

## **MINUTES OF 22<sup>nd</sup> RECONSTITUTED EXPERT APPRAISAL COMMITTEE (INDUSTRY) HELD ON 28<sup>th</sup>-29<sup>th</sup> AUGUST 2014**

**22.1** Opening Remarks of the Chairman

**22.2** Confirmation of the Minutes of the 21<sup>st</sup> Reconstituted Expert Appraisal Committee (Industry) held during **30<sup>th</sup> July – 1<sup>st</sup> August 2014**.

The minutes of the 21<sup>st</sup> Meeting of the EAC was confirmed subject to the following corrections:

Correction:

21.6.5 Para 4, In the sentence "After detailed deliberations, the Committee recommended for the extension of validity of EC by a period of five years with effect from 11.6.2013 subject to environmental safeguards", the words "11.6.2013" to be replaced by the words "12.06.2008"

### **THURSDAY, 28<sup>th</sup> AUGUST 2014**

#### **INDUSTRY-1 PROJECTS**

##### **22.3 Environmental Clearance**

22.3.1 EC for Writing & Printing paper from 60 TPD to 150 TPD and 12.5 Co-gen Power Plant of **M/s Satia Industries Ltd.** at village Rupana, Dist. Muktsar, Punjab (EC)

1. The project proponent, namely M/s Satia Industries Ltd (SIL) and their consultants, namely Eco Chem Sales & Service, Surat (NABET accredited for Pulp & paper Sector). The proposal was granted TOR vide MOEF letter dated 21.07.2011. The application for EC was received dated 03.01.2013. Public Hearing was held on 12.10.2012; however it was chaired by an Officer of the rank of a sub-divisional Magistrate and in view of this, the MOEF had requested for re-conduct of Public Hearing. The second Public Hearing was held on 30.09.2013. The revised EIA-EMP report was received vide letter dated 26.05.2014.

The Plant was commissioned in 1984 using agricultural residues as raw material with an installed production capacity of 20 TPD Writing and Printing Paper. The Plant is located 6km from Muktsar at Muktsar-Malout Road in village Rupana. The latitude is 30o, 25'N and longitude is 74o, 31'E and altitude is 197.67m above MSL. The PP informed that the expansion of the unit from 20TPD to 60TPD of Writing and Printing Paper in the year 2000 did not require an EC as the costs of the expansion project was within Rs 50 crores and operated with a CTO. Compliance of consent conditions has been submitted. It was informed that to comply with pollution control standards, a soda recovery plant based on conventional chemical recovery to treat black liquor produced from agro based pulp mill was commissioned in March 2006. The industry is presently manufacturing eco-friendly paper of different varieties and grades of writing and printing paper. A State-of-the-Art Bio-methanation Plant based on UASB System to treat wastewater was also installed.

2. The present proposal is for Modernisation/Expansion of its existing unit to further enhance production capacity of Writing & printing paper from 60TPD to 150 TPD at village Rupana, Dist. Muktsar, Punjab. The proposal was considered for TOR by the EAC(I) in its meeting held on 29.06.2011 for the appraisal of TORs and TOR was issued dated 21.07.2011 for 150TPD and 12.5 MW Co-gen Plant. The Public Hearing was held on 12.10.2012 at the site. MoEF&CC vide letter dated 21.03.2013 sought fresh P.H. as the earlier P.H. was chaired by an officer of the rank of Sub-Divisional magistrate. The Punjab SPB conducted a fresh P.H. on 30.09.2013.

S.N.	Item	Existing Writing and Printing Paper	Proposed Writing & Printing Paper & Cogen-Unit
1.	Capacity (TPD)	60	150
2.	Land (acres)	36.019	36.019
3.	Water usage (m3/d)	6600	10,500
4.	Water (m3/T of Paper)	110	70
5.	Power Requirement (MW)	4.25 (from Co-gen and PSPCL)	7.5
6.	Mill Effluent Generation (m3/d)	5800	9420
7.	Black Liquor (m3/d)	750	1800
8.	Boilers/APCDs	27 TPH Boiler- Multicyclones with wet scrubber 45 TPH Boiler – Multicyclones with wet scrubber 15TPH Recovery Boiler- ESP	The steam requirement for the enhanced capacity will be met from the proposed 75TPH boiler, which will run on rice husk and biogas generated from UASB digester. After commissioning the 75TPH boiler, the existing 2 boilers will be kept as standby and ESP installed in the 75TPH boiler.
9.	T.G.Units	5MW turbine (2 No.s)	12.5 MW additional turbine will be installed
10.	D.G.Sets	-	-

3. There are no National Parks or Wildlife Sanctuary/Biosphere within 10km radius of the project.

4. The main raw materials along with source and mode of transportation are given below:

S.N.	Raw Material/Chemicals	Consumption for existing Plant (60TPD capacity)	Consumption for Proposed Expansion (150TPD capacity)
1.	Raw materials/Chemicals	155 MT	315MT
2.	Wheat Straw + Sarkanda + Bagasse	-	62MT
3.	Wood & Veneer Chips	120MT	250MT
4.	Rice Husk	29.6 MT	76.36MT
5.	Caustic Soda	6MT	Nil
6.	Chlorine (as element)	Nil	3.75MT
7.	Chlorine Dioxide	-	4.5MT
8.	Oxygen	-	1.8MT
9.	Hydrogen peroxide	15MT	51.2MT
10.	Lime	15MT	35MT
11.	Nutrients: Urea DAP	100Kg, 35Kg	210Kg, 105Kg
12.	Paper Additives	0.965MT	2.405MT

5. The following steps are involved in Writing and Printing Paper Manufacture:

1. Pulping Process:
  - Raw Material Washing
  - Cooking in continuous Digester
  - Washing, Cleaning & Bleaching
2. Stock Preparation
  - Soap Stone & Chemicals Preparation
  - Additional of Soap Stone & Chemicals

3. Paper Making
4. Converting, Finishing & packing
5. Auxiliary Equipments
  - Chemical Recovery
  - Boilers
  - Effluent Treatment Plant

6. SIL is introducing Oxygen delignification and Chlorine dioxide bleaching to eliminate elemental chlorine bleaching, i.e. the purpose of introducing Elemental Chlorine Free Bleaching (ECF Bleaching) in the process is to reduce pollution load as well as AOX level. Current bleaching sequence is being changed to make brown pulp into white up to desired level of brightness. The company has improved the washing of unbleached pulp by using Twin Roll Press Technology.

7. To reduce water consumption & effluent generation drastically, following steps will be taken:
- Utilisation of paper machine black water for washing of pulp in bleaching stages.
  - Maximum circulation of bleaching plant filtrate.
  - Sufficient number of washers for the enhanced bleached pulp processing capacity for 150MT of paper production with minimum chemical losses.
  - Generated black liquor is used in soda recovery plant for recovery of caustic soda.
  - Chlorine dioxide, alkali extraction & Peroxide stage generated filtrate will be used for dilution in same stage before washing.
  - Condensate from paper machine will be re-circulated back to the boiler for steam generation.
  - Utilisation of a portion of treated wastewater from ETP in ETP itself in place of fresh water.

By adopting the aforesaid water conservation measures, the freshwater consumption will reduce to 70m<sup>3</sup>/t of paper produced, which is below the 73m<sup>3</sup>/T standard.

8. To meet the steam requirement, SIL has 2 boilers of 27 tph and 45tph, which run on rice husk and biogas and 15 tph Recovery boiler. The steam requirement for the enhanced capacity shall be met from proposed 75tph boiler, which will also run on Rice Husk and biogas.

9. Power requirement of 4.25MW is met from grid and existing 10MW Co-gen plant with back pressure 5MW turbine and another extraction-cum-condensing steam turbine of 5MW capacity. Additional power requirement for the expansion project will be met from the proposed 12.5 MW Turbine and the existing 2 turbines, which will be kept as standby.

10. One-season data was collected during October-December 2011. Data on AAQ monitoring indicates the following:

Parameter	Range (ug/m <sup>3</sup> )	98 Percentile (ug/m <sup>3</sup> )
PM10	47-96	87.51
PM2.5	24.7-44.2	42.38
SO <sub>2</sub>	5.9 -14.3	12.79
NO <sub>2</sub>	10.1-22.3	19.32

11. The ambient air quality monitoring conducted at 8 locations in the work zone and in the surrounding areas shows that the ambient air quality monitoring of the major AAQ parameters is within prescribed limits vide E(P)A, Rules. In order to avoid fugitive dust emissions from different sources, dust collectors are provided at material transfer points. The major areas of fugitive dust emissions are: (i) Combustion of rice husk and (ii) Burning of Black liquor in incinerator. The major mitigative measures proposed include the following: (i) 75tph Boiler to be equipped with ESP, (ii) Adequate stack heights has been provided for 45 & 27 tph Boilers, which are equipped with multi-cyclones, however, both these boilers would be standby after the expansion and (iii) ESP has been provided

for the Recovery Boiler. Further, roads within the premises have been concreted. Green belt has also been developed.

12. The total water requirement (including existing) shall not exceed 10,500m<sup>3</sup>/day. Of the total water consumption of 10,500m<sup>3</sup>/d, about 9420m<sup>3</sup>/d will be used in plant process, 1000m<sup>3</sup>/d as make-up water in cooling tower/DM water for boilers and 80m<sup>3</sup>/d for domestic use. It was informed that no tube well is proposed to be installed as the entire water requirement of the project would be obtained from Sirhind Canal at a distance of 1km, for which permission from the State Irrigation Dept. has been obtained. Water quality parameters with respect to Ca, Mg, Na, K, iron, Copper, Chromium and Zinc were found to be below permissible limits at 8 locations of monitoring. Certain water quality parameters such as Chloride, sodium, TDS, Total Alkalinity were on found to be on the higher side as compared to level found in canal water. TDS was found to be in the range of 1010-1120 mg/m<sup>3</sup> as against the level of 100.7 in canal water.

13. Details of Treatment of wastewater from different units in the plant:

S.N.	Source of Effluent	Existing Quantity (m <sup>3</sup> /d)	Quantity After Expansion (m <sup>3</sup> /d)
1.	Wet Washing System	2100	3760
2.	Pulp Mill	3100	4110
3.	Paper Machine	Recycled	--
4.	Boiler Cooling Tower	200	625
5.	DM Plant/Evaporators	200	329
6.	Miscellaneous	200	556
	<b>TOTAL</b>	<b>5800</b>	<b>9420</b>

14. Characteristics of Raw Effluent at the Inlet of ETP and Effluents after treatment at ETP:

S.N.	Parameter	Characteristics		Permissible Limits
		Influent	Treated Effluent	
1.	Flow (m <sup>3</sup> /d)	9420	8900	-
2.	pH	7.0 - 7.6	6.5-8.5	6.5-8.5
3.	Suspended Solids (mg/l)	430-500	<50	50
4.	BOD (mg/l)	500-550	<30	30
5.	COD (mg/l)	1400-1500	<250	250

15. Major steps for water conservation include: (i) Installation of the latest technology which includes USAB Plant and two-stage aeration system, (ii) Existing aerobic ETP (in which total mill effluents are treated) consisting of two-stage sludge process. After the treatment process, the concentration of AOX in the treated wastewater is well within the prescribed standards of 1kg per tonne of paper. Provisions of fibre recovery from the paper machine backwater and its reuse to the max. Will be made to minimise consumption of fresh (make-up) water. Presently, the generation of black liquor from the existing pulp mill is approximately 750m<sup>3</sup>/d and after expansion, the quantity of black liquor generated will increase to 1800m<sup>3</sup>/d. The existing chemical recovery plant has a capacity to handle only 150T solids/D and is presently under-utilised to 80T/D. With the proposed expansion, the generation of solids will be about 266.7T/D and the existing Chemical Recovery Unit will be upgraded. By adopting various water conservation measure sin the process, the freshwater consumption shall be reduced to 70m<sup>3</sup>/ton of paper produced against the norm of 75m<sup>3</sup>/T.

16. The effluents (9420m<sup>3</sup>/d) after treatment are discharged into a drain and are used for irrigation of Unit's plantation as well as irrigation of agricultural crops of farmers. An amount of 1800m<sup>3</sup>/d of black liquor from pulp washing is fed into chemical recovery boiler for recovery of chemicals. Of the 9420m<sup>3</sup>/d, 520 m<sup>3</sup>/d are water losses and the balance 8900 m<sup>3</sup>/d are discharged into drains for irrigation of plantation in an area of 207 acres, on which approximately 80,000 trees /shrubs have been planted.

17. The solid wastes generated from the plant operations and disposal are as given below:

S.N.	Soild Wastes	Section	Existing Quantity (MT/day)	Quantity After Expansion (MT/Day)	Disposal Arrangements
1.	ETP Sludge	ETP	2.5 TPD	6 TPD	Collected by small-scale carboard manufacturers for making carboard.
2.	Boiler Ash	Boiler House	35TPD	45TPD	Filling Low lying areas
3.	Lime Sludge	Hypo Preparation	105kg/D	Nil	Store in HDPE bags and disposed off through a Common TSDF at village Nimbua, Tehsil Dera Bassi, dist. Mohali, Punjab. Approx 35MT/Annum sent to TSDF. MOU signed.
4.	Lime Sludge	Cautisizing	25TPD	90TPD	
5.	Used Oil				Stored in drums and disposed off to authorized recyclers and reproprocessors of used oil

An amount of Rs 8 lakhs was spent on CSR during 2011-12. After expansion SIL proposes to spend 5% of the capital cost in the next 5 years on CSR activities as given below:

ACTIVITY	AMOUNT TO BE SPENT (Rs in lakhs)					TOTAL
	1 <sup>st</sup> Yr	2 <sup>nd</sup> Yr	3 <sup>rd</sup> Yr	4 <sup>th</sup> Yr	5 <sup>th</sup> Yr	
Upgradation of Eye Hospital being supported by SIL	15	-	-	-	-	<b>15</b>
Eye Hospital	-	10	10	10	10	<b>40</b>
Health check-ups, mobile vans and in Family Planning	10	10	10	10	10	<b>50</b>
Supporting cultural and sports activities	2.50	2.50	2.50	2.50	2.50	<b>12.50</b>
Scholarships and Books, school uniforms, tuition fees, etc	2.50	2.50	2.50	2.50	2.50	<b>12.50</b>
Water supply & Sanitation, repairs and whitewash of community buildings in nearby villages	5	5	5	5	5	<b>25</b>
Miscellaneous	5	5	5	5	5	<b>25</b>
<b>TOTAL</b>	<b>45</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>205</b>

Of the total capital costs of Rs 41 crores for the expansion project, a total of Rs 11 crores will be spent on environmental management plan and recurring cost will be Rs 4 crores. There are no court cases/litigation pending against the project.

Public Hearing was held on 30.09.2013. The participants of the Public Hearing were in favour of the proposed expansion plan of the company.

The Expert Appraisal Committee after deliberations recommended the project for environmental clearance subject to stipulation of the following specific conditions along with other environmental conditions as given below:

- 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 Chandigarh.
- ii. The project authority shall install ESPs with the boilers to achieve the particulate emission below prescribed limits. The emissions from chemical recovery section shall be controlled through ESPs to meet the prescribed norms.

- iii. Data on ambient air, stack and fugitive emissions shall be regularly submitted online to Ministry's Regional office at Chandigarh, SPCB and CPCB as well as hard copy once in six months and display data on PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> 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 proponent shall obtain prior permission of the State Irrigation Department for use of water from Srihand Canal.
- vi. The company shall limit the water consumption upto 75 m<sup>3</sup>/tonne of product. 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. Adequate steps including use of modern RO/UF based technologies shall be used to increase recycling and reduce water consumption.
- vii. The company shall install Oxygen Delignification (ODL) Plant and use Elemental Chlorine Free Bleaching (ECF Bleaching) in the process and shall maintain AOX below 1 kg/tonne of paper production.
- viii. An amount of 1800m<sup>3</sup>/d of black liquor from pulp washing shall be used in chemical recovery boiler for recovery of chemicals. The existing Chemical Recovery Unit shall be upgraded. The proponent shall adopt other water conservation measures for reducing freshwater consumption, which include the following, to reduce the freshwater requirements below prescribed standards of 75m<sup>3</sup>/T of paper produced.
  - Utilisation of paper machine black water for washing of pulp in bleaching stages.
  - Maximum circulation of bleaching plant filtrate.
  - Sufficient number of washers for the enhanced bleached pulp processing capacity for 150MT of paper production with minimum chemical losses.
  - Generated black liquor is used in soda recovery plant for recovery of caustic soda.
  - Chlorine dioxide, alkali extraction & Peroxide stage generated filtrate will be used for dilution in same stage before washing.
  - Condensate from paper machine will be re-circulated back to the boiler for steam generation.
  - Utilisation of a portion of treated wastewater from ETP in ETP itself in place of fresh water.
- ix. The proponent shall treat the 8900 m<sup>3</sup>/d of wastewater generated and water quality parameters such as Chloride, Sodium, TDS, COD, Total Alkalinity, etc shall meet the standards for discharge notified under Environment (Protection) Rules, 1986, before discharge into drains. In case of discharge for irrigation of plantation, in addition to the aforesaid parameters, the wastewater discharged shall also meet the prescribed standards with respect to Sodium Absorption Ratio (SAR), Boron, etc before irrigation for plantation.
- x. The water quality characteristics of the treated effluents and of groundwater, below the zone of discharge onto the land, shall be got tested at regular intervals through NABL and reports of the same furnished as part of the compliance report submitted to the MOEF, RO Chandigarh. In case the levels exceed the prescribed limits, the effluents shall be treated to prescribed standards and only thereafter discharge onto the land.
- xi. 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.
- xii. 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.

- xiii. Ground water quality study in and around the project area shall be conducted through installation of peizometers in consultation with the State Ground Water Board and report on data on groundwater quality (pre-monsoon) shall be submitted to Ministry's Regional Office at Bangalore, SPCB and CPCB as part of compliance report.
- xiv. The project authority shall dispose of hazardous waste as per the provision of Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008.
- xv. The company shall develop green belt in 33% of the total land as per the CPCB guidelines to mitigate the effect of fugitive emissions. A time-series photographs (pre-monsoon and post-monsoon) of both ground as well as aerial view of the greenbelt (existing and in proposed projects) and submit the same as part of compliance report to RO, Chandigarh.
- xvi. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- xvii. The company shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling.
- xviii. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the pulp and paper sector shall be strictly implemented.
- xix. All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 30.09.2013 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 Bangalore.
- xx. The proponent shall adopt a 'Model Village' under CSR. A total of 5% of the capital cost of the project shall be earmarked towards various activities under CSR Plan under Enterprise Social Commitment and shall be implemented during the first 5 years of the project, which may include 2 % of the net retain profits of the project. The activities may be based on Public Hearing issues and other need based activities identified in consultation with the local communities and District Administration. The detailed CSR Plan along with item-wise and village-wise details along with time-lines shall be prepared and submitted to the Ministry's Regional Office at Chandigarh. Implementation of such program shall be ensured accordingly in a time bound manner. The details shall be uploaded on the company website and also submitted as part of the Annual Report of the company.
- xxi. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

#### 22.3.2 Expansion of existing Integrated Steel Plant (Iron ore Pelletisation, Sinter Plant, SMS/MS Billet, Seamless Pipe) of **M/s MSP Metallics Ltd.** at vill Marakuta, Tehsil & Dist. Jharsugda, Odisha (EC)

The proposal is for Expansion of existing Integrated Steel Plant of M/s MSP Metallics Ltd. at village Marakuta, Tehsil & Dist. Jharsugda, Odisha. The Consultant engaged is Pioneer Enviro Laboratories & Consultants Pvt. Ltd. The proposal was granted TOR vide MOEF letter dated 08.05.2013. Public Hearing was conducted on 27.12.2013. Final EIA-EMP was submitted vide letter dated 24.03.2014. Compliance report of RO, Bhubaneshwar for the existing EC dated 13.07.2009. EC has been granted to the existing vide letter No. J-11011/494/2007-IA.II(I) dated 13.07.2009

for establishment of Sponge Iron (10,50,000 TPA), Pig Iron (10,60,000 TPA), Iron ore Pelletisation Plant (6,00,000 TPA), SMS (10,50,000 TPA), Sinter Plant (4,60,000 TPA), Coal Washery (15,00,000 TPA), Coke Oven (6,00,000 TPA) and Captive Power Plant (85MW). The present expansion proposal is for enhancement of Iron Ore Pelletisation, Sinter Plant, SMS/MS Billet, Seamless Pipe, MS Bars/Rods, Oxygen Gas Plant. The total land in possession is 250 acres. Land optimisation has been done in 251.76 acres of land for the present and expansion proposals, of which 35.20 acres are Govt. land, 191.02 acres are private land through IDCO and 25.54 acres are private land through direct purchase. There is no forestland involved. No tribal land is involved. No additional land is required for the expansion proposal. No R&R is involved. The total capital cost of the expansion proposal is Rs 1279 crores. Public Hearing was held on 27.12.2013. The project is located within 10km of Critically Polluted Area of Ib Valley, Jharsuguda, Odisha. A number of industries and coal mines are located within the 10km study area. The project is however outside the Ib Valley/Jharsuguda CPA where moratorium has been reimposed. The nearest habitation is Bhuripadar at 0.3km from plant site. There are no National Parks, Wildlife Sanctuaries existing within 10km radius of the plant site. A number of RFs such as Katangburi RF, Rajpur RF, Khait RF, Rampur RF, Malda RF, Kurebaga RF exist within 10km radius of the project. Rivers Ib and Bhedan flow at a distance of 1km and 4.3 km respectively. No litigation is pending against the project.

The details of the existing and proposal expansion are given below:

S.N.	Plant/Unit	EC obtained for (in LTPA)	Existing (in LTPA)	Balance (in LTPA)	To be Deleted from EC (in LTPA)	Proposed Under Expansion (in LTPA)	Total (Existing + Expansion) (in LTPA)
1.	Sponge Iron	9.94	2.4 (8x100TPD)	6.64 (4x550TPD)	4.22 (1x300TPD) (2x550TPD)	-	5.72 (8x100TPD) (1x300TPD) 2x550TPD)
2.	Iron ore Pellet	6	6	-		6	12
3.	Iron ore Sinter	4.60	4.60	-		4.60	9.2
4.	Pig Iron	10.60	1.88	6.22 (2x380CM)	-	-	10.60
5.	SMS	10.50	2.60				
6.	Seamless Pipe	-	-	-	-	3	3
7.	TMT Bars & Rods	-	-			2.40	2.40
8.	Coal Washery	15	7	8	8	-	7
9.	Coke Oven	6	0.24	3.36	1	-	5
10.	CPP/Power	85MW	24MW 8MW WHRB 16MW-FBC	36MW 35MW WHRB 1MW-FBC	20MW WHRB	-	
11.	Oxygen Gas	-	-	-	-	465.7Lakh NM3 (approx 6000M3/hr)	465.7Lakh NM3 (approx 6000M3/hr)

Water requirement for the existing project after deletion of the aforesaid unit/capacity will be 8473 KLD and for the proposed project will be 1650KLD and the total water requirement of 10,123 KLD will be sourced from Hirakud Reservoir. PP has obtained permission to draw 10,270 KLD of water from Govt. of Odisha vide Letter No. 18396/WR dated 08.07.2013 of the Dept. of Water Resources, Govt. of Odisha allocating 4.08 cusecs (without assurance during non-monsoon and lean period) for the EC obtained for existing project. No additional water is required. The existing unit is a zero-discharge unit as no process water or cooling water from blow down generation from pellet plant, sinter plant, seamless tube unit and Oxygen Gas unit is discharged as these are closed circuit system. A total of 32 m3/d of wastewater from domestic use will be treated in a septic tank. Solid wastes generated from Rolling Mill –Mill Scales (40TPD), Seamless Pipes Unit (mill Scales – 67TPD) will be reused in induction Furnace and dust from Pellet Plant and Sinter Plant will be reused in Sinter Plant. It was informed that the flyash being generated is being taken by 3 cement units within 10km – ACC, UltraTech and OCL. A total of 85

acres of the total 251.76 acres is earmarked for greenbelt development. The greenbelt will be 15m wide all around the plant periphery and developed as per CBCB Guidelines.

Iron Ore is obtained as raw material from Keonjhar mines. Coal is to be imported. Char produced is fully utilised. The details of raw materials required and mode of transportation are given below:

Raw Material	Quantity (TPA)	Source of Supply	Mode of Transportation
<b>For Iron Ore Pelletisation Plant</b>			
Iron Ore Fines	6,50,000	Sundergarh/Keonjhar Dist.	By rail/road (covered trucks)
Bentonite	6000	Bhuj (Gujarat/Chhattisgarh)	By road (covered trucks)
Limestone	6000	Odisha/MP/Chhattisgarh	By road (covered trucks)
Dolomite	6000		By road (covered trucks)
Coal (imported)	4680	Imported from Indonesia/South Africa	By Sea, Rail, Road (covered trucks)
<b>For Sinter Plant</b>			
LD Slag	8360	In-Plant generation	Through closed conveyor
Iron ore Fines (MG)	312315	Sundergarh/Keonjhar	By rail/road (covered trucks)
Limestone	71515	Odisha/MP/Chhattisgarh	By road (covered trucks)
Dolomite	46425	Jharsuguda	By road (covered trucks)
Coke Breeze	15605	Dhanbad, Jharkhand	By road (covered trucks)
Mill Scale	26520	In-plant generation	Through closed conveyor
BF Flue Dust	8360	In-plant generation	Through closed conveyor
Dust/Sludge	10455	In-plant generation	Through closed conveyor

A total of 44 MW of power is required of which 24 MW would be from WHRB and the balance 20 MW would be sources from public supply (WESCO). AAQ monitoring carried out during the last 3 years within plant premises show that the levels are well below prescribed limits of GSR No. 826(E) dated 16.11.2009: PM<sub>2.5</sub> (14.2 to 48.9ug/m<sup>3</sup>), PM<sub>10</sub>: (23.4 to 81.5 ug/m<sup>3</sup>), SO<sub>2</sub> (6.4 to 16.2 ug/m<sup>3</sup>) and NO<sub>x</sub> (7.2 to 21.5ug/m<sup>3</sup>).

Depth of aquifer is in the range of 31-67m bgl. There is general decline of groundwater over the last 10 years in the range of 0.07-0.60m/yr during pre-monsoon period and in the range of 0.02m-1.50m/y during post-monsoon. There is no history of flooding of the plant site and study area during the past 25 years. Water harvesting measures such as recharge pits, trenches and shafts will be constructed for recharging the shallow aquifer. Analysis of water quality of groundwater indicates that the major water quality parameters are within the limits prescribed by BIS:10500 standards.

Public Hearing was held on 27.12.2013 and issues raised include air pollution generated from the plant, provision of drinking water facilities, health care facility, establishment of an ITI Centre, street lights in village roads and water sprinkling arrangements in village roads, providing employment to the villagers, and implementation of commitments made in the last P.H. It was informed that the 166 provided employment in the company, includes 59 land losers.

The total capital costs earmarked for EMP is Rs 15 crores and recurring cost of Rs 60 lacs/annum. The PP has so far incurred a total of Rs 118.5 lakhs towards CSR. In addition, an amount of 5% of the total capital cost of the expansion project (5% of Rs 1279 crores – Rs 63.95 crores) is earmarked for CSR activities during the next 5 years as part of Enterprise Social Commitment shall be implemented, which may include 2 % of the net retain profits of the project, and based on Public Hearing issues (present and previous) and other need based activities identified in consultation with the local communities and Dist. Admn. through RPDAC meetings, and village-wise and item-wise CSR Plan along with time lines shall be prepared and submitted to the Ministry's Regional Office at Chandigarh.

The Committee recommended that no groundwater shall be used for the plant – either for domestic or for industrial operation. The Committee also desired Skill development through it is for the local youth and special steps for education of the girl child. The Committee desired that the proponent explore that the expansion of Coke Oven Plant be non-recovery with dry coke quenching.

The Committee considered the Certified Compliance report dated 11.07.2014 of the MOEF RO, Bhubaneswar. It was noted that the existing project is not complying with reference to the following:

1. Inter-locking facility has not been provided for the running of ESP.
2. Concreting of roads near the weigh bridge area.
3. Details of flyash utilisation/ash generation are not being submitted.
4. Load based monitoring of gaseous emissions is not being carried out.
5. Proper facility for audiometry test and eye test for all workers has not been created.
6. Uploading of status of compliance on the company website is not being done.
7. Implementation of CREP Guidelines is not being furnished as part of the Compliance report.

The Committee sought an Action Plan for compliance of the aforesaid conditions. The Committee after deliberations decided to further consider the project only after the compliance status is ascertained with respect to the existing project and details thereof received from RO, Bhubaneswar.

22.3.4 Proposed for Integrated Cement Plant of 5 MTPA (2x2.5 MTPA) Capacity with captive Power Plant of 54 MW (2x27MW) and Limestone Mining (5.4 MTPA) of 701.268ha of **M/s Rajputana Properties Pvt. Ltd (a subsidiary of M/s Dalmia Cement Ventures Ltd** at village Mangrol, Taluka Nimbahera, Dist. Chhittorgarh, Rajasthan (EC)

The proposal is for a proposed Integrated Cement Plant of 5 MTPA capacity (2x2.5 MTPA) of Cement Plant and a 54MW (2x27MW) Captive Power Plant. The project is linked to the proposed limestone mine of 701.268ha, which is proposed as captive limestone mine to the Cement Project. TOR for the project was granted on 16.11.2010 and extension of validity of TOR thereafter on 22.03.2013 and an amendment to TOR on 24.12.2013. The Final EIA-EMP Report was submitted on 31<sup>st</sup> July 2013. Baseline data was collected from April-June 2010. However, revalidation of the env. data was sought by collection of one-season baseline data during winter season of 2013-14 (Dec-Feb. 2014), and the proposal is being considered in the present meeting. PP informed that the Consultant – EQMS was accredited for the Cement Sector at the time of preparation of EIA-EMP Report, during conduct of Public Hearing as well as during collection of one-season data. It was further informed that the proposal for limestone mine has been considered in the EAC (Non-Coal Mining) Committee.

The PP made the presentation. It was informed that Clinker line of 10,000 TPD (2x2500TPD) for a total capacity of 3.3 MTPA. The Cement Plant will have a capacity of 5 MTPA (2x2.5MTPA) and the CPP of 54 MW capacity (2x27MW) would meet the power requirement of the project. The total area of the plant and colony is 170ha, which is non-forestland (revenue land). The total water to be used for the proposed project is 13,33,300 m<sup>3</sup>/annum and the recharge potential created would be an estimated 22,55,409 m<sup>3</sup>/d which would be 169% of the proposed water abstraction. The total water requirement for the Integrated Cement Project is 4000m<sup>3</sup>/d which includes 3000m<sup>3</sup>/d for the plant, 350m<sup>3</sup>/d is for drinking and sanitation and 550m<sup>3</sup>/d for CPP (air cooled) and 100m<sup>3</sup>/d is for the mine. It is proposed to meet the water demand from groundwater. Clearance for usage of groundwater has been submitted to State Ground Water Authority on 19.10.2012, which is under process. An alternate option is for intake of water from Gambhiri Dam at a distance of 4.5km. It was clarified that no water will be drawn from River Lilagar as per MOEF amendment of TOR dated 24.12.2013. Provision of rainwater harvesting structures for a total capacity of 22,55,409m<sup>3</sup>/annum and use of rainwater stored in mined out pits will also augment the water requirements. Water holding capacity of reservoir is about 55MCum and live capacity is about 53.5Mcum The Cement Plant-cum-CPP will operate on a zero-discharge basis. Treated water from ETP and STP will be reused in greenbelt development, dust suppression, etc. ESP and Baghouse will be installed in all the major polluting units/Transfer points such as Raw Mill/kiln, Coal Mill, Cement Mill, Limestone Weigh Feeder, Raw Material storage silo, Stockpile, Raw coal hopper, Clinker Silo, clinker hopper, Cement silo, in the Cement Plant. ESP will be installed in Cooler, Boiler, and CPP. Raw material will be stored in silos. About 33% of the total area will be developed as greenbelt.

There are no National Parks, WL Sanctuaries, Biosphere Reserves, etc within the 10km study area. There are a few patches of RF and the nearest RF is Galundia Block (6.08km). There are a few Schedule-I fauna for which a

Conservation Plan approved by Addl. PPCF (WL), Govt. of Rajasthan has been prepared. An amount of Rs 1.63 crores has been earmarked for the same. Major rivers include River Gambhiri (2.6km) and River Satkhanda (0.3km). Other water bodies include Gambhiri dam (4.5km) and Muruliya Pond (0.4km).

Raw materials will be obtained as per details given below:

Material	Source	Distance from Plant (km)	Remarks
Limestone	Captive	1-2	Transport by dumper
Mill scale/iron ore	Indore, Ratlam, and Gwalior	190 to 545	By road
Laterite	Chittorgarh	60	By road
Red Ochre	Chittorgarh	30	By road
Gypsum	Nagaur/Bikaner	350 to 550	RSMML/FAGMIL
Flyash	Kota/Baran,Banswara, Kawai	175-275	By road
Fuel-Coal	SECL/WCL Coalfields Import from South Africa	815	By Rail
Petcoke	Jamnagar, Gujarat	700	By rail

The CPCB Environmental Guidelines for Cement sector will be followed. Recommendations of CPCB Guidelines for Co-processing of hazardous waste in Cement Industry will be followed.

AAQ monitoring of parameters such as PM10, PM2.5, SO2 and NOx indicates that the AAQ values of PM10 and PM2.5 at Satkanda and Phalwa were on the higher range, exceeding the limits – PM<sub>10</sub>- 98 -157ug/m<sup>3</sup>, PM<sub>2.5</sub> – 47.5 – 86.6, SO<sub>2</sub> – 8.8-18.9 ug/m<sup>3</sup>, NO<sub>x</sub> – 15.2 – 37.1 ug/m<sup>3</sup>. It was stated that this was due to different road construction activities such as widening of NH79 (1.9 -3.5km (W) from plant), construction of pucca roads, which were in progress. However, AQIP Modelling carried out on the proposed project indicates that the impacts of the proposed project on the AAAQ would be negligible.

S.N.	Unit/Process	Environmental Control measure
1.	Crusher (for limestone & Correctives & coal)	Bag Filters/Dust suppression system to control fugitive dust from crusher and transfer points
2.	Storage (limestone, Correctives & coal)	Installation of bag filters at raw mills and cement mills feed bin.
3.	Raw mill drying and grinding system	Main bag house common for Pyro section for de-dusting of raw mill gases after mill cyclones. Bag House will be designed to meet the required standards.
4.	Coal storage	A covered circular stockpile has been proposed for 15 days storage. Water spray system would be installed.
5.	Coal Drying & Grinding	A bag filter will be used for de-dusting of gases. Bag filter will meet the required standards.
6.	Clinker Cooler	A new generation, heat recuperation efficiency (minimum 75%) clinker cooler will be installed. A cooler ESP and Cooler ESP fan will also be installed for de-dusting and cooling cooler exhaust gas. In addition, water spray system also will be installed in case cooler gas temp. rises more than 300°C.
7.	Cement Grinding System	Bag House.

NH-79 which is about a km distance form the proposed plant will be used for transportation of major raw materials. Approach road to NH-79 will be constructed by the PP. Avenue plantation will be developed along the approach roads and roads within the plant. A total of 56.1 ha of the plant area will be developed as green belt. Selection of species and green belt development will be as per CPCB Guidelines.

Solid Wastes generated from the project and their utilisation is given as per details below:

S.N.	Type of Waste	Method of Disposal
1.	Cement Dust - Cinkerisation - Cement Grinding & Packing	Recycled back into the process
2.	Refractory Bricks	Sold
3.	Solid wastes generated from: - Transport in roads - Civil construction	Dumped in low-lying areas.
4.	Municipal solid wastes	Biodegradable wastes
5.	ETP sludge	Dried & Disposed
6.	STP sludge	Used as manure in greenbelt
7.	CPP - Flyash - Bed Ash	Flyash will be transported pneumatically to the cement plant Flyash silo and will be used for manufacture of PPC. Bed ash will be collected from overflow spouts into ash cooler Hopper and will be conveyed pneumatically to bed ash storage silo for use as Boiler Bed Material.

The project does not involve displacement. Land is yet to be acquired for the project. However, consents have been obtained from the land owners. The process of land acquisition is yet to begin as land prices are yet to be fixed jointly by RPPL and land owners under the leadership of the local admn.

The capital cost of the project is Rs 2143 crores. An amount of Rs 40 crores is earmarked for CSR activities over a period of 10 years and Rs 79 crores towards EMP as capital costs and Rs 6.25 crores as recurring costs. CSR will broadly cover the areas of education, healthcare, livelihood issues ad environment and infrastructure.

The main issues raised in Public Hearing covered the issues of employment and livelihood, environmental pollution, infrastructure development, sanitation, animal husbandry and land acquisition.

The EAC desired that instead of use of surface water or groundwater, the entire source of water for the cement plant should be from mine water and rainwater harvesting. The EAC sought a copy of the letter of approval of the Wildlife Dept of Govt. of Rajasthan. The Committee stated that 5% of the total capital cost for the first 5 years of CSR is Rs 200 crores and a comprehensive CSR Plan with village-wise, activity-wise details should be prepared in consultation with the local villages and local admn. and furnished to Ministry.

The Committee observed that there was a lot of opposition to the proposed project during Public Hearing. The EAC also noted that the project is pre-mature as land acquisition is yet to begin for the Integrated Cement project. Although it was clarified that a mining lease for the captive limestone has been granted, the extent of land acquisition completed for the mine is not given. The Committee observed that since this is an Integrated Cement-cum-Limestone Mine Project, the operation of the Cement project is tied to the operation of the captive limestone mine. The EAC after deliberations decided that the project is pre-mature and should be delisted and considered only after the project proponent has acquired at least 70-80% of the total land and details thereof furnished to the Ministry and for consideration of the Committee.

22.3.5 Proposal for Expansion of Integrated Cement Plant (clinker 3.6 MTPA to 7.2 MTPA; Cement 5 MTPA to 10 MTPA) by Installation of Line-II of **M/s Reliance Cementation Pvt. Limited** at vill. Bharauli & Itahara, dist. Satna Madhya Pradesh (EC)

The proposal is for expansion of Integrated of cement Plant for enhancement of clinker production from 3.6 MTPA to 7.2 MTPA and Cement from 5 MTPA to 10 MTPA by installation of Line-II under phase-II by installing an additional unit of 3.6MTPA clinker and 5MTPA of cement plant within the existing premises. TOR was granted vide letter No. J-11011/375/2011-IA.II(I) dated 18.12.2012. The EIA-EMP Report was prepared by Bhagvathi Ana Labs Pvt. Ltd., Hyderabad, which is a NABET accredited Consultant for Cement Sector. Vimta Labs, Hyderabad collected the baseline data during winter season 2012-13. Public Hearing was held on 14.07.2013 at Government New

Primary School, Lohi village, Tehsil Maihar, Dist. Satna, M.P. EC for the existing project was obtained vide letter No.J-11011/500/2008-IA.II(I) dated 23.03.2011. Certified Monitoring Report of RO Bhopal has been received vide letter dated 05.08.2014 from MOEF RO, Bhopal.

The details of the expansion project are given below:

S.N.	Parameter	Existing (Line-I)	Proposed (Line-II)	TOTAL
1.	Clinker production (MTPA)	3.6	3.6	7.2
2.	Cement Production (MTPA)	5	5	10
3.	Auxilliary Fuel	Furnace Oil, High Speed Oil		
4.	Land Requirement (ha)	150	16	166
5.	Water Requirement & Source	7900 m3/d Groundwater	1380m3/d Groundwater	9280m3/d Groundwater
6.	Power Requirement	75mw	60mw	135mw
7.	Power Source	CPP/Nearest grid sub-station		
8.	Project Cost	Rs 2500 crores	Rs 1663 crores	Rs 4163 crores
9.	Environmental protection cost	Rs 200 crores	Rs 135 crores	Rs 335 crores

The existing and proposed facilities are as given below:

S.N.	Equipment/Facility/Unit	Equipment Capacity	
		Existing Plant (Line-I)	Proposed Expansion (Line-II)
1.	Stacker	2000tph	
2.	Reclaimer	1000tph	1000tph
3.	Raw Mill	2x475tph	2x475tph
4.	Coal Crusher	1x1900tph	
5.	Coal Mill	1x110tph	1x110tph
6.	Rotary Kiln (Pyro process)	10,000tpd	10,000tpd
7.	Cement Mill	2x240tpH	2x240tph
8.	Packing Plant	4x240tph	
9.	Storage Clinker Silo	1x70,000	1x70,000t
10.	Storage Cement silo	3x10,000t	2x10,000t
11.	Storage Flyash Silo	1x7000t	

There are no eco-sensitive areas such as biospheres, wildlife sanctuaries, National Parks, etc within 15km. NH-7 is at a distance of 1.2 km from plant site. Hardua RF exists at a distance of 13.4km (SE) and PF is at 2.1km (NW). The expansion project. The total plant area is 166 ha of which the proposed expansion will be carried out in 16ha. No forestland is involved. No additional land is required for the expansion proposal. Captive limestone mines – Sadhera Limsetone Mine (3.5 MTPA), Two Salaiya Limestone Mines (2 MTPA) and Bindhi Limestone Mine (1 MTPA) for the Plant are at a distance of 5.6 km, 7 km and 9.7 km.

The total water requirement for existing and proposed unit is 9280m3/d which will be met through groundwater. Permission for CGWA abstraction of 9500m3/d has been obtained. Water requirement for the existing project is 2250m3/d of which 690m3/d of wastewater is recycled and reused. Water level in the area is in the range of 9.5m-10m bgl near village Bandhi, Salayia, Barroh. There will be no process waste water from plant operations and the plant will be operated on a zero-discharge basis. Domestic sewage generated will be treated in a STP and used for green belt development. Three ponds serving as rainwater harvesting structures of a total combined capacity of 9000m3 are being deepened. In addition, two ponds of a capacity of 12,000m3 and 22,000m3 are proposed in the plant area. A check dam has been constructed across River Tumas with a storage capacity of 3 lakh m3 storage capacity.

The existing CPP and grid source will also provide additional power for the expansion proposal. Installation of a 11.33 MW capacity WHRB is being explored. Use of High calorific wastes such as tyre chips, plastic wastes and pet coke have been identified and permission is being sought from MPPCB.

Details of raw material requirement and transport are as given below:

S.N.	Raw Material	Quantity (MTPA)		Total (MTPA)	Source	Distance from Plant (in km)	No. of trips/day
		Line I	Proposed Line-II				
1.	Limestone	5.4	5.4	10.8	Three captive limestone mines	7.5km by belt and conveyor/road	-
2.	Flyash	1.75	1.75	3.5	Reliance's Power plant at Sasan and Proposed CPP	250km By road/rail	200-400 bulkers/day
3.	Coal	1.6	0.6	2.2	SECL/NCL/CCL/Open market	250km by rail	
4.	Gypsum	0.25	0.25	0.50	Rajasthan, Chemical gypsum from nearby industries	700km By rail/road	20-40 Trucks/day
5.	Laterite	0.07	0.07	0.14	Katni/Maihar	75/15 by rail/road	14-20 trucks/day

The pollution control measures include:

- i. Installation of online particulate monitoring
- ii. Provision of process interlocking system
- iii. Collection of dust in bag house and bag filters.
- iv. Lime injection system will be provided to reduce SO<sub>2</sub> emissions.

Monitoring of AAQ parameters indicates that the levels of air quality parameters such as PM<sub>10</sub> (61.4ug/m<sup>3</sup>), PM<sub>2.5</sub>, SO<sub>2</sub> (18.2ug/m<sup>3</sup>) and NO<sub>x</sub> (20.5ug/m<sup>3</sup>) are within prescribed limits. Maximum incremental concentrations for PM<sub>10</sub>, SO<sub>2</sub>, and NO<sub>x</sub> are 2.5ug/m<sup>3</sup>, 1.6ug/m<sup>3</sup> and 2.1ug/m<sup>3</sup> respectively at a distance of 2.2.km in SE direction. Water quality parameters in the study area are in compliance with the standards. A green belt will be developed in an area of 55 ha (33% of the total land).

It was informed that pet coke is being obtained from nearby refinery to be used as fuel. Flyash is being store in silos. All material (Cement and clinker) are also stored in silos. Limestone is stored in covered sheds. Finished products of 2 MTPA clinker and cement would be transported by trucks (by road).

Capital cost of the project is Rs 1663 crores. A total of Rs 135 crores will be incurred as capital costs on pollution control measures. About Rs 80 crores (5% of the total project cost) will be spent on CSR. The PP has submitted the certified compliance report, which were discussed. The Committee noted that the conditions in the EC are being complied with.

Public Hearing was held on 14.07.2013 and issues raised include direct/indirect employment, rainwater harvesting, increase tree plantation, sanitation in villages. The PP informed that these have appropriately incorporated in the CSR Plan prepared for the project. There is no litigation/court case on the project. There are 526 land losers and all will be provided employment, of these 317 have been already employed and 48 are being trained.

The Committee considered the Certified Monitoring Report of RO, Bhopal. Although most of EC conditions have been complied with, the Committee noted that certain conditions such as utilisation of high calorific hazardous wastes in the cement kiln, creation of rainwater harvesting structures. The EAC desired that the PP enter into an MOU with potential generators of such wastes for its use with necessary statutory approvals. The EAC desired that rainwater and recycled water should be used to the maximum extent possible and only the balance should be

drawn from groundwater and in this regard a detailed Water Utilisation and Management should be prepared and submitted to MOEF RO, Bhopal.

After deliberations, the Committee recommended the project for environmental clearance subject to stipulation of the following specific conditions and any other conditions:

- i. The expansion project shall comply with the new MOEF Standards for particulate emissions of 30mg/Nm<sup>3</sup> for Cement sector by installing adequate air pollution control system viz. Bag filters and stacks of adequate height etc. Data on ambient air, fugitive and stack emissions shall be submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB regularly.
- ii. The proponent shall utilise rainwater and recycled water to the maximum extent possible and only the balance shall be drawn from groundwater with prior permission from CGWA and in this regard a detailed Water Utilisation and Management should be prepared and submitted to MOEF RO, Bhopal.
- iii. Gaseous emissions including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines/Code of Practice issued by the CPCB should be followed.
- iv. The company shall install adequate dust collection and extraction system to control fugitive dust emissions at various transfer points, raw mill handling (unloading, conveying, transporting, stacking), vehicular movement, bagging and packing areas etc. All the raw material stock piles should be covered. A closed clinker stockpile system shall be provided. All conveyers should be covered with GI sheets. Covered sheds for storage of raw materials and fully covered conveyers for transportation of materials shall be provided besides coal, cement, fly ash and clinker shall be stored in silos. Pneumatic system shall be used for fly ash handling.
- v. Asphaltting/concreting of roads and water spray all around the stockyard and loading/unloading areas in the cement plant shall be carried out to control fugitive emissions. Regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM and RSPM such as haul road, loading and unloading points, transfer points and other vulnerable areas. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
- vi. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash should be transported in the closed containers only and should not be overloaded. Vehicular emissions should be regularly monitored.
- vii. Total ground water requirement for the cement plant shall not exceed 9280m<sup>3</sup>/d. All the treated wastewater should be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge should be adopted.
- viii. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- ix. All the bag filter dust, raw meal dust, coal dust, clinker dust and cement dust from pollution control devices should be recycled and reused in the process used for cement manufacturing. Spent oil and batteries should be sold to authorized recyclers /reprocessors only.

- x. Green belt shall be developed in at least 33% area in and around the cement plant as per the CPCB guidelines to mitigate the effects of air emissions in consultation with local DFO.
- xi. At least 5 % of the total cost of the project of the initial 5 years shall be earmarked towards the Enterprise Social Commitment based on locals need and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner. Activities shall include capital cost for a primary health centre, and a school. The PP shall also undertake skill development of the youth in local communities. The company shall earmark 2% of the retain profits towards CSR for life of the project.
- xii. 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.
- xiii. A Plan for use of hazardous wastes to be used in cement kiln shall be prepared and implemented, after obtaining necessary approvals under the E(P)A Rules from the statutory authorities. PP shall enter into an MOU with potential generators of such wastes for its use with necessary statutory approvals.
- xiv. A Plan for 100% utilisation of flyash shall be prepared and implemented.

22.3.6 Expansion of Integrated Cement Plant (from 2.5 MTPA to 8.25 MTPA capacity) and WHRB (from 7 MW to 27 MW) and CPP (from 30 MW to 160 MW) of **M/s Chettinad Cement Corp. Ltd.** at villages Sangem & Kallur, Taluka Chincholli, Dist. Gulbarga, Karnataka (EC)

The proposal is for seeking EC for Expansion of Integrated Cement Plant (from 2.5 MTPA to 8.25 MTPA capacity) and WHRB (from 7 MW to 27 MW) and CPP (from 30 MW to 160 MW) of **M/s Chettinad Cement Corp. Ltd.** at Dist. Gulbarga, Karnataka. The PP has engaged Pioneer Enviro Laboratories and Consultants Pvt. Ltd. (NABET accredited) for preparation of EIA-EMP Report for a common EIA-EMP prepared for Cement Plant with WHRB, CPP & Captive Limestone Mine and a common public hearing held thereon on 09.10.2013 vide MOEF O.M. dated 24.12.2010. Capital cost of the project is Rs 2010 crores. The existing project obtained EC vide letter No. J-11011/57/2011-IA.II(I) dated 21.04.2011 and 05.03.2012. TOR was granted for the proposed expansion vide letter of even no. dated 21.04.2011, which was extended by a year vide letter dated 05.07.2013.

The details of the proposed expansion are as given below:

S.N.	Facility/Project	Existing	Proposed	Total
1.	Captive Limestone Mines (MTPA)	4	6	10
2.	Cement Plant (Ordinary Portland Cement, Portland Pozzolona Cement, & Portland Slag Cement) (MTPA)	2.5	5.5	8.25
3.	Waste Heat Recovery Boiler (WHRB) (MW)	7	20	27
4.	Captive Power Plant (MW)	30	130	160

The total land area for the project is 177.28 ha of which Plant is 133.55 ha and colony is 43.73 ha. Entire land is private land. No forestland is involved. River Mullameri flows at a distance of 0.4km. A number of cement and

other industries are located within 10km of the project site. A few RFs exist in the 10km study area – Chincholi RF (5.8km), Ramachandrapur RF (8.6km) and Gingurti RF (9.2km). Chincholi WL Sanctuary is found at a distance of 5.8 km from the plant site. The WL Sanctuary has been notified on 28.11.2011. No R&R is involved as expansion is within existing premises. No litigation/court cases are pending against the project.

The total water requirement for the expansion project is 2940 m<sup>3</sup>/d includes make-up water for Cement Plant, Captive Power Plant, Central Workshop, Township and domestic water and will be sourced from groundwater and River Mullameri flowing at a distance of 0.4km from the project site. The total water requirement for the proposed expansion will be 130m<sup>3</sup>/d for dust suppression and for greenbelt development, which will be sourced from mine pit water and groundwater source. Ground water level in the area is in the range of 4.4m-26.6m bgl (Kallur (26.6m), Sangam Kallar (7.4m), Soma Lingadahalli (8.2m), Chikka Lingadahalli (4.4m) and Bhaktampalli (8.62m) bgl respectively). Permission for drawl of groundwater for the existing operations has been obtained from Central Ground Water Board Authority dated 01.07.2013 for abstraction of 900m<sup>3</sup>/d of groundwater. Permission for use of groundwater for the expansion project shall be obtained from CGWA. Permission for drawl of water from River Mulalmari to the extent of 2500m<sup>3</sup>/d (0.089Mcf or 21.36 MCft for 240 days in year) has been obtained vide letter No. KNNL/CEG/TA-2/AE-1/2010-11/559 dated 09.05.2010. The total wastewater generation Cement Plant and colony of the expansion project will be 975m<sup>3</sup>/d (including mines). The treated wastewater will meet the standards prescribed by KSPCB.

S.N.	Process/Unit	Wastewater Generation (Existing project) after Treatment (m <sup>3</sup> /d)	Wastewater Generation after Treatment (Proposed expansion project) (m <sup>3</sup> /d)	Total Wastewater generation after Treatment (m <sup>3</sup> /d)
1.	Process wastewater from Cement and Plant	156	831	987
2.	Domestic wastewater from Plant, Mines & Colony	150	148	298
	<b>TOTAL</b>	<b>306</b>	<b>979</b>	<b>1285</b>

The entire 1285 m<sup>3</sup>/d of treated wastewater generated, an amount of 250m<sup>3</sup>/d will be utilised for cooling cement plant equipment and for handling ash, 127 m<sup>3</sup>/d will be used in dust suppression in CHP, 908 m<sup>3</sup>/d will be used for greenbelt development. No effluent is being discharged outside the premises.

AAQ monitoring of stations at 12 locations indicate that the levels of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> are within prescribed limits. AQIP Modelling indicates a GLC concentration of PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub> to be 64.1, 47.5 and 40.1 ug/m<sup>3</sup> respectively due to the proposed expansion, which is within prescribed limits. The major air pollution control measures include: provision of ESP in Stack of Cement Cooler and Power Plant Boiler, provisions of bag houses to kiln/raw mill, coal mill and cement mill. Bag filters and vent will also be provided to coal crusher, silos and transfer points of conveyors. Dust suppression systems will be provided at raw material unloading areas. All internal roads will be concreted/black topped. Adequate truck parking area will be provided. Fugitive emissions will be regularly monitored as per GSR 414(E) dated 30.05.2008 and the compliance reports submitted. Transportation of cement will be by rail/road. Of the total area of 177.28 ha, an area of 51.5 ha (33% of the total area) will be developed as green belt as per CPCB Guidelines. A 15m wide greenbelt will be developed all around the plant. It is proposed to utilise high calorific wastes such as chemical wastes, distillation residues, refuse derived fuels, etc as alternate fuels based on availability and composition. The proposed cement plant kiln will be provided with a flexible fuel feeding system to enable use of hazardous wastes such as oil sludge, cut tyres, etc.

A WHRB for recovery of heat from the rotary kiln of the cement unit would be installed to generate 20MW power, in addition to the existing WHB of 7MW capacity.

Flyash would be utilised in Cement Plant and any balance would be sent by road to Raichur TPP.

Chincholi RF exists within 10km of the project site and Chincholi Wildlife Sanctuary at a distance of 5.8km was notified as a WL Sanctuary on 28.11.2011. As the WL sanctuary was not in existence at the time of obtaining the EC – J-11011/399/2008-IA.II(I) dated 18.06.2010, there was no requirement for obtaining WL clearance from the NBWL. A number of Schedule-I fauna such as Black Buck, Indian Wolf, Leopard, Indian Mud Turtle, Monitor Lizard, Python etc are found in the RF and WL Sanctuary. An application for NBWL clearance has been made to CCF on 09.05.2013 for the existing project and on 16.01.2014 for the expansion project. A Wildlife Conservation Plan for the existing project is under implementation for Rs 250 lakhs and for regeneration of degraded forest in Sy.No.23/1 of Ganganpalli of Chincholi Taluk (total cost of WL Con. Plan = Rs 306.80 lakhs). An additional Rs 25 lakhs is proposed for implementation of the WL Plan within the 10km radius of the project. This includes: construction of a check dam (Rs 5 lakhs), construction of 2 ponds (1 lakh), Construction of nala bud (2) of Rs 1 lakh each, eradication of exotic species /weeds and sowing of grass (Rs 15 lakhs) and other measures (Rs 2 lakhs). The application dated 16.01.2014 has been made to the CCF, Gulbarga for forwarding the recommendations of the SWLB to the SCWL of the NBWL for the proposed expansion.

The total cost of the project is Rs 4967 crores and cost of proposed expansion project is Rs 2010 crores, of which 5% (Rs 100.5 crores) is earmarked for CSR for the next 25 years and an expenditure of Rs 4.02 crores is proposed per year. The capital cost of environmental management plan is Rs 60 crores and the recurring cost is Rs 2 crores. It was stated that there are 159 land losers, but no displacees. Of the 159 land losers, 80 have been employed so far.

Public Hearing was conducted on 09.10.2013 Chaired by Deputy Commissioner, Gulbarga in the premises of the project site. The people who attended the P.H. have supported the project. However, some complaints have been also received particularly regarding the proposed expansion vis-à-vis the operation of the plant near the WL Sanctuary, use of river water of Mullameri, developmental activities in the area and providing employment. The issues raised in the P.H. include measures for pollution control, welfare measures, roads, land purchase rate and compensation, employment, etc. It was clarified that no additional land is required for the expansion project. The PP has provided details on how these have been /are being addressed.

The Committee after deliberations recommended the project for environmental clearance subject to stipulation of the following specific conditions along with other environmental conditions as given below:

- i. The expansion project shall not be undertaken without prior approval of the Standing Committee of the National Board of Wildlife.
- ii. The expansion project shall comply with the new MOEF Standards for particulate matter, SO<sub>2</sub>, NO<sub>x</sub> for Cement sector by installing adequate air pollution control system viz. Bag filters and stacks of adequate height etc. Data on ambient air, fugitive and stack emissions shall be submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB regularly.
- iii. The proponent shall provide an interlocking system to ensure that whenever the ESP is not in operation, the raw material feeder will automatically stop and restart only with the restart of ESP.
- iv. The proponent shall monitor the groundwater regime of the study area, by installing peizometers in and around the impact zone of the project site and collect data of groundwater (level as well characteristics) and the same shall be furnished as part of the Compliance Report to MOEF, RO, Bangalore. In case of declining levels, prior approval shall be obtained from the State Ground Water Board.
- v. The proponent shall obtain prior permission from the State Irrigation Dept, Govt. of Karnataka for use of water from River Mullumari after undertaking a study of use of the River water by competing users and availability, particularly during season.

- vi. The proponent shall obtain prior approval of the CGWA for drawl of groundwater for the expansion project.
- vii. The proponent shall create rainwater harvesting structures including creation of 6 ponds of a total combined capacity of 902,000m<sup>3</sup>. The total water requirement for the Cement-cum-Power Plant shall be supplemented by the rainwater collected and from mine pit water, particularly during lean season period.
- viii. The proponent shall not change/modify the natural drainage of the Kulwala Nadhi, Dindi Vagu and Mullaimari River flowing within/close to the plant site.
- ix. The proponent shall adopt the unit on zero-discharge basis. No effluents shall be discharged outside the premises. The proponent shall adopt water conservation measures including reuse and recycle of water at every stage/process in the Plant (cement/power) operations.
- x. The proposed cement plant kiln will be provided with a flexible fuel feeding system to enable use of hazardous wastes such as oil sludge, cut tyres, etc.
- xi. The proponent shall examine and prepare a plan for utilisation of high calorific wastes such as chemical wastes, distillation residues, refuse derived fuels, etc as alternate fuels based on availability and composition. For this, the proponent shall identify suitable industries with such wastes and enter into an MOU for long-term utilisation of such wastes as per the E(P) A Rules, 1986 and with necessary approvals.
- xii. The proponent shall implement a Plan for 100% utilisation the fly ash from the Power Plant in the Cement Plant.
- xiii. The proponent shall prepare a detailed CSR Plan for every next 5 years for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Health, Skill Development and infrastructure requirements such as strengthening of village roads, avenue plantation, etc) activities in consultation with the local communities and administration. The CSR Plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the Plan shall be submitted as part of the Compliance Report to RO, Bangalore. The details of the CSR Plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company.
- xiv. Landless labour and small farmers also require to be compensated and details of these to be submitted as part of the Compliance report submitted to MOEF RO, Bangalore.
- xiv. The proponent shall implement a Wildlife Conservation Plan prepare in consultation with the Wildlife Dept. Government of Karnataka. A separate budget head shall be created and the annual capital and revenue expenditure of the Plan shall be submitted as part of the Compliance Report to RO, Bangalore. The details of the WL Conservation Plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company.

## **22.4 Further consideration Cases**

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

The proposal is for expansion of the project wherein the following facilities and production capacities are proposed:

S.N	Proposed Facilities	Production Capacity
1.	Rolling mills	1.2 Mt/yr
2.	Billet casters	1.24Mt/yr
3.	Basic oxygen furnaces	1.26 Mt/yr
4.	Pipe Plant	0.4 Mt/yr
5.	Blast furnace	1.82 Mt/yr
6.	Sinter plant	2.75 Mt/yr
7.	Pellet Plant	2.0 Mt/yr(existing 0.8 Mt/yr + proposed 1.2 Mt/yr)
8.	Beneficiation Plant	4.28 Mt/yr
9.	Coke plant	0.88 Mt/yr
10.	Power plant	160 MW
11.	Calcination plant	640 t/d
12.	Dolomite Calcination plant	500t/d
13.	Oxygen plant	1000 t/d

The proposal was considered in the EAC(I) meeting held on 19<sup>th</sup>-20<sup>th</sup> February 2014, wherein the EAC(I) had sought the following clarification/additional information:

- i. Copy of the EC granted by SEIAA – Karnataka along with the certified monitoring report from RO-Bangalore;
- ii. Firm iron ore linkage documents;
- iii. Specific agreement made by M/s Bhatia Global Trading Limited with the coal mines at Indonesia for the coal supply along with the mode of transportation from place of import to the plant site;
- iv. Details of coal supply agreements made by M/s Bhatia Global Trading Limited with other firms in India for along-term supply of coal;
- v. Socio-economic survey and R&R action plan;
- vi. Recheck the Ambient Air Quality data and additional one season baseline data collection;
- vii. Revised layout plan incorporating the rain water harvesting structures; and
- viii. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) for the initial 5 years and 2% of retain profit thereafter for CSR based on local needs and village wise action plan with financial and physical breakup/details should be prepared over a period of ten years and shall be submitted.

The PP had furnished these details vide letter dated 07.08.2014 which were further considered. The consultant engaged namely; Environmental & Power Technologies P Ltd., Bangalore has a stay order in W.P. 34120/2013 dated 18.01.2012. With reference to point (i), it was informed that an EC has been granted by Forest, Ecology & Environment Dept, Govt. of Karnataka vide letter No. FEE 64 ECO 2010 dated 18.03.2011 for the establishment of an Iron Ore Pelletisation Plant and a certified Monitoring Report after inspection of the unit on 29.05.2014 thereon has been sent by MOEF, RO, Bangalore, which indicated conditions are complied with. In regard to details of firm iron ore linkage, it was stated that following the SC Order, the Govt. of Karnataka have introduced e-auction and iron ore linkage agreements are no longer valid. Further, the PP has submitted 15 applications for allotment of new iron ore mine leases which are under consideration of the Govt. of Karnataka. However, even if the iron ore is mined from own mines, they will be available only through e-auction.

The project is located 1.1km from backwaters of Tungabhadra Dam. The level of TB Dam is 498m above MSL and the project is at an elevation of 510-520m above MSL. Hence there is no possibility of the water from the Dam flooding the project.

In regard to point (ii), expressed inability to provide details of source of mines/Agreements for long-term supply was not provided by M/s Bhatia Global Trading Ltd as part of Non-Disclosure Agreements. However, the PP is also

exploring another option of obtaining coal from a coal trader in China, namely, China National Metal products Co. Ltd. and details of an 'in-principle' agreement vide letter dated 15.05.2014 for supply of coal was furnished. The details of PAFs were provided as per which a detailed socio-economic survey carried out, the number of PAPs from the villages of Hirebaganal (58), Kunikere (409), Kunikere Tanda (156), Lachankere (86), Chikkabaganal (153). The PP furnished a detailed R&R and CSR Plan for the project area.

With reference to Point (vi), the PP collected a fresh baseline data during March 2014 to May 2014 at 10 locations. The monitoring was carried out by M/s Richardson & Cruddas with NABET accreditation. The values of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>x</sub> and NO<sub>x</sub> were found to be within prescribed limits.

With reference to point (vii), the PP informed that a detailed CSR Plan has been prepared for 5% of the capital cost of the project amounting to Rs 308 crores towards Enterprise Social Responsibility as given below:

Particulars	1 <sup>st</sup> Yr	2 <sup>nd</sup> Yr	3 <sup>rd</sup> yr	4 <sup>th</sup> yr	5 <sup>th</sup> Yr	Grand Total
Education	41.75	37.22	55.94	43.58	39.46	217.95
Community & Women Empowerment	7.175	3.175	3.175	2.925	2.925	19.375
Health care	0.92	15.92	1.592	11.02	10.92	51.70
Infrastructure Development	2.575	1.845	1.845	1.925	1.1135	9.255
Agriculture & Environment	1.7875	1.9175	1.9175	1.9275	2.18	9.720
	<b>5.4075</b>	<b>60.0775</b>	<b>75.7157</b>	<b>61.3775</b>	<b>56.62</b>	<b>308.0</b>

The PP informed that it will comply with the Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities. A comprehensive CSR Plan has been prepared for the project. The capital cost for EMP would be Rs 325 crores with an annual recurring cost of Rs 32 crores.

The Committee after deliberations recommended the project for environmental clearance subject to stipulation of the following specific conditions along with other environmental conditions as given below:

- i. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), and bag filters etc. shall be provided to keep the emission levels below prescribed limits by installing energy efficient technology.
- ii. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
- iii. Dust suppression system and bag filters shall be installed to control the fugitive dust emissions at conveyor and transfer points, product handling, loading and unloading points.
- iv. Hazardous wastes (tar sludge and ETP Sludge) shall be handled as per the Hazardous Waste Rules. Tar sludge will be recycled into coke ovens. Dust from Sinter Plant and Pellet Plant shall be recycled back into the Plant. BOF slag (11,2620TPA) shall be stored in landfill. Bed ash shall be sent for brick manufacturing. Flyash and BF slag shall be sent to cement manufactures for which an MOU with potential buyers shall be entered with.

- v. Hot gases from the Plant shall be passed through Dust Settling Chamber (DSC) to remove coarse solids and After Burning Chamber (ABC) to burn CO completely and used in Waste Heat Recovery Boiler (WHRB). The gas then shall be cleaned in ESP before dispersion out into the atmosphere through ID fan and stack. ESP shall be installed to control the particulate emissions from the WHRB. Coke Dry Quenching process shall be carried out.
- vi. The Plant shall operate on a zero-discharge basis. The water consumption shall not exceed as per the standards prescribed for the sponge iron plants and steel plants. Process wastewater from BF Plant, BOF, Rolling Mills, Power Plant, shall be recycled/reuse to the maximum extent. The blow down from cooling towers, chemically treated effluents, and treated domestic effluents shall be used for dust suppression and in greenbelt development, etc.
- vii. Prior permission shall be obtained for use of water from River Krishna. Total make up water requirement shall not exceed 3260 m<sup>3</sup>/h of the total water requirement of 79,511m<sup>3</sup>/h and an estimated amount of 76,251m<sup>3</sup>/h shall be re-circulated.
- viii. Efforts shall further be made to use maximum water in the plant process from the rain water harvesting sources in an area not less than 81ha to reduce water consumption and for groundwater recharge. If needed, capacity of the reservoir shall be further enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources and water requirement for the project shall be modified accordingly. Use of air cooled condensers shall be explored and closed circuit cooling system shall be provided to reduce water consumption particularly during lean season when water abstraction from River Krishna is not permitted.
- ix. No groundwater shall be used for the project.
- x. All the effluent shall be treated and used for ash handling, dust suppression and green belt development. No effluent shall be discharged and 'zero' discharge shall be adopted. Domestic wastewater shall be treated in septic tank followed by soak pit.
- xi. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB.
- xii. The sulphur and ash content of coal shall not exceed <1% and 5-6 % respectively. All the char from DRI plant shall be utilized in FBC boiler of power plant and no char shall be disposed off anywhere else. FBC boiler shall be installed simultaneously along with the DRI plant to ensure full utilization of char from the beginning.
- xiii. The proponent shall enter into a MOU for coal linkage.
- xiv. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 and 2009. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding shall be submitted to the Ministry's Regional Office at Bangalore.
- xv. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office at Bangalore, SPCB and CPCB within 3 months of issue of environment clearance letter.

- xvi. A detailed study on chemical composition of coal used particularly heavy metal and radio activity contents shall be carried out through a reputed institute and report shall be submitted to Regional Office of the Ministry at Bangalore. Only after ascertaining its radioactive level shall fly ash be supplied for utilization in cement manufacturing.
- xvii. As proposed, green belt shall be developed in 33 % of plant area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xviii. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Sponge Iron Plants and Steel Plants shall be implemented.
- xix. A comprehensive CSR Plan prepared for Rs 308 crores earmarking 5 % of the total cost of the project towards the Enterprise Social Commitment (ESC) based on locals needs shall be implemented in a time bound manner. Item-wise details along with time bound action plan shall be prepared in consultation with the local villagers/community and the District/Local Administration and submitted to the Ministry's Regional Office at Bangalore. The details of the annual expenditure incurred on CSR and EMP shall be uploaded on the company website and also be part of the company's Annual Report.
- xx. 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.
- xxi. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 3.8.2011 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bangalore.
- xxii. 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.

The Committee observed that the EC obtained for the existing Iron ore Pelletisation Plant has not been obtained from SEIAA, Karnataka but from Govt. of Karnataka and decided that MOEF may examine this issue.

## **22.5 Terms of Reference (TOR) Cases**

22.5.1 Proposal Industrial Unit for manufacturing of TMT Bars and Wire Rod of **M/s Tanmay Dhyata Steel Concast Ltd.** at Kota, Rajasthan (TOR)

PP did not attend the meeting. It was decided that the proposal will be considered as and when requested by the proponent.

22.5.2 Revised proposal for Greenfield Project of 350 BD TPD Pulp Paper, 450TPD Paper Plant along with 47MW co-generation Power Plant of **M/s Kohinoor Pulp & Paper Pvt. Ltd.** at Industrial Growth Centre, Matia, Dist. Goalpara, Assam (TOR)

The proponent namely M/s Kohinoor Pulp and Paper Pvt. Ltd has proposed to establish a Greenfield project of 350 TPD Pulp Plant, 450 TPD Paper Plant along with a CPP of 47 MW (Co-gen unit based on CFBC Boiler). An environmental clearance was granted by MoEF vide letter No. F-J-11011/464/2010-IA.II(I) dated 03.09.2011.

The details of the EC granted and proposed revised configuration of the Greenfield project is given in the Table below:

S.N.	Unit	Capacity For which EC was granted by MoEF Dated 03.09.2011	Revised capacity for which TOR dated 25.09.2013 was granted by MOEF	Revised capacity For which PP sought amendment
1.	Natural Fibre (Bamboo)/ Wood Based Pulp Plant	250 TPD	-	350 TPD
2.	Paper Plant for Writing, Printing and Copier Paper	250 TPD	-	450 TPD
3.	Captive Power Plant	10MW (Co-gen)	47MW (Co-gen) (15 MW based on Heat Recovery Boiler and 32 MW based on CFBC Boiler)	47MW (Co-gen) (15 MW based on Heat Recovery Boiler and 32 MW based on CFBC Boiler)

The PP made a presentation. It was informed that an EC was granted vide F.J-11011/464/2010-IA.II(I) dated 03.09.2011 for a proposed Greenfield project of 250 TPD Pulp Plant, 250 TPD capacity Paper Plant along with 10MW Co-gen Power Plant. The proposed is proposed to be set up in Industrial growth Centre, Plot Block C, village Mornoi, Matia, District Goalpura, Assam. River Brahmaputra flows at a distance of 2.5km from plant site. The PP decided to revise the power plant configuration from 10MW to 47 MW due to incorporation of an integrated Chlorine Dioxide Plant in place of Sodium Chlorate to manufacture Chlorine Di-oxide since Sodium Chlorate is an explosive material and no sanction was granted by the State Authority for the storage and use of sodium chlorate required to run the plant. In addition, the power consumption of the integrated plant was high to convert brine solution into Chlorine Di-oxide. In addition, a lime kiln was also decided to be installed to manage lime sludge to be generated during the operation of the project to comply with one of the EC conditions. The operation of lime kiln would also consume significant power.

In view of the revised configuration of the Co-gen Unit of the proposed Greenfield project, the PP submitted a letter dated 03.10.2012 seeking amendment of expansion of the 10MW Co-gen Unit to 47MW (Co-gen) Power Plant (15 MW based on Heat Recovery Boiler and 32 MW based on CFBC Boiler). The proposal was considered in the EAC(I) meeting held on 06.03.2013, wherein the PP did not attend. In response to MOEF's letter dated 29.04.2013 for submission of Form-I and PFR for considering the proposed expansion, an application for TOR was received vide PP's letter dated 24.05.2013, which was considered in the EAC(I) meeting held on 31.07.2013. The EAC did not agree with the proponent's request for an amendment of EC dated 03.09.2011 and a TOR dated 25.09.2013 along with conduct of Public Hearing was accorded for a revision in the Co-gen capacity from 10MW to 47 MW.

Thereafter, the PP decided to further change the configuration of the Pulp and Paper Units for enhancing the capacity from 250 TPD to 350 TPD for the Pulp Plant and 250 TPD to 450TPD for the Paper Plant. A letter dated 05.12.2013 was submitted to MOEF to include the revised Pulp and Paper Plant configurations in the already accorded TOR. The proposal was placed before the EAC(I) in the Meeting held on 18<sup>th</sup> March 2014, however, the proposal was deferred as the proponent did not submit a fresh TOR application with the aforesaid revised

configuration. A fresh application for TOR with the configuration as given in column 4 in the aforesaid Table was submitted. The changes proposed in the revised project vis-à-vis EC granted earlier are as given below:

Description	Project Configuration As per EC dated 03.09.2011	Revised Project for which Fresh TOR has been applied for
Land Requirement	200 acres	200 acres
Natural Fibre (Bamboo)/ Wood Based Pulp Plant	250 TPD	350 TPD
Paper Plant for Writing, Printing and Copier Paper	250 TPD	450 TPD
Captive Power Plant	10MW (Co-gen)	47MW (Co-gen) (15 MW based on Heat Recovery Boiler and 32 MW based on CFBC Boiler)
Raw Water Requirement & Source	18,000 m <sup>3</sup> /d (9670 m <sup>3</sup> /d for Pulping Plant, 5260m <sup>3</sup> /d for Paper Plant, 3000m <sup>3</sup> /d for Boiler & 70m <sup>3</sup> /d for domestic use)	29,860 m <sup>3</sup> /d (11,790 m <sup>3</sup> /d for Pulping Unit, 8640m <sup>3</sup> /d for Paper Plant, 2880m <sup>3</sup> /d for Chemical Recovery Unit, 6480 m <sup>3</sup> /d for Boiler and 70m <sup>3</sup> /d for domestic use)
Power Requirement	15MW of which 10MW will be sourced from Co-gen Unit and the balance from Assam State Electricity Board	Approx. 36.3 MW sourced from the 47 MW Co-gen Unit and the excess power will be sold to Assam State Electricity Board
Effluent generation	592 m <sup>3</sup> /h to be treated in an ETP	1188m <sup>3</sup> /d which will be treated in an ETP
Manpower	750 persons	850 persons
Project Cost	Rs 585 crores	Rs 1200 crores

The Committee after deliberations decided that the scope of the project has been entirely changed from the EC dated 03.09.2011 and TOR dated 25.09.2013. The Committee further noted that the existing unit has obtained only a CTE dated 06.02.2012 and a CTO has not been granted as the project is yet to start. The Committee noted that the project for which EC was granted in 2011 itself has not taken off. **Therefore, the present TOR application is not an expansion proposal under Clause 7.2 but a new project with entirely revised scope.** The Committee further noted that a Public Hearing was conducted for the project for which the EC was granted on 03.09.2011. However, since the scope of the project has been entirely changed and the present application for TOR is for Greenfield Pulp and Paper Project with entirely new configuration along with revised water, power requirements, transportation, etc the impacts would require to be assessed afresh through a fresh EIA-EMP Report and a Public Hearing would also require being conducted afresh.

The Committee after deliberations accorded the Terms of Reference along with conduct of P.H as given in Annexure-1 read with Annexure-2.

#### 22.5.3 Expansion of Coke Oven Plant (Non-recovery type) (from 1.6 MTPA to 2.2 MTPA) of M/s Tata Steel, at dist. Purba Medinipur, West Bengal (TOR)

The proposal is for proposed installation of a Coke Oven Plant (non-recovery type) is their Greenfield Hooghly Metcoke Division of Tata Steel established in 2005 for their Coke oven unit of 1.6 MTPA, wherein coke is being

manufactured with imported coal and indigenous coal from Tata Steel's captive mines in Jharia and West Bokaro. The technology used is modern heat recovery coke making technology to produce high quality metallurgical coke for use in the steel plant of Tata Steel works at Jamshedpur. An environmental clearance has been obtained for the existing unit. By utilising the sensible heat of waste gas from coke oven and thereby raising steam in waste heat recovery boilers, 120 MW of power is generated, which is connected to the national grid. Thus, the technology used is eco-friendly. The proposed plant is being installed in an area of 72.5 acres within the premises of the existing plant area of about 180 acres.

The details of the existing and proposed units are as given below:

S.N.	Unit	Capacity	Product
<b>EXISTING PLANT</b>			
1.	Coke Oven Plant #1 (Non-recovery type)	1.6 MTPA	Metallurgical coke
2.	WHRB	120MW	
<b>PROPOSED EXPANSION</b>			
2.	Coke Oven Plant #2 (Non-recovery type)	0.44 MTPA	Metallurgical coke
3.	Expansion of existing Unit#1	0.16 MTPA	Metallurgical coke
4.	WHRB	45MW	
	<b>TOTAL (Existing + proposed)</b>		
	<b>1. Coke Plant capacity</b>	<b>2.2 MTPA</b>	
	<b>2. WHRB</b>	<b>165MW</b>	

The proposed expansion of Haldia Coke Plant of Plant from 1.6 MTPA to 2.2 MTPA is aimed for meeting the additional hot metal capacity in Tata Steel and also to supplement the requirement in case of coke oven re-building. Additional 45 MW power will be generated from the Coke Plant expansion. Total capacity after expansion will be 165 MW (120 MW +45 MW).

River Hooghly is at a distance of about 4km from the project site and River Haldia is about 9.1km from project site. Nearest Town is Haldia at a distance 4km. Haldia is a CPA and for which moratorium was lifted in September 2013. The fugitive emissions at the coal handling operation is controlled with mist spray arrangement. In addition, dry fog system has been installed at the coal crusher unit, blending bunker, coal transfer points. The dust generated in the battery area is controlled by mechanised Mobile Vacuum Cleaning System (IVC). In addition, water sprinkling is carried out on the road used for transportation on a regular basis. Similar dry fogging arrangements have been made at the coke handling unit. In addition solid wastes generated such as coal fines, coke fines, are recycled and reused, broken refractory masses and used oil are disposed off to authorised TSDF at Haldia and biodegradable wastes are incinerated.

The Committee after deliberations stated that the PP may explore use of Coke Dry Quenching instead of wet quenching for conservation of water in the expansion coke oven unit and the details thereof to be reconsidered for grant of TOR.

## 22.6 Any Other Items

22.6.1 Installation of a Manganese Oxide Manufacturing plant of **M/s Navrang Industries** at Plot No. K-40, MIDC, Hingna Road, Nagpur (**Applicability of EIA Notification**)

The PP has proposed to set up a Manganese Oxide Manufacturing Plant of a production capacity of 400MT/Month of manganese Oxide powder at about 20km away from Nagpur city in MIDC plot of 3000sq.m. The total investment cost is Rs 1.1 crores. Fumes from the Manganese Ore (Pyrolusite Ore – MnO<sub>2</sub>) Roasting Furnace will be washed in a scrubber and emissions let off through a 20MT high stack. The manganese oxide produced will be pulverised into

powder and sent to Raymond Mill to be used a micronutrient in cattle feed. Coal tar generated in process to be sent to a TSDF facility. It was informed that the MPPCB has not granted CTE and PP has sought the advice of MOEF on the applicability of EC for the unit.

The Committee after deliberations stated since the process is from an ore – it falls in the Category of Primary Metallurgy under Item 3(a) of Schedule to the EIA Notification 2006. The Committee requested the PP to apply for TOR as per provisions of the EIA Notification 2006.

22.6.2 Proposed Integrated Steel Plant (0.4 MTPA) with 43MW CPP of **M/s Rashi Steel and Power Ltd**, at vill. Paraghat and Beltukri, Tehsil Masturi, Dist. Bialspur, Chhattisgarh (Amendment in EC) (J-11011/466/2010-IA.II(I) adted 10.09.2013 of M/s Rashi Steel & Power Ltd., Bilaspur, Chhattisgarh (EC)

(1) The PP informed that an EC was granted for the aforesaid project on 10.09.2013. In the EC application made as well as in the plant layout in the EIA report, a Producer Gas Plant of 280 MNM3 (9W +2S) has been mentioned , however, the same has not been specifically mentioned in the EC letter dated 10.09.2013 for the SPCB as well as the Banker. PP sought an amendment vide letter dated 26.12.2013 in the aforesaid EC letter for incorporation of the Producer Gas Plant as one of the units. Extracts of the relevant chapters of the EIA-EMP Report were also furnished.

The Committee after deliberations agreed for the proposed amendment in the EC dated 10.09.2013.

(2) PP has also vide letter dated 26.12.2013 sought waiver of Specific condition No. 1 in the same EC dated 10.09.2013 which states that:

*“No construction activity at the project site shall be initiated till the complete land of 199 acres is acquired”.*

It was informed that of the total area of 199 acres has been reduced to 165 acres> it was clarified in the letter that the revised land area of 165ha includes the 33% land requirement for green belt development. It was stated that 165 acres is required for Phase-I and II of the project, of which a total area of 77 acres is already available with the PP and the balance is under acquisition. In view of this PP may be permitted to start construction for Ph.I of the project comprising of Beneficiation Plant (1.9 MTPA), Rotary Hearth Furnace based on DRI Unit (0.4 MTPA) and Coal Washery (0.35 MTPA) and the balance, namely, Captive Power Plant (43 MW), Pellet Plant (1.324MTPA), and power intensive units such as Submerged Arc Furnace (0.3 PTPA) would be taken up subsequently

The Committee after deliberations did not agree to the proposed amendment for deletion of Specific Condition No.1.

22.6.3 Expansion of Cement Grinding Unit (from 2.5 to 3.4 MTPA) of **M/s Ambuja Cement** by optimisation at vill. Dubuji, P.O.Lodimajra, The & Dist. Ropar, Punjab (Extn. of Validity of TOR dated 15.06.2012)

The PP has vide letter dated 30.05.2014 informed that the draft EIA-EMP Report has been prepared and submitted to Punjab PCB for conduct of Public Hearing; however, the certified monitoring report of MOEF RO, which is a requirement as per TOR Point No. 4 is still awaited. In view of this, the PP has sought extension of validity of TOR by one year.

The Committee after discussions, agreed for extension of validity of TOR by a year.

22.6.4 Proposed Greenfield Integrated Cement Plant (2x1.5 MTPA, Cement – 5.2 MTPA, CPP- 2x25 MW and Limestone Mining- 4.8 MTPA of **M/s Shree Cement Ltd.**, at vill. Semaradih, Bharuwadih & Chandi in Tehsil Baloda Bazaar & Simga, Dist. Raipur, Chhattisgarh (Amendment in EC dated 07.03.2011 and 01.06.2011)

PP stated that the project was granted an EC vide MOEF letter No. J-11011/235/2008-IA.II(I) dated 07.03.2011 and 01.06.2011 for Proposed Greenfield Integrated Cement Plant (2x1.5 MTPA, Cement – 5.2 MTPA, CPP- 2x25 MW and Limestone Mining- 4.8 MTPA. The TOR proposal for further expansion was not considered in the EAC(I) meeting held on 30<sup>th</sup> July -1<sup>st</sup> August 2014 as the existing unit is yet to be commissioned. In this regard, a letter dated 02.08.2014 has been received from M/s Shree Cement Ltd. informing that due to delay in delivery of plant and machinery by the supplier, the plant is being commissioned in a phased manner. Accordingly, 1<sup>st</sup> cement mill (2.6 MTPA Cent), would be ready for start the production in Aug/Sept. 2014, clinker unit (1.5 MTPA clinker would be ready for production in December 2014. The erection work of 2<sup>nd</sup> unit would start by mid-2015 after successful commissioning of Unit 1. Till start of 1<sup>st</sup> clinker unit, the required clinker for cement mill will be transported from the existing cement plant located in Rajasthan. The PP sought an amendment in the EC to obtain consent from SPCB. In this regard, PP furnished a copy of the certified Monitoring Report of RO, Bhopal. TOR application has also been submitted.

The Committee agreed for amendment of the EC condition for the use of the required clinker for cement mill from the PP's Rajasthan unit for one year and for its transport by rail from the existing cement plant until the start of the 1<sup>st</sup> clinker unit.

22.6.5 Expansion of Ferro Alloy Plant (Existing 16.5 MVA, proposed 3x9 MVA Submerged Arc Furnace) of **M/s Sharp Ferro Alloys Ltd.**, at Nachan Road, Kamalpur, Durgapur, W.B. (Extn. of validity of EC)

The proposal was not considered.

## INDUSTRY-2 PROJECTS

### 22.7 SPECIAL AGENDA ITEMS

22.7.1 NGT case

22.7.2 NGT case

22.7.3 NGT Case

The Committee was apprised of 3 cases wherein the Ministry's response/affidavit was to be submitted.

### 22.8 Consideration of TORs

22.8.1 Established Proposed unit of **M/s Achal Chemical** at Dist. Anand, Gujarat (TOR)

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

22.8.2 Proposal for establishment of proposed unit of **M/s Parth Chemical Industries** at Dist. Anand, Gujarat (TOR)

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

22.8.3 Proposed project of Polyester Resins manufacturing of **M/s Reliance Composite Polymers** at Survey No. 206 paiki-2, Distt. Kheda, Gujarat (TOR)

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

**22.8.4 Development of Amines, Amine Derivatives and Acetonitrile Plants of M/s Alkyl Amines Chemicals Ltd. at D2/CH149/2, GIDC Dahej, Phase II, Village Dahej, Tehsil Vagra, District Bharuch, District Banaskantha, Gujarat ( TOR)**

M/s Alkyl Amines Chemicals Ltd. has proposed for Development of Amines, Amine Derivatives and Acetonitrile Plants of M/s Alkyl Amines Chemicals Ltd. at D2/CH149/2, GIDC Dahej, Phase II, Village Dahej, Tehsil Vagra, District Bharuch, District Banaskantha, Gujarat. As per EIA Notification, 2006, all Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B' and appraised at State level. PP informed that the said project proposal is categorized as Category 'B' project as project is located in the notified Industrial area and submitted in MoEF&CC due to non-constitution of SEIAA/SEAC of Gujarat State. The Committee noted that SEIAA/SEAC, Gujarat has now been constituted and operational. Therefore, the said project proposal may be transferred to SEIAA/SEAC, Gujarat for appraisal.

**22.8.5 Proposed Active Pharmaceuticals Ingredients Manufacturing Project of M/s La Chandra Pharmalab Pvt. Ltd. at Sy. No. 64/P2/P2, Village Vaghrol, Tehsil Dantiwada, District Banaskantha, Gujarat (TOR)**

The project proponent and their consultant gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP. All Synthetic Organic Chemicals Industry 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 La Chandra Pharmalab Pvt. Ltd. has proposed for setting up of Active Pharmaceuticals Ingredients Manufacturing Project at Sy. No. 64/P2/P2, Village Vaghrol, Tehsil Dantiwada, District Banaskantha, Gujarat. Plot area is 10186 m<sup>2</sup> of which greenbelt will be developed in 3486 m<sup>2</sup>. Cost of project is Rs. 6 Crore. Dantiwada Dam is located at a distance of 4.5 km. It is reported that no areas which are important or sensitive for ecological reasons are located within 15 Km distance. Following products will be manufactured:

S.N.	Products	Quantity ( MTPM)
1	16-DEhydro Pregnenolone Acetate	1.0
2	Progesterone	0.833
3	Pregnenolone	1.0
4	Estradiol -1	0.833
5	Testosterone	0.833

PP proposed that Electric boiler will be used. DG set (50 KVA) will be installed for emergency power. Common scrubber will be installed to control process emissions. Bagfilter will be provided to rotaray vacuum dryer. Total fresh water requirement from ground water source will be 22.5 m<sup>3</sup>/day. Industrial effluent generation will be 17.8 m<sup>3</sup>/day and treated in ETP. ETP sludge and spent catalyst will be sent to TSDF. Used oil will be sent to authorized recycler.

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

1. Executive summary of the project
2. Justification of the project.
3. Project location and plant layout.
4. Promoters and their back ground.
5. Regulatory framework
6. A map indicating location of the project and distance from severely polluted area
7. Infrastructure facilities including power sources.
8. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.

9. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
10. Present land use based on satellite imagery for the study area of 10 km radius.
11. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
12. Details of the total land and break-up of the land use for green belt and other uses.
13. List of products alongwith the production capacities.
14. Detailed list of raw material required and source, mode of storage and transportation.
15. Manufacturing process details alongwith the chemical reactions and process flow chart.
16. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
17. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
18. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> including HC and VOCs should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
19. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
20. Name of all the solvents to be used in the process and details of solvent recovery system.
21. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
22. Details of water and air pollution and its mitigation plan
23. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
24. An action plan to control and monitor secondary fugitive emissions from all the sources.
25. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
26. Source and permission for the drawl of 22.5 m<sup>3</sup>/day water from the competent authority. Water balance chart including quantity of effluent generated recycled and reused and discharged. Efforts shall be made to reduce ground water drawl.
27. Action plan for 'Zero' discharge of effluent should be included.
28. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
29. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste.
30. Action plan for the management of fly ash generated from boiler should be included. Tie-up or agreement with brick manufacturer to be provided.
31. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
32. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilized all the organic solid waste generated.
33. A copy of 'Memorandum of Understanding' (MoU) signed with coal supplier for imported coal and brick manufacturers for management of fly ash.
34. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
35. 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.
36. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
37. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
38. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.

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

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

#### **22.8.6 Proposal for expanding of Drug & Intermediates Manufacturing Unit II of M/s Synthkem Labs Pvt. Ltd at District Medak, AP (TOR)**

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

### **22.9 Consideration of EC cases**

#### **22.9.1 Exploration & Test Production of Coal Bed Methane (CBM) in Block IB-CBM-2008/IV, IB Valley CBM Block, Orissa by M/s Essar Oil Limited (E&P Division) Limited (EC)**

The project authorities and their consultant (Senes Consultants India Pvt. Ltd.) gave a detailed presentation on the salient features of the project and briefed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 23<sup>rd</sup> Meeting of the Reconstituted Expert Appraisal Committee (Industry) held during 30<sup>th</sup> -31<sup>st</sup> May, 2011 for preparation of EIA-EMP report. Proposal for extension of validity of TOR was considered in the EAC meeting held during 29<sup>th</sup> -31<sup>st</sup> July, 2013 and the Committee recommended extension of TOR for another one year.

M/s Essar Oil Limited (E&P Division) Limited has proposed for the Exploration & Test Production of Coal Bed Methane (CBM) in Block IB-CBM-2008/IV, IB Valley CBM Block, Orissa. Total block area is 209 km<sup>2</sup> in Sundargarh & Jharsuguda (3 Km<sup>2</sup>) Districts, Orissa. However, public hearing was conducted on 05.09.2013 for Sundargarh District only. PP informed that the Public hearing for Jharsuguda District was not concluded. Therefore, PP clarified during meeting that they are proposing to drop the proposal of CBM project in Jharsuguda district and will carry out CBM project in Sundargarh District only. Following activities will be carried out in Sundargarh District:

Phase	Activity	Sundargarh District (206 Km <sup>2</sup> )
Phase - I	Core holes	23
	Test Wells	3
Phase II	Pilot Wells	15
	Supporting /Directional Wells	60
	Gas Gathering Station (GGS)	3
	Main Compressor Station	1

Each pilot well site, four supporting wells will be drilled.

No national park/ Wildlife Sanctuary/ biosphere reserves are located within 10 Km distance. Debrigarh Sanctuary is located about 12 Km south of block boundary. Presently 12 coreholes have been proposed within the forest boundary for which necessary application has been made to the Chief Conservator of Forest, Orissa vide letter no. EO/CBM/IB/FCA/02 dated 06.08.2012. As per page 20 of EIA-EMP report, the length of total pipeline is in non-forest area or open land is approximately 28 Km and the pipe line within forest area is approximately 22 Km. Total cost of project is Rs. 1021.3 Crore. It is estimated that approx. 0.5 acres will be required for core drilling and 1.5 to 2.0 acres will be required for test /pilot well drilling. Land required for core hole drilling and 1.5-2.0 acres will be required for test/pilot well drilling. Land required for installation of surface facilities (GGS & MCS) for CBM gas processing will be approx..4-5 acres. Wells will be drilled up to depth of 2000 m.

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 12 locations during December – January for the year 2011-12 and submitted baseline data indicates that ranges of concentrations of PM10 (53.7 µg/m<sup>3</sup> to 74.5 µg/m<sup>3</sup>), PM2.5 (19.2 µg/m<sup>3</sup> to 27.7 µg/m<sup>3</sup>), SOx (2.61 µg/m<sup>3</sup> to 6.2µg/m<sup>3</sup>) and NOx (7.5 µg/m<sup>3</sup> to 12.2 µg/m<sup>3</sup>) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.10745 µg/m<sup>3</sup>, 3.2236 µg/m<sup>3</sup> and 0.00188 µg/m<sup>3</sup> with respect to SPM, SO<sub>2</sub> and NO<sub>x</sub>. The resultant concentrations are within the NAAQS. Power requirement will be met from DG/GG set capacity 20 kVA, 40 kVA, 125 kVA, 180 kVA, 950 kVA & 1330 kVA for drilling and operation. Elevated flaring will be done only during process upset. Adequate stack height will be provided to DG set/GG sets. The water requirement for core hole drilling (15 m<sup>3</sup>/core hole) and test /pilot drilling (75 m<sup>3</sup> per TW/PW) will be met through approved local suppliers initially and subsequently from the produced water. However, air drilling will be carried out to minimized water requirement. 50 m<sup>3</sup>/day of CBM produced water will be generated during dewatering operation of each production cum development well. Produced water will be treated through RO or other suitable system (if the TDS) to meet the CPCB discharge standard. Though EIA – EMP report does not mention about the treatment of RO rejects but during presentation PP explained that RO rejects will be concentrated and dried by using Multiple Effect Evaporator. Salts will be disposed as per CPCB guidelines.

Drill cuttings (5 MT/core holes and 200 MT/tester Pilot hole) will be generated and separate in a solid control system and conveyed to a specially designed pit (lined with HDPE) for temporary storage. Then, treated and disposed in accordance with CPCB regulations specified for on-shore oil and gas industry. Waste / used oil will be sold to authorized recyclers / re-processors.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Odisha State Pollution Control Board on 5<sup>th</sup> September, 2014. The issues were raised on local employment, health, anticipation of water pollution, anticipation of depletion of ground water table 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 recommended the project for environmental clearance and stipulated the following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i. Environmental Clearance is recommended for Exploration & Test Production of Coal Bed Methane (CBM) in Sundergarh District only as public hearing was conducted for Sundergarh District. No exploration & test production is granted in Jharsuguda.
- ii. Forest Clearance shall be obtained for forest land.
- iii. Compensation for the land acquisition to the land ousters, if any, and also for standing crop shall be paid as per the National Resettlement and Rehabilitation Policy (NRRP) 2007 or State Government norms. It may be ensured that compensation provided shall not be less than the norms of the NRRP, 2007.
- iv. The surface facilities shall be installed as per the applicable codes and standards, international practices and applicable local regulations.
- v. Ambient air quality shall be monitored near the closest human settlements as per the National Ambient Air Quality Emission Standards (NAAQES) issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, CH<sub>4</sub>, VOCs, HC, Non-methane HC etc. Efforts shall be made to improve the ambient air quality of the area.
- vi. The flare system shall be designed as per good oil field practices and Oil Industry Safety Directorate (OISD) guidelines. The company shall take necessary measures to prevent fire hazards and soil remediation as needed. At the place of ground flaring, the flare pit shall be lined with refractory bricks and efficient burning system. In case of overhead flare stacks, the stack height shall be provided as per the regulatory requirements and emissions from stacks shall meet the MOEF/CPCB guidelines.
- vii. The company shall make the arrangement for control of noise from the drilling activity and DG/GG sets by providing necessary mitigation measures such as proper acoustic enclosures to DG/GG sets and meet the norms notified by the MoEF. Height of all the stacks/vents shall be as per the CPCB guidelines.
- viii. 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 30<sup>th</sup> August, 2005.
- ix. Total fresh water requirement shall not exceed (15 m<sup>3</sup>/core hole) and test /pilot drilling (75 m<sup>3</sup> per TW/PW) for each well during drilling phase and prior permission shall be obtained from the Competent Authority and a copy submitted to the Ministry's Regional Office at Bhubaneswar.
- x. During well drilling, wastewater shall be segregated into waste drilling fluid and drill cuttings. Drill cutting shall be stored onsite impervious HDPE lined pit for solar evaporation and drying. Effluent shall be properly treated and treated effluent shall conform to CPCB standards. The produced water shall be stored onsite HDPE lined pit for solar evaporation and reuse in drilling of new wells and fire hydrant system. Domestic effluent shall be disposed off through septic tank followed by soak pit.
- xi. As proposed, produced water shall be treated through RO and RO rejects shall be concentrated/evaporated in MEE. Treated water shall be reused in drilling of other core/test wells as well as other beneficial purposes.
- xii. Ground water quality monitoring shall be done to assess if produced water storage or disposal has any effect.

- xiii. Drilling wastewater including drill cuttings, wash water shall be collected in disposal pit lined with HDPE lining, evaporated or treated and shall comply with the notified standards for on-shore disposal on land. Proper toxicological analysis shall be done to ensure there is no hazardous material. Copy of toxicological analysis shall be submitted to Ministry's Regional Office at Bhubaneswar.
- xiv. Only water based drilling mud shall be used. The drilling mud shall be recycled. Hazardous waste shall be disposed of as per Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008. The recyclable waste (oily sludge) and spent oil shall be disposed of to the authorized recyclers/re-processors.
- xv. The Company shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. At place of ground flaring, the overhead flaring stack with knockout drums shall be installed to minimize gaseous emissions during operation.
- xvi. To prevent underground coal fire, preventive measures shall be taken for ingress of ambient air during withdrawal inside the coal seams by adopting technologies including vacuum suction. Gas detectors for the detection of CH<sub>4</sub> and H<sub>2</sub>S shall be provided.
- xvii. The design, material of construction, assembly, inspection, testing and safety aspects of operation and maintenance of pipeline and transporting the natural gas/oil shall be governed by ASME/ANSI B 31.8/B31.4 and OISD standard 141. Pipeline wall thickness and minimum depth of burial at river crossing and casings at rails, major road crossings should be in conformity with ANSI/ASME requirements.
- xviii. The company shall develop a contingency plan for H<sub>2</sub>S release including all necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal H<sub>2</sub>S detectors in locations of high risk of exposure along with self containing breathing apparatus.
- xix. Adequate well protection system shall be provided like Blow Out Preventer (BOP) or diverter systems as required based on the geological formation of the blocks.
- xx. The top soil removed shall be stacked separately for reuse during restoration process.
- xxi. Emergency Response Plan shall be based on the guidelines prepared by OISD, DGMS and Govt. of India. Recommendations mentioned in the Risk Assessment & Consequence Analysis and Disaster Management Plan shall be strictly followed.
- xxii. Project proponent shall comply with the environment protection measures and safeguards recommended in the EIA/EMP/risk analysis report/disaster management plan.
- xxiii. The company shall take measures after completion of drilling process by well plugging and secured enclosures, decommissioning of rig upon abandonment of the well and drilling site shall be restored in original condition. In the event that no economic quantity of hydrocarbon is found a full abandonment plan shall be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations.
- xxiv. Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.
- xxv. In case the commercial viability of the project is established, the Company shall prepare a detailed plan for development of gas fields and obtain fresh environmental clearance from the Ministry.
- xxvi. All the commitments made to the public during the Public Hearing / Public Consultation meetings held on 5<sup>th</sup> September, 2014 shall be satisfactorily implemented.

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

**22.9.2 Resin manufacturing Unit (3250 MT/M ) at Survey No.389, Village Nava Sadulka, Taluka Morbi, District Rajkot, Gujarat by M/s Graffiti Laminates Pvt. Ltd.- Regarding EC**

The project proponent and their consultant (M/s T R Associates, Stay order no. C/SCA/1782/2013 dated 9/12/2013) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 14<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry) held during 19<sup>th</sup>-20<sup>th</sup> December, 2013 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 Graffiti Laminates Pvt. Ltd. has proposed for setting up of Resin manufacturing Unit (3250 MT/M ) at Survey No.389, Village Nava Sadulka, Taluka Morbi, District Rajkot, Gujarat. Total plot area is 17402 m<sup>2</sup> of which greenbelt will be developed in 5766 m<sup>2</sup>. The cost of project is Rs. 2 crores. It is reported that no national parks/wildlife sanctuary are located within 10 km distance. The following products will be manufactured:

S.N.	Product	Quantity
1	Laminated Sheet /Electrical Insulation Board	3,00,000 Nos./Month
2	P. F. Resin	1000 MTPM
3	MF Resin	750 MTPM
4	UF Resin	1500 MTPM

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 7 locations during October-December, 2013 and submitted baseline data indicates that ranges of concentrations of PM<sub>10</sub> (63.2 µg/m<sup>3</sup> to 77.2 µg/m<sup>3</sup>), PM<sub>2.5</sub> (34.0 µg/m<sup>3</sup> to 44.5 µg/m<sup>3</sup>), SO<sub>x</sub> (10 µg/m<sup>3</sup> to 18.4 µg/m<sup>3</sup>) and NO<sub>x</sub> (15.2 µg/m<sup>3</sup> to 27.8 µg/m<sup>3</sup>) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 10 µg/m<sup>3</sup> and 3.0 µg/m<sup>3</sup> and 2.58 µg/m<sup>3</sup> with respect to SPM, SO<sub>2</sub> and NO<sub>x</sub>. The resultant concentrations are within the NAAQS. Multi-cyclone Dust collector will be provided to coal/white coal fired boiler & Thermic fluid heater to control particulate emissions. DG set (250 KVA) will be installed. Scrubber will be provided to Dryer to control methanol. Total water requirement is 44.30 m<sup>3</sup>/day, of which fresh water requirement from ground water source will be 18.06 m<sup>3</sup>/day. Remaining will be sourced from treated effluent. Industrial effluent generation will be 13.90 m<sup>3</sup>/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. Fly ash will be sent to brick manufacturers.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 20<sup>th</sup> June, 2014. The issues were raised regarding reasons for closure order, chemicals to be used, road location, pollution control etc. PP informed that unit has obtained NOC from GPCB for manufacturing of laminated sheets and presently they have applied for resin manufacturing. GPCB had issued closure order and closure order had been revoked. PP further clarified that they are not manufacturing resin in the existing premises. 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 recommended the project for environmental clearance and stipulated the following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- (i) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.
- (v) Bag filter along with stack of adequate height should be installed to coal/white coal fired boiler to control particulate emission.
- (vi) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored.
- (vii) Wet scrubber should be provided to control process emissions. Methanol should be recovered from the process area.
- (viii) Total ground water requirement should not exceed 18.06 m<sup>3</sup>/day and prior permission should be obtained from the Central Ground Water Authority/State Ground Water Board.
- (ix) 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.
- (x) The company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from GPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire fighting facilities in case of emergency.
- (xi) As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- (xii) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- (xiii) All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 20<sup>th</sup> June, 2014 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhopal.
- (xiv) At least 5 % of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.

#### **22.9.3 Expansion of Bulk Drugs of M/s Avik Pharmaceutical Ltd. at District Valsad, Gujarat- reg. EC.**

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

#### **22.9.4 Resin Manufacturing Unit at Sy. No. 485, 486 Near Gokulesh Petrol Pump, Village Kanera, Taluka Kheda, District Kheda, Gujarat by M/s AIM Laminar Pvt. Ltd.-regarding EC.**

The project proponent and their consultant (M/s T R Associates, Stay order no. C/SCA/1782/2013 dated 9/12/2013) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 12th Meeting of the Expert Appraisal Committee (Industry) held during 30th September-1st October, 2013 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 AIM Laminar Pvt. Ltd. has proposed for setting up of Resin Manufacturing Unit at Sy. No. 485, 486 Near Gokulesh Petrol Pump, Village Kanera, Taluka Kheda, District Kheda, Gujarat. Total plot area is 14164 m<sup>2</sup> of which greenbelt will be developed in 4674.12 m<sup>2</sup>. The cost of project is **Rs. 1 crore**. It is reported

that no national park/wildlife Sanctuary/Reserve Forest within 10 Km distance. The following products will be manufactured:

S.N.	Product	Quantity
1	Phenol Formaldehyde Resin	1000 MTPM
2	Melamine Formaldehyde Resin	500 MTPM
3	Urea Formaldehyde Resin	1000 MTPM
4	Laminated Sheets	4,00,000 Nos/Month

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 7 locations during November, 2013- January, 2014 and submitted baseline data indicates that ranges of concentrations of PM10 (59.4 µg/m<sup>3</sup> to 71.9 µg/m<sup>3</sup>), PM2.5 (33.6 µg/m<sup>3</sup> to 42.3 µg/m<sup>3</sup>), SOx (8.1 µg/m<sup>3</sup> to 17.9 µg/m<sup>3</sup>) and NOx (14.7 µg/m<sup>3</sup> to 29.5 µg/m<sup>3</sup>) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 10.9 µg/m<sup>3</sup> and 0.4 µg/m<sup>3</sup> and 2.0 µg/m<sup>3</sup> with respect to SPM, SO<sub>2</sub> and NO<sub>x</sub>. The resultant concentrations are within the NAAQS.

Multicyclone Dust collector will be provided to coal fired boiler & Thermic fluid heater to control particulate emissions. DG set (320 KVA) will be installed. Scrubber will be provided to Dryer to control methanol. Total water requirement will be 76.2 m<sup>3</sup>/day of which, fresh water requirement from ground water source will be 23.96 m<sup>3</sup>/day and remaining water (42.0 m<sup>3</sup>/day) will be sourced from treated effluent. Industrial effluent generation will be 25.6 m<sup>3</sup>/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. Fly ash will be sent to brick manufacturers.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 23rd May, 2014. The issues were raised regarding pollution from other industrial units, effect of pollutants in the atmosphere, solid waste disposal 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 recommended the project for environmental clearance and stipulated the following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- (i) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.
- (ii) Bag filter along with stack of adequate height should 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. should be regularly monitored.
- (iv) Wet scrubber should be provided to control process emissions. Methanol should be recovered from the process area.
- (v) Total ground water requirement should not exceed 23.96m<sup>3</sup>/day and prior permission should 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 should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from GPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire fighting facilities in case of emergency.
- (viii) As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- (ix) Occupational health surveillance of the workers should 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 23<sup>rd</sup> May, 2014 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhopal.
- (xi) At least 5 % of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.

**22.9.5 Expansion of Bulk Drug Manufacturing Plant located at Plot No.457 & 458, Sarkhej- Bavla Highway, Village Matoda, Taluka Sanand, District Ahmedabad, Gujarat by M/s Intas Pharmaceuticals Limited - regarding EC**

The project proponent and their consultant (Anand 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 10<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry) held during 29<sup>th</sup>-31<sup>st</sup> July 2013 for preparation of EIA-EMP report. All the Synthetic Organic Chemical Units located outside industrial area/estate are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Intas Pharmaceuticals Limited has proposed for expansion of Bulk Drug Manufacturing Plant located at Plot No.457 & 458, Sarkhej- Bavla Highway, Village Matoda, Taluka Sanand, District Ahmedabad, Gujarat. Total plot area is 94,214 m<sup>2</sup> of which greenbelt will be developed in 42,000 m<sup>2</sup>. The cost of project is Rs. 4.00 Crore. It is reported that no eco-sensitive zone is located within 10 Km distance. Following products will be manufactured:

S.N.	Name of Product	Production Capacity (Kg./Annum)		
		Existing	Additional	Total
1	Gemcitabine HCl	500	700	1,200
2	Capacitabine	5,000	15,000	20,000
3	ImatinibMesylate	750	450	1,200
4	Docetaxel	50	50	100
5	Paclitaxel	0	150	150

6	Cabazitaxel	0	50	50
7	Decitabine	0	25	25
8	Azacitidine	0	100	100
9	ErlotinibHCl	0	300	300
10	SorafenibTosylate	0	300	300
11	LapatinibDitosylate mono hydrate	0	300	300
12	Methotrexate	0	350	350
	TOTAL	6,300	17,775	24,075

Ambient air quality monitoring was carried out at 6 locations during post monsoon season, 2013 and submitted data indicates as PM<sub>10</sub> (48–88ug/m<sup>3</sup>), PM<sub>2.5</sub> (18–38ug/m<sup>3</sup>), SO<sub>2</sub> (10–27ug/m<sup>3</sup>) and NO<sub>x</sub> (12–29ug/m<sup>3</sup>). Predicted value of ground level concentration due to proposed expansion is PM<sub>10</sub> (0.67), SO<sub>2</sub> (0.77ug/m<sup>3</sup>) and Nox (0.33ug/m<sup>3</sup>). The resultant concentrations are within the NAAQS. Water ventury scrubber followed by a packed column with caustic scrubber has been provided to process vent 1 to control process emissions viz. HCl and ammonia. Existing process vents will be used for the proposed activities. Mechanical dust collector/bagfilter has been provided to agro fuel fired boiler. Quenching tank followed by ventury scrubber followed by wet scrubber have been provided in solid waste incinerator. Water requirement after expansion will be 511 m<sup>3</sup>/day and sourced is ground water. Industrial effluent generation will be 353 m<sup>3</sup>/day and treated in ETP followed by RO. RO rejects will be concentrated in MEE. Sewage will be treated in STP. ETP sludge, Incineration ash and waste containing sodium sulphate/other salts, Hyflow and silica gel will sent to TSDF. Used oil will be sent to Authorized recyclers. The Committee deliberated on certified compliance report of the Regional Office, Bhopal to the environmental conditions stipulated in the existing EC.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 21<sup>st</sup> May, 2014 under the Chairmanship of District Collector. The issues raised during Public Hearing were regarding greenbelt, effluent discharge, water consumption, details of show cause notice issued etc. Public Hearing issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

After deliberations, the Committee sought the following additional information:

- (i) A Copy of certified compliance report to the environmental conditions prescribed in the existing EC. Action taken report/ detailed action plan on the partly/non-compliance conditions reported by the MoEF&CC Regional Office.
- (ii) Location of representative water sampling points from water bodies to be indicated w.r.t. site location.
- (iii) Soil analysis report to be rechecked and analysed.

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 PP will be discussed internally without calling project proponent.

#### **22.9.7 Expansion of Pigment Manufacturing Unit of M/s Asahi Songwon Colors Ltd. at District Mehsana, Gujarat.- Reg. EC**

The Committee noted that proposal relates to expansion of Pigment Manufacturing Unit. PP has already obtained environmental clearance for the existing unit. However, PP has not submitted the certified compliance report from the Regional Office at Bhopal for the existing EC.

The proposal was, therefore, 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 PP will be discussed internally without calling project proponent.

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

The project proponent and their consultant (SGS India Private 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 2<sup>nd</sup> Meeting of the Expert Appraisal Committee (Industry) held during 29<sup>th</sup> – 31<sup>st</sup> October, 2012 for preparation of EIA-EMP report. All the Synthetic Organic Chemical Units located outside industrial area/estate are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Rajaram Maize Products has proposed for expansion of Maize based Products (from 120 TPD to 300 MTPD) Manufacturing Unit and addition of New Sorbital Manufacturing Facilities (20 TPD) at Khasra No 761/1-4, 760/1, 745/2, 745/3, Village Mohad, Tahsil & District Rajnandgaon, Chhattisgarh. Total plot area is 16.02 acres, of which greenbelt will be developed in 4.5 acres. Existing plant is located in 4.49 acres of land. The proposed sorbital plant will be installed in 1.30 acres of land within existing plant area. No forest land is involved. Shivanath River is flowing at a distance of 1.0 KM and Ranisagar lake is at 7.0 Km from the project site. Cost of project is Rs. 27.35 Crore. It is reported that no wildlife sanctuary, national park or any reserve forest is located within 10 Km distance. Following products will be manufactured:

S.N.	Products	Quantity ( MTPD)		
		Existing	Proposed Additional	Total After expansion
1	Maize Based Products ( Starch, Oil, Gluten, Dextrine, Liquid Glucose), Dextrose. Maltose Dextrin and Hydrol)	120	180	300
2	Sorbitol	--	20	20

Ambient air quality monitoring was carried out at 6 locations December, 2012 –March, 2013 and submitted data indicates as PM<sub>10</sub> (27.5–69.8 ug/m<sup>3</sup>), PM<sub>2.5</sub> (13.9–35.9ug/m<sup>3</sup>), SO<sub>2</sub> (4.2 – 7.8 ug/m<sup>3</sup>) and NO<sub>2</sub> (11.2-25.3 ug/m<sup>3</sup>). Predicted value of ground level concentration due to proposed project is PM (7.5 ug/m<sup>3</sup>), SO<sub>2</sub> (12.3 ug/m<sup>3</sup>) and Nox (13.6 ug/m<sup>3</sup>). The resultant concentrations are within the NAAQS. Existing coal fired boiler (0.5 TPH) and Rice Husk fired boiler (4.0 TPH) will be used. Additional rice husk fired boiler (2.5 TPH) will be installed. Existing DG sets (625 KVA + 125 KVA) will be used. The Committee suggested that bag filter shall be installed to control particulate emissions. Total fresh water requirement will be increased from 380 m<sup>3</sup>/day to 690 m<sup>3</sup>/day after expansion. Source of water supply is Shivnath River and ground water source. Wastewater generation will be increased from 253 m<sup>3</sup>/day to 445 m<sup>3</sup>/day after expansion. Wastewater will be treated in ETP comprising anaerobic treatment process followed by activated Sludge process. Treated effluent will be used for horticulture purpose. During presentation, PP informed that treated effluent after confirming SPCB norms, will be used in gardening /irrigation in surrounding crop field. However, the Committee suggested that treated effluent should be routed through a holding pond and online monitoring system such as pH meter, TOC analyser and flowmeter should be installed. ETP Sludge is organic in nature, which will be used as manure. Ash will be used by brick manufacturing unit. Waste oil/Nickel catalyst will be sent to Authorized recyclers.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the State Pollution Control Board on 25<sup>th</sup> February, 2014 under the Chairmanship of Addl. District Magistrate. The issues raised during Public Hearing were regarding greenbelt, ground water sampling, no village development work, local employment, truck parking etc. In response, PP clarified that plantation will be carried out in 4.5 acre land and treated effluent is not discharged in Shivnath River. However, treated wastewater is used for irrigation propose in near by villages. The existing plant has provided employment to about 600 persons. Out of

which 95 % are from nearby villages only. Sufficient space is available within factory for parking of trucks. The Committee was satisfied with the response of PP.

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

- i. Bag filter alongwith stack of adequate height shall be provided to rice husk /coal fired boiler to control particulate emission within prescribed limits.
- ii. Pucca approach road to project site shall be constructed prior to commencing construction activity of the proposed Expansion so as to avoid fugitive emissions.
- iii. Total fresh water requirement from from Shivanth River and ground water source shall not exceed 690 m<sup>3</sup>/day and prior permission shall be obtained from the CGWA/SGWA and copy shall be submitted to the MoEF&CC Regional Office,
- iv. Water consumption shall be reduced by adopting 3 R's (reduce, reuse and recycle) concept in the process.
- v. Wastewater generation shall not exceed 445 m<sup>3</sup>/day after expansion. Wastewater will be treated in ETP comprising anaerobic treatment process followed by activated Sludge process. Treated effluent will be used for horticulture purpose and water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB and recycle/reuse.
- vi. Treated effluent shall be passed through holding pond. Online pH meter, flow meter and TOC analyzer shall be installed.
- vii. Coal storage shall be done in such a way that it does not get air borne or fly around due to wind.
- viii. 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.
- ix. 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.
- x. 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.
- xi. All the commitment made regarding issues raised during the Public Hearing/consultation meeting held on 25<sup>th</sup> February, 2014 shall be satisfactorily implemented.
- 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 Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.

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

**22.9.9 Drilling of 25 wells Up – gradation of GCS, Gamnewala and laying of 6” dia, 46 Km. long underground Pipeline of M/s ONGC in Jaisalemer Basin Rajasthan (EC)**

Project proposal was considered in the 20<sup>th</sup> Expert Appraisal Committee (Industry) meeting held during 23<sup>rd</sup>-24<sup>th</sup> June, 2014 and the Committee desired following information:

- i. Certified Compliance report of the condition stipulated in the existing Environmental Clearance by Regional Office.
- ii. Action plan to be prepared for Enterprises Social responsibility consisting of local issues such arrangement of standby arrangement for electricity, water availability and local employment etc.

Project proponent vide letter dated 2<sup>nd</sup> June, 2014 has submitted the above mentioned information. PP informed they have earmarked funds of Rs. 1.87 Crore for ESR activities to be carried out in the next five years. Priority areas identified are school furniture, street solar lights, water facilities, help age program and SC/ST component plan. After detailed deliberations, the Committee on the basis of documents furnished and presentation made recommended the project for environmental clearance and stipulated the following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i. 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 16<sup>th</sup> November, 2009 for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, methane & Non-methane HC etc.
- ii. Mercury shall also be analyzed in air, water and drill cuttings twice during drilling period.
- iii. Approach road shall be made pucca to minimize generation of suspended dust.
- iv. 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.
- v. Total water requirement shall not exceed 35m<sup>3</sup>/day and prior permission shall be obtained from the concerned agency.
- vi. 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.
- vii. 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 Lucknow.
- viii. Good sanitation facility shall be provided at the drilling site. Domestic sewage shall be disposed off through septic tank/ soak pit.

- ix. 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.
- x. 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 30<sup>th</sup> August, 2005.
- xi. 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.
- xii. The company shall develop a contingency plan for H<sub>2</sub>S release including all necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal H<sub>2</sub>S detectors in locations of high risk of exposure along with self containing breathing apparatus.
- xiii. On completion of drilling, the company have to plug the drilled wells safely and obtain certificate from environment safety angle from the concerned authority.
- xiv. 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.
- xv. Emergency Response Plan (ERP) shall be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- xvi. 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.
- xvii. Abandoned well inventory and remediation plan shall be submitted within six months from the date of issue of letter.
- xviii. All the issues raised during the Public Hearing/consultation meeting held on 26<sup>th</sup> February, 2014 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xix. Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.
- xx. Restoration of the project site shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office at Lucknow.
- xxi. 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 Lucknow.
- xxii. 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.
- xxiii. 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.
- xxiv. All personnel including those of contractors shall be trained and made fully aware of the hazards, risks and controls in place.
- xxv. Company shall have own Environment Management Cell having qualified persons with proper background.
- xxvi. 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.

**22.9.10 Sugar Complex (Sugar Plant 5,000 TCD; Co-generation Plant, 30 MW; Molasses based Distillery Plant, 120 KLPD) at Sy. Nos. 138 to 151, 159 to 162, 167, 168 of Village Mygur and Sy. Nos. 237 to 241 of Village Hippargi, Taluka Jamakhandi, District Bagalkot, Karnataka by M/s Shri Sai Priya Sugars Ltd. – reg.**

The Committee discussed the chronology of the event of the above project :

- i. Proposal for the above project was received in the Ministry on 25.05.2010.
- ii. Proposal was considered in EAC (I) meeting held during 16<sup>th</sup>-17<sup>th</sup> September, 2010 for TOR.
- iii. TOR letter was issued on 26.10.2010.
- iv. EIA –EMP report was submitted on 18.05.2011.
- v. Public hearing was conducted on 22.03.2011.
- vi. Ambient Air Quality data was collected during March-May, 2010, prior to award of TOR.
- vii. Proposal was considered in the EAC meeting held during 21<sup>st</sup>-22<sup>nd</sup> September, 2011 and the project proponent did not attend the meeting.
- viii. MoEF vide letter dated 24<sup>th</sup> October, 2011 has communicated the information and closed the file.
- ix. PP vide letter dated 12.06.2014 has submitted addl. information alongwith final EIA –EMP report.
- x. MoEF vide OM letter no. J-11013/41/2006-IA II (I) Part, dated 22<sup>nd</sup> August, 2014 regarding Validity of TOR prescribed under EIA Notification, 2006 prescribes the following guidelines for considering such cases:

*“Instance have also come to the notice of this Ministry wherein, though the EIA/EMP report is submitted by the proponent within the validity period of TORs, the case remains pending for want of additional information from the proponent, State Government etc., as sought by the EAC/Ministry. The Ministry has already decided vide OM No. J-11013/5/2009-IA II (Part) dated 30.10.2012 that such cases will be delisted in case such information is not received within six months. In some cases the proponents have been requesting for re-listing of their projects after the requisite information has been submitted after considerable lapse of time. For such cases, it has been decided that they could be considered provided the date of public hearing is not more than 3 years old and the data used in preparation of EIA/EMP report is not more than 3 years old. In case these conditions are not met, the proponent will have to start the process de novo after obtaining fresh TORs.”*

As per the records, public hearing and data used for preparation of EIA-EMP report of the above mentioned project are more than three years old.

Therefore, in context of aforesaid OM by MoEF&CC, the Committee recommended that M/s Shri Sai Priya Sugars Ltd. *has to start the process de novo after obtaining fresh TORs.*

## **22.10 Further Consideration Cases**

### **22.10.1 Distillery Plant (30 KLPD to 60 KLPD) at Survey No.290, village Sai Naga Ranjani, Tehsil Kallam, District Osmanabad, Maharashtra by M/s Natural Sugar & Allied Industries Ltd. regarding EC.**

A copy of certified compliance report dated 7.02.2014 issued by MoEF Regional Office is submitted. The Committee deliberated on the monitoring report of RO, Bhopal. It is reported that project proponent has already initiated the proposed expansion project unit without obtaining prior environmental clearance as per the provisions of EIA Notification, 2006. 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 12<sup>th</sup> December, 2012 and 27<sup>th</sup> June, 2013.

### 22.10.3 Any Other Items

#### 22.10.1 Proposed 30 MTPH Fertilizer Blending Unit for Customized NPK Grade of Fertilizers Production Facility of M/s Zuari Holdings Ltd. at South Goa, Goa ( Amendment in TOR)

This Ministry vide letter no. J-11011/372/2012- IA II (I) dated 19<sup>th</sup> March, 2013 has issued TOR of preparation of EIA/EMP report.

Project proponent vide letter dated 5.3.2014 has requested for the following amendment:

- i. 25 MW Gas Turbine (GT) alongwith Heat Recovery Steam Generator (HRSG) generation MP steam (37 Kg/cm<sup>2</sup>g) with unfired capacity of 50 MT/Hr.( 70 MT/Hr with supplementary firing)
- ii. 1 x 5000 MT Atmosphere Ammonia Storage Tank.

Besides, PP has also requested for extension of validity of TOR for another one year as some more time is required to complete EIA/EMP report and to submit EIA Report to SPCB for public hearing.

After detailed deliberations, the committee recommended the proposal for amendment in TOR for addition of utilities and ammonia storage tank . Validity of TOR may be extended to another one year w.e.f. 19<sup>th</sup> March, 2015.All other TOR conditions would remain the same. Public Hearing shall be carried out.

#### 22.10.2 Coal Bed Methane (CBM) in Block :TL-CBM-2008/IV,Talcher CBM Block,Orissa by Essar Oil Limited (E&P Division) - Extension of validity of ToR.

This Ministry vide letter no. J-11011/104/2011- IA II (I) dated 13.07.2011 has issued TOR of preparation of EIA/EMP report. Further, extension of validity of TOR was granted for another one year vide MoEF letter dated 22.11.2013.

Now, PP vide letter dated 26.06.2014 has requested for extension of validity for another 6 months as public hearing could not be held due to local protests and State Assembly & Loksabha elections.

After detailed deliberations, the committee recommended that Project Proponent has to apply afresh TOR.

#### 22.10.3 Applicability of EIA Notification, 2006 for the Barytes Beneficiation Plant of M/s Garuda Drilling Mud Chemicals at Village Gajulamandyam, District Chitto, AP (Applicability of EIA Notification 2006).

M/s Garuda Drilling Mud Chemicals has proposed for installation of 1,00,000 TPA Beneficiation Plant at 33B-APIIC Industrial Development Area Gajulamandyam, Village Gajulamandyam, Mandal Renigunta, District Chittoor, Andhra Pradesh. Total plot area is 1.47 ha. Of which greenbelt will be developed in 0.5 ha. Cost of project is Rs. 3 Crore. Swarnamukhi River is flowing at a distance of 1.1 Km. Narayanavanam PF, Karvetnagar PF and Tirupati Extension RF are located within 10 Km distance. The only raw material required is low grade Barytes. PP informed that the nature of project is to beneficiation/convert low grade barytes mineral powder containing lower percentages of Barium Sulphate into Barytes Powder Concentrates containing Barium Sulphate of over 85 %. The principal operations of beneficiation plants are feed preparation ( Powder 200 meshes + water); the mixture is introduced into agitator for homogeneous mixer. The mix is subjected to Multi gravity flotation. The slurry concentrate is separated from the tailing. Water requirement will be 50 m<sup>3</sup>/day. The solid waste generation is about 30000 TPA. This will be sold to brick manufacturing units as well as cement units.

After detailed deliberations, the committee clarified that the said activity attracts provisions of EIA Notification, 2006 and falls under 2 (b) of the schedule of the Notification and categorised as category 'A' project. It was also noted that PP has submitted Form1 alongwith pre-feasibility report. Therefore, the Committee recommended TORs for preparation of EIA-EMP report along with Public Hearing:

1. Executive summary (*maximum 2-3 sheets in A4 size paper*) of the project covering project description, description of the environment, anticipated environmental impacts & its mitigation measures, environmental management plan, environmental monitoring programme, public consultation, project benefits, Social impacts including R&R.
2. Site Details:
  - i. Location of the project site covering village, Taluka/Tehsil, District and State on Indian map of 1:1000,000 scale.
  - ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet.
  - iii. Co-ordinates (lat-long) of all four corners of the site.
  - iv. Google map-Earth downloaded of the project site.
  - v. A map showing environmental sensitivity [land use/land cover, water bodies, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc.] and from critically/severely polluted area(s) and Eco-sensitive Areas within 10km radius of the project site vis-à-vis shortest (aerial) distance from the project. If the project is located within 10km of CPAs/severely Polluted Areas, confirm whether moratorium has been imposed on the area.
  - vi. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. In addition, if located within an Industrial area/Estate/Complex, layout of Industrial Area and location of unit within the Industrial area/Estate/Complex, layout of Industrial Area.
  - vii. Photographs of the proposed and existing (if applicable) plant site. If existing, in addition to site map, provide photographs of plantation/greenbelt in the existing project. If fresh EC application, photographs
3. Landuse break-up of total land of the project site (identified and acquired) – agricultural, forest, wasteland, water bodies, settlements, etc shall be included.
4. A copy of the mutual agreement for land acquisition signed with land oustees.
5. Proposal shall be submitted to the Ministry for environment clearance only after acquiring at least 60% of the total land required for the project. Necessary documents indicating acquisition of land shall be included.
6. Forest and wildlife related issues:
  - i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department.
  - ii. Landuse map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (*in case of projects involving forest land more than 40 ha*)
  - iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.
  - iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon
  - v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area
  - vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife
7. A list of major industries with name and type within study area (10km radius) shall be incorporated.
8. Details of proposed raw materials and products along with production capacity. If expansion project, details for existing unit, separately for existing and new (proposed) unit.
9. Details of manufacturing process, major equipment and machinery. If expansion project, details of existing unit, separately for existing and new (proposed) unit.

10. List of raw materials required and its source along with mode of transportation shall be included. All the trucks for raw material and finished product transportation must be “Environmentally Compliant”.
11. Quantity of fuel required, its source and characteristics and documentary evidence to substantiate confirmed fuel linkage shall be furnished
12. 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.
13. Manufacturing process details of all the plants including captive power plant if any along with process flow chart shall be included.
14. Mass balance for the raw material and products shall be included.
15. Energy balance data for all the components of the plant shall be incorporated.
16. Geological features and Geo-hydrological status of the study area shall be included.
17. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of RL of the project site and mRL of the river should also be provided.
18. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) at 8 locations for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO and HC (methane & non-methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
19. Surface water quality of nearby River (60m upstream and downstream) and other surface drains at eight locations to be provided.
20. Ground water monitoring minimum at 8 locations shall be included.
21. Noise levels monitoring at 8 locations within the study area.
22. Traffic study of the area for the proposed project in respect of existing traffic, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
23. 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.
24. Emissions (g/second) with and without the air pollution control measures.
25. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be well assessed. Details of the model used and the input data used for modeling shall also be provided. The air quality contours should be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.
26. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.
27. Details of water requirement, water balance chart for new unit or for existing unit as well as proposed expansion (in case of expansion).
28. Source of water supply and quantity and permission of withdrawal of water (surface/ground) from Competent Authority.
29. Details regarding quantity of effluents generated, recycled and reused and discharged to be provided. Methods adopted/to be adopted for the water conservation shall be included. Zero discharge effluent concepts to be adopted.
30. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.
31. Action plan for control of ambient air quality parameters as per NAAQES Standards for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub>, etc as per GSR 826(E) dated 16<sup>th</sup> November, 2009.
32. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> May, 2008.

33. Action plan for solid/hazardous waste generation, storage, utilization and disposal. Copies of MOU regarding utilization of solid waste shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
34. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 and 2009. A detailed plan of action should be provided.
35. 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.
36. 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.
37. 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.
38. Details of Rehabilitation & Resettlement (R & R) involving the project. R&R shall be as per policy of the State Govt. and a detailed action plan shall be included.
39. Action plan for post-project environmental monitoring shall be submitted.
40. Disaster Preparedness and Emergency Management Plan including Risk Assessment and damage control needs to be addressed and included.
41. Occupational health:
  - i. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
  - ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
  - iii. Annual report of health status of workers with special reference to Occupational Health and Safety.
  - iv. Action plan for the implementation of OHS standards as per OSHAS/USEPA.
  - v. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.
42. 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
43. 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.

44. 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.
45. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof 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.
46. '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.
47. A tabular chart with index for point wise compliance of above TORs.
48. 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).

**22.10.4 Applicability of EC for existing Speciality Products Manufacturing Unit of M/s Adi Finechem Ltd. at Village Chekhala, Taluka Sanand, District Ahmedabad ( Applicability of EC).**

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

**22.10.5 One Well B-CY-EOT1 in Onshore PEL Block II of M/s ONGC in Cauvery Basin, Tamil Nadu – For Extension of TOR Dated 21.08.2013.**

M/s ONGC vide letter dated 28<sup>th</sup> June, 2014 has requested for extension of TOR for Well B-CY-EOT in Onshore PEL Block II of Cauvery Basin. Committee noted that MoEF vide letter no. J-11011/2/2011 IA II (I) dated 24<sup>th</sup> May, 2011 has issued TOR for exploratory Drilling (25 additional Wells.). Further, EC was granted vide MoEF letter of even no dated 21<sup>st</sup> August, 2013 for 24 wells. Considering these facts and records, the extension of Validity of TOR letter dated 24<sup>th</sup> May, 2011 cannot be recommended. It was noted that PP has submitted fresh form 1 for exploratory drilling of 1 Well in PEL L-2 Block. After detailed deliberations, the committee recommended that following fresh TOR for preparation of EIA –EMP report alongwith public hearing :

1. Executive summary of a project
2. Project description, project objectives and project benefits.
3. 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.
4. Details of forest land involved in the proposed project. A copy of forest clearance letter, if applicable.
5. 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 should be submitted.

6. Distance from nearby critically/severely polluted area as per Notification dated 13th January, 2010, if applicable.
7. Does proposal involves rehabilitation and resettlement? If yes, details thereof.
8. Details of project cost.
9. 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.
10. 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, SO<sub>2</sub>, NO<sub>x</sub>, VOCs, Methane and non-methane HC.
  - (iii) Soil sample analysis (physical and chemical properties) at the areas located at 5 locations.
  - (iv) Ground and surface water quality in the vicinity of the proposed wells site.
  - (v) Climatology and Meteorology including wind speed, wind direction, temperature rainfall relative humidity etc.
  - (vi) Measurement of Noise levels within 1 km radius of the proposed wells.
  - (vii) Vegetation and land use; Animal resources
11. Incremental GLC as a result of DG set operation.
12. Potential environmental impact envisages during various stages of project activities such as site activation, development, operation/ maintenance and decommissioning.
13. Actual source of water and 'Permission' for the drawl of water from the Competent Authority. Detailed water balance, wastewater generation and discharge.
14. Noise abatement measures and measures to minimize disturbance due to light and visual intrusions in case coastally located.
15. Treatment and disposal of waste water.
16. Treatment and disposal of solid waste generation.
17. Disposal of spent oil and loose.
18. Storage of chemicals and diesel at site.
19. Commitment for the use of WBM only
20. Mud make up and mud and cutting disposal – all options considered should be listed with selective option.
21. Hazardous material usage, storage accounting and disposal.
22. Disposal of packaging waste from site.

23. Oil spill emergency plans in respect of recovery/ reclamation.
24. H2S emissions control.
25. Produced oil handling and storage.
26. Details of scheme for oil collection system alongwith process flow diagram and its capacity.
27. Details of control of air, water and noise pollution in oil collection system.
28. Disposal of produced/formation water.
29. Whether any burn pits being utilized for well test operations.
30. Restoration and decommissioning plans which should include mud pits and wastage restoration also and documentation and monitoring of site recovery.
31. Measures to protect ground water and shallow aquifers from contamination.
32. Risk assessment and disaster management plan for independent reviews of well designed construction etc. for prevention of blow out.
33. Environmental management plan.
34. Documentary proof of membership of common disposal facilities, if any.
35. Details of environmental and safety related documentation within the company including documentation and proposed occupational health and safety Surveillance Safety Programme for all personnel at site. This should also include monitoring programme for the environmental.
36. Total capital and recurring cost for environmental control measures.
37. 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.
38. Any litigation pending against the project and or any direction/order passed by any court of law against the project. If so details thereof.
39. A tabular chart with index for point-wise compliance of above TORs.

The following general points should be noted:

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

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

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

**22.10.6 Drilling of Development well (108 Nos.) in oil field of Ahmedabad Asset of ONGC Ltd. At Mehsana and Gandhinagar Districts, Gujarat by M/s ONGC – extension of validity of TOR**

TOR to the above proposal was accorded by MoEF vide letter no. J-11011/92/2012-IA II (I) dated 13.07.2012. The Project Proponent (PP) vide letters dated 27.05.2014 has requested MoEF for extension of validity of TOR. PP informed that project was delayed due to finalization of NABET approved EIA Consultant and compilation of technical information required for the project. After detailed deliberations, the committee recommended for the extension of validity of TOR for a period of one year with effect from 13.07.2014.

**22.10.7 Drilling of Development well (138 Nos.) of Wella in Oil Field of Ahmedabad Asset of M/s ONGC at Kheda, Gandhinagar and Ahmedabad Districts of Gujarat by M/s ONGC – extension of validity of TOR**

TOR to the above proposal was accorded by MoEF vide letter no. J-11011/90/2012-IA II (I) dated 18.07.2012. The Project Proponent (PP) vide letter dated 27.05.2014 has requested MoEF for extension of validity of TOR. PP informed that project was delayed due to finalization of NABET approved EIA Consultant and compilation of technical information required for the project. After detailed deliberations, the committee recommended for the extension of validity of TOR for a period of one year with effect from 18.07.2014.

**22.10.8 Additional Exploratory Drilling (01 well) in Kangra-Mandi under PEL Block, Himachal Pradesh by M/s ONGC Ltd. - regarding amendment in EC.**

**Environmental Clearance was issued vide MoEF's letter no. J-11011/410/2012-IA II (I) dated 21<sup>st</sup> June, 2013 with following Specific condition at S.N. viii:**

*“Drilling wastewater including drill cuttings wash water should be collected in disposal pit lined with HDPE lining evaporated or treated and should comply with the notified standards for on-shore disposal. The membership of common TSDF should be obtained for the disposal of drill cuttings and hazardous waste. Otherwise, secured land fill should be created at the site as per the design approved by the CPCB and obtain authorization from the SPCB. Copy of authorization or membership of TSDF should be submitted to Ministry's Regional Office at Chandigarh.”*

Now, PP clarified that ONGC in its drilling operations uses water base mud which as per test carried out by NIO Goa, Non- Toxic mud and is non-hazardous. ONGC is to comply with the guidelines for disposal of Solid Waste, drill cuttings and drilling fluids for onshore drilling operation notified under GSR 546 ( E) dated 30.08.2005.

After detailed deliberations, the committee recommended the proposal for amendment in EC's specific condition as per following:

For : *“Drilling wastewater including drill cuttings wash water should be collected in disposal pit lined with HDPE lining evaporated or treated and should comply with the notified standards for on-shore disposal. The membership of common TSDF should be obtained for the disposal of drill cuttings and hazardous waste. Otherwise, secured land fill should be created at the site as per the design approved by the CPCB. “*

Read : *“to comply with the guidelines for disposal of Solid Waste, drill cuttings and drilling fluids for onshore drilling operation notified under GSR 546 ( E) dated 30.08.2005.”*

All other environmental conditions including validity period would remain the same.

**22.10.9 Expansion of Molasses based Distillery (80 to 160 KLPD) along with CPP (14MW) of M/s Lokmangal Agro Industries Ltd. at Gat No. 573, 574 and 575, Subhashnagar, BibiDarphal, Taluka North Solapur, District Solapur, Maharashtra (EC)- Site Visit reg.**

As per recommendations of the Reconstituted Expert Appraisal Committee (Industry) in its 20<sup>th</sup> Meeting held during 23<sup>rd</sup>– 24<sup>th</sup> June, 2014, a sub-committee comprising Shri Niranjana Raghunath Raje, Prof. C.S. Dubey and Shri A. N. Singh, Jt. Director, MoEF visited the above mentioned project site to assess the existing environmental scenario and recommend additional environmental protection measures to be undertaken by the above mentioned projects during expansion.

Site visit was made by the Sub-Committee on 17<sup>th</sup> August, 2014 and following officials were present:

(A) From M/s Lokmangal Agro Industries Ltd.

1. Shri Satish S Deshmukh, Promoter
2. Shri Prashat P Patil, Director
3. Shri Parag Patil, Director
4. Shri Ravikant P. Patil, General Manager
5. Shri Mohan Pise, Technical Director
6. Shri Suryakant Dalavi, Dy. GM
7. Shri Hanmant D Sagar, Distillery Manager
8. Shri Ashish Nawade, CEO, Innovative Env. Tech. Pvt. Ltd., Pune

(B) From MPCB

- i. Shri Anil Mohekar, RO, MPCB, Solapur
- ii. Shri Koparkar, SRO, MPCB, Solapur

At the outset, M/s Lokmangal Agro Industries Ltd. briefed the Sub-Committee about the production facilities, Spent wash storage lagoon, bio-compost yard, spent waste treatment system, H<sub>2</sub>S removal system, boiler, Power generation unit, effluent management system, control of air emissions etc. Existing unit comprises of distillery plant (80 KLPD), bagasse fired boiler (26 TPH) with power generation capacity (3 MW), Gas Generator ( 2 x 2660 KVA) etc. Now, PP has proposed to set up additional 80 KLPD ethanol from molasses based distillery in the vacant plot of the existing premises. It is also proposed to use the existing boiler of 26 TPH after upgrading to 30 TPH steam generation capacity. Steam generated from boiler will be utilized for running two turbo generators to produce 3 MW power from each TG set to generate 6 MW total power before fulfilling process heating requirement. Biogas generated from bio-methanation plant 36000 m<sup>3</sup>/day will be fed to gas engines after H<sub>2</sub>S removal from biogas. From purified biogas fired engine of 4 MW each will be generated from existing and proposed expansion. Total power generation from gas engine will be 8 MW. Thus there will be total power generation of about 14 MW from by-products. The Sub-Committee visited the bio-composting Yard, spent wash lagoon, bio-methanation plant, H<sub>2</sub>S removal system alongwith sulphur recovery unit, bagasse based power plant, gas generator area. PP has also informed about the CSR activities carried out by them. Some of the important CSR schemes include rain water harvesting in Village BibiDarphal up by way constructing canal and channels. They have constructed 4 km channel and planned to construct upto 12 KM within 5 years. They have also established a primary health centre for the labors working in factory, advanced education in Primary and Secondary division. PP informed that water will be available from River Sina 4.7 Km away and permission obtained from Irrigation Department Pune. Distillery will be operated for 270 days. It was informed that this distillery plant was last operated on 15.07.2014. Next operation of distillery unit will start on 15.11.2014. The Committee then went through the additional information asked by the Committee in the 20<sup>th</sup> EAC meeting and found to be satisfactory. During site visit, following observations were made:

- i) In the whole, plant area housekeeping was found good. At present, bagasse storage area is partly covered. Therefore, unit has to create covered bagasse storage yard in the expansion project.
- ii) Existing spent wash treatment scheme includes bio-methanation followed by evaporation and bio-composting to achieve 'Zero' Discharge.

- iii) Spentless is being treated in ETP and treated effluent is being used in process.
- iv) Concrete yard has been constructed for bio-composting alongwith leachate collection system. Existing area of compost yard is 8 acres.
- v) Only one piezometer well was found installed to monitor ground water quality around bio-composting yard. However, the Committee suggested them to install two additional piezometer wells at the strategic locations.
- vi) Existing raw spentwash lagoon storage is for 30 days. It was observed that storage lagoon became old and corroded. It was advised them to replace the existing lagoon with new concrete spent wash storage tank as per CPCB guidelines.
- vii) H<sub>2</sub>S removal plant exists for biogas generation (36000 m<sup>3</sup>/day). They have installed indigenously developed bio-chemical gas de-sulphurisation system/H<sub>2</sub>S scrubber system. In this system, H<sub>2</sub>S gas is scrubbed in H<sub>2</sub>S scrubber column and scrubbed solution is taken into biological reactor, where biological sulphur is separated. Operation of sulphur recovery system was found to be satisfactory.
- viii) Existing greenbelt was not found satisfactory specially along boundary of the plant. They have to add 10 m width plantation in and around the boundary of plant.
- ix) ESP has been installed in the existing boiler to control particulate emissions.
- x) As discussed in the 20<sup>th</sup> EAC meeting, PP has submitted the proposal for spent wash treatment scheme comprising biomathantion followed by concentration followed by incineration of spent wash to achieve zero discharge.

Based on the observations during the plant visit and discussion, the Sub Committee recommends EC with following stipulations:

- i) Unit shall create covered bagasse storage yard in the expansion project.
- ii) Unit shall replace the existing spentwash lagoon with concrete storage tank before obtaining consent to operate from MPCB for expansion project.
- iii) For the expansion project, Unit shall adopt spent wash treatment scheme comprising biomathantion followed by concentration followed by incineration of spent wash to achieve zero discharge.
- iv) Greenbelt covering 10 m width plantation to be done around boundary wall.
- v) 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.
- vi) Noise monitoring shall be carried out near gas generating Sets. Ear plugs shall be provided to the operators and other workers. Acoustic room shall be created.
- vii) Dispensary shall be created in the factory premises.
- viii) Accident/Health risk management plan shall be implemented for the workers.

The Site Visit Report was considered by the EAC. The Committee deliberated on the additional information furnished by the project and the site visit report. After detailed deliberations, the Committee based on the additional information furnished and presentation made recommended the project for environmental clearance

stipulated the following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

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) Unit shall create covered bagasse storage yard in the expansion project.
- iii) Unit shall replace the existing spentwash lagoon with concrete storage tank before obtaining consent to operate from MPCB for expansion project as Sub Committee of EAC (I) during their site visit pointed out that storage lagoon became old and corroded. Spent wash lagoon shall be kept in proper condition to prevent ground water pollution. The storage of spent wash shall not exceed 15 days capacity.
- iv) ESP along with stack of adequate height shall be provided to bagasse fired boilers to control particulate emissions within 50 mg/Nm<sup>3</sup>.
- v) Total fresh water requirement from River Sina shall not exceed 3176 m<sup>3</sup>/day and prior permission shall be obtained from the Competent Authority.
- vi) Spent wash generation from molasses based distillery shall not exceed 8 Kl/Kl of alcohol. For the expansion project, Unit shall adopt spent wash treatment scheme comprising biomathantion followed by concentration. Concentrated spent wash shall be incinerated in incineration boiler to 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.
- vii) 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.
- viii) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- ix) Adequate numbers of ground water quality monitoring stations by providing piezometers around the 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 Bhopal and MPCB.
- x) Bagasse/biomass storage shall be done in such a way that it does not get air borne or fly around due to wind.
- xi) Boiler ash shall be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust shall be avoided. Bagasse ash and coal ash shall be stored separately.
- xii) Fire fighting system shall be as per the norms and cover all areas where alcohol is produced, handled and stored. Provision of foam system for fire fighting shall be made to control fire from the alcohol storage tank. DMP shall be implemented.

- 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 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.
- 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 commitments made during the Public Hearing/Public Consultation meeting held on 28<sup>th</sup> November, 2013 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xvii) At least 5 % of the total cost of the project shall be earmarked towards *the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted to the Ministry's Regional Office at Bhopal.* Implementation of such program shall be ensured accordingly in a time bound manner.
- xviii) Noise monitoring shall be carried out near gas generating Sets. Ear plugs shall be provided to the operators and other workers. Acoustic room shall be created.
- xix) Dispensary shall be created in the factory premises.
- xx) Accident/Health risk management plan shall be implemented for the workers.

2.10.10 **Expansion of Bulk Drug Manufacturing Unit of M/s Lupin Laboratories Ltd. (formerly M/s Rubamin Laboratories), at Block No. 21, Village Dabhansa, TahsilPadra, District Vadodara, Gujarat (EC) - Site Visit reg.**

As per recommendations of the Reconstituted Expert Appraisal Committee (Industry) in its 19<sup>th</sup> Meeting held during 28<sup>th</sup> – 30<sup>th</sup> May, 2014, a sub-committee comprising Shri R.K. Garg, DR. S.K. Dave, Expert Members, EAC (Industry) and Shri A. N. Singh, Jt. Director, MoEF visited the above mentioned project site to assess the existing environmental scenario and recommend additional environmental protection measures to be undertaken by the above mentioned projects during expansion.

Site visit was made by the Sub-Committee on 16.08.2014 and following officials were present:

(A) From M/s Lupin Laboratories Ltd.

- i) Shri Snehal M Seth, General Manager, Works
- ii) Shri Kaushik Samanta, Senior General Manager, Environment, Health & Safety
- iii) Mr. Bosco Martins, Vice President ( Projects)
- iv) Shri Pavan Kumar, Dy. General Manager- Environment, Health & Safety
- v) Shri Santosh Andhare, Manager- Environment.

(B) From GPCB

- i) Sh M. S. Pancholi, Regional Officer
- ii) Ms. Rekha Sheikh, Deputy Environment Engineer, GPCB, Vadodara

At the outset, M/s Lupin Laboratories Ltd. briefed the Sub-Committee about the existing operations and the proposed expansion. Indicated the existing requirement of water, fuel, power and the emissions, quantity of effluent generation and its mode of treatment and discharge and HW generation and its disposal. These figures were also presented for the expansion proposal also. It was brought out that water requirement will go up from 360 m<sup>3</sup>/day to 711 m<sup>3</sup>/day. Effluent generation from 110 m<sup>3</sup>/day to 871 m<sup>3</sup>/day. In the present effluent treatment scheme, all effluent (110 m<sup>3</sup>/day) is mixed and partially treated and sent to nearby CETP for further treatment. For the proposed expansion, scheme is being made for complete treatment of the effluent to achieve Zero liquid discharge. The proposed scheme includes segregation and treatment of effluent by MEE followed by ATFD, biological treatment and RO. However, they requested that before the proposed new scheme is established during operation period for about six months, they may be permitted to operate the existing scheme for a period of six months with the existing plant.

Adequate system exists for emissions control and similar systems will be incorporated in the proposed expansion. The hazardous waste generated is being sent to TSDF. It was proposed that they should plan to send the organic waste to cement plant. The Committee then discussed the report of the RO of the Ministry and the response to the various comments on the partially complied items was noted. The Committee was satisfied with the action taken on the report. The Committee then went through the additional information asked by the Committee in the 19<sup>th</sup> EAC meeting. The Committee also went through ground water quality data again collected after the 19<sup>th</sup> EAC meeting. The Committee was informed that they have already applied for permission for drawl of 716 m<sup>3</sup>/day ground water. The Committee also went through the analysis of effluent sent to the CETP. It was learnt that the tanker of CETP comes and takes the effluent. Analysis of effluent is also carried out by the CETP before accepting the wastewater. The Committee was informed by the GPCB Official that the performance of the CETP is satisfactory.

The CSR activities carried out so far were explained and the proposed activities were broadly indicated. The Committee however, suggested that they should send a specific plan of action taking into consideration the need of the nearby villages. One of the items suggested was construction of ponds for collection of rain water for the use of the villagers.

In respect of Occupational health check up arrangements, the Committee was informed that a part time Doctor comes to the plant for 2 hrs per day. Complete records of all the employee are maintained. The Committee recommended that the Occupational health section should be strengthen by the appointment of full time Doctor. After discussion, Sub-Committee took a round of the site and in particular went to the following sections:

- i) ETP
- ii) HW storage
- iii) Solvent storage
- iv) Solvent Recovery Section
- v) One production block

This production block was the one about which a comment had been made in the RO's report. During the visit, Committee found the house keeping quite good. Effluent treatment plant is reasonably well maintained. Solvent bulk storage (underground) are provided with chilled brine condenser. There is good greenery but greenbelt needs to be improved.

Based on the observations during the plant visit and discussion, the Sub Committee recommends EC with following stipulations:

- i. The Company shall ensure zero liquid effluent discharge through the treatment scheme comprising segregation of effluent streams into high COD/TDS and low COD/TDS effluent stream, MEE, biological treatment, RO etc. However, after commissioning of the expansion project, the Company may continue the present scheme for treating 110 KLD of the existing effluent for a maximum period of six months.
- ii. For rain water harvesting from roof top a separate drain line may be constructed upto the recharge well. The Committee was informed by the GPCB that for chemical plant, rain water harvesting through recharge wells is not encouraged. The Company may also explore the possibility of providing surface water storage to the extent possible for their process use.
- iii. The Company vide letter dated 22.08.2014 has submitted the copy of layout plan of existing production facilities as constructed after the latest EC granted in 2008 and document of excise department indicating actual production for the financial year 2013-14 of the existing unit is within the permitted production capacity, which meeting the condition of the existing environmental clearance.
- iv. Greenbelt around process area to be increased. 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 particularly, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- v. 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 a program shall be ensured in a time bound manner.
- vi. Occupational health section to be strengthen by employing a full time Doctor.

The Company vide letter dated 22.08.2014 has submitted the copy of layout plan of existing production facilities as constructed after the latest EC granted in 2008 and document of excise department indicating actual production for the financial year 2013-14 of the existing unit is within the permitted production capacity, which meeting the condition of the existing environmental clearance. The Site Visit Report was considered by the EAC. The Committee deliberated on the additional information furnished by the project and the site visit report. After detailed deliberations, the Committee based on the additional information furnished and site visit report, recommended the project for environmental clearance stipulated the following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i. Scrubber shall be provided to control process emissions viz. HCl, SO<sub>2</sub>, NH<sub>3</sub>, NO, Bromine and Ethyl Chloride. The scrubbing media shall be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. At no time, the emission levels shall go beyond the prescribed standards.
- ii. Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emissions shall conform to the limits imposed by APPCB. Odour management plan shall be implemented.
- iii. Total fresh water requirement from ground water source shall not exceed 711m<sup>3</sup>/day and prior permission shall be obtained from the CGWA/SGWA.

- iv. The Company shall ensure zero liquid effluent discharge from the entire unit after expansion through the treatment scheme comprising segregation of effluent streams into high COD/TDS and low COD/TDS effluent stream, MEE, biological treatment, RO etc. However, after commissioning of the expansion project, the Company may continue the present scheme for treating 110 KLD of the existing effluent for a maximum period of six months. In this regard, Company shall submit an undertaking in order to comply with the time frame. Condensate and recover water will be recycled/reused within factory premises.
- v. '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 :
  - a. Reactor shall be connected to chilled brine condenser system
  - b. Reactor and solvent handling pump shall have mechanical seals to prevent leakages.
  - c. The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
  - d. Solvents shall be stored in a separate space specified with all safety measures.
  - e. Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.
- xi. Entire plant where solvents are used shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.
- xii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- xiii. All the issues raised during the Public Hearing/consultation meeting held on 17<sup>th</sup> January, 2014 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xiv. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.
- xv. Greenbelt around process area to be increased. 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. For rain water harvesting from roof top a separate drain line may be constructed upto the recharge well. The Company may also explore the possibility of providing surface water storage to the extent possible for their process use.

xvii. Occupational health section to be strengthening by employing a full time Doctor.

The meeting ended with a Vote of Thanks to the Chair.

—

**LIST OF PARTICIPANTS OF EAC (I) IN 22<sup>nd</sup> MEETING OF EAC (INDUSTRY) HELD ON  
28<sup>th</sup>-29<sup>th</sup> AUGUST 2014**

S.N.	Name		
1	Shri M. Raman	Chairman	A
2	Shri R.K. Garg	Vice-Chairman	P
3	Prof. R.C. Gupta	Member	A
4	Dr. Prem Shankar Dubey	Member	P
5	Dr. R.M. Mathur	Member	P
6	Dr. S. K. Dave	Member	P
7	Dr. B. Sengupta	Member	P
8	Shri Rajat Roy Choudhary	Member	A
9	Dr. S.D. Attri	Member	A
10.	Dr. Antony Gnanamuthu	Member	P
11.	Prof. C. S. Dubey	Member	P
12.	Shri Niranjana Raghunath Raje	Member	P
<b>MOEF Representatives</b>			
13.	Dr.T.Chandini	Scientist F& MS-Industry-1	
14.	Shri L.K.Bokolia	Scientist E & MS- Industry-2	
15.	Shri A.N.Singh	Scientist D	

**GENERIC TERMS OF REFERENCE (TOR) IN RESPECT OF INDUSTRY SECTOR**

49. Executive summary (*maximum 2-3 sheets in A4 size paper*) of the project covering project description, description of the environment, anticipated environmental impacts & its mitigation measures, environmental management plan, environmental monitoring programme, public consultation, project benefits, Social impacts including R&R.
50. **Site Details:**
- viii. Location of the project site covering village, Taluka/Tehsil, District and State on Indian map of 1:1000,000 scale.
  - ix. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet.
  - x. Co-ordinates (lat-long) of all four corners of the site.
  - xi. Google map-Earth downloaded of the project site.
  - xii. A map showing environmental sensitivity [land use/land cover, water bodies, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc.] and from critically/severely polluted area(s) and Eco-sensitive Areas within 10km radius of the project site vis-à-vis shortest (aerial) distance from the project. If the project is located within 10km of CPAs/severely Polluted Areas, confirm whether moratorium has been imposed on the area.
  - xiii. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. In addition, if located within an Industrial area/Estate/Complex, layout of Industrial Area and location of unit within the Industrial area/Estate/Complex, layout of Industrial Area.
  - xiv. Photographs of the proposed and existing (if applicable) plant site. If existing, in addition to site map, provide photographs of plantation/greenbelt in the existing project. If fresh EC application, photographs
51. Landuse break-up of total land of the project site (identified and acquired) – agricultural, forest, wasteland, water bodies, settlements, etc shall be included.
52. A copy of the mutual agreement for land acquisition signed with land oustees.
53. Proposal shall be submitted to the Ministry for environment clearance only after acquiring at least 60% of the total land required for the project. Necessary documents indicating acquisition of land shall be included.
54. **Forest and wildlife related issues:**
- vii. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department.
  - viii. Landuse map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (*in case of projects involving forest land more than 40 ha*)
  - ix. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.
  - x. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon
  - xi. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area
  - xii. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife
55. **Expansion/modernization proposals:**
- i. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30<sup>th</sup> May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including

Amendments should be provided. In addition, status of compliance of Consent to Operate for the ongoing /existing operation of the project from SPCB shall be attached with the EIA-EMP report.

- ii. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.

#### **Details of Industrial Operations**

56. A list of major industries with name and type within study area (10km radius) shall be incorporated.
57. Details of proposed raw materials and products along with production capacity. If expansion project, details for existing unit, separately for existing and new (proposed) unit.
58. Details of manufacturing process, major equipment and machinery. If expansion project, details of existing unit, separately for existing and new (proposed) unit.
59. List of raw materials required and its source along with mode of transportation shall be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
60. Quantity of fuel required, its source and characteristics and documentary evidence to substantiate confirmed fuel linkage shall be furnished
61. 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.
62. Manufacturing process details of all the plants including captive power plant if any along with process flow chart shall be included.
63. Mass balance for the raw material and products shall be included.
64. Energy balance data for all the components of the plant shall be incorporated.

#### **Environmental Status**

65. Geological features and Geo-hydrological status of the study area shall be included.
66. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of RL of the project site and mRL of the river should also be provided.
67. 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 based on peak rainfall data of the past 30 years.
68. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) at 8 locations for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO and HC (methane & non-methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
69. Surface water quality of nearby River (60m upstream and downstream) and other surface drains at eight locations to be provided.
70. Ground water monitoring minimum at 8 locations shall be included.
71. Noise levels monitoring at 8 locations within the study area.
72. Traffic study of the area for the proposed project in respect of existing traffic, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
73. 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.
74. Emissions (g/second) with and without the air pollution control measures.
75. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be well assessed. Details of the model used and the input data used for modeling shall also be provided. The air quality contours should be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.

76. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.
77. Details of water requirement, water balance chart for new unit or for existing unit as well as proposed expansion (in case of expansion).
78. Source of water supply and quantity and permission of withdrawal of water (surface/ground) from Competent Authority.
79. Details regarding quantity of effluents generated, recycled and reused and discharged to be provided. Methods adopted/to be adopted for the water conservation shall be included. Zero discharge effluent concepts to be adopted.
80. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.
81. Action plan for control of ambient air quality parameters as per NAAQES Standards for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub>, etc as per GSR 826(E) dated 16<sup>th</sup> November, 2009.
82. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> May, 2008.
83. Action plan for solid/hazardous waste generation, storage, utilization and disposal. Copies of MOU regarding utilization of solid waste shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
84. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 and 2009. A detailed plan of action should be provided.
85. 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.
86. 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.
87. 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.
88. Details of Rehabilitation & Resettlement (R & R) involving the project. R&R shall be as per policy of the State Govt. and a detailed action plan shall be included.
89. Action plan for post-project environmental monitoring shall be submitted.
90. Disaster Preparedness and Emergency Management Plan including Risk Assessment and damage control needs to be addressed and included.
91. Occupational health:
  - vi. 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,
  - vii. 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.
  - viii. Annual report of health status of workers with special reference to Occupational Health and Safety.
  - ix. Action plan for the implementation of OHS standards as per OSHAS/USEPA.

- x. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.
92. Corporate Environment Policy
- v. 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.
  - vi. 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.
  - vii. 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.
  - viii. 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
93. 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.
94. 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.
95. 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.
96. The questionnaire for industry sector (available on MOEF website) shall be submitted as an Annexure to the EIA-EMP Report.
97. '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.
98. A tabular chart with index for point wise compliance of above TORs.
99. 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 4<sup>th</sup> 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.

\*\*\*\*\*

ANNEXURE-2

**ADDITIONAL TORs FOR PULP AND PAPER INDUSTRY**

- i. For major Pulp and Paper Units, a 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. MRL details of project site and RL of nearby sources of water shall be indicated.
- ii. A note on pulp washing system capable of handling wood pulp should be included.
- iii. Manufacturing process details for the existing and proposed plant should be included. Chapter on Pulping & Bleaching should include: no black liquor spillage in the area of pulp mill; no use of elemental chlorine for bleaching in mill; installation of hypo preparation plant; no use of potcher washing and use of counter current or horizontal belt washers. Chapter on Chemical Recovery should include: no spillage of foam in chemical recovery plant, no discharge of foul condensate generated from MEE directly to ETP; control of suspended particulate matter emissions from the stack of fluidized bed recovery boiler and ESP in lime kiln
- iv. Studies should be conducted and a chapter should be included to show that Soda pulping process can be employed for Eucalyptus/Casurina to produce low kappa (bleachable) grade of pulp.
- v. Commitment that only elemental Chlorine-free technology will be used for the manufacture of paper and existing plant without chemical recovery plant will be abolished within 2 years of issue of environment clearance.
- vi. A commitment that no extra bleaching chemicals (more than being used now) will be employed and AOx will remain within limits as per CREP for used based mills.

\*\*\*\*\*