jigging

operation and domestic effluent. The water from jigging will be treated in settling tank and will be reused in the process. Zero discharge condition from the proposed plant will be maintained. Non –hazardous slag waste from the process shall be used for filling of low lying area and will be sold as a road construction material.

Further, the EAC asked the proponent to carryout baseline data collection for a period two months (Jan – Feb 2014) within 5km radius of the project site and submit the EIA-EMP report to the Ministry.

After deliberations, the Committee prescribed the following TORs as given in Generic TOR (except TOR No.71) at Anenxure-1 read with following additional TORS for the preparation of EIA-EMP report:

1. Details of solid waste management including management plan of disposal of boiler ash.
2. Public hearing / consultation for project cited above was exempted by the EAC as per stage Section 7 (i), III Stage (3), Para (i)(b) of EIA Notification 2006 due to project being located in notified industrial area.

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

The Committee noted that the proponent vide their email communication dated 18.1.2014 expressed their inability to attend the meeting as the proponent is changing the name and location of the project site. Further PP has requested MoEF to consider the proposal in the next EAC meeting. The Committee decided that the proposal may be placed before the EAC in the next EAC meeting.

15.4.6 Proposed expansion of Ferro Alloys Plant of **M/s. Stork Ferro and Mineral Industries Private Limited**, located at plot no. Z-3, IID Centre, Somnathpur Industrial Estate, District Balasore, Odisha by **(TOR)**

The project proponents and their consultant (M/s Global Experts – Bhubaneshwar) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA-EMP report. All the Metallurgical Industries (Ferrous and Non Ferrous) are 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. Stork Ferro and Mineral Industries Private Limited have proposed to establish a green field project for the production of Titanium Slag (50,000 TPA) and Pig iron (28,000 TPA) at plot no. Z-3, IID Centre, Somnathpur Industrial Estate, District Balasore, Odisha. Total land requirement is 20.63 acres. The latitude and longitude of the project site is 21°30'0.27"N and 86°51'2.15"E respectively. No Forest land is involved. No National Park, Wildlife Sanctuary within 10 km radius of the project site. No court cases/litigation is pending against the project. Sona river and Budhabalanga river is located at a distance 6 km and 7.5km respectively from the project site. Balasore railway station is located at a distance 8.5 km from the project site.

Total cost of the project is Rs.196.39 crores. Rs. 10 crores and Rs. 0.50 crores are earmarked towards capital cost and recurring cost/annum for pollution control measures.

The salient features of the project are as below:-

DESCRIPTION	DETAILS
Furnace Capacity	25.5 MVA
Production	Titanium Slag 50,000 TPA & Pig Iron 28,000 TPA
Furnace Transformer Rating	3 Nos. of 8.5 MVA = Three Phase for 25.5 MVA Capacity of Sub-merged Arc Furnace (SAF).
Max. Electrode Current	25,400 Amps.
Graphitized Electrode Dia.	710 mm
Shell Dia. (Approx.)	12,000 mm
Shell Height (Approx.)	28,000 mm
Power Factor	0.82
Specific Energy Conservation	2300 KWh/t

The raw materials required are anthracite coal (12,150 TPA) and Ilmenite concentrate (87,300 TPA). The power requirement is 21 MW which will be met from the NESCO supply. Total make up water will be 188 m3/ day which will be sourced from the River Budha Balanga through NOCCi (North Orissa Chamber of Commerce & Industry), Balasore from IDCO (Industrial Development Corporation, Odisha). The water pipe line will be constructed in Somnathpur Industrial Estate to provide sufficient water to the Industrial Units.

Gas Cleaning Plant comprises of spark arrester, forced draft cooler, bag filter and adequate stack height of 45 meter. Water Sprinkling arrangement and Dry Fog Dust Separation System will be provided to control fugitive emission. Provision of fume extraction hood around the furnace circumference over the Tap holes connecting to flue gas duct line leading to Air Pollution Control Devices. The major solid wastes generated in the plant will be flue dust (@ 15-20 kg/ t of Titanium Slag). The flue dust recovered will be recycled back to the process. Titanium Slag will be sold out as the product. Pig iron which is a by-product of the plant also will be sold out.

Public hearing / consultation for project cited above was exempted by the EAC as per stage Section 7 (i), III Stage (3), Para (i)(b) of EIA Notification 2006 due to project being located in notified industrial area.

After detailed deliberations, the Committee prescribed following TORs for undertaking detailed EIA-EMP study read with Generic TOR at Annexure-1 (except TOR No. 71):

1. Copies of iron ore/coal linkage documents
2. Studies for titanium slag material and solid waste generated should also be included, if the raw materials used has trace elements and a management plan.

3. Air quality modeling for all the proposed plants for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm^3 should be included.
4. Public hearing / consultation for project cited above was exempted by the EAC as per stage Section 7 (i), III Stage (3), Para (i)(b) of EIA Notification 2006 due to project being located in notified industrial area. The final EIA-EMP report for obtaining environmental clearance shall be submitted to the Ministry.

15.4.7 Expansion of CTD/TMT Bars and Billets manufacturing Unit (Existing CTD.TMT Bars capacity (1,00,000 TPA) and proposed 1,50,000 TPA and Billets proposed capacity 2,50,000 TPA) of **M/s RGTL Industries Limited,** located at #293-296, Phase-IV, Industrial Area, Chopanki (Bhiwadi), District Alwar in Rajasthan **(TOR)**

The project authorities along with their consultant M/s. Enkay Enviro Services Private Limited – Jaipur 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 is listed at S.No. 3(a) under Category 'B' However, applicability of general condition due to project site is located within 4.6 km interstate boundary (Rajasthan and Haryana), in district Alwar, Rajasthan, the proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I). The project is in Bhiwadi critically polluted area, moratorium has been lifted on 17.09.2013.

M/s RGTL Industries Limited have proposed to expand the CTD/TMT Bars (2,50,000 TPA) manufacturing unit by installation of M.S. Billets/Ingots manufacturing unit – 2,50,000 TPA at SP 293-296, Phase-IV, Industrial Area, Chopanki (Bhiwadi), District Alwar in Rajasthan. The proposed expansion will be carried out in the existing plant area of 68692.50 m^2. No additional land is required for the proposed expansion. Environment Clearance has been obtained from SEIAA – Rajasthan vide letter no. F1 (4)/SEIAA/SEAC-Raj / Sectt / Project / Cat 3 (a) (c) B1 (166) /08-09 dated 29.12.2009. No Forest land is involved. No national park/wild life sanctuary/ecologically sensitive area located within 10 km radius of the project site. The nearest railway station is Rewari Junction, which is at a distance of about 27 km towards North-West from the site**.** The reserved forest exists in the study area are Chaupankhi RF and Indaur RF. The daily fresh water requirement after the expansion would be 20 KLD which will be supplied by RIICO. The power will be supplied through the 132/33 kV substation of Rajasthan State Electricity Board (RSEB), from where an independent 33 kV line has been drawn. Total cost of the project after the expansion would be Rs. 137.5 crores (Existing: Rs. 43.16 crores and Expansion: Rs.94.34 crores). No court cases/litigation is pending against the project.

Adequate stack height will be provided to ensure wider dispersion of emissions. Water sprinkling system will be installed at various locations to control fugitive emissions. The PP will have adequate arrangements for treatment of water from scrubber. All conveyors will be covered and will have water fogging system for dust suppression. In order to conserve water and minimize the makeup water requirement, it is proposed to adopt re-circulating systems for equipment cooling.

After detailed deliberations, the Committee prescribed for undertaking a detailed EIA-EMP study on the generic TOR given at **Annexure 1**

15.5 Any Other Items

15.5.1 Expansion of Alumina Refinery (from 1 MTPA to 6 MTPA) and Captive Power Plant (from 75 MW to 285 MW) of **M/s. Sesa Sterlite Limited (Formerly M/s Vedanta Aluminium Limited)** located at village Lanjigarh, District Kalahandi in Odisha **(Revival of TORs)**

The Terms of Reference (TOR) for the aforesaid proposal was accorded by the Ministry vide F.No.J-11011/406/2011-IA.II(I) dated 02.02.2012. Thereafter, the Ministry vide letter dated 17.4.2012 requested the State Govt. of Odisha to keep the TORs in abeyance till the issue of free accessibility and Forest Conservation (FC) requirement for 28.943 ha of 'Gramya Jungle Jogya' land was resolved. In this regard, the Project proponent vide letter no. VAL/MK/13/126 dated 14.8.2013 submitted the compliance to the Ministry's O.M. dated 12.12.2012 pertaining to the violation along with the information regarding the diversion of 26.123 ha of "Gramya Jungle Jogya" land. The proposal was placed before the EAC for consideration in its 13th meeting held during 18-20th November 2013 wherein the proposal could not be considered as the documents circulated by the PP were not received by the EAC in time. The proposal has been placed for consideration before the EAC.

The project proponent stated that the aforesaid project is under hold for the last three years and requested the EAC to permit them to restart the construction activity by issuing Environment Clearance without any fresh Public Hearing. The Committee informed the PAs that the proposal is only for the revival of TOR dated 2.2.2012 granted afresh. The proposal for environment clearance can be considered only after preparation of an EIA-EMP report and conduct of fresh Public Hearing based on the fresh TOR, in accordance with the procedure stipulated under the EIA Notification 2006.

After detailed deliberations, the Committee recommended that the TOR accorded on 2.2.2012 may be revalidated for a period of twenty two months with effect from January 2014 along with copies of bauxite and coal linkage documents including status of their ECs and a comprehensive CSR Plan as per the recent directive under Companies Act 2013. The Committee also requested the proponent to separately apply to the Ministry for transfer of TOR from M/s Vedanta Aluminium Limited (VAL) to M/s. Sesa Sterlite Limited as the original TOR is in the name of M/s.VAL.

It was decided that TOR accorded on 2.2.2012 and the additional 'TOR' prescribed as above by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA-EMP report in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA-EMP report shall be submitted to the Odisha Pollution Control Board for Public Hearing. The issues raised in Public Hearing issues 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-EMP report shall be submitted to the Ministry for obtaining environmental clearance.

15.5.2 Expansion of Integrated Steel Plant (10.0 MTPA to 16.0 MTPA) along with Captive Power Plant (600 MW) of **M/s JSW Steel Limited**, located near Village Tornagallu, District Bellary in Karnataka (**regarding EC)**

The aforesaid proposal was considered in the 17th Expert Appraisal Committee (Industry-1) meeting held during 13-14th December, 2010 and further considered in its 27th meeting held during 26-27th August, 2011. The Committee recommended the proposal for Environment Clearance (EC) subject to stipulation of specific conditions along with other environmental conditions. However, in this regard, the matter of firm linkage of raw materials such as iron ore required for the proposed expansion required a more detailed examination, vis-à-vis Orders of the Hon'ble Supreme Court.

The Hon'ble Supreme Court vide its order dated 29.7.2011 and 26.8.2011 in W.P.(C) No.569 of 2009 had banned iron ore mining operations in the districts of Bellary, Tumkur and Chitradurga in the State of Karnataka. In compliance to the said orders of the Hon'ble Court, MoEF vide Office Memorandum (O.M) No. J-110132/41/2006-IA.II(I) dated 5.10.2011 had decided that MoEF will not consider any proposal relating to EC to integrated steel plants/ sponge iron plants, which are linked to iron ore as a raw material to be obtained from these three districts till the Hon'ble Supreme Court lifts the ban in these districts. For the expansion of the project, one of the sources of iron ore is from Bellary District. In view of this, the project was kept on hold by MoEF for the grant of EC.

The Hon'ble Supreme Court subsequently, vide Order dated 18.4.2013 has allowed the resumption of mining operations in the aforesaid three districts in all Category 'A' mines and 63 Category 'B' mines subject to certain conditions including overall cap on production. MoEF vide O.M. dated 1.7.2013 lifted the moratorium for consideration of proposals for EC for integrated steel plants/sponge iron plants, as imposed earlier vide O.M. of 5.10.2011 subject *inter-alia* to the condition that while considering such proposals, the Expert Appraisal Committee will look into and satisfy themselves about availability of requisite iron ore, transportation requirements and other parameters of Environment law and rules for such projects.

The EAC had sought additional information regarding availability of requisite iron ore and its transportation arrangements for further consideration of the proposal. The information furnished by the proponent vide letter dated 09.01.2014 was placed before the EAC for further consideration.

It was informed that the Hon'ble SC had suspended iron ore mining in Karnataka based on recommendations of CEC in July/Aug. 2011. Further, Hon'ble SC ordered NMDC to produce iron ore to the tune of 12 MTPA/annum to cater to the requirements. The Hon'ble SC has also permitted 72 iron ore mines to reopen subject to prpern and approval of R&R Plan. Cat C mining leases were cancelled and directed that they be allocated to end users. Based on Order of Hon'ble SC, the SCMC has successfully carried out e-auction of iron ore in Karnataka among end users for the last two and half years. In its Final Judgement, the SC had directed that new mining leases be granted as per MMDR Act. In pursuance of these Orders, report of CEC and State Govt had stated that 29.5 MTPA of iron ore capacity has been approved for operations.

It was stated that the expansion of the Integrated Steel Plant to 16 MTPA would require 26 MTPA of iron ore which will be arranged from the existing sources (Karnataka through e-auction – 21 MTPA; NMDC Chhattisgarh – 2 MTPA and Private mines (Odisha, Jharkhand & Chhattisgarh – 3 MTPA). Further, the iron ore will also be arranged from the additional sources: new mining leases of 188.128 ha in Donimalai range, availability of ore after revival

of mining in Cat. C mines, and import through long–term agreement with Duferco (10 MTPA). It was further informed that for the existing project, 9.24 MTPA of iron ore (55%) is being transported by rail and the balance 7.56 MTPA (by road). For the proposed expansion project, an estimated 20.8 MTPA (80%) of iron ore is proposed to be transported by rail and 5.2 MTPA (20%) by road.

The EAC noted that this is a mega Integrated Steel Plant of a very large capcity (16 MTPA). Further, almost the entire amount of (21 MTPA of the total 26 MTPA) of the iron ore required for the project is to be met form e-auction. The EAC sought a letter from Govt. of Karnataka for assured sustained supply of 21 MTPA of iron ore by e-auction. The Committee also sought a copy of Agreement entered with Duferco for supply of 10 MTPA of iron ore. Further, the Committee also requested the proponent to submit a long-term MOU/agreement for supply of coal for the Steel Plant, including source of mine and quantum and coal characteristics and adequacy of rail/road network for transportation of 26 MTPA of iron ore and requisite coal for the expansion project. The Committee was also of the view that the ports being identified by the proponent may not have the requisite infrastructure capcity for handling the required extent of imports of iron ore and coal. The Committee also noted that an authenticated map showing the location of the project vis-à-vis boundary of Daroji Bear Sanctuary has not been furnished by PCCF, Wildlife Govt of Karnataka.

After detailed deliberations, the Committee recommended that the proponent submit the following documents for the record of the Ministry:

i. Letter of Govt. of Karnataka assuring sustained availability of 21 MTPA of iron ore through e-auction to meet 80% (as stated by the proponent) requirement of the expansion of the Steel Plant to 16 MTPA a long-term basis/agreement.
ii. MoU from the private mine owners for the iron ore supply for the balance 20%.
iii. Furnish copy of Agreement with Duferco for supply of 10 MTPA of iron ore
iv. Further, the company will also submit a long-term MOU/agreement for supply of coal for the Steel Plant, including source of mine and quantum and coal characteristics.
v. Letter from the concerned port authorities wherein the raw materials (along with quantum of coal and iron ore proposed to be imported) of M/s JSWSL are likely to be imported indicating that the infrastructure capacity in the ports is adequate for handling the extent of requirement of import of raw material and coal.
vi. An authenticated map of the study area by the PCCF (Chief Wildlife Warden), Government of Karnataka showing the shortest aerial distance between the boundary of Daroji Bear Sanctuary and the plant site
vii. Wildlife Conservation Plan for conservation of Schedule I fauna.

15.5.3 Proposed 3.5 MTPA Cement Plant & MW captive Power plant (2x50 MW of FBC power plant and 8 MW of WHRB) of **M/s Chettinad Cement Corporation limited** located at Peddagariapadu Village, Dachepalli Mandal, Guntur District, Andhra Pradesh **(Amendment of TOR dated 13.10.2013 in respect location of project site)**

The Terms of Reference (TORs) to the aforesaid proposal was accorded by MoEF vide letter no. J-11011/421/2011-IA II (I) dated 13.10.2011. Thereafter, Ministry vide letter dated 12.11.2013 extended the validity of the TOR for a period of one year with effect from 12.10.2013.

The proposal for extending the validity of extending the TOR granted on 13.10.2011 for an Integrated Cement, WHRB and CPP by one year vide letter of PP submitted on 30.04.2013 was considered by EAC in the July 2013 meeting. However, at the time of presentation, the PP had sought a change in location in shifting of location from the earlier proposed site by about 500m. It was stated that all other issues given in the TOR of 13.10.2011 would remain the same. The new location is about 1km from a village from the earlier 500m and is thus more environmentally friendly. The revised location also requires an additional land (from 40.94 ha to 131.52 ha) in the villages of Pedagarlapadu and Kesanupalli for effective utilisation of common infrastructure and other facilities for future expansion and for development of more greenbelt. However, the minutes of the July 2013 EAC meeting has mentioned only the extension of the validity of the TOR and not about the slight shift in location by about 500m and change in land area. The Revised Form-I & PFR was submitted vide letter dated 08.10.2013 for change in the extent of land (from 40.94 ha to 131.52 ha) & shifting of location of the plant site. However, the MOEF letter dated 12.11.2013 mentions only the extension of validity of TOR and not the change in location and increase in area.

The Revised Form-I & PFR for the new location submitted vide letter dated 8.10.2013 were considered in the meeting.

The PP also made a presentation before the Committee. It was submitted by the proponent that the reasons for seeking amendment in the TOR dated 13.10.2011 read with MOEF letter dated 12.11.2013 was in regard to change in the extent of land (from 40.94 ha to 131.52 ha) & shifting of proposed location of the plant site by about 500m. The PP also informed that the company has also made a separate application for TOR with Form-I and a PFR was made to MOEF on 16.05.2013 for the captive limestone mine, whose allocation of lease has been confirmed by Govt. of A.P. on 30.05.2013. The TOR proposal for the captive limestone mine was considered in the EAC (Mining) meeting held on 27.06.2013 and TOR is awaited. The company also submitted that a one-season baseline data from Oct. 2013 to Dec. 2013 for the revised location of the Cement Plant has been collected on the basis of presentation made in July 2013 and the revised Form-I & PFR submitted to Ministry vide letter dated 08.10.2013. The PP has also prepared a draft Common EIA-EMP report for the Integrated Cement Plant along with WHRB and CPP and the captive Limestone mine and the draft EIA-EMP report has been submitted to A.P. PCB on 22.01.2014 for conducting the P.H.

After detailed deliberations, the committee recommended for the amendment in the TOR dated 13.10.2011 for the shift of integrated cement plant location by about 500m from SE to East side of Captive Limestone Mines and in addition, the area required for the plant site shall be amended as 131.52 ha instead of 40.94 ha and for revision of the TOR accordingly. The EAC also agreed to the one season baseline data of Oct-Dec. 2013 collected for the revised location.

15.5.4 Expansion of Ferro Alloy Plant by installation of Submerged Arc Furnace (SAF) (16.5 MVA) for production of Si-Mn 26,645 TPA/Fe-Mn 29,500 TPA/Fe-Si 11,400 TPA/Fe-Cr 25,000 TPA of **M/s Stork Ferro and Mineral Industries Private Limited,** located at Plot No. Z-1, IDCO IID Centre, Village Somnathpur, District Balasore in Odisha **(Amendment of EC)**

Environmental Clearance (EC) to the above proposal was accorded by MoEF vide letter no. J-11011/519/2010-IA II (I) dated 26.2.2013 for the expansion of Ferro Alloy Plant by

installation of Submerged Arc Furnace [SAF] (16.5 MVA) for production of Si-Mn - 26,645 TPA/ Fe-Mn - 29,500 TPA/ Fe-Si -11,400 TPA/ Fe-Cr - 25,000 TPA at Plot No. Z-1, IDCO IID Centre, Village Somnathpur, District Balasore in Odisha.

The Project Proponent (PP) vide letter dated 15.4.2013 and 26.8.2013 requested MoEF for amendment in para no. 2 of the EC dated 26.2.2013 in respect of reduction of total project area from 60.63 acres to 38.151 acres. The PP along with their consultant (M/s Sun Consultancy and Services, Bhubaneswar) also made a presentation before the Committee. The amendment requested by the proponent is as below:-

Para no. 2 (line no. 5 & 6) as per the EC dated 26.2.2013	**Amendment sought**
"The total project area is 60.63 acres which was allotted by IDCO"	"The total project area is 38.15 acres which was allotted by IDCO"

The reasons for seeking aforesaid reduction in the total project area are:

- IDCO could be able to hand over only 38.151 acres of land with respect to Plot No. Z-1 where Furnace – I & II are installed and the organisation has restricted all its activities with respect to Furnace I & II within Plot No Z – 1 which is spread over 38.151 acres.
- Further there will be no change in Raw Material Consumption, no change in Energy Consumption, no change in water requirement and no change in product mix.

After detailed deliberations, the Committee recommended for the amendment in para no.2 of the EC dated 26.2.2013 as mentioned below subject to the environmental safe guards.

Para no. 2 (line no. 5 & 6) of the EC dated 26.2.2013 may be read as:-

"The total project area is 38.15 acres which was allotted by IDCO".

15.5.5 Ferro Alloy Plant (Silico-Manganese, 26,645 TPA) of **M/s Stork Ferro and Mineral Industries Private Limited,** located at IDCO, IID Centre, Somnathpur Industrial Estate, District Balasore, Orissa **(Amendment of EC)**

Environmental Clearance (EC) to the above proposal was accorded by MoEF vide letter no. J-11011/55/2008-IA II (I) dated 17.7.2008 for setting up of Ferro alloys plant (Si-Mn:26645 TPA) at IDCO IID Centre, Somnathpur Industrial Estate, Remuna, Balasore, Odisha. The Project Proponent (PP) vide letter dated 3.5.2013 requested MoEF for the amendment in the EC dated 17.7.2008 for including Fe-Cr: 25,000 TPA in the product mix in addition to Silico Manganese: 26,645 TPA as accorded earlier.

The PP along with their consultant (M/s Sun Consultancy and Services, Bhubaneswar) also made a presentation before the Committee. The amendment requested by the proponent is as below:

As per the EC dated 17.7.2008	**Amendment sought**

Silico Manganese: 26,645 TPA	Silico Manganese: 26,645 TPA & Ferro Chrome: 25,000 TPA

Note: The maximum capacity mentioned against each product refers to when that product is exclusively produced throughout the year. But in practice normally the production will be less than figure mentioned against each product when there will be combination of products.

The PP submitted the following justification for seeking amendment in the EC dated 17.07.2008:

- Due to changed scenario in the present market demand and future trends it is very much essential to include FeCr in the product-mix of Furnace -1 as well.
- Due to decreasing market demand of SiMn the production becomes unprofitable without FeCr which is having better prospect in national and international market.
- No change in plant and machineries. Both the products can be produced in the same furnace (16.5 MVA) depending upon the market demand.
- No change in Layout.
- No extra land requirement.
- No change in Land Use Plan.
- No change in Water requirement.
- No additional Project Cost.
- No increase in total production capacity.
- No increase in Energy Consumption. Rather the specific power consumption of FeCr is 3800 KWh/T against that of SiMn which is 3925 KWh/T.
- CTO not yet obtained. Will install continuous monitoring System.

After detailed deliberations, the Committee sought the following additional information for further consideration:-

i. Certified compliance report from Regional Office of MoEF at Bhubaneswar for the existing unit;
ii. Chromium management plan; and
iii. Stack emission data on furnace 1 (Si Mn:26,645 TPA) and furnace 2 (Si-Mn 26,645 TPA/Fe-Mn 29,500 TPA/Fe-Si 11,400 TPA/Fe-Cr 25,000 TPA).
iv. When both are in operation, the Cr+6 levels must not exceed the limits. The PP shall monitor heavy metals (trace metals). For the existing unit – details of one month data on emissions required.

15.5.6 Expansion of Sponge Iron Plant into Mini Steel Plant (Sponge Iron Plant 100 TPD; Induction Furnaces 2x10 TPD; Ladle Furnace 1x12 TPD; Continuous Billet Casting Machine 70,000 TPA, Bar & Rod Mill) and Captive Power Plant (10 MW) of **M/s Dhruvdesh Metasteel Private Ltd.** located at hirenbangal, Koppal, Karnataka (**Amendment of EC and Extension of validity of EC)**

Environmental Clearance (EC) to the above proposal was accorded by MoEF vide letter no. J-11011/391/2006-IA II (I) dated 23.12.2008. Validity of EC expired on 22.12.2013. Under the existing EC – the following units have been already established:

- Second 100 TPD unit sponge iron unit commissioned in March 2009.
- 10 MW CPP commissioned in 2011.

The Project Proponent (PP) vide letters dated 11.7.2013, 23.8.2013 and subsequent communication dated 10.12.2013 along with the updated Form I has requested MoEF for extension of validity of EC and also amendment in the EC for increase in sponge iron production. Regional Office of MoEF at Bangalore had sent the certified compliance report vide letter no.EP/12.1/590/KAR/4492 dated 10.12.2013.

The PP also made a presentation before the Committee. The project is to be implemented in 3 phases. The amendment sought by the PP is as below:

PHASE –I	**PHASE-II EC obtained vide Letter No J.11011/391/2006-IA II(I) dated 23-12-2008**	**PHASE –III Amendment sought for the increased sponge Iron production**	**Extension of EC required**
• Rotary Kiln of Nominal capacity 100 TPD sponge iron based on lump Iron ore and Singareni Coal • Established in Feb - 2005	• Second Kiln of Nominal capacity 100 TPD for sponge iron production based on lump Iron ore & Singareni Coal • Captive power plant (12/15 MW) • Induction furnace (2 X 10/12 T) • Ladle Furnace (1 X 10/14 T) • 2 Strand continuous billet casting machine. • Bar and Rod Mill (80,000 TPA)	• Production of 90,000 TPA sponge iron from the same 2 x 100 TPD kilns already existing. • No new Rotary Kiln will be installed. • Increase in annual production achieved when ***Iron ore pellets and High Grade South African Coal*** are used instead of ***Lump Iron ore and Singareni Coal***	• Validity of the present EC mentioned in Column No. 2 expired on 22-12-2013. • Under the present EC, the following projects have already been installed and operating: ➢ Second 100 TPD Sponge Iron Kiln commissioned in March- 2009 ➢ 10 MW Captive Power Plant commissioned in December – 2011 • <u>Extension of validity of</u> the same <u>Environmental clearance</u> is requested to complete the Balance installations covered in the Present EC (column No. 2).

Of the total land area of 70 acres (28,3280 sq.m), 35% (99148 sq.m) is under green belt. Tungabhadra Reservoir of Tungabhadra River, located 2km from project. Permission for drawl of 3000 KLD from Govt. of Karnataka vide Order dated WRD 79 MTP 2007 dated 21.04.200. Total water requirement is 720 KLD of which present project's requirement is 80 KLD. Total power requirement is 18MW, of which present power production from CPP is 10 MW of which 2 MW is utilised

<u>The PP stated that benefits of Iron Ore Pellets:</u>

With the use of iron ore pellets instead of lump iron ore, productivity increases by about 30% and raw material feed to the kiln/tonne of sponge iron produced decreases by about 25%. This will not only result in less quantity of raw material handled but also correspondingly result in decrease in pollution load, and emissions – both fugitive and stack. And the dust burden to exhaust is reduced by about 20%. No contamination of iron ore pellets as compared to iron ore lumps. No loss in Ignition with pellets as compared to iron ore lumps. Good quality of Dolo Char is generated which is used completely as fuel in AFBC Boiler resulting in reduction in usage of coal and thus, a lower coal consumption. Improved and uniform sponge iron

quality. Hardly any iron ore fines generated in the rotary kiln operations as against of upto 30-35% When lump iron ore is used. The project also involves lower energy and refractory consumption.

Solid waste management – Dolochar of 40TPD is to be used in AFBC boiler. Flyash collected in ESPs are pneumatically transported to closed steel silos and thereafter sold to nearby cement units (M/s Bagalkot Cement Inds.), and also used in the in-house brick manufacturing facility.

The Committee noted that as per the certified compliance report received from RO-Bangalore, the compliance to the EC conditions is satisfactory. After detailed deliberations, the Committee recommended for the extension of validity of EC by a period of five years with effect from 22.12.2013 subject to environmental safeguards.

With respect to the amendment in EC dated 23.12.2008 for the increase in sponge iron production from 60,000 TPA to 90,000 TPA, the EAC sought the following documents from the PP for the reconsideration of the proposal:-

- Data regarding stack emission with iron ore lumps and iron ore pellets
- Project report for the proposed change of raw materials from Lump Iron ore & Singareni Coal to Iron ore pellets and High Grade South African Coal.

30th January 2014

15.6 Environmental Clearance

15.6.1 Exploration Drilling of 103 Wells in 30 Blocks of Western On-Shore Basin, of **M/s ONGCL**, District Mehsana & Patan, Gujarat **(EC)**

The project proponents and their consultant (Kadam Environmental Consultants) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 22nd Meeting of the Expert Appraisal Committee (Industry-2) held during 29th-30th April, 2011 for preparation of EIA-EMP report. All the projects related to offshore and onshore Oil and Gas exploration, development and production are listed in para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at central level.

M/s Oil and Natural Gas Corporation Limited (ONGCL) have proposed for the Exploration Drilling of 103 wells in 30 Blocks or Western On-shore Basin (about 200m from coast), District Mehsana & Patan, Gujarat. Total area of the 30 blocks is 1116.206 sq. km. located in Mehsana and Patan. Exploratory drilling will be temporary activity. Land (150 x 150 m) will be temporarily acquired. Total cost of the project is Rs.672.00 Crores. Out of 30 blocks, 26 blocks are ML blocks, 3 PL blocks and are NELP block. It was informed that P.H. was held for the 3 districts of Mehsana, Patan and Gandhigram and in case of the third, P.H. was held in conjunction with another project of ONGC. It was informed that CRZ clearance has been obtained in Nov. 2013 for drilling, laying of pipeline and for establishment of a terminal.

Out of 30 blocks, environmental clearance has been obtained for exploratory drilling of wells in 9 blocks in the past. Name of the blocks and details of environmental clearances accorded are as follows:

S. N.	Name of the PEL/ ML Blocks	EC Date	EC Letter Details
1	CHARADA	28.04.2008	EC received on 28.04.2008 vide MOEF letter No. J-11011/178/2008-IA II(I)
2	CHARADA-MANSA EXT-I	28.04.2008	EC received on 28.04.2008 vide MOEF letter No. J-11011/178/2008-IA II(I)
3	LINCH	28.04.2008	EC received on 28.04.2008 vide MOEF letter No. J-11011/178/2008-IA II(I)
4	LINCH EXT.-I	28.04.2008	EC received on 28.04.2008 vide MOEF letter No. J-11011/178/2008-IA II(I)
5	JOTANA-WAROSAN	15.11.2007	EC received on 15.11.2007 vide MOEF letter No. J-11011/976/2007-IA II(I)
6	PATAN	14.10.2009	EC received on 14.10.2009 vide MOEF letter No. J-11011/558/2008-IA II(I)
7	NORTH SOBHASAN PART A & B	14.10.2009	EC received on 14.10.2009 vide MOEF letter No. J-11011/558/2008-IA II(I)
8	NORTH SOBHASAN EXT.-1	14.10.2009	EC received on 14.10.2009 vide MOEF letter No. J-11011/558/2008-IA II(I)
9	CB-ONN-2002/1	28.04.08	EC received on 28.04.2008 vide MOEF letter No. J-11011/178/2008-IA II(I)

A total of 103 exploratory wells in 30 blocks will be drilled at a depth of 1000-3500m during 2011-16. About 1500 wells have been drilled in the proposed area so far and oil production is approx. 40,000 MTPD. Mining lease of the proposed block was granted 1965 onwards and reviewed time to time. These blocks have proven hydrocarbon reserves. It is reported that there is no national park/wildlife sanctuary/reserve forest/eco-sensitive area. The details of blocks and wells to be drilled are as given below:

S.N.	Block Name	Area (Sq. km.)	District	No. of Wells to be drilled	Cost (Rs. In Cr.)
1	Kadi ML	64.49	Mehsana	3	18
2	Kadi Ext-I ML	20.42	Mehsana	3	18
3	Kadi Ext-II ML	41.01	Mehsana	3	18
4	Linch ML	43.73	Mehsana	4	28

5	Linch Ext-I ML	34.25	Mehsana	4	28
6	Linch Ext-II ML	13.35	Mehsana	3	18
7	Nandasan-Langhnaj ML	61.9	Mehsana	4	28
8	Sobhasan ML	35.89	Mehsana	3	18
9	West Sobhasan ML	9.6	Mehsana	3	18
10	Mehsana City Ext-II ML	7.58	Mehsana	2	12
11	Nandasan Ext-I ML	26.387	Mehsana	3	18
12	Mansa ML	58.72	Mehsana	3	18
13	Mansa Ext-I ML	12.5	Patan	3	18
14	North Sobhasan Part A & B ML	12.048	Mehsana	4	28
15	East Sobhasan ML	22.422	Mehsana	3	18
16	West Mewad ML	13.2	Mehsana	4	28
17	Langhnaj-Wadasama ML	13.84	Mehsana	4	28
18	North Sobhasan Ext-I ML	56.852	Mehsana	3	18
19	North Sobhasan Ext-II ML	23	Mehsana	3	18
20	Langhnaj ML	17.92	Mehsana	3	18
21	Jotana ML	39.5	Mehsana	3	18
22	Jotana-Warason ML	38.05	Mehsana	4	24
23	Jotana-South ML	23.07	Mehsana	4	30
24	Charada ML	10.6	Mehsana	3	18
25	Sanganpur ML	6.974	Mehsana	2	12
26	Jakasana ML	9.8	Mehsana	3	18
27	Patan PEL	163.5	Patan	4	30
28	Patan-Tharad PEL	12.103	Patan	4	30
29	Charda – Mansa EXT-I PEL	187.5	Mehsana	7	48
30	CB-ONN-2002/1 (West Patan)	36	Patan	4	30

Ambient air quality monitoring was carried out at 14 locations during summer season, 2012 and submitted data indicates as PM2.5 (19–34ug/m^3),PM10 (58–76ug/m^3), SO2 (9 – 10.9

ug/m3) and NOx (12-16.1ug/m3). Predicted value of ground level concentration due to proposed project is PM (0.21 ug/m3), SO2 (46.65 ug/m3) and NOx (0.12 ug/m3). The resultant concentrations are within the NAAQS.

Air emissions from D.G. sets will be dispersed by providing adequate stack height. Water based mud will be used. Total water requirement from tanker supply will be 20 m^3/day. Drilling and wash water generation will be 5 m^3/day and treated in ETP and stored in HDPE lined pit. Domestic effluent will be treated in septic tank followed by soak pit. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted. 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 sold to authorized recyclers. Acoustic enclosures will be provided to D.G. sets. D.G. sets (3x1250 KVA) will be installed to meet the emergency requirement of exploratory drilling operations. HSD (360 KLH) will be used as fuel.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meetings conducted by the Gujarat Pollution Control Board on 12th February, 2013 for Mehsana District and on 22nd February, 2013 for Patan District. The issues raised during Public Hearing were regarding construction of tar road instead of kuccha road, development of village, pollution occurred from well, period of drilling, anticipation of ground water pollution, treatment and disposal of wastewater etc. The Committee desired that the issues raised in the P.H. be brought out in a tabular form with another column indicating the plan of implementation along with costs (capital and revenue) along with time-schedule of its implementation. The Committee desired that ONGC draw up a detailed CSR Plan in consultation with the local panchayat(s) and local administration for implementation for life of the project. The details of the project-wise CSR Plan should be included in the Annual Report of the company and status of implementation of CSR (including status of costs incurred) shall be uploaded and regularly updated on the company website.

The Committee also discussed the compliance status report dated 06.12.2013 on the conditions stipulated in the environmental clearance for the existing project, which were monitored by the Ministry's regional office, Bhopal. It is reported that compensation amount of Rs. 6,09,096.00 and Rs. 1,11,265.00 has been paid towards well no. LNBR and JNXM.Drill cuttings and fluids were disposed of as per said order. However, details of generation & disposal were not furnished. It was informed that top soil was removed and stacked separately for reuse. However, quantitative details could not be submitted. During visit the ONGC has informed that they have prepared DMP, Emergency Response Plan (ERP) and Oil Spill Contingency Plan as per norms and to ensure prevention of any fire or oil spill. However, analytical reports were not submitted. It was intimated during visit ONGC is member of TSDF facilities. However, details of generation & disposal were not provided. RO reported that ONGC, WOB, Baroda has provision of sufficient funds for implementation of condition laid in EC letter. Rs. 2.8 Crore was incurred but details were not provided. Representatives of M/s ONGC committed during the meeting that they will provide full compliance of the partly complied conditions.

After deliberations, the Committee desired following additional information:

1 Full compliance report on the observations made by the Regional Office to be provided.

2 Details of ground water monitoring of wells for salinity in villages along the coast within the 'potential zone of impact'.

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

The Committee also recommended that a Project be taken up by MOEF under the Coordinated Research programme of MOEF with institutions such as NIOT, NGRI, ISM, etc with partial funding from oil companies to determine whether there is any saline water ingress into the coastal areas. In addition, the project may also cover issues such as changes in coast line due to impacts of off-shore and on-shore activities of drilling & exploration and development of wells in the KG Basin. The research project may also involve agencies such as NRSA, IITs for geospatial mapping and time-series studies of changes that have occurred using baseline data of the topography of the coastline prior to and after the start of such projects in the area.

15.6.2 (a) Exploratory Drilling (6 wells) of **M/s Oil & Natural Gas Corporation Ltd.**, in Bengal Onshore Block WB-ONN-2005/4, West Bengal under NELP-VII (ONGCL)**(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 27thMeeting 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. have proposed for the Exploratory Drilling (6 wells) in Bengal Onshore Block WB-ONN-2005/4, West Bengal under NELP-VII. This is a joint venture block with ONGC having a PI of 75% share and OIL having PI of 25 %. The block WB-ONN-2005/4 is situated in south eastern part of the Bengal basin in the state of West Bengal. Spread over four districts 24-parganas (N), Nadi, Burdwan and Hoogli in West Bengal. Block area is 3940 Km^2. 6 wells will be drilled. Target depth varies from 1500 m to 4500 m. Cost of project is Rs. 180 Crores. Major water bodies include Churni River, Bhagirathi River. 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-2005/4 are as follows:

Point	**Longitude**			**Latitude**		
	Deg	**Min**	**Sec**	**Deg**	**Min**	**Sec**
A	88	10	0	23	20	0
B	88	32	0	23	20	0
C	88	37	0	23	20	0
D	88	37	0	23	10	0
E	88	45	0	23	10	0

F	88	45	0	22	42	0
G	88	10	0	22	42	0
A	88	10	0	23	20	0

One exploratory well is to be drilled in Village Hihlia, Gram Panchayat Bhurkunda, Block Guma-II, Asok Nagar of North 24 Parganas District. 1 Exploratory well is to be drilled in Village Patuli, Gram Panchayat Baidyapur-II of Ranaghat II block in Nadia District. Distribution of remaining 4 locations planned to be drilled are as follows: In Nadia district, 3 wells are planned. 1 well in village Darappur in Birohi gram panchayat of Haringhata block.1 well in village Sutra in Tatala gram panchayat of Chakdah block.1 well in village Panchpota in Altab gram panchayat of Shantipur block. In North 24 Pargans District, 1 location is planned in Village Jalore in Sadimpur gram panchayat of block Amdanga.

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 m^3/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 PM_{10} (24-70 ug/m^3), $PM_{2.5}$ (20-51 ug/m^3), SO_2 (6-11 ug/m^3) and NO_x (7- 12 ug/m^3). 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 m^3/day. Water based mud (WBM) will be used. Total wastewater generation will be around 16 m^3/day. Drill cutting (DC) will be separated from water based mud (WBM) and washed properly and unusable drilling fluids (DF) will be disposed off in well designed lined pit with impervious liner for solar drying. Disposal of drill cuttings and drill mud will be carried out in accordance with the GSR 546 (E) dated 30th August, 2005. Used oil will be sent to 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 20th September, 2013 for Nadia District and 27th September, 2013 for 24 Parganas (North). The issues raised were regarding land acquisition process, local employment, etc. M/s ONGC mentioned that only 4.35 acres of land is required for temporary basis and compensation will be given as per the guidelines of the State Government. Land will be returned. All the issues have been satisfactorily responded by the project proponent and incorporated in the final EIA-EMP report. The Minutes of the P.H. shall be presented in a tabular from with a column on actual plan of implementation along with costs (capital and revenue) along with time-schedule of its implementation for record of the Ministry.

After detailed deliberations, the Committee found the EIA-EMP report satisfactory 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 PM_{10}, $PM_{2.5}$, SO_2, 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 m^3/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 H_2S release including all necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal H_2S detectors in locations of high risk of exposure along with self containing breathing apparatus.

xiv. On completion of drilling, the company have to plug the drilled wells safely and obtain certificate from environment safety angle from the concerned authority.

xv. Blow Out Preventer (BOP) system 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.

15.6.2 (b) 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. **(EC)**

The project proponents and their consultant (Asian Consulting Engineers Private Ltd., New Delhi) 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 32nd Meeting of the Expert Appraisal Committee (Industry-2) held during 16th17thFebruary, 2012 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 ONGC has proposed for Integrated Development of Vashishta & S1 fields - drilling & completion of four wells in Vashishta & S-1 fields, installation of dual sub-sea pipeline and expansion of onshore terminal at Odalarevu. Number of existing wells are Five wells (G1-9, G1-10, G1-11, G1-DA, G1-DB). Total number of proposed Production Wells are 4 wells - VA-DA, VA-DB, SI-A and S1-B . Type of hydrocarbon expected is gas. Average daily gas rate of 5.75 MMSCMD (for a period of five years) has been envisaged from Vashishta and S-1 Field. The cumulative gas production at the end of nine years is expected to be close to 15.775 BCM. Target depth of drilling wells is 2200 m True Vertical Depth Subsea. Total project cost is Rs. 3407.17 crores. Pipeline and platforms details are as given below:

Existing Pipeline Facility	Dual 10 inch sub-sea pipeline to evacuate production fluid from G-1 and G-15 fields to existing onshore terminal. Length: 25 km approx.
Proposed Pipeline Facility	Dual 14 inch sub-sea pipeline to evacuate production fluid from Vashishta and S-1 Fields to Proposed Onshore Terminal. Length: 45 km approx. Onshore section of pipeline is approx. 4km
Existing Terminal Capacity (Under Construction)	2.75 MMSCMD of gas & 1500 m³/d of crude
Proposed Capacity of the Terminal after expansion	7.25 MMSCMD of gas

Proposed well location coordinates and their distance from onshore facility as given below:

		Longitude			**Latitude**				
S. No.	**Proposed Well**	**Deg.**	**Min.**	**Sec.**	**Deg.**	**Min.**	**Sec.**	**Distance from facility**	**Water Depth**

	Locations							**(in km)**	**(in m)**
1	S1-A	82	11	49.48	16	16	27.56	28.40	243
2	S1-B	82	12	24.58	16	15	58.69	29.80	305
3	VA-DA	82	10	10.99	16	11	50.38	31.80	553
4	VA-DB	82	12	38.74	16	11	25.02	35.40	689

Onshore terminal at Odalarevu to handle VA & S-1 well fluids, would share the spare compression capacity of G1 terminal and some other utilities. The major facilities at the proposed onshore terminal would be as under:

(a) High-pressure Pig Receiver & Launcher
(b) Multipipe Slug Catcher
(c) Gas System (which includes Gas Compression, Gas Dehydration, DPD and Metering)
(d) MEG regeneration and Refrigeration system
(e) Produced Water handling facilities
(f) Utility Systems such as Cooling Water, Fuel Gas, Plant and Instrument Air System, Circulating hot oil system, Diesel engine and Gas turbine generator
(g) Flare & Closed Drain System
(h) Open Drain System (Oily water sewer, Storm water sewer and Contaminated rain water sewer)
(i) Chemical Injection System
(j) Fire Water system etc.

Power required during normal plant operation is supplied by Gas Turbine Generator. Two Gas turbine generators, one operating and one standby are considered. Required minimum site power from generator is estimated to be 3030 kW.Waste Heat Recovery System (WHRS) will be installed at exhaust of Gas Turbine for Power Generators. There is no eco-sensitive area within 10 km study area. It is reported that the aerial distance between Coringa Forest and Project Site is approximately 51 km. Ambient air quality monitoring was carried out at 30 locations September – November, 2012 and submitted data indicates as PM10 (34.4–128.3 ug/m^3), PM2.5 (16.8–62.3 ug/m^3), SO2 (1.7 – 5.4 ug/m3) and NOx (2.8-7.8 ug/m3). Predicted value of ground level concentration due to proposed project is PM (0.255 ug/m3), SO2 (0.714ug/m3) and NOx (5.319 ug/m3).

As regard to offshore drilling, sewage will be treated on-board the rig. Residual chlorine of the treated sewage will not exceed 1mg/L before disposal. Drilling and wash water will be treated to conform to limits notified as per MARPOL Regulations, before disposal into sea. The treated effluent will be monitored regularly.WBM or SOBM (only used in special case) will be disposed off as per G.S.R. 546 (E); dated 30/08/05, according to which WBM/SOBM will be recycled to maximum extent. A SOBM is typically consists of base oil, primary and secondary emulsifier, viscosifier, barite, lime, water and other components depended on the condition of drilling. Unusable WBM/SOBM (toxicity of 96 hr LC50 Value> 30,000 mg/L) will be discharged offshore into sea intermittently, at an average rate of 50 bbl/hr/well from a

platform so as to have proper dilution and dispersion without any adverse impact on marine environment.All fuels, lubricants and chemicals will be kept in a well-designed storage facility with regular inventory checking. Used and unused chemicals will be stored in a lined & bounded area.

Water requirement from Surface and Canal Water will be 120m3/day during the construction / operational activities of the terminal facilities.Produced water- Produced water separated during gas processing at 65 m3/day, shall be treated in Effluent Treatment Plant (ETP) of G-1 / GS-15 project and sent to the produced water storage tank for intermediate storage before disposal. Then, produced water transfers from storage tank through produced water pumps to existing produced water disposal header and from disposal header produced water is sent for injection into disposal wells below 1000 m depth as per CPCB guidelines. Condensate- Condensate produced during gas production at160 m3/day, shall be spiked to crude oil in G-1/GS-15 Odalarevu Oil Terminal from where it will be dispatched to S. Yanam Terminal. Sewage- Sewage generated from onshore facility shall be treated in the Effluent Treatment Plant (ETP). The treated effluent shall be reused for the purpose of watering green belt in the plant area. During laying of pipeline the top soil recovered during land clearance will be stockpiled separately and will be used for backfilling the trench in order to restore the original soil condition.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meetings conducted by the Andhra Pradesh Pollution Control Board on 3rd December, 2013 for for east Godavari. The issues raised during Public Hearing were regarding compensation for the SC & ST lands and leased lands, employment for land loosers, environmental pollution caused due to inject of wastewater, CSR activities, land fertility, land subsidence etc. Public Hearing issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report

Environment Forests Science & Technology Department, Govt. of Andhra Pradesh vide letter no. 6555/Env/CZMA/2013 has issued no object certificate under the provisions of CRZ Notification, 2011 & EIA Notification, 2006 for laying of 14" dual subsea pipeline and expansion of Odalarevu Onshore Terminal under Vashishta and S1 field development project in Eastern Offshore of ONGC.

<u>After deliberations, the Committee desired the following additional information</u>:

(i) Details of forest land involved in the proposed pipeline facility and Terminal facility.
(ii) Status of stage 1 forest clearance.
(iii) Certified compliance report from regional Office.
(iv) Details and Status of court cases.
(v) Details of CSR plan to be provided.

The proposal was 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 the project proponent.

15.6.3 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)**

The project proponents and their consultant (AECOM) 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 8thMeeting of the Expert Appraisal Committee (Industry-2) held during 16th-17thMay, 2013 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 Cairn India Ltd. have proposed for augmentation of hydrocarbon Production(from 2,00000 BOPD to 300000 BOPD) and 165 mmscfd natural gas in RJ-ON-90/1 Block, Barmer and Jalore Districts, Rajasthan. The Rajasthan (RJ-ON-90/1) block is a joint venture between Cairn India Ltd. (CIL -70%) and ONGC (30 %) with CIL as operator. The block covers an area of 3111 km^2 located largely in Barmer District & partly in Jalore District of western Rajasthan. Till date CIL has made 25 commercial discoveries out of which six have been developed/under development. The hydrocarbon resource potential is estimated at 7.3 billion barrels of oil equivalent. The cost of project is Rs. 16000 Crore. Following facilities will be developed:

i. Additional 205 well pads will be developed in the various field of the block for additional production/injection/EOR wells.
ii. Truck off loading and loading facilities will be provided to transfer crude oil and produced water for marginal fields having smaller production rates.
iii. For medium fields, separation facilities combined with pumping into spine corridor will be engaged.
iv. For larger fields fluids will be pumped into spine corridor.
v. Additional 150 km of spine pipeline corridor will be acquired and over 500 Km of intra /inter field pipeline corridor will be laid down.
vi. Mother solution plants will be set up at each of the major fields.
vii. Enhanced Oil Recovery (EOR) will be created.

Following are the status of drilling facilities :

S.N.	Particular	Existing		Additional Proposed	
1	Well Pads (Nos)	41	45	135	70
2	Fluid Handling Capacity (bfpd)	680000	0	340000	340000
3	Oil Production Capacity (boPD)	200000	14200 (Satellite Filed)	100000	100000
4	Gas Processing Capacity (mmscfd)	40	33	25	67
5	Low Marginal fields with early /quick production system	0	45	30	30

Land requirement for terminal expansion will be 344 ha. Per well pad requires 0.6 ha land. In field pipeline including spine corridor requires land area of (500 Km x 30 m approx. + 150 km x

60 m). A 150km long spine pipeline corridor is proposed within the block. Intra- inter field pipeline of 500km will also be developed to connect GGS, EOR, chemical processing facility spine construction and processing terminal. Land requirement for storage facilities is 45 ha.

Ambient air quality monitoring was carried out at 30 locations March – May, 2013 and submitted data indicates as PM10 (36.8–183.3 ug/m^3), PM2.5 (12–67.8ug/m^3), SO2 (2.4 – 13.4 ug/m3) and NOx (5.9-23.7 ug/m3). Predicted value of ground level concentration due to proposed project is PM (0.368 ug/m3), NOx (8.68 ug/m3), CO (44.26 ug/m3) and HC (7.26 ug/m3). The resultant concentrations are within the NAAQS. Water consumption will be 51500 m3/day of saline water from Thumbli aquifer, 15000 m3/day from Fatehgarh aquifer and 2175 m3/day from Quaternary aquifer. It was clarified that the freshwater aquifers are found in unconfined zones about 25km from project area and are not being disturbed or impacted by the project. The freshwater/saline water interface will also not be disturbed by the project activities. The wells are very deep and will not impact the saline aquifers (TDS of 5000 mg/l) found within the project area. The ground water ejected during operations is saline, however the groundwater will be treated in inject water treatment plant and treated water will be injected in ground. It was clarified that there would be no disposal of saline groundwater onto land and consequent land degradation. It was informed that 12 villages have been provided with OP Plants for drinking water under the CSR programme.

Drill cuttings @ 500 Mt, drilling mud and drilling wastes @ 100 Mt will be generated. Additional power requirement will be 100 MW from Rajasthan State Electricity Board.

It was informed that the State Forest/WL Department has recommended measures for the improvement of habitat of the Schedule-I fauna found in the area.

The Committee desired that the groundwater modelling carried out by the PP about 7 years ago should be validated by actual data collected during the period and details presented before the Committee. The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meetings conducted by the Rajasthan State Pollution Control Board on 25th October, 2013 for Jalore District and on 22nd October, 2013 for Barmer District. The issues raised during Public Hearing were regarding about CSR, village development programme, compensation against land lease, tree plantation etc. The Committee noted that 800 people have given up their land for the project. The Committee sought details of the status of R&R including providing employment to the displaced as well as providing jobs to the local communities (direct and indirect) as per the National R&R Policy. The Committee noted that the total cost of the project is Rs 17,000 crores. The Committee sought a detailed CSR Plan for 2% of retain profits to be earmarked and spent on CSR (as per Company Affairs Act 2013).

The Committee noted that there are a number of Schedule-I fauna found in the study area and desired that a WL Conservation Plan be prepared though a recognised Institution(s) for habitat improvement of the species including planting local species of trees and shrubs, creation of water holes, water recharge structures etc. The Committee desired that sand dune stabilisation study be got done through institutions such as CAZRI.

After deliberations, the Committee sought the following additional information:

(i) 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.
(ii) Post project ground water monitoring
(iii) Impact on environment due to use of synthetic oil mud
(iv) Wildlife conservation plan for schedule 1 species.

(v) Detailed need based Enterprise Social Responsibility Plan for 5 % of project cost.
(vi) Authenticated English translation of the P.H.
(vii) 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.
(viii) 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 panchayts (s) of the villages concerned falling within the study area.
(ix) Groundwater issues: Map of area – cross section showing aquifers and fresh water regions.

The proposal was 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.

15.6.4 Grain based Distillery (45 KLPD) at Gat No. 990/1 of **M/s Gadhinglaj Agro Alcochem Ltd**., located in village Beradwadi, Tehsil Gadhinglaj, District Kolhapur, Maharashtra **(EC)**

The project proponents and their consultant (Equinox Environments (I) Pvt., Ltd) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 3rd Meeting of the Expert Appraisal Committee (Industry) held during 3rd– 5th December, 2012 for preparation of EIA-EMP report. All grain based distilleries are listed at S.N. 5(g) (ii) under category 'A' and appraised at Central level.

M/s Gadhinglaj Agro Alcochem Ltd has proposed for setting up of grain based distillery (45 KLPD) at Gat No. 990/1, Village Beradwadi, Tehsil Gadhinglaj, District Kolhapur, Maharashtra. Total plot area is 3.00 ha of which greenbelt will be developed in 5808.66 m^2. Total project cost is Rs. 48.27 crore. River Hiranyakeshi is flowing at a distance of 3 Km. Following products will be manufactured:

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

By products

S.N.	Name of the By- Product	Quantity
1	Distiller's Wet Grains with Solubles (DWGS)	85 MT/D
2	Disillery's Dry Grains with Solubles (DDGS)	30 MT/D
3	Fusel Oil	2700 LIT/Month

Ambient air quality monitoring was carried out at 6 locations October –December, 2012 and submitted data indicates as PM10 (42.8–44.6 ug/m3), PM2.5 (26.2–27.6 ug/m3), SO2 (9.3 – 11.6 ug/m3) and NOx (11.6-14.5 ug/m3). Predicted value of ground level concentration due to proposed expansion is SPM (16.46 ug/m3) and SO_2 (13.74 ug/m3). The resultant

concentrations are within the NAAQS. Bagfilter will be provided to bagasse /coal fired boiler to control particulate emissions. Fly ash will be sent to brick manufacturers. Raw water requirement from Hiranyakeshi River will be 472.8 m3/day. Spentwash generation will be 370 m3/day.Spent wash from grain based will be treated through decanter and concentrated in multi-effect evaporator (MEE) to form Distiller's Wet Grains with Soluble (DWGS). DWGS will be dried in the dryer to form Distiller's Dry Grains with Soluble (DDGS). Spentlees, effluent from utilities and cogeneration unit will be treated in effluent treatment plant (ETP).Treated effluent will be recycled/reused in process. No effluent will be discharged outside the plant premises. Flyash will be sent to brick manufacturing unit. DG sets (2 x 600 KVA) will be installed.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Maharashtra Pollution Control Board on 17thAugust, 2013. The issues raised were regarding DDGS, daily water consumption, feasibility of raw materials other than maize and Jawar, operations period of distillery, development in surrounding, total investment, impact of project on public heath etc. All the issues have been satisfactorily responded by the project proponent and incorporated in the final EIA-EMP report.

i. Distillery unit shall be based on Grain based only and no Molasses based distillery unit shall be operated. The unit will use bagasse if available.

ii. Bag filter alongwith stack of adequate height shall be provided to bagasse /coal fired boiler to control particulate emission within 50 mg/Nm^3.

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 River Hiranyakeshi shall not exceed 472.8 m^3/day for distillery and cogeneration unit 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 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. As proposed no spent wash storage lagoon will be provided.

viii. No effluent from 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. 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.

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

xii. 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.

xiii. 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.

xiv. 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.

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.

xvi. All the commitment made regarding issues raised during the Public Hearing/consultation meeting held on 17thAugust, 2013 shall be satisfactorily implemented.

xvii. 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.

xviii. 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.

xix. Long-term FSA for imported coal shall be furnished for record of ministry.

15.6.5 Single Super Phosphate (Powder & Granular, 1500 MTPD), N_2SiF6, 130 MTPD), NPK Fertilizer (Powder & Granular, 500 MTPD), LABASA (500 MTPD), Benzene Sulphonyl Chloride (20 MTPD), Sulphone (1.26 MTPD) of **M/s Bodal Agrotech Ltd.** located at Sy. No. 525, 532, 554-556, 560, 561/1, Village Dudhwada, Tehsil Padra, District Vadodara, Gujarat **(EC)**

The project proponents and their consultants (Ramans Enviro Services Pvt. Ltd and EQMS India Pvt. Ltd.) gave a detailed presentation on the salient features of the project and

proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 3rd Meeting of the Expert Appraisal Committee (Industry) held during 3rd– 5th December, 2012 for preparation of EIA-EMP report. All fertilizer plant except single super phosphate plant is listed at S.N. 5(a) and 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. under category 'A' and appraised at Central level.

M/s Bodal Agortech Ltd. have proposed for manufacturing of Single Super Phosphate (Power & Granular), NPK fertilizer, LABSA, Benzene Sulphonyl Chloride at Plot No. 525, 532, 554, 555, 560, 561/1, Village Dudhwada, Tehsil Padra, Distirict Vadodara, Gujarat. Cost of expansion is Rs. 70.00 crore. Total plot area is 58,000 m^2. It is reported that no national park/wildlife sanctuary/reserve forests are located within 10 Km. Following products will be manufactured.

S.N	Products	Capacity (MTPD)
1	Single Super Phosphate (powder & granular) **By Product :** H_2SiF_6	1500 50
2	NPK Fertilizers (Powder and granular)	500
3	LABSA **By Product :** Sulphuric Acid [55-70%] [Used for mfg. of SSP]	400 @200
4	Benzene Sulphonyl Chloride **By Product :** Sulphone HCL	20 1.26 13

Rock Phosphate, Sulphuric acid, Urea, DAP, SSP, MOP, Linear Alkali Benzene, Benzene, Chloro Sulphoric acid will be used as raw materials. Ambient air quality monitoring was carried out at 6 locations March, 2011 –May, 2011 and submitted data indicates as PM10 (49–92 ug/m3), PM2.5 (32–56 ug/m3), SO2 (9.0 – 24 ug/m3) and NOx (12-41 ug/m3). Predicted value of ground level concentration due to proposed project is SPM (1.2 ug/m3), SO_2 (2.0 ug/m3) and NOx (1.3 ug/m^3). The resultant concentrations are within the NAAQS. Bagfilter will be provided to coal fired steam boiler. Cyclone separator followed by three stage water scrubber will be provided to continuous reactor & Den of SSP to control particulate and fluoride. Cyclone separator followed by dust collector will be provided to ball mill of SSP and Granular and dryer of NPK to control particulate emissions. Cyclone separator followed by SSP will be provided to granular and dryer of SSP. Two stage water scrubber will be provided to sulphonation reactor of BSC and De chlorinator for recovery of HCl from un-reacted CSA.

Total fresh water requirement from ground water source will be 1051 m^3/day. CGWA permission has been obtained. There will be no generation of any wastewater from the manufacturing activity and 'zero' discharge concept will be adopted. Boiler blow down (50 m^3/day) and wash water will be utilized for curing during the production of granular SSP plant. Sewage generation (45 m^3/day) will be treated in STP based on MBBR technology followed by microfiltration. Distillation residues will be sent to CHW/facility. Spent Sulfuric acid will be consumed in SSP manufacturing. HCl will be sold out to authorized potential consumers. Used oil shall be sold to authorized re-processors.

Project propoent confirmed that green belt will be developed in 19000 m^2 of total plot area 58000 m^2. Power requirement will be 4000 KVA from Gujarat Electricity Board. Coal requirement will be 20 MTPD. LDO (350 KLM) will be used as fuel in furnace. GPCB has issued consent to establish to M/s BodalAgrotech Ltd. on 08.04.2013 for manufacturing of Single Super Phosphate (Powder & Granular, 1500 MTPD), N_2SiF6, 130 MTPD), NPK Fertilizer (Powder & Granular, 500 MTPD), LABASA (500 MTPD), Benzene Sulphonyl Chloride (20 MTPD), Sulphone (1.26 MTPD).

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 22nd February, 2012. The issues raised were regarding greenbelt to be developed, environmental monitoring, permission for effluent discharge to ECPL 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 desired that monitoring of CO and HC will be rechecked and details furnished to Ministry for record. The EAC observed that levels of TDS was high and stated that although it has been informed that Govt. of Gujarat is supplying drinking water, if need be, PP can supply through RO Plant. The Committee recommended that water use from water harvesting structures should used to an extent to reduce dependency on groundwater (except in lean season when 1054 m3/d will be used from groundwater). The Committee desired that a detailed CSR plan along with villages-wise details and activities-wise details along with capital and revenue costs for life of the project shall be prepared and furnished for record of the Ministry.

The EAC found the final EIA-EMP report adequate and stipulated following specific conditions along with other environmental conditions while considering the grant of environmental clearance:

i) As proposed, Silicon Fluoride gases shall be passed through three stage–wet scrubbers before discharging into atmosphere through adequate stack height to control fluorine content within 15 mg/m^3. After three stages, if fluorine content in emission is not meeting the prescribed norms then efficiency of scrubber shall be improved by adding additional stage of scrubber. Scrubbing shall have interlocking system with main plant.

ii) As proposed, Cyclone followed by bag filter shall be provided to SSP plant and grinding section for controlling fugitive emissions.

iii) The gaseous emissions (SO_2, NOx, CO and Fluoride) and particulate matter from process stacks shall conform to the norms prescribed by the CPCB/ Rajasthan State Pollution Control Board (RSPCB) 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 and efficiency of air pollution control device shall be checked regularly. The stack monitoring report shall be submitted to the Ministry's Regional Office at Bhopal, CPCB and GPCB.

iv) Fluoride monitoring through continuous fluoride analyzer shall be carried out in ambient air as well as stack.

v) Total fresh water requirement from ground water source shall not exceed 1051 m^3/day and and prior permission shall be obtained from CGWA/SGWB and a copy submitted to the Ministry's Regional Office at Bhopal.

vi) 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.

vii) Industrial effluent shall be treated and recycled/reused in the process. As proposed sewage shall be treated in STP based on MBBR followed by ultrafiltration.

viii) No effluent shall be discharged outside the premises and 'Zero' discharge shall be ensured.

ix) 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 and report submitted to the Ministry's Regional Office at Lucknow, SPCB and CPCB.

x) All the fly ash shall be utilized as per Fly ash Notification, 1999 subsequently amended in 2003 and 2008.

xi) 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.

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 commitments made to the public during the Public Hearing/Public Consultation meeting held on 22nd February, 2012 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bhopal.

xiv) At least 5 % of the total cost of the project shall be earmarked towards the Enterprises Social Commitment 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.

15.6.6 Expansion of Synthetic Organic manufacturing Unit of **M/s Krishna Industries**, located at Village GIDC Sarigam District Valsad Gujarat **(EC)**

The project proponents and their consultant (Unistar Environment and Research 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 4th Meeting of the Expert Appraisal Committee (Industry) held during 8th– 9th January, 2013 for preparation of EIA-EMP report. All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, project site is located within 10 Km of interstate boundary and treated as category 'A' project due to applicability of general condition of the EIA notification, 2006 and appraised at Central level.

M/s Krishna Industries has proposed for expansion of Synthetic Organic manufacturing Unit located at Village GIDC Sarigam District Valsad Gujarat. The unit is located 18km from Arabian Sea. The unit is involved in manufacture of dyes in a GIDC with a mix of about 350 industrial units set up in the nineties. The GIDC was notified in 1997. Total land requirement is 1634 m^2 (0.40 acres) of which greenbelt will be developed in 344 m^2. No National Park, Wildlife Sanctuary within 10 km radius of the project site. Rivers Darotha and Damanganga are flowing at a distance of 3.2 km and 6 km respectively. Total cost of the project is Rs.1.05 crore, of which Rs. 15 lakhs and Rs. 11 lakhs are earmarked towards capital cost and recurring cost/annum for pollution control measures.

The following products will be manufactured:

S.No.	Name of the product	Existing (TPM)	Proposed (TPM)	Total (TPM)
1	Di Calcium Phosphate	20.00	0.00	20.00
2	DCP based formulation products	30.00	0.00	30.00
3	Organic Azo Pigments (Red, Yellow, Orange)	0.00	100.00	100.00
4	Synthetic Organic Dyes Direct Yellow, Direct Red, Direct Brown, Direct Orange, Direct Violet, Direct Black, Direct Blue, Direct Green, Acid Yellow, Acid Orange, Acid Red, Acid Brown, Acid Black, Acid Blue)	0.00	25.00	25.00
	Total	**50.00**	**125.00**	**175.00**

Ambient air quality monitoring was carried out at 8 locations during December 2012 – February 2013 and submitted baseline data indicates that ranges of concentrations of PM_{10} (36 µg/m^3 to 110 µg/m^3), $PM_{2.5}$ (4 µg/m^3 to 33 µg/m^3), SO_2 (16 µg/m^3 to 44 µg/m^3) and NO_x(10 µg/m^3 to 27 µg/m^3)respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 0.05 µg/m^3, 0.03 µg/m^3 and 0.32 µg/m^3 with respect to PM_{10}, SO_2 and NO_x respectively. The resultant concentrations are within the NAAQS. Stack height of 20 m will be provided to gas fired thermopack heater and steam heater. Cyclone dust collector and bagfilter will be provided to control particulate emissions.

Although the GIDC has its own CETP, primary treatment of effluents is being done within own premises as the norms for treatment of effluents in CETP is 1000mg/l for BOD and 400 mg/l for COD. Primary treatment by activated flocculent will reduce the colour to a large extent. The unit has obtained CTO form GSPCB. Water requirement is met from GIDC water supply, which will be increased from 10.3 m3/day to 150.9 m3/day after expansion. Effluent generation will be 132.4 m3/day after expansion and treated in ETP. Treated effluent will be discharged to Arabian sea through GIDC closed pipe. The power requirement is 100 KVA which will be met

from the Dakshin Gujarat Vij Co. Limited. DG set (125 KVA) will be installed as standby arrangement. The ETP waste will be sent to will be sent to TSDF through SWEMCL, Sarigam for SLF. The used oil and spent oil shall be sent to registered recyclers.

The Committee noted that the project is exempted from Public Hearing / consultation due to project being located in notified GIDC Sarigram as per stage Section 7 (i), III Stage (3), Para (i)(b) of EIA Notification 2006. The Committee sought the compliance status of the CTO of GPCB for record of Ministry.

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

i) Adequate stack height shall be provided to gas fired thermopack heater and steam heater.

ii) The levels of PM_{10}, SO_2, NO_X, CO and VOC shall be monitored in ambient air.

iii) Monitoring of work zone environment, product, raw materials storage area etc. shall be regularly carried out and report submitted to Regional Office at Bhopal.

iv) Total fresh water requirement from GIDC water supply shall not exceed 150.9 m3/day and prior permission shall be obtained from the Competent Authority. No ground water shall be used.

v) Total effluent generation shall not exceed 132.4 m3/day. Effluent shall be treated in ETP. Treated effluent shall be discharged to Arabian sea through GIDC closed pipe after conforming to the standards prescribed for the effluent discharge and obtaining permission from the GPCB. No process effluent shall be discharged in and around the project site.

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

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 and prior permission from GPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. Measures shall be taken for fire-fighting facilities in case of emergency.

viii) Green belt shall be developed in an area of 344 m^2 out of total plant area.

ix) All the recommendations made in the risk assessment report shall be satisfactorily implemented.

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

15.6.7 Expansion of Bulk Drug Manufacturing Unit at Sy. No. 93/2, 94/1 to 94/6 of **M/s TYCHE Industries Ltd** Village Kakinada Manal, East Godavari District, Andhra Pradesh **(EC)**

The project proponents and their consultant (Pioneer Enviro Laboratories & Consultants Pvt. Ltd) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 3rdMeeting of the Expert Appraisal Committee (Industry) held during 3rd– 5thDecember, 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 TYCHE Industries Ltd has proposed for expansion of Bulk Drug Manufacturing Unit at Sy. No. 93/2, 94/1 to 94/6, Village Kakinada Manal, East Godavari District, Andhra Pradesh. Total existing plant area is 22 acres and no additional land is required. no national parks and reserve forests are located within 10 km distance.

Following products will be manufactured.

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

Environment clearance of the existing unit was accorded by the Ministry's letter no. J-11011/678/2007-IA II (I) dated 13th March, 2008.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during March, 2013-May 2013 and submitted baseline data indicates range of PM_{10} (30.4–53.6 ug/m^3), SO_2 (9.4 – 18.6 ug/m^3) and NO_x (9.8-21.3 ug/m^3). The results of the modeling study indicate that the maximum increase of GLCs due to the

proposed project is 1.2 µg/m^3, 3.2 µg/m^3 and 4.5 µg/m^3 for SPM, SO_2 and NOx respectively. The resultant GLCs are within the NAAQS.In the existing unit Boiler 3 TPH and 5 TPH are alreadyinstalled. Multicyclone separator and bagfiltersare provided in the existing coal/rice husk fired boilers. Hence no boiler will be required for the present proposal. The process emissions from the unit will be mostly methanol and hydrochloric acid. The process emissions are being sent to scrubber and after treatment discharged into atmosphere through a chimney. Total fresh water requirement from Samalkot Canal will be 109.5 m^3/day after expansion. Total wastewater generation will be 82.9 m^3/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS/COD effluent stream will be treated in effluent treatment plant (ETP) comprising primary, secondary and tertiary treatment. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted. The Committee suggested to recycle/reuse of treated effluent in cooling tower make up. Inorganic & evaporation salt and ETP sludge will be sent to Treatment Storage Disposal Facility (TSDF) for hazardous waste. Fly ash will be sold to brick manufacturers. Waste oil and used batteries will be sold to authorized recyclers/re-processors.

The Committee exempted the project from Public Hearing as per para 7 (ii) of EIA Notification, 2006 as there is no increase in air emissions, water pollution load, solid waste generation and plant area.

The Committee also discussed the compliance status report dated 13.11.2013 on the conditions stipulated in the existing environmental clearance, which were monitored by the Ministry's regional office, Bangalore. It is reported that multicyclone separator along with bagfilter has been provided to boiler. Water and caustic lye solution scrubbers have been installed and it was informed that the dilute HCl so formed is being reused. SO2 is being scrubbed in scrubber and scrubbing liquor is being treated in ETP and treated effluent is being utilized for greenbelt. They have online VOC analyzer for monitoring of volatile organic compounds. Water requirement is within 110 KL. Wastewater generation is within 84.35 KLD, which includes domestic wastewater. Greenbelt has been developed in more than 3.5 ha. of the area. The Committee found report satisfactory.

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

i) The levels of $PM_{2.5}$, PM10, SO2, NOx, VOC and HCl shall be monitored in ambient air.

ii) Two stage chilled water/caustic scrubber shall be provided to process vents to control HCl. 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.

iv) Total fresh water requirement from Samalkot Canal shall not exceed 109.5 m^3/day and prior permission shall be obtained from the competent Authorities.

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.
- Entire plant where solvents are used shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.

xi) 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.

xii) 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 Bangalore Implementation of such program shall be ensured accordingly in a time bound manner.

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

The project proponents and their consultant (M/s Envision Enviro 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 3rdMeeting of the Expert Appraisal Committee (Industry) held during 3rd–5th December, 2012 for preparation of EIA-EMP report. All cane juice/non-molasses based distillery (>30 KLD) are listed at S.N. 5(g) (ii) under category 'A' and appraised at Central level.

M/s Esveegee Breweries (P) Ltd. has proposed for grain based Distillery (ENA/RS 60 KLPD) and Expansion (ENA RS/60 KLPD to 120 KLPD) and Absolute Alcohol 30 KLPD) with Cogeneration Power Plant (3.5 MW) at Plot no.321, 323-325, 339-340, 362-363, 381, 392, 403 & 449, Village Manpur, Tehsil Namchi, District South Sikkim, Sikkim. Interstate boundary of Sikkim & West Bengal is located at a distance of 80 m. Kitam Bird Sanctuary is located at distance of 200 m in NNW direction. Sumbuk RF, Kitam RF, Rangit RF, Mannjhitar RF, Rong RF, Mikhola RF, Bharikhola RF, Syampani RF, Salghari RF, Namchi RF, Jhum RF, Rabong RF etc are located within 10 km distance. Plant area is 12 acres or 4.8562 ha. Total cost of existing project is Rs. 44.90 Crore and proposed expansion is Rs. 79.5 crores. River Rangit is flowing adjacent to the site. The unit was established in 2010 without an EC and was operating with a CTO. The unit has bene closed since January 2012 and will restrt only after obtaining EC and approval from NBWL since the unit is located within 10km of WL Sanctuary. An application has been made at the State level for WL clearance.

Following products will be manufactured:

	Product	**Existing (KLPD)**	**Proposed (KLPD)**	**Total after expansion (KLPD)**
1	Extra Neutral Alcohol/Rectified Spirit	60 KLPD	60 KLPD	120 KLPD
2	Absolute Alcohol	-	30 KLPD	30 KLPD
3	Co-Generation Power Plant	--	3.5 MW	3.5 MW

Grain (300 MT) will be sourced from Assam, Bihar, West Bengal and Uttar Pradesh.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 8 locations during January, 2013 to April, 2013 and submitted baseline data

indicates that ranges of concentrations of PM_{10} (12 µg/m^3 to 96 µg/m^3), $PM_{2.5}$ (5 µg/m^3 to 32 µg/m^3) SO_2 (4 µg/m^3) and NO_x (9 µg/m^3 to 25 µg/m^3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 4.8 µg/m^3, 8.4 µg/m^3 and 3.0 µg/m^3 with respect to PM_{10}, SO_2 and NOx. The resultant concentrations are within the NAAQS. Bagfilter/ESP along with stack height will be provided to coal fired boiler. Limestone as absorbent will be blended with coal to take care of SO_2 emissions. Total fresh water requirement from ground water source/River Rangit will be 1134 m^3/day. Spent wash will be passed through centrifuge decanter for separation of solid. The part of thin slop from centrifuge will be recycled to process. The remaining slop will be concentrated through multi-effect evaporator (MEE) to form DWGS to achieve zero discharge. DWGS will be passed through dryer to form DDGS. DDGS will be sold as cattle feed and yeast sludge will be added to the wet cake. Storage capacity of spent wash holding tank will be for 5 days. Fly ash will be sent to brick manufacturers/cement plant. Used oil will be sent to authorized recyclers/re-processors.

The Committee desired that lime be used along with lignite for reducing S content (4%) in the lignite used. The Committee noted that the project proposal involves violation of the Environment (Protection) Act, 1986 or Environment Impact Assessment (EIA) Notification, 2006. TOR for preparation of EIA-EMP report was issued after receiving compliance reports as per Ministry's O. M no. J-11013/41/2006-IA II (I) dated 12th December, 2012 and 27th June, 2013. The Committee recommended that the proponent first obtain an EC for the existing unit and thereafter may apply afresh with Form-I and PFR for the proposed expansion from 60KLD to 120 KLD which will be considered under Clause 7 (ii) of the EIA Notifictaion2 006.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Sikkim Pollution Control Board on 24thAugust, 2013. The issues were raised regarding distance between the Kitam Bird Sanctuary, impact of pollution on bird sanctuary, measures to control foul smell, health camp, quantity of water to be used, local employments etc. The Committee noted that issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

After detailed deliberations, the Committee found the final EIA-EMP report adequate and 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. Environmental clearance is subject to their obtaining prior clearance from the Standing Committee of the National Board for Wildlife as applicable regarding Patkai Wild life Sanctuary. Grant of environmental clearance does not necessarily implies that wildlife clearance shall be granted to the project and that their proposals for wildlife clearance will be considered by the respective authorities on their merits and decision taken. No work at the site shall be started without prior permission. The investment made in the project, if any, based on environmental clearance so granted, in anticipation of the clearance from wildlife angle shall be entirely at the cost and risk of the project proponent and Ministry of Environment & Forests shall not be responsible in this regard in any manner" and all the recommendations shall be implemented in a time bound manner.

iii. Bag filter along with stack of adequate height shall be provided to coal/rice husk fired boiler to control particulate emission within 50 mg/Nm^3.

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

v. Total fresh water requirement from ground water source/River shall not exceed 600 m^3/day for distillery and cogeneration unit and prior permission shall be obtained from Central Ground Water/State Ground Water Authority.

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

vii. 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.

viii. No effluent from 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. 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.

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

xii. 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 alongwith the storm water. Direct exposure of workers to fly ash & dust shall be avoided.

xiii. 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.

xiv. 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.

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.

xvi. All the commitment made regarding issues raised during the Public Hearing/consultation meeting held on 24thAugust, 2013 shall be satisfactorily implemented.

xvii. 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.

xviii. 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.

15.6.9 Molasses based Distillery Unit (30 KLPD) of **M/s Shreenath Mhaskoba Sakhar Karkhana Ltd.** located at Village- ShreenatnagarPatethan, Tehsil Dauand, District Pune, Maharashtra **(EC)**

The project proponents and their consultant (Goldfinch Engineering System 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 3rdMeeting of the Expert Appraisal Committee (Industry) held during 3rd– 5th December, 2012 for preparation of EIA-EMP report. All molasses based distilleries are listed at S.N. 5(g) (i) under category 'A' and appraised at Central level.

M/s Shreenath Mhaskoba Sakhar Karkhana Ltd. has proposed for setting up of Molasses based Distillery Unit (30 KLPD) located at Village- ShreenatnagarPatethan, Tehsil Dauand, District Pune, Maharashtra. Total plot area is 20 acres. Cost of project is Rs. 32.71 Crore. Bima River and Mula-Muta River are flowing at a distance of 2.3 km and 7 km respectively. No ecological sensitive area is located within 10 km distance. Distillery will be operated for 270 days. Molasses will be sourced from own sugar unit (32400 MTPA) and nearby sugar plant (7200 MTPA).

Additionally, the proponent informed the Committee that ambient air quality monitoring was carried out at 4 locations during October 2012 to December, 2012 and submitted baseline data indicates that ranges of concentrations of PM_{10} (51.9 µg/m^3 to 77.4 µg/m^3), $PM_{2.5}$ (11.2 µg/m^3 to 15.9 µg/m^3) SO_2 (8.4 µg/m^3-16.2 µg/m^3) and NO_x (14.6 µg/m^3 to

18.5 µg/m^3) respectively. Ventury Scrubber along with stack height of 65 m will be provided to bagasse and biogass fired boiler. Water requirement from River Bima will be 300 m3/day. Spent wash generation will be 240 m3/day. Spent wash will be treated through biomethanation process. Treated spent wash will be evaporated in MEE and concentrated spent wash will be biocomposted with pressmud to produce organic manure. The unit will operate as a 'zero-discharge' unit. A biocomposting facility has been created in an area of 10 acres of the total 24 acres of plant area. Yeast Sludge will be dried and used for biocomposting.

The Committee suggested that bagfilter be provided to boiler for control of particulate emissions. The Committee deliberated upon the issues raised during the Public Hearing/Public Consultation meeting conducted by the Maharashtra Pollution Control Board on 2nd July, 2013. The issues were raised regarding air pollution due to molasses based distillery, composing area etc have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report. The Committee sought a detailed CSR Plan for life of the project with village-wise details which includes details of skill development/vocational training as part of CSR shall be furnished for record of Ministry.

After detailed deliberations, the Committee found the EIA-EMP report satisfactory and stipulated following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

i) Distillery unit shall be based on Molasses based only and no Grain based distillery unit shall be operated.

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

iii) Total fresh water requirement from River Bima shall not exceed 300 m^3/day and prior permission shall be obtained from the Competent Authority.

iv) Spent wash generation from molasses based distillery shall not exceed 8 Kl/Kl of alcohol. The spent wash from molasses based distillery shall be treated through biometnation process. Treated spent wash will be evaporated in MEE and concentrated spent wash will be biocomposted with pressmudto achieve 'Zero' discharge. Evaporator Condensate shall be treated and recycled/reused in process. No effluent shall be discharged outside the premises and 'Zero' discharge shall be maintained.

v) Spent wash shall be stored in impervious pucca lagoons with proper lining with HDPE and shall be kept in proper condition to prevent ground water pollution. The storage of spent wash shall not exceed 5 days capacity.

vi) As proposed, no effluent from distillery and co-generation power plant shall be discharged outside the plant premises and Zero discharge shall be adopted. Water consumption shall be reduced by adopting 3 R's (reduce, reuse and recycle) concept in the process.

vii) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.

viii) Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area and compost yard shall be set up. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to SPCB and this Ministry. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and total dissolved solids shall be monitored. Sampling and trend analysis monitoring must be made on monthly basis and report submitted to the Ministry's Regional Office at Lucknow and RSPCB.

ix) Bagasse/biomass storage shall be done in such a way that it does not get air borne or fly around due to wind.

x) 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 alongwith the storm water. Direct exposure of workers to fly ash & dust shall be avoided. Bagasse ash and coal ash shall be stored separately.

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

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 materials 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 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 commitments made during the Public Hearing/Public Consultation meeting held on 2nd July, 2013 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.

xvi) At least 5 % of the total cost of the project (i.e. Rs 250 crores???) 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.

15.6.10 Expansion of PF of **M/s Durolam Ltd.,** located at Village RajpurChatraMehsana Highway TalukaKadi District Mehsana Gujarat by **(EC)**

The project proponents and their consultant (M/s Durolam Ltd., Stay order no. C/SCA/1782/2013 dated 9/12/2013) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 33rdMeeting of the Expert Appraisal Committee (Industry) held during 21st– 22nd March, 2012 for preparation of EIA-EMP report. All the synthetic organic chemicals industry (basic organic, chemicals, other, synthetic organic

chemicals and chemical Intermediates) located outside the notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Durolam Ltd. has proposed for expansion of PF and MF resin manufacturing unit at Plot No. 1195/A, 1196, Village Rajpur, ChatraMehsana Highway, TalukaKadi, District Mehsana, Gujarat. No national parks/wildlife sanctuary/reserve forest are located within 10 km. Total cost of project is Rs. 3.0 Crore. Total plot area is 8451 m^2. Project proponent informed that the unit was established in 2004 and copy of consent order no. 1833 issued on 6.3.2004 is submitted. Following products will be manufactured :

S.N.	Product	Existing Quantity (MTPM)	Proposed Quantity (MTPM)	Total Quantity after expansion (MTPM)
1	Phenol Formaldehyde Resin	90	754	844
2	Melamine Formaldehyde Resin	15	126	141
3	Laminated Sheet	32000 No./month	2,68,000	3,00,000 No. /M

The project proponent further informed the Committee that ambient air quality monitoring was carried out at 8 locations during March, 2012 to May, 2012 and submitted baseline data indicates that ranges of concentrations of PM_{10} (42 µg/m^3 to 93 µg/m^3), $PM_{2.5}$ (25 µg/m^3 to 55 µg/m^3), SO_2 (6.2 µg/$m^3$to 19.5 ug/m^3) and NO_x (10.5 µg/m^3 to 28.3 µg/m^3) respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 1.44 µg/$m^3$and 1.51 µg/m^3 with respect to PM_{10} and SO_2. The resultant concentrations are within the NAAQS.

Multicyclone separator will be provided to coal/lignite/wood fired steam boiler & Thermic fluid heater to control particulate emissions. DG set (250 KVA) will be installed. Scrubber will be provided to Dryer to control methanol. Fresh water requirement from ground water source will be 55.97 m3/day. Industrial effluent generation will be 12 m3/day. Industrial effluent will be treated in ETP with photo fenton oxidation process method followed by evaporator. Condensate from evaporator will be recycled/reused in process. No effluent will be discharged outside the plant premises. ETP sludge will be sent to TSDF. Resin waste will be sent to common incineration facility. Used oil/spent oil will be sent to registered recyclers.

The Committee desired that lime should be added if lignite (4% S) is used as a fuel. The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 2nd July, 2013. The issues were raised regarding impact of air pollution on crop, disposal of effluent, local employment etc. The Committee noted that issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

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

i) Regular monitoring of Volatile Organic Compounds (VOCs) shall be carried out.

ii) Bag filter alongwith stack of adequate height shall be installed to lignite/ biomass fired boiler to control particulate emission.

iii) Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored.

iv) Wet scrubber shall be provided to control process emissions. Methanol shall be recovered from the process area.

v) Total ground water requirement shall not exceed 55.97 m^3/day and prior permission shall be obtained from the Central Ground Water Authority/State Ground Water Board.

vi) Industrial effluent will be treated in ETP based on photo fenton process followed by evaporation to achieve zero discharge. Water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB.

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

viii) 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.

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 commitments made to the public during the Public Hearing/Public Consultation meeting held on 2nd July, 2013 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bhopal.

xi) At least 5 % of the total cost of the project shall be earmarked towards the corporate social responsibility 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.

15.6.11 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 Gaurgaon, TalukaKallamb, District Osmanabad, Maharashtra **(EC)**

The project proponents and their consultant (M/s J M EnviroNet Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 31stMeeting of the Expert Appraisal Committee (Industry) held during 12th–13th

January, 2012 for preparation of EIA-EMP report. All cane juice/non-molasses based distillery (>30 KLD) are listed at S.N. 5(g) (ii) under category 'A' and appraised at Central level.

M/s Adlers Bio-Energy Ltd. have proposed for expansion of grains based distillery (25 KLPD to 60 KLPD) at Survey No. 284 (B), Subhash Nagar, A/P Village Gaurgaon, Taluka Kallamb, District Osmanabad, Maharashtra. The unit is not located in MIDC area. No forest land is involved. No court case/litigation is pending against the project. Total existing plot area is 19.20 ha. No additional land is required for the proposed expansion. Greenbelt will be developed in a land of 8.4 ha. Cost of project is Rs. 22.5 crore. There is no national park, wildlife sanctuary, biosphere reserve, tiger reserve, wildlife corridor and reserved forests/protected forests are located within 10 km distance. Distillery will be operated for 330 days. Environmental Clearance for 25 KLPD grain based distillery was accorded by Environment Department, Government of Maharashtra vide letter dated 17th February, 2010. Following will be manufactured:

S.N	Product	Existing	Proposed	Total after expansion
1	Alcohol	25 KLPD	35 KLPD	60 KLPD
By-products				
2	Impure Spirit	1.73 KLPD	2.6 KLPD	4.33 KLPD
3	Distillers Wet Grains with Soluble (DWGS)	1800 MTPM	2550 MTPM	4350 MTPM
	Distillers Dry Grain with Soluble (DDGS)	600 MTPM	850 MTPM	1450 MTPM
4	CO2 gas	600 MTPM	860 MTPM	1460 MTPM

Jowar (4500 MTPM).Maize (4650 MPM)/Broken Rice (4350 MTPM)/ Bajara (5250 MTPM) will be used as raw materials. The existing boiler of 20 TPH capcity is to be sued for the expansion. Coal fired boiler, coal is being obtained from Indonesia through vendors in Bellary.

Additionally, the proponent informed the Committee that ambient air quality monitoring was carried out at 8 locations during March, 2012 to May, 2012 and submitted baseline data indicates that ranges of concentrations of PM_{10} (46.52 µg/m^3 to 85.57 µg/m^3), $PM_{2.5}$ (19.55 µg/m^3 to 40.00 µg/m^3), SO_2 (6.28 µg/m^{3}to 9.38 µg/m^3) and NO_x (10.51 µg/m^3 to 18.15 µg/m^3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 0.58 µg/m^3, 1.0 µg/m^3 and 0.3 µg/m^3 with respect to PM_{10}, SO_2 and NOx. The resultant concentrations are within the NAAQS.

Multicyclone dust collector followed by bagfilter will be provided to coal fired boiler (20 TPH). DG sets (750 KVA & 400 KVA) will be installed for standby arrangement. Although not located in MIDC, water is being met from piped supply from MIDC with agreement with MIDC. Fresh water requirement from MIDC water supply will be increased from 414 m^3/day

to 830 m^3/day after expansion. Spent wash will be passed through centrifuge decanter for separation of solid. The part of thin slop from centrifuge will be recycled to process. The remaining slop will be concentrated through multi-effect evaporator (MEE) to form DWGS to achieve zero discharge. DWGS will be passed through dryer to form DDGS. The process condensate will be partally recycled to process. The lean effluent generated from boiler and cooling towers blow down, bottle washing and condensate will be treated in an effluent treatment plant. DDGS will be sold as cattle feed and yeast sludge will be added to the wet cake. Storage capacity of spent wash holding tank will be for 5 days. Fly ash will be sent to brick manufacturers. Used oil will be sent to authorized recyclers/re-processors.

The Committee recommended restriction of fresh water usage upto 600 m^3/day. The Committee noted that coconut plantation alone cannot be considered as green belt and recommended that green belt should be developed in vacant areas and in areas with potential fugitive dust emissions. The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Maharashtra Pollution Control Board on 23rd November, 2012. The issues were raised regarding effect of proposed project on agriculture; local employment, sulphur content in coal; environmental monitoring etc. The Committee recommended that effluents from the unit should be treated to meet prescribed standards as this issues has been raised in P.H. have been satisfactorily responded to by the project proponent and incorporated in the final EIA-EMP report.

After deliberations, the Committee decided that compliance of existing project should be discussed internally without the requirement of the proponent. The EAC also sought a copy of the agreement with vendors in Bellary for obtaining coal from Indonesia.

15.7 Reconsideration of EC cases

15.7.1 Pesticides & Chemicals (8250 TPM) Manufacturing Unit at Plot No.D-2/CH/41/A at Dahej-II, Industrial Estate, Village Vadadala Tehsil Vagra District Bharuch State Gujarat by M/s Shivalik Rasayan Ltd. **(EC)**

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

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

15.7.4 Drilling of Exploratory/Appraisal Wells (300) at RJ-ON-90/1 Block at District Barmer&Jalore, Rajasthan by M/s Cairn India Ltd. **(EC)**

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

15.7.6 On-Shore Exploratory Drilling of 8 Wells in Oil and Gas in Block CB- ONN-2005/3 in Districts Ahmedabad and Mehsana, Gujarat by M/s Mercator Petroleum Limited**. (EC)**

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

15.7.8 Grain based Distillery (3 KLPD) at Plot 358, Sector 8, IMT Bawal Industrial Estate, Tehsil Bawal, District Rewari, Haryana by M/s Piccadily Sugar & Allied Industries Ltd. **(EC)**

The aforesaid agenda item 15.7 could not be considered due to paucity of time.

15.8 Consideration of Cases for Terms of Reference (TOR)

15.8.1 Expansion of Bulk Drugs & Intermediates manufacturing unit–I alongwith CPP (3 MW) of **M/s Covalent Lab. Pvt. Ltd.** Located at Village Gundlamachanoor,Mandal Hatnoor,District Meddak, Andhra Pradesh. **(TOR)**

The project proponents 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 Covalent Lab. Pvt. Ltd. has proposed for expansion of Bulk Drugs & Intermediates manufacturing unit–I along with CPP (3 MW) at Village Gundlamachanoor,Mandal Hatnoor,District Meddak, Andhra Pradesh, at a distance of about 15km from Pattancheru Industrial Area, existing for the past 25 years or so. The existing Unit was established in 1989 and obtained environmental clearance for manufacturing of bulk drugs for 36 TPA vide MoEF letter no. J-11011/88/2004-IA dated 30.11.2004. Cost of project is Rs. 212.94 crores. APPCB lifted ban vide GO Ms No. 64 dated 25.07.2013, originally imposed in 1997 and allowed the existing industries to apply for expansion. Manjeera River is flowing at a distance if 2.5 Km. The said industry is located at a distance of 15 Km from the CEPI identified Patancheru-Bollaram stretch. Total plot area is 11.85 ha. Two court cases are pending against the project proposal. It is proposed to manufacture 65 bulk drugs and its intermediates on campaign basis with any 20 products manufactured at a time along with 3 MW Captive Power Plant.

List of existing products being manufactured is given below:

S.N.	Product Name	Quantity (TPA)
Environmental Clearance (EC)		
1	Flucinazole	2.16
2	Nalidixic acid	14.4
3	Naproxen	36
Consent from APPCB		

1	Cefixime	24.00
2	Cefpodoxime Proxetil	11.99
3	Cefurosime Axetil	24.00
4	Cefuroxime Sodium	3.00
5	Ceftriaxone Sodium	6.00
6	Cefpirome	3.00
7	Cefdini	6.00
8	Cefprozil	3.00
9	Cefepime	6.00

List of proposed products to be manufactured is as given below:

S.N.	**Product Name**	**Quantity (TPA)**
1	Cefixime Trihydrate	780
2	Cefpodoxime Proxetil	120
3	Cefurosime Axetil	180
4	Cefuroxime Sodium	180
5	Cefdinir Monohydrate	72
6	Cefprozil Monohydrate	60
7	Meropenem	60
8	Doripenem Monohydrate	60
9	7-AVNA	60
10	MEAT (Thio Ester)	60
11	Cefuroxime Acid	36
12	Cefotaxime Sodium	36
13	Faropenem Sodium	36
14	7-APCA	36
15	Cefuroxime Sodium	24
16	Cefpirome Sulfate	12
17	Cefepime Dihydrochloride Monohydrate	12
18	Cefditoren Pivoxil	12

19	Ceftibuten Monohydrate	24
20	Cefazoline Sodium	12
21	Cefoperazone Sodium	12
22	Cefoxitin Sodium	6
23	Ceftazidime Pentahydrate	6
24	Ceftizoxime Sodium	12
25	Cephalothin Sodium	12
26	Cefpodoxime Acid	12
27	Cefcapene Pivoxil	9.6
28	Cefmetazole Sodium	12
29	Cefmetazole	12
30	Imipenem	24
31	Cilastatin Sodium	24
32	Ertapenem Sodium	12
33	Biapenem	12
34	Panipenem	12
35	Tebipenem Pivoxil	1.2
36	Darifenacin Hydrabromide	6
37	Solifenacin Succunate	6
38	Tolterodine Tartrate	6
39	7-Amino-3-(methoxymethyl)-8-oxo-5-thai-1-azabicyclo[4.2.0] oct-2-ene-2-carboxylic acid (7- AMCA)	12
40	7-Amino3-thiazole cephalosporanic acid (7-ATCA)	24
41	Lacosamide	120
42	Cinacalcet Hydrochloride	120
43	Fexofenadine Hydrochloride	120
44	Dronedarone Hydrochloride	120
45	Deferasirox	120
46	Silodosin	24
47	Fingolimod Hydrochloride	24

48	Sitaglinptin Phosphate	24
49	Prasugrel Hydrochloride	24
50	Venlafaxine Hydrochloride	24
51	Pregabalin	24
52	Diacerein	24
53	Linezolid	24
54	Ropinirole Hydrochloride	24
55	D-Cycloserine	24
56	Clopidogrel Hydrogen Sulfate	24
57	Bosentan	24
58	Candesartan Cilexitil	24
59	Febuxostat	24
60	Azilsartan medoxomil	24
61	Soilfenacin Succinate	24
62	Darifenacin Hydrobromide	24
63	Trospium Chloride	24
64	Tolterodine Tartrate	24
65	Valsartan	24
Total production capacity 2400TPA (Maximum 20 Products at a time) with 3MW coal based CPP		

ESP will be provided to coal fired 30 TPH boiler to control particulate emissions. Bag filter will be provided to coal fired 10 TPH boiler. Scrubber will be provided to control process emissions viz. HCl, SO_2, HBr and HF. Vapour absorption system, chillers for chilled brine circulation will be installed to reduce the solvent evaporation loss. Fresh water requirement will be increased from 53.5 m3/day to 734 m3/day after expansion. Effluent generation will be increased from 9.2 m^3/day to 298 m^3/day after expansion. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS/COD effluent stream will be treated in effluent treatment plant (ETP) comprising primary, secondary and tertiary treatment. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted.

Power requirement will be increased from 230 HP to 8128.5 HP, which will be met from CPP (3 MW). Additional DG set (1010 KVA) will be installed for standby arrangement. Organic Residue and spent carbon will be sent to cement industry. ETP sludge and Evaporation salt will be sent to TSDF. Boiler ash will be sent to cement brick manufacturers.

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

15.8.2 Augmentation in carrying capacity (175,000 BoPD to 200,000 BoPD) of Pipeline from Barmer to Bhogat of **M/s Cairn India Ltd** – **Amendment in EC**

M/s Cairn India Ltd has proposed for augmentation in carrying capacity of Pipeline (from 175,000 BoPD to 200,000 BoPD) from Barmer to Bhogat. ONGC-CIL has permitted to produce 200,000 BOPD crude oil from RJ-ON-90/1 block in Barmer and Jalore districts of Rajasthan whereas permitted crude oil carrying capacity of pipeline is 175,000 BoPD. Increase in crude oil carrying capacity from 175000 -200000 BoPD can be achieved by injection of Drag Reducing Agent (DRAs) and operation of existing mainline pumps with existing pipeline facilities. DRA are high molecular weight, poly –olephins with long chain polymers used globally to reduce frictional pressure losses across the pipeline and utilise the same to improve the flow performance of the export pipeline. DRA injection rates are very less (10 PPM) & with daily consumption of 300 litres i.e. 110 KLPA. Main pipeline pumps at MPt (4 nos. x 50,000 BoPD) and Viramgam Terminal (2 W + 1 S x 90,000 BoPD) will be optimally operated. No additional facilities, land energy and water consumption is envisaged.

The Committee stated that the use of synthetic polymers for cleaning the pipes are governed by strict regulations in USEPA and the same shall be complied with. The Committee noted that the proposal is for expansion in production to the tune of 50% enhancement in carrying capacity by making the aforesaid changes. After detailed deliberations, the Committee found the information satisfactory and recommended for the amendment in the EC for as referred above subject to the specific and general environmental conditions.

15.8.3 Expansion of Synthetic Organic Chemical Manufacturing Unit of **M/s MAC Industry Mumbai**, located at GIDC Sarigam, Village Sarigram, Tehsil Umbergaon, District Valsad, Gujarat **(TOR)**

The project proponents 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 Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within interstate boundary, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s MAC Industry has proposed for expansion of Synthetic Organic Chemical Manufacturing Unit located at GIDC Sarigam, Village Sarigram, Tehsil Umbergaon, District Valsad, Gujarat. The project is located in an inter-State boundary. Expansion of existing unit in two phases – Ph. I and II. Unit was established in 1993. Cost of project is Rs. 1123.6 Lakhs. Total existing plot area is 3870 m^2. River Damanganga and River Darotha is flowing at a distance of 5.5 Km and 3.5 Km respectively. Proposed expansion will be carried out in the existing plot. No additional land will be required for proposed expansion. Proposed expansion will be done in Phase-I and Phase II.

Following products will be manufactured :

S.N.	Products	Existing (MTPA)	Proposed after Phase-1 (MTPA)	Phase -2 (MTPA)
1	Ortho Tertiary Butyl Cyclohexyl Acetate (OTBCHA) (OTBCH)	1200	2400	3600
2	Para Tertiary Butyl Cyclo Hexyl Acetate (PTBCHA) (PTBCH)	1200	3600	4800
3	Heptanol	0	600	600
4	Undecylic alcohol	0	300	300
5	Citronellal	0	300	300
6	Citronellol	0	300	300
7	PTBC Hexanol	0	240	240
8	OTBC Hexanol	0	120	120
9	2- Methyl Undecanal	0	100	100
	Total	2400	7960	10360

Dust collector followed by wet scrubber will be provided to coal fired boiler. Fresh water requirement from GIDC water supply will be increased from 20.6 m3/day to 40 m3/day after expansion. Industrial effluent generation will be increased from 8.2 m3/day to 25.5 m3/day after expansion. Industrial effluent will be treated in ETP and sent to CETP through underground drainage. ETP waste will be sent to TSDF. Process residue will be sent to common incineration facility. Spent acetic acid will be sent to actual users. Eletrci power requirement will be increased from 405 HP to 490 HP and sourced from Dakshin Gujarat Vij Company Ltd. DG set (2 x 320 KVA) will be installed as standby arrangement.

After detailed deliberations, the Expert Appraisal Committee prescribed TORs given as Generic TORs in Annexure-1 read with additional TORs in Annexure-2 for preparation of EIA-EMP report. The EAC agreed to the collection of baseline data of Dec 2013-Feb. 2014 and for submission of the data collected for P.H.

15.8.4 Resin Manufacturing Unit (expn. of 2500 TCD to 6000 TCD and Cogen Plant from 12 MW to 26 MW) of **M/s Perfect Ply Industries Pvt. Ltd.,** located at Sy.No. 1133, near TarapurKheda Road, Talukamata District Kheda, Gujarat **(TOR)**

The project proponents 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

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

M/s Perfect Ply Industries Pvt. Ltd. has proposed for setting up of Resin Manufacturing Unit at Sy. No. 1133, near Tarapur Kheda Road, Talukamata District Kheda, Gujarat.Total plot area is 22392.26 m^2. The number of days of working will be 180 days ?? Cost of project is Rs. 1.0 crore. River Sabarmati is flowing at a distance of 19.08 Km. Pariyej lake is located at a distance of 1.53 km. Following products will be manufactured:

S.N	Products	Production Capacity (MTPM)
1	P F Resin	800
2	M F Resin	300
3	UF Resin	300
4	Electrical Insulation Board and HP Decorative Laminated Sheet	3,00,000 Nos./month

Multi cyclone & Thermic fluid heater will be provided to coal/white coal fired steam boiler & thermic Fluid heater. Fresh water requirement from ground water source will be 34.433 m^3/day. Industrial effluent generation will be 13.480 m3/day and treated in ETP. No effluent will be discharged outside the plant premises and zero discharge concepts will be adopted. ETP sludge will be sent to TSDF. Used oil will be sent to registered recycler. Number of trucks used for transportation will remain the same by increasing the tonnage of trucks.

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

15.8.5 Expansion of Auto Component Manufacturing Unit for PU Foam seats of **M/s Varroc Engineering Pvt. Ltd.**, located at Plot No. 20, Sector 9, IIE Sidcul, Town Pant Nagar, Tehsil Kichha, District US Nagar, Uttarakhand **(TOR)**

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

M/s Varroc Engineering Pvt. Ltd. has proposed for expansion of Auto Component Manufacturing Unit for PU Foam seats at Plot No. 20, Sector 9, IIE Sidcul, Town Pant Nagar, Tehsil Kichha, District US Nagar, Uttarakhand. The unit is located in an Industrial Area since 2004. Total available land is 25 acres. Out of which greenbelt will be developed in 22219.58 m^2. Cost of project is Rs. 2.02 crores. Interstate boundary of Uttar Pradesh is located within distance of 10 Km. Tanda range forest is at 6 km distance. Unit has proposed to manufacture

1500 MT or 1500000 Nos. /annum of PU foam seats. PU foam is synthetic organic chemicals and manufactured by mixing polyol & Isocynate in appropriate ratio.

Water requirement from ground water source will be increased from 209 m3/day to 214 m3/day after expansion. Industrial effluent generation from the existing unit is 35 m^3/day. No additional industrial effluent will be generated. Sewage will be treated in STP. Only solid waste as PU foam seat cutting waste (1800 kg/month) will be generated from PU foam manufacturing unit. This waste will be handed over to authorized recyclers by UEPPCB. 5 nos. of DG sets of total capacity 3135 KVA are installed in the existing project. Power requirement for PU foam unit is 300 KVA.

After detailed deliberations, the Expert Appraisal Committee prescribed TORs given below in addition to TORs given as Generic TORs (except TOR 71) in Annexure-1 read with additional TORs in Annexure-2 for preparation of EIA-EMP report.

(i) Copy of the May 2006 latest CTO.

(ii) As unit is highly hazardous due to use of Isocyantes – A detailed Risk Assessment and safety issues + Disaster preparedness and Management Plan is required.

(iii) P.H. exemption since the unit is located in an Industrial Area since 2004???

15.8.6 Expansion of Bulk Drugs Manufacturing Unit (from 39.7 TPa to 133.2 TPA) of **M/s Chromo Lab. India Pvt. Ltd.,** located at Plot No. 43 & 44, Pashamylaram, Phase II, IDA, Mandal Patanchera, District Medak, A.P. **(TOR)**

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

M/s Chromo Lab. India Pvt. Ltd. has proposed for expansion of Bulk Drugs Manufacturing Unit (from 39.7 TPa to 133.2 TPA) at Plot No. 43 & 44, Phase II, IDA, Mandal Patanchera, District Medak, A.P established before 1990. Existing plot area is 1.575 acres of which greenbelt will be developed in 0.52 acres. Cost of project is Rs. 2 crores. No reserve forest is located within 10 km distance. Nakkavagu Stream and Isnapur Cheru is at 8 km and 0.7 km respectively.

S.No	Name of the Product	Capacity (TPA)	
		Permitted	After Expansion**
1	Candesartan Cilexetil	1	21.6
2	Cinitapride Hydrogen Tartrate	0.5	7.2
3	Keterolac Tromethamine	2	10.8

4	Levocitrizine Hydrochloride	3	3.6
5	Moxifloxacin Hydrochloride	20	18
6	Repaglinide	0.3	7.2
7	Terbinafine Hydrochloride	6	18
8	Valsartan	5	10.8
9	Voricinazole	0.5	7.2
10	Zafirlukast	0.4	10.8
11	Ziprasidone	1	3.6
12	Abacavir Sulfate	--	7.2
13	Atorvastatin Calcium	--	10.8
14	Azilsartan Medoxomil	--	5.4
15	Clopidogrel Bisulfate	--	5.4
16	Ezetimibe	--	7.2
17	Olmesartan	--	9
18	Posaconazole	--	7.2
19	Risperidone	--	5.4
20	Telmisartan	--	7.2
21	Vardenafil HCl	--	9
22	3-(2-chloroethyl)-9-hydroxy-2-methyl-6, 7, 8, 9-tetrahydro-4H-pyrido [1, 2-a] pyrimidin-4-one	--	14.4
Total		**39.7**	**133.2**

Bagfilter will be provided to coal fired 2.0 TPH boiler. Scrubber will be provided to control process emissions viz. HCl, SO_2, NH3. Total water requirement will be increased from19.09 m3/day to 93.2 m3/day after expansion. Out of which fresh water requirement will be 64.23 m^3/day. Effluent generation will be increased from 3.68 m^3/day to 36.8 m^3/day after expansion. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS/COD effluent stream will be treated in effluent treatment plant (ETP) comprising primary, secondary and tertiary treatment. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted. Additional DG set (500 KVA) will be installed for standby arrangement. Organic Residue and spent carbon will be sent to cement

industry. ETP sludge and Evaporation salt will be sent to TSDF. Boiler ash will be sent to brick manufacturers.

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

15.8.7 Expansion of Sugar Complex (2500 TCD to 6000 TCD) and Cogeneration Power Plant (12 MW to 26 MW) of **M/s Siddhanath Sugar Mills Ltd.,** located at Post Tihre, District North Solapur, Maharashtra **(TOR)**

All thermal power plants (biomass or non-hazardous municipal solid waste as fuel) are listed at S.N. 1(d) under category 'A' and appraised at Central level. Sugar unit $\geq$ 5000 TCD cane crushing is listed at 5 (J) under category 'B' and appraised at state level. Since project is integrated and capacity of the CPP is >15 MW (22 MW), the proposal will be appraised at Central level.

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 report. M/s Siddhanath Sugar Mills Ltd. has proposed for expansion of Sugar Complex (2500 TCD to 6000 TCD) and Cogeneration Power Plant (12 MW to 26 MW) located at Post Tihre in District North Solapur, Maharashtra. Total land acquired is 309992.54 m^2 of which greenbelt will be developed in 66004.94 m^2. Cost of proposed expansion is Rs. 90 crores. Following products will be manufactured:

S.N.	Industrial Unit	Product	Existing Quantity	Expansion	Total
1	Sugar	Sugar	7500 MTPM	12075 MTPM	19575 MTPM
		Byproduct			
		Molasses	3000 MTPM	4200 MTPM	7200 MTPM
		Bagasse	22500 MTPM	31500 MTPM	54000 MTPM
		Press Mud	2625 MTPM	4200 MTPM	6825 MTPM
2	Cogen	Electricity	12 MW	14 MW	26 MW

ESP will be provided to additional bagasse fired boiler.(75 TPH). DG sets (500 KVA; 320 KVA & 1000 KVA) will be installed. Additional water requirement from river water source for sugar factory and cogen power plant will be 2514 m^3/day. Additional effluent generation will be 470.7 m3/day and treated in ETP. Fly ash will be sent to brick manufacturers of used as manure. Spent oil will be burnt in the cogeneration power plant.

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

15.8.8 Expansion of Bulk Drugs Manufacturing Unit (from 8.925 MTPA to 62.10 MTPM) of **M/s Sanrog Laboratories (P) Ltd**., located at Sy. No. 542, 538, 539, Village Chollair, Mandal YAdagirigutta, District Nalgonda, A.P. **(TOR)**

The project proponents 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 Sanrog Laboratories (P) Ltd. has proposed for Expansion of Bulk Drugs Manufacturing Unit (from 8.925 MTPA to 62.10 MTPM) at Sy. No. 542, 538, 539, Village Chollair, Mandal YAdagirigutta, District Nalgonda, A.P. Total plot area is 11.90 acres of which greenbelt will be developed in 16327 m^2. No additional land is required. Cost of expansion project is Rs. 10.67 crores. Following products will be manufactured:

S. N	Name of the product	CAS NO.	Application	Quantity In MT/Month
1	Fluconazole	86386-73-4	Antifungal	5.00
2	Gabapentin	60142-96-3	Anticonvulsant	5.00
3	Itraconazole	84625-61-6	Antifungal	1.00
4	Rosavastatin Calcium	287714-41-4	Anti lipemic	1.00
5	Escitalopram oxalate	128196-01-0	Antidepressant	1.00
6	Domperidone	57808-66-9	Antiemetic	5.00
7	Tramadol Hydrochloride	46941-76-8	Analgesic	10.00
8	Omeprazole	73590-58-6	Antiulcer	5.00
9	Esomeprazole Magnesium	217087-09-7	Antiulcer agent	1.00
10	Lansoprazole	103577-45-3	Antiulcer	1.00
11	Pantoprazole sodium	138786-67-1	Proton Pump Inhibitor	2.50
12	Rabeprazole sodium	117976-90-6	Proton Pump Inhibitor	2.50
13	Losartan potassium	124750-99-8	Antihypertensive	2.00
14	Telmisartan	144701-48-4	Antihypertensive	2.00
15	Valsartan	137862-53-4	Antihypertensive	1.00
16	Tamsulosin HCl	106463-17-6	Anti-adrenergic	0.10

17	Duloxitine	217087-09-7	Antidepressant	5.00
18	Levo cetirizene Dihydrochloride	103577-45-3	Antiallergic agent	2.00
19	Ornidazole	138786-67-1	Antiprotozoal	10.00
	TOTAL			**62.10**

Coal fired boiler (2. 0 TPH and 5.0 TPH) will be installed. Scrubber will be provided to control process emissions viz. HCl and SO_2. Fresh water requirement from groundwater source will be increased from 32.48 m3/day to 207.83 m3/day after expansion. Effluent generation will be increased from 14.4 m^3/day to 99.3 m^3/day after expansion. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS/COD effluent stream will be treated in effluent treatment plant (ETP) comprising primary, secondary and tertiary treatment. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted. Organic Residue and spent carbon will be sent to cement industry. ETP sludge and Evaporation salt will be sent to TSDF. Boiler ash will be sent to cement brick manufacturers.

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

15.8.9 Expansion of Bulk Drugs Manufacturing Unit of **M/s Sasank Biotech Ltd.,** located at Raichur Growth Center Industrial Area, Raichur, Karnataka **(TOR)**

All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B' and appraised at State level. However, applicability of general condition due to project location within 10 Km from interstate boundary, proposal is treated as category 'A' and appraised at Central Level.

The project proponents gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA-EMP. M/s Sasank Biotech Ltd.has proposed for expansion of Bulk Drugs Manufacturing Unit at Raichur Growth Center Industrial Area, Raichur, Karnataka. Sasank Biotech has obtained environmental clearance from SEIAA, Karnataka vide EC No. SEIAA: 113: IND:2008 dated 19.01.2010. Existing plot area is 2.99 acres of which greenbelt will be developed in 4489.60 m^2.

Following products will be manufactured:

S.N.	Name of the product	CAS NO.	Application	Quantity in (MTPM)
1	Ketoconazole	65277-42-1	Antifungal	12.00

2	2-PhenylBenzimidazole-5-sulphuric acid(PBSA)	35235-02-1	Cosmetic Agent used in Sunscreen Lotion	10.00
3	Omeprazole	73590-58-6	Antiulcer	1.50
4	Lansoprazole	103577-45-3	Antiulcer	2.00
5	Esomeprazole Magnesium	82115-62-6	Antiulcer	1.00
6	Ciprofloxacin	85721-33-1	Anti-infective	10.00
7	Cyclopropyl amine	765-30-0	Int. for Ciprofloxacin	30.00
8	Norfloxacin	70458-96-7	Antibiotic	3.00
9	Pyrazine-2-Carboxylic acid	98-97-5	Int. for Pyrazinamaide	4.00
10	Tri phenyl phosphine	603-35-0	Synthetic Reagent	30.00
	TOTAL		**103.50**	

Bagfilter will be provided to additional coal fired 2.0 TPH boiler. Scrubber will be provided to control process emissions viz. HCl and SO_2. Total water requirement will be increased from 38 m3/day to 126.88 m3/day after expansion. Effluent generation will be increased from 16 m^3/day to 89.77 m^3/day after expansion. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS/COD effluent stream will be treated in effluent treatment plant (ETP) comprising primary, secondary and tertiary treatment. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted.

Additional DG set (250 KVA) will be installed for standby arrangement. Organic Residue and spent carbon will be sent to cement industry. ETP sludge and Evaporation salt will be sent to TSDF. Boiler ash will be sent to brick manufacturers.

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

15.8.10 Expansion of Bulk Drugs Manufacturing Plant of **M/s Sterling Biotech Ltd.,** located at Village Masar, Tehsil Padra, District Vadodara, State Gujarat **(TOR)**

The project proponents gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA-EMP. All Synthetic Organic Chemicals

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

M/s Sterling Biotech Ltd. has proposed for expansion of Bulk Drugs Manufacturing Unit at Village Masar Tehsil Padra District Vadodara State Gujarat. The industry intends to expand its production capacity of Oncological, non Oncological & Fermentation products from 47.8534 MTPM to 130.0008 MTPM. The proposed expansion will be carried out within the existing premises of 13891 m2 and using existing infrastructure. No forest and wildlife protected area in the impact zone of 10 km. Following products will be manufactured:

S.N.	**Product**	**Production Capacity (MTPM)**		
		Existing	**Proposed**	**Total**
A	Non Onco Product viz. Aliskiren, Amlodipine besylate, Aripiprazole , Atenolol, Atorvastatin, Carvedilol, Citalopram, Sitagliptin, Simvastatin, Sertraline hydrochloride, Repaglinide, Losartan, Irbesartan, Glimepiride, Gliclazide, Glibenclamide, Gabapentin, Ezetimbe, Esomeprazole, Escitalopram, Elitriptan, Duloxetine hydrochloride, Desloratadine, Clopidogrel hydrogensulphate, Telmisartan, Zolpidem, Venlafaxine, Coenzyme-Q10, Lovastatin, 2 Chloro 4 Methyl Sulphoyl Benzoic Acid (CMSBA), 2,3 Di Chloro Benzoic Acid, Meta Fluoro Benzoic Acid and others.	32.8000	80.6000	113.4000
	By-Product for Non Onco Product viz. Sodium Acetate, Acetate, Acetic Acid and Mixed Slovents	10.0000	0.000	**10.0000**
B	Onco Products viz. Anastrozole, Bendamustine, Bortezomib, Capecitabine, Carboplantin Cisplantin Docetaxel, Doxifluridine, Erlotinib, Gefitinib, Gemcitabine, hydrochloride, Irinotecan hudrochloride trihydrate, Letrozole, Methotrexate, Oxaliplatin, Pemetrexed, Temozolomide, Vincristine, Zoledronic acid, Daunorubicin, Doxorubicin, Epirubicin, Idarubicin and others.	0.0534	0.7894	**0.8428**
	By-Products for Onco Product viz. Mixed Solvents	5.0000	0.000	**5.0000**
C	Fermentation Products viz. Cyclosporin, Tacrolimus, Mycophenolic Acid, Sirolimus and others	0.000	0.7580	0.7580
	Total Production	**47.8534**	**82.1474**	**130.0008**

Scrubber will be provided to control process emissions viz. HCl, H_2S and SO_2.Project proponent intends to change the fuel of boiler from furnace oil to agro waste briquetts. Power requirement from Madhya Gujarat Vij company Ltd. (MGVCL) will be 5000 KVA. Existing DG Sets (3 x 2270 KVA) are installed. water consumption from ground water source will be increased from 767 m3/day to 1160 m3/day after expansion. Wastewater generation will be increased from 231 m3/day to 395 m3/day after expansion. Industrial effluent will be treated in ETP and treated effluent will be sent to Vadodara Enviro Channel Ltd. Distillation residue and spent carbon will be sent to common incineration facility. ETP sludge and silica waste will be sent to TSDF. Spent organic solvent will be sent to authorised recyclers.

The Committee noted that the unit is involved in manufacturing of resin without environmental clearance. Therefore, the project proposal involves violation of the Environment (Protection) Act, 1986 or Environment Impact Assessment (EIA) Notification, 2006 and will be considered as per Ministry's O. M no. J-11013/41/2006-IA II (I) dated 12th December, 2012 and 27th June, 2013.

After detailed deliberations, the Expert Appraisal Committee further recommended that only after completion of the action required vide MOEF O.M. dated 12.12.2012 and 27.06.2013 as above, the proponent may prepare an EIA-EMP report on the basis of TORs prescribed in Annexure-1 read with additional TORs in Annexure-2 for preparation of EIA-EMP report.

15.8.11 Bulk Drug Manufacturing Unit of **M/s MVL Medisynth Pvt. Ltd,** located at Plot No. F-13, MIDC Chincholi, Tehsil Mohol, District Solapur, Maharashtra **(TOR)**

The project proponents 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 located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B' and appraised at State level. However, applicability of general condition due to project location within 10 Km from bird sanctuary, proposal is treated as category 'A' and appraised at Central Level.

M/s MVL Medisynth Pvt. Ltd has proposed for setting up of Bulk Drug Manufacturing Unit at plot no. F-13, MIDC Chincholi, Tehsil Mohol, District Solapur, Maharashtra. Plot area is 1.63 ha of which greenbelt will be developed in 0.33 ha. Cost of project is Rs. 10.30 crores. During presentation, Environment Consultant, Equinox Environment (I) Pvt. Ltd. has confirmed that a bird sanctuary (Great Indian Bustard Bird Sanctuary) is located within 10 km distance of the project site. Although the proposal is a Cat. B project, but has become Cat A because it falls in eco-sensitive area.

The following products will be manufactured:

S.N.	Product	Quantity (Kg/Yr)
1	Meropenam	12000
2	Carboplatin	48
3	Cisplatin	24

4	Famicyclovir	50400
5	Imbatinib Mesylate	4800
6	Azacitidine	48
7	Efavirenz	24600
8	Tenofovir	49800
9	Travoprost	12
10	Latanoprost	12
11	Bimatoprost	12
12	Erlotinib	47.88
13	Impenam	12000
14	Caffeicacid Phenethylester	39513.6
15	Curcumin	50232
16	Pterostibene	39600
17	Reserveratrol	36000

List of By-products

S.N.	**Product**	**Quantity (Kg/Month)**
1	Potassium Chloride	24.9
2	HBr	3640
3	Ammonium Chloride + Acetic Acid	4219.6
4	Triethyl Amine HCl Salt	600
5	Hydroxy Benzotriazole	520
6	Bute – 1,3-Diene	1845
7	MgBr	1845
8	Imidazole	2050
9	4-Methylbenzenesulfonic Acid	3320
10	Bromo Ethane	2573
11	DBUHI	10.1
12	Potassium Bromide	6.8

13	Sodium Sulphate	8314.7
14	Aluminium Hydroxide	5068
15	Pyridine. HCl	966
16	Potassium Carbonate	3000
17	Phosphorodibromidous Acid	4727
18	Diethyl Phosphate Sodium	3250
19	3, 4- dihydro-2H-pyran	2000
20	Tetrabutyl Ammonium Carbonate	73.311
21	Piperidine Hydrochloride	840
22	Sodium Chloride	1535
23	Silver Lodide	13.9

Bagfilter will be provided to bagasse fired boiler (4 TPH). Mist collectors will be provided to control acid mist. Solvent recovery system and scrubbers will be provided. Fresh water requirement from MIDC water supply will be 32 m^3/day. Industrial effluent generation will be 32.5 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/COD effluent stream will be treated in effluent treatment plant (ETP) comprising primary, secondary and tertiary treatment. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted. Distillation residue, process residue and ETP sludge will be sent to CHWTSDF. Used/spent oil, spent carbon and spent solvent will be sent to authorised reprocesses/recyclers. It was noted that gazette Notification for the industrial area was not submitted. Status of environmental clearance for MIDC Chincholi is not known.

The Committee noted that the project requires approval of NBWL. The Committee noted the proponent's statement that the State Government is in the process of defining the buffer zone of the Bird Sanctuary. The Committee desired details in this regard from the PCCF (WL), State Government and in case it si found to be within the buffer zone/10km (whichever applies), the project will require prior approval of the Standing Committee on Wildlife of NBWL.

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

15.8.12 Manufacturing of Ethyl Acetate of **M/s Salutaire Chemicals Ltd.,** located at Khasra No. 55/189, Village Jaunmani, Tehsil & District Baghpat U.P **(TOR)**

The project proponents and their consultant gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA-EMP 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 Salutaire Chemicals Ltd. has proposed for manufacturing of Ethyl Acetate (60 TPD) at Khasra No. 55/189, Village Jaunmani, Tehsil & District Baghpat U.P. Plot area is 5790 m^2 fo which greenbelt will be developed in 2294 m^2. Cost of project is Rs. 733.05 Lakhs. Multicyclone followed by ESP will be provided to pet coke /coal fired boiler. Limestone will be blended to control SO2 emissions. Fresh water requirement from ground water source will be 50 m3/day. Industrial effluent generation will be 15m3/day and treated in ETP. Treated effluent will be recycled/reused within the plant premises. No effluent will be discharge outside the plant premises.

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

15.8.13 Expansion of Petrochemical Unit of **M/s Satyam Petrochemical Ltd.** located at Plot No. 73, 120 Wanachiwadi, Post Masur, TalukaKarad, District Satara, Maharashtra **(TOR)**

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.

The project proponents and their consultant gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA-EMP report. M/s Satyam Petrochemical Ltd. has proposed for Expansion of Petrochemical Unit at Plot No. 73, 120 Wanachiwadi, Post Masur, TalukaKarad, District Satara, Maharashtra. Environmental clearance for the existing unit was obtained from MoEF vide their letter no J-11011/69/2010-IA II (I) dated 22nd March, 2013. The unit is located outside MIDC area. Total plot area is 20,000 m^2. Cost of expansion project is Rs. 9 crores. The following products will be manufactured :

S.N.	Products	Existing	Proposed Additional	Total after expansion
1	Ethanol	1800 KLPM	--	1800 KLPM
2	Ethyl Acetate	4050 KLPM	--	4050 KLPM
3	Diethy Phthalate	20 TPD	--	20 TPD
5	Di Acetone Alcohol	-	2250 MTPM	2250 MTPM
6	Mesitylene Oxide		810 Kg/Day	810 Kg/Day
7	Power	750 KW	1500 KW	2250 KW

Additional coal fired boiler will be installed. Fresh water requirement will be increased from 430 m3/day to 883 m3/day after expansion. Effluent generation will be increased from 50.6 m3/day to 81.4 m3/day after expansion and treated in ETP. ETP sludge and spent catalyst will be generated as solid waste. Power requirement will be increased from 826.75 KW to 1709.39 KW. Coal, diesel and bagasse will be used as fuel. Additional DG sets (1 x1000 KVA & 2 x 500 KVA) will be installed as standby arrangement.

The Committee noted that a P.H. was held in 2010, however, in view of the fact that there is a100% increase in water requirement from 430 to 883 m3/d to be sourced from a canal of a dam, conduct of P.H. is necessary along with necessary approvals. After detailed deliberations, the Expert Appraisal Committee prescribed TORs given as Generic TORs in Annexure-1 read with additional TORs in Annexure-2 for preparation of EIA-EMP report.

15.8.14 Expansion of Synthetic Resin Adhesives Unit of **M/s Jyoti Resins & Adhnesives Ltd.** located at Sy. No. 878, Village Santej, District Gandhi Nagar, Gujarat **(TOR)**

The project proponents and their consultant gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA-EMP 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 Jyoti Resins & Adhnesives Ltd. has proposed for expansion of Synthetic Resin Adhesives Unit (from 46 MTPM to 600 MTPM) at Sy. No. 878, VillageSantej District Gandhi Nagar, Gujarat. Total plot area is 7016 m^2 of which greenbelt will be developed in 2519.56 m^2. Cost of expansion project is Rs. 2 crores. Thol bird sanctuary is located at 6.8 km distance from project site. As per the State Govt. draft Notification of the Bird Sanctuary, it is 2.45 km outside the buffer zone. River Sabarmati flows at a distance of 14 km. Fresh water requirement from tanker water supply will be increased from 7.091 m3/day to 17.343 m3/day (2 tankers/day) after expansion. Effluent generation will be increased from 0.24 m3/day to 0.84 m3/day.

The Committee noted that the proposal is for 10-fold expansion of the project and due to its location within 10km of a WL Sanctuary, conduct of P.H. would be required. The Committee agreed for collection of baseline data for the season Feb.-April 2014. The Committee stated that in case the draft Notification is not approved, approval of Standing Committee on WL of NBWL would be required. After detailed deliberations, the Expert Appraisal Committee prescribed TORs given as Generic TORs in Annexure-1 read with additional TORs in Annexure-2 for preparation of EIA-EMP report.

15.8.15 Manufacturing of Epoxy Resin **M/s Hindustan Specialty Chemical Ltd.**, located at Plot No. 830, GIDC Jhagadia, District Bharuch, Gujarat **(TOR)**

All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B' and appraised at State level. However, applicability of general condition due to project location within 10 Km (8.3km) from critically polluted area (GIDC Ankleshwar), proposal is treated as category 'A' and appraised at Central Level.

The project proponents 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. M/s Hindustan Specialty Chemical Ltd. has proposed for setting up of Epoxy Resin Manufacturing Unit at GIDC Jhagadia, District Bharuch, Gujarat, established in 1993. Plot area is 188257 m^2. Cost of project is Rs. 400 crores. Following products will be manufactured:

S.N.	Products	Quantity
1	Liquid Epoxy Resin	30000 MTPA
2	Solid Epoxy Resin	20000 MTPA
3	Solvent based Epoxy Resin	10000 MTPA
4	Formulated Epoxy Resin	15000 MTPA
5	Diluents	10000 MTPA
6	Epoxy Resin Hardeners	15000 MTPA

Coal fired boiler (10 TPH) and gas fired boiler (8 TPH) will be installed. Bag filter will be provided to control BIS-Phenol dust. Water ecrubber will be provided to control process emissions. Fresh water requirement from GIDC water supply will be 1086 m3/day. Effluent generation will be 459 m3/day. Industrial effluent will be treated in ETP and treated effluent will be disposed into deep sea via GIDC pipeline after achieving Marine norms. Power requirement from Dakshin Gujarat Vij Company Ltd will be 2000 KVA. DG set (1 x 1250 KVA) will be installed. Resin sludge with polymers, Resin soaked, spent oil will be sent to incinerations. ETP sludge will be sent to TSDF.

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

15.8.16 Expansion of Sugar (2500 TCD to 6000 TCD) and addition of Cogeneration Power Plant (36 MW) of **M/s NCS Sugar (Nellore) Limited,** located at Village Prabhagiripatnam, Tehsil Podalakur District Nellore A.P. **(TOR)**

The project proponents gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP report. All thermal power plants (biomass or non-hazardous municipal solid waste as fuel) are listed at S.N. 1(d) under category 'A' and appraised at Central level. Sugar unit $\geq$ 5000 TCD cane crushing is listed at 5 (J) under category 'B' and appraised at state level. Since project is integrated and capacity of the CPP is >15 MW (22 MW), the proposal will be appraised at Central level.

M/s NCS Sugar (Nellore) Limited has proposed for expansion of Sugar (2500 TCD to 6000 TCD) and addition of Cogeneration Power Plant (36 MW) at Village Prabhagiripatnam, Tehsil Podalakur District Nellore A.P. Total plot area is 186 acres. Cost of proposed expansion is

Rs. 191 Crore. Penneru River is flowing at a distance of 6.9 Km. Kandamuru RF, Prabhagiripatnam RF and Nallpalem RF are located within 10 Km distance

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

15.8.17 Resin Manufacturing Unit of **M/s Parikshit laminate Pvt. Ltd.**, located at Sy. No. 898/p, Village Susvas, Tehsil Ishwarnagar, District Surendernagar, Gujarat **(TOR)**

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

The project proponents 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. M/s Parikshit laminate Pvt. Ltd. has proposed for setting up of Resin Manufacturing Unit at Sy. No. 898/p, village Susvas, Tehsil Ishwarnagar, District Surendernagar, Gujarat. Total plot area is 10522 m^2. Cost of project is Rs. 6 crores. Following products will be manufactured:

S.N	Products	Production Capacity (MTPM)
1	P F Resin	90
2	M F Resin	40

Reverse pulse jet type bag filter will be provided coal fired boiler. Fresh water requirement from ground water source will be 15 m^3/day. Industrial effluents will be treated in ETP. No effluent will be discharged outside the plant premises and zero discharge concepts will be adopted. ETP sludge will be sent to TSDF. Used oil will be sent to registered recycler.

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

15.8.18 Onshore Oil and Gas Exploration Development & Production in Block CB-ONN-2010/8 of **M/s Bharat Petro Resources Ltd.**, in Gujarat of **(TOR)**

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

M/s Bharat Petro Resources Ltd. has proposed for Onshore Oil and Gas Exploration Development & Production in Block CB-ONN-2010/8 in Gujarat. There is no national park, sanctuary or forest land in surrounding 10 km radius. The NELP IX block CB-ONN-2010/8 is

located in common boundary of Ahmedabad, Kheda and Gandhinagar District, Gujarat. The area covered under part A of the block is 14 sq. km and under part B is 28 sq. km. Meshwa River is flowing within the block. BPRL intends to drill wells to depth ranging between 1800 m to 3500 m. Following are the coordinates of the blocks:

Geographical coordinates of Block 'A'

	Latitude			Longitude		
A	23	0	54	72	50	10
B	23	0	54	72	48	6
C	23	3	0	72	48	6
D	23	3	0	72	50	11
A	23	0	54	72	50	10

Geographical coordinates of Block 'B'

	Latitude			Longitude		
A	23	0	0	72	46	38
B	23	0	0	72	50	10
C	22	57	26	72	50	8
D	22	57	26	72	46	38
E	23	0	0	72	46	38

The total water requirement of water per well will be 35-40 m^3/day.wastewater generated will be 5 m3/day. The drilling mud and drill cuttings will be separated in the solid control system and conveyed to special designed pit. DG set (4 x 500 KVA + 1 x 100 KVA) will be installed.

After detailed deliberations, the Expert Appraisal Committee prescribed the TORs as given in **Annexure-3** for preparation of EIA-EMP. Since the 8 exploration wells fall in 3 districts, namely Gandhinagar, Ahmedabad and Kherad, P.H. is required for each of the 3 districts as per the provisions of the EIA Notification, 2006.

15.8.19 Resin Manufacturing Unit of **M/s Rosewood Laminates Pvt. Ltd.,** located at Sy. No 219/p & 283 /p, village Matel, Tehsil Wankaner, District Rajkot, Gujarat **(TOR)**

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

M/s Rosewood Laminates Pvt. Ltd. has proposed for setting up of Resin Manufacturing Unit at Sy. No 219/p & 283 /p, Village Matel, Tehsil Wankaner, District Rajkot, Gujarat. Total plot area is 19000 m^2. Cost of project is Rs. 4.5 Crore. No eco-sensitive area is located within 10 km distance. Following products will be manufactured :

S.N	Products	Production Capacity (MTPM)
1	P F Resin	90
2	M F Resin	40

Boiler (2.5 TPH) and DG Set (250 KVA) will be installed. Fresh water requirement from ground water source will be 15 m^3/day. Industrial effluent generation will be 1.0 m3/day and treated in ETP. No effluent will be discharged outside the plant premises and zero discharge concepts will be adopted. ETP sludge will be sent to TSDF. Used oil will be sent to registered recycler.

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

15.8.20 Additional Grain based Distillery Unit (120 KLPD) (Expn. from 60 KLD to 180 KLD) along with Cogeneration Power Plant (8 MW) of **M/s The Jeypore Sugar Company Ltd**, located at Village Chagallu, District West Godavari, A.P **(TOR)**

The project proponents 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 The Jeypore Sugar Company Ltd has proposed for additional Grain based Distillery Unit (120 KLPD) along with Cogeneration Power Plant (8 MW) at Village Chagallu, District West Godavari, A.P. The total plot area is 89.11 acres. Cost of project is Rs. 301.2 Crore. Existing environmental clearance was obtained from MoEF vide letter no J-11011/225/2004-Ia II (I) dated 08.04.2005. Following is the production capacity:

S.N.	**Description**	**Units**	**Permitted Molasses Based Distillery Unit**	**Proposed Grain Based Distillery Unit**	**Total after Expansion**
1	Rectified Spirit	KLPD	40	120(or)	160(or)
2	Anhydrous Alcohol*	KLPD	60	120(or)	180(or)
3	Extra Neutral Alcohol (ENA)	KLPD		120	120

4	Bio-Compost	TPA	12200		12200
5	Distillers Dired Grains with Soluble (DDGS)	TPD		120	120
6	Liquified Carbondioxide	TPD		70	70
7	Power Plant (co-generation)	MW	0.5	8	8.5

ESP will be provided in the additional coal fired boiler (50 TPH). DG set (2 x 1000 KVA) will be installed. Fresh water requirement from Godavari Canal will be increased from 343 m3/day to 1593 m3/day after expansion. Spent was from existing molasses based distillery is treated through biomethanisation followed by RO and biocomposting. Spent wash will be decanted followed by evaporated in MEE to form DWGS. Condensate will be treated in ETP. Fly ash will be sent to brick manufacturers. DDGS will be sent to cattle feed. Waste oil will be sent to authorized recyclers.

The Committee noted that although EC was obtained in 2005, the proposal would require conduct of a P.H. vide provisions of the EIA Notification 2006. The Committee sought the Monitoring Report form the RO, Bangalore. After deliberations, the Committee prescribed the following TORs read with Generic TOR at Annexure-1 for the preparation of draft EIA-EMP report:

1. List of existing distillery units in the study area along with their capacity and sourcing of raw material.
2. Details of proposed products along with manufacturing capacity.
3. Number of working days of the distillery unit.
4. Sources and quantity of fuel (rice husk/coal etc.) for the boiler. Measures to take care of SO_2 emission. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers shall be submitted.
5. Storage facility for raw materials, prepared alcohol, fuel and fly ash.
6. Details of the use of steam from the boiler.
7. Ground water quality around proposed spent wash storage lagoon and the project area.
8. Proposed effluent treatment system for molasses based distillery (spent wash and spent lees) as well as domestic sewage and scheme for achieving zero discharge.
9. Spent wash generation form grain based distillery shall not exceed 6 KL/KL of alcohol production. Details of the spent wash treatment for grain based distillery.
10. Capacity for spent wash holding tank and action plan to control ground water pollution.
11. Layout for storage of bagasse/biomass/coal.
12. Details of solid waste management including management of boiler ash.
13. 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.

15.8.21 Expansion of Refinery Plant by adding Refinery Unit (5th Crude Train), Coal Based Power Plant, Ethylene Propylene Diene Monomer Rubber, Poly Isoprene Rubber at Jamnagar Manufacturing Division, HSEF Dept, District Jamnagar, Gujarat by M/s

Reliance Industries Ltd. – Report of **Site Visit undertaken on 11.01.2014 -**Further consideration

Site visit report could not be discussed due to paucity of time.

15.9 Any other Matter

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

Matter could not be discussed due to paucity of time.

15.9.2 Proposed Surface Production facilities of M/s GSPC, located at Ahmedabad District Gujarat (**Amendment in TOR)**

Matter could not be discussed due to paucity of time.

15.9.3 Revised proposal of **Directorate of Hydrocarbons** for environmental clearance for drilling of R & D Wells in KG & Mahanadi Offshore basins under **National Gas Hydrate Programme** (NGHP)

Directorate General of Hydrocarbons, ministry of Petroleum & Natural Gas has informed that NGHP Expedition-02 is a project for offshore exploratory drilling of wells for gas hydrates in deep sea sediments in KG Basin about 35km from coast and at a depth of about 500m. The project consists of logging while drilling (LWD) and coring at about 20 sites in 5 blocks covering an area of 9073.7 Km^2. The locations of the drilling sites have been proposed in May 2013 by M/s ONGC, NGRI and by a team of renowned international experts. For the scientific R & D project, the services of suitable scientific drillship is proposed to be hired, which would carry out the LWD and coring operations at the designated sites during the appropriate weather window in KG and Mahanadi off shore areas in East Coast. The intended drillship for carrying out the LWD & coring programme of NGHP Expedition -02 shall have onboard facilities for carrying out various scientific analysis /studies for characterization of gas hydrate bearing sediments and gas hydrate itself. The drilling/logging will be carried out in a non riser environment and will use only sea water as drilling fluid. No additional muds /chemicals will be used during the R & D logging while drilling and coring project. The minimum distance of the nearest locations from shore is 19 nautical miles and will be drilled in the water depths, ranging from 1400m to 2700m. The maximum depth of penetration will be 500 mbsf.

After deliberations, the Committee desired following information specific to the proposed project:

1. Details of sensitive areas such as coral reef, marine water park, sanctuary and any other eco-sensitive area.
2. Project Description and Project Benefits;
3. Distance from coast line.
4. Climatology and meteorology including wind speed, wave and currents, rainfall etc.

5. Base line status for surface water within 1 km for drilling and coring site, particularly in respect of oil content.
6. Noise abatement measures and measures to minimize disturbance due to light and visual intrusions in case coastally located.
7. Procedure for handling oily water discharges from deck washing, drainage systems, bilges etc.
8. Procedure for preventing spills and spill contingency plans.
9. Procedure for treatment and disposal of produced water.
10. Procedure for sewage treatment and disposal and also for kitchen waste disposal.
11. Procedure for handling solid waste and any waste segregation at source for organic, inorganic and industrial waste.
12. Storage of chemicals on site.
13. Risk assessment and mitigation measures including whether any independent reviews of well design, construction and proper cementing and casing practices have been followed.
14. Handling of spent oils and lubes.
15. Handling of oil from well test operations.
16. H_2S emissions control plans.
17. Details of all environment and safety related documentation within the company in the form of guidelines, manuals, monitoring programmes including Occupational Health Surveillance Programme etc.
18. Restoration plans and measures to be taken for decommissioning of the rig.

15.9.4 Application of **M/s Numaligarh Refinery Ltd.** to waive of the condition No. 3 of Environmental Clearance to NRL vide MoEF's OM No. J-11011/16/90-IA.II dated 31.05.1991.

MoEF granted environmental clearance to M/s Numaligarh Refinery for setting up of petroleum refinery on 31st May, 1991 with the following specific condition No. (iii):

"The national highway shall be diverted away from the Kaziranga National Park and that peortion of this road through and along the National Park (from Jakhlabandh to Bokakhat) to be de-notified from all highway records and handed over to the National Park Authorities for regulating traffic. No movement of personnel, material or equipment for the project shall take place on the existing National Highway 37. The realignment of the National Highway 37 would be finalized in consultation with the Ministry of Environment & Forests so that the wildlife habitat in the nearby Mikir hills and areas rich in biological diversity therein are protected. Work on the diversion of NH37 will start before construction of refinery begins and the Ministry of Petroleum shall ensure that the road is completed before the commissioning of the project."

M/s Numaligarh Refinery Ltd. informed that vide letter No. GM (Project) NRL/EC/8/1294.1 dated 1st January, 1994, NRL had requested MoEF not to link the realignment of NH-37 with the implementation of the Refinery project as NRL had planned to transport equipment and other materials through River ways instead of NH37 passing through Kaziranga National Park. NRL had sought permission for commissioning of the refinery from MoEF enclosing status of all EC conditions including clause No. 3 during March 1999. It was informed that NRL transported all industrial equipment and machinery for the establishment of the refinery by waterways (River Brahmaputra) or railways. Thus, there has been no movement of materials and

equipment thru' NH-37 for the establishment of the refinery. Subsequently the refinery was commissioned in October, 2000. Since commissioning, use of the said portion of the highway by NRL, either to transport raw materials, or to transport finished goods are very limited as crude oil is being transported to the refinery through pipeline and major portion of finished product is being transported either through pipeline of through rail, in fact the operation of NRL has negligible impact on the highway as compared to the overall traffic /transport through the highway. Details of this have been submitted for the NGT Court case – Rohit Choudhary vs UOI & Ors.

According to M/s NRL, irrespective of whether NRL operates or not, this highway is a lifeline of Nagaland, Manipur and eastern Arunachal Pradesh. It has also tremendous strategic importance as it is the main approach to the borders of China and Mayanmar. Since the NH is used by all, NRL should not be discriminated against its usage (although only limited no. of tankers and vehicles of NRL use the NH-37, the transport of oil is by mainly by rail). Further, since realignment of NH-37 does not fall within the purview of MOEF or the PP but in the domain of NHAI of Ministry of Transport and Highways, the PP requested that if found necessary, the MOEF take up this matter with them. Keeping the above in view, NRL vide their letter dated 2nd December, 2013 to MoEF has requested for waiver of condition no. 3 of EC under reference.

The EAC noted that the condition was imposed for development of the project. The project has come up using rail and waterways, The condition is presently no longer required and can be dropped. Additional equipment if any, required to be transported in future shall by rail/waterways only. After deliberations, the Committee noted that presently, construction of M/s Numaligarh Refinery project is over and equipment and machinery for the Plant have been already shifted/installed in the refinery, and hence the said specific condition is redundant and recommended dropping of EC condition (iii) of EC letter dated 31.05.1991. The Committee also recommended that in case of any modernization equipments/machinery to be installed in the refinery in future, the same shall be transferred by waterways/railways only and the NH-37 shall not be used for the purpose.

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LIST OF PARTICIPANTS OF EAC (I) IN MEETING HELD ON 29th-30th JANUARY 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 (29.01.2014)
10.	Dr. Antony Gnanamuthu	Member	A
11.	Prof. C. S. Dubey	Member	P
12.	Shri Niranjan Raghunath Raje	Member	P
MOEF Officials :			
13.	Dr. T.Chandini	Director & Member Secretary	
14.	Shri A.N. Singh	Deputy Director (30.01.2014)	
15.	Shri Sundar Ramanathan	Deputy Director (29.01.2014)	

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ANNEXURE -I

GENERIC TERMS OF REFERENCE (TOR)

1. Executive summary of the project along with justification for the project.
2. Photographs of the proposed and existing (if applicable) plant site.
3. A line diagram/flow sheet for the process and EMP.
4. In case of existing projects seeking expansion, (i) A certified copy of the Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30th May, 2012, on the status of compliance of the conditions stipulated in the environmental clearance and (ii) Status of compliance of Consent to Operate for the ongoing /existing operation of the project 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 indiacted.
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-dimesional view of the location vis-à-vis major landuse features and locations such as Critically Polluted Area(s) and Eco-sensitive Area(s) found within the study area, indicating shortest distance from the site shall be provided.
8. Map showing location of 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 :
    i) Emissions (g/second) with and without the air pollution control measures
    ii) Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height) on hourly basis
    iii) Model input options for terrain, plume rise, deposition etc.
    iv) Print-out of model input and output on hourly and daily average basis
    v) A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
    vi) Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
    vii) Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution shall be inclusive of both existing and expanded capacity.
    viii) No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
    ix) Graphs of monthly average daily concentration with down-wind distance
    x) Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
    xi) Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
31. A plan for the utilisation of waste/fuel gases in the WHRB (if applicable) for generating power shall be presented.
32. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. The alternate method of raw material and end product transportation shall also be studied and details included.
33. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008.
34. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer shall be included.
35. If the site is within 1 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1;10,000 scale indicating the peak and lean River discharge as well as flood occurrence frequency.
36. Details of water requirement, water balance chart for new unit or for existing unit as well as proposed expansion (if expansion). Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
37. Source of water supply and permission of withdrawal of water from Competent Authority.
38. Water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation shall be included. Zero discharge effluent concepts to be adopted.
39. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site shall also be included. Information regarding surface hydrology and water regime shall be included.

40. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
41. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
42. Ground water modelling showing the pathways of the pollutants shall be included
43. 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.
44. 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.
45. A note on the impact of drawl of water on the nearby River during lean season. Permission of competent authority for withdrawl of groundwater.
46. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations to be provided.
47. 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.
48. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
49. 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.
50. Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from any other source shall be included.
51. 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.
52. 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.
53. 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.
54. 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.
55. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
56. 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.
57. 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.
58. Disaster Preparedness and Management Plan including Risk Assessment and damage control needs to be addressed and included.
59. Occupational health:
    a. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
    b. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last

month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.

c. Annual report of heath status of workers with special reference to Occupational Health and Safety.
d. Action plan for the implementation of OHS standards as per OSHAS/USEPA.
e. Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.

60. Corporate Environment Policy
    i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
    ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
    iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
    iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report
61. 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.
62. 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.
63. 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.
64. Plan for the implementation of the recommendations made for the Sector in the CREP guidelines must be prepared.
65. 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.
66. A note on identification and implementation of Carbon Credit project shall be included.
67. 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.
68. A tabular chart with index for point wise compliance of above TORs.
69. The questionnaire for industry sector (available on MOEF website) shall be submitted while submitting EIA-EMP.
70. '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.
71. The TORs prescribed shall be valid for a period of two years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points shall be noted:

i. All documents shall be properly indexed, page numbered.
ii. Period/date of data collection shall be clearly indicated.

iii. Authenticated English translation of all material in Regional languages shall be provided.

iv. The letter/application for environmental clearance shall quote the MOEF file No. and also attach a copy of the letter.

v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.

vi. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report

vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry shall also be followed.

viii. The consultants involved in the preparation of EIA-EMP report after accreditation with Quality Council of India (QCI) /National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA-EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc.

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ANNEXURE-2

ADDITIONAL TORs FOR SYNTHETIC ORGANIC CHEMICALS INDUSTRY

1. Manufacturing process details along with the chemical reactions and process flow chart.
2. Name of all the solvents to be used in the process and details of solvent recovery system.
3. Design details of ETP, incinerator, if any along with boiler, scrubbers/bag filters etc.
4. The details of solid and hazardous wastes generation, storage, 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.
5. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
6. Material Safety Data Sheet for all the Chemicals are being used/will be used. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
7. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
8. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
9. Details of occupational health programme.
   i) To which chemicals, workers are exposed directly or indirectly.
   ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
   iii) What measures company have taken to keep these chemicals within PEL/TLV.
   iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
   v) What are onsite and offsite emergency plan during chemical disaster.
   vi) Liver function tests (LFT) during pre-placement and periodical examination.

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ANNEXURE-3

GENERIC TOR FOR Onshore Oil and 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 utilized 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).

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