

**MINUTES FOR 10<sup>th</sup> RECONSTITUTED EXPERT APPRAISAL COMMITTEE (INDUSTRY) HELD DURING 29<sup>th</sup> JULY, 2013 to 31<sup>st</sup> JULY, 2013**

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

TIME 10.00 A.M.

10.0 Opening Remarks of the Chairman

10.1 Confirmation of the Minutes of the 9<sup>th</sup> Reconstituted Expert Appraisal Committee (Industry) held during 10<sup>th</sup> June, 2013– 11<sup>th</sup> June, 2013.

**29<sup>th</sup> July, 2013**

**10.2.0 Consideration of the Projects:**

10.2.1 Synthetic Organic Chemicals ( Chlorinated Paraffin Wax – 24 MTD capacity ) at Village Sundram, Tehsil DeraBassi, District Mohali, Punjab by M/s Standard Chemicals.- regarding EC.

The project authorities and their consultant gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 36<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry) held during 11<sup>th</sup> – 12<sup>th</sup> JUNE, 2012 for preparation of EIA/EMP report. Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Standard Chemicals has proposed for setting up of Synthetic Organic Chemicals (chlorinated paraffin wax- 24 MTD capacity) at Village Sundram, Tehsil Dera Bassi, district Mohali, Punjab. Plot area is 0.74 ha (1.84 acres) of which greenbelt will be developed in 3859 m<sup>2</sup> area. Cost of the project is Rs. 80.71 Lakhs. Project proponent and the Environmental Consultant during presentation, it was confirmed that no national park/wildlife sanctuary/reserve forest is located within 10 Km distance. Following products and by-products will be produced:

S.N.	Product	Capacity
1	Chlorinated Paraffin Wax	24 TPD
By product		
1	HCl	48 TPD
2	Sodium Hypochlorite	0.5 TPD

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during April, 2012 to June, 2012 and submitted baseline data indicate ranges of concentrations of PM10 (75.8 µg/m<sup>3</sup> to 131.00 µg/m<sup>3</sup>), PM2.5 (26.19 µg/m<sup>3</sup> to 55.52 µg/m<sup>3</sup>), SO<sub>2</sub> (4.07 µg/m<sup>3</sup> to 6.99 µg/m<sup>3</sup>) and NO<sub>x</sub> (9.58 µg/m<sup>3</sup> to 21.23 µg/m<sup>3</sup>) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 0.104 µg/m<sup>3</sup> with respect to PM10. The resultant concentrations are within the NAAQS. The HCl vapours will be scrubbed by adopting two stage chlorination absorption system to absorb unreacted chlorine and HCl vapours. The Committee advised them to provide proper hood, suction and scrubbing arrangement at Chlorine storage area. Fresh water requirement from ground water source will be 90 m<sup>3</sup>/day. Effluent generation will be 1.5 m<sup>3</sup>/day. Effluent will be treated in ETP comprising Ultra Filtration and Reverse Osmosis.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Punjab Pollution Control Board on 20<sup>th</sup> November, 2012. The issues raised during public hearing were regarding local employment, wastewater discharge by M/s Parabolic Drugs Ltd., ground water contamination by the adjoining unit namely M/s Parabolic Drugs Ltd. etc and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

Project proponent and the Consultant informed that they have started construction activities. They have also shown photographs. Therefore, the project proposal involves violation of the Environment (Protection) Act, 1986 or Environment Impact Assessment (EIA) Notification, 2006 will

be considered as per Ministry's O. M no. J-11013/41/2006-IA II (I) dated 12th December, 2012 and 27th June, 2013.

10.2.2 Expansion of Organic Azo Pigment Plant (from 100 TPM to 200 TPM) at Plot No.287/2-B, 2nd Phase, Industrial Estate, GIDC, Vapi, Taluka Padra, District Valsad-396195, Gujarat, by M/s Micas Organics Ltd. (Unit-V) - regarding EC

The project authorities and their consultant (Eco-Chem Sales & Service) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 23rd Meeting of the Expert Appraisal Committee (Industry-2) held during 30th– 31st May, 2011 for preparation of EIA/EMP report. All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within interstate boundary, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I)

M/s Micas Organics Ltd. have proposed for the expansion of Organic Azo Pigment Plant (from 100 TPM to 200 TPM) at Plot No.287/2-B, 2nd Phase, Industrial Estate, GIDC,Vapi, TalukaPadra, District Valsad Gujarat. Proposed expansion will be carried out in the existing plant premises. Total plot area is 2055 m<sup>2</sup> of which greenbelt will be developed in 290.40 m<sup>2</sup> area. Damanganga River is flowing at a distance of 3 km. Total cost of expansion project is Rs. 301.5 Lakhs. No national park/ wildlife sanctuary/ reserve forest is located within 10 Km distance. Project proponent has submitted copy of consent order no. AWH-47747 dated 3.07.2012. Project proponent informed the compliance to the conditions stipulated in consent. Following products will be manufactured:

S.N.	Products	Capacity (TPM)		
		Existing	Proposed Additional	Total after expansion
1.	Zinc Chrome Pigment	23.0	0	23.0
2.	Middle Chrome Pigment	23.0	0	23.0
3.	Lemon Chrome Pigment	23.0	0	23.0
4.	Prime Rose Chrome Pigment	4.0	0	4.0
5.	Searlet Chrome Pigment	23.0	0	23.0
6.	Light Yellow Chrome Pigment	4.0	0	4.0
7.	Organic Red Pigment	0	45.0	45.0
8.	Organic Yellow Pigment	0	45.0	45.0
9.	Organic Orange Pigment	0	10.0	10.0
	TOTAL	100.0	100.0	200.0

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during October, 2011 to December, 2011 and submitted baseline data indicate ranges of concentrations of PM<sub>10</sub> (54.56 µg/m<sup>3</sup> to 86.00 µg/m<sup>3</sup>), PM<sub>2.5</sub> (32.56 µg/m<sup>3</sup> to 52.00 µg/m<sup>3</sup>), SO<sub>2</sub> (16.52 µg/m<sup>3</sup> to 37.00 µg/m<sup>3</sup>) and NO<sub>x</sub> (16.04 µg/m<sup>3</sup> to 26.00 µg/m<sup>3</sup>) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 0.03 µg/m<sup>3</sup> and 0.012 µg/m<sup>3</sup> with respect to SO<sub>2</sub> and NO<sub>x</sub>. The resultant concentrations are within the NAAQS.

Common Stack (32m) will be provided to gas fired thermopack and boiler. Cyclone followed by bagfilter will be provided to pulveriser. Total water requirement from GIDC Vapi water supply will be increased from 81.53 m<sup>3</sup>/day to 281.6 m<sup>3</sup>/day after expansion. Project proponent informed that counter current washing will be carried out with 80 m<sup>3</sup>/day effluent. Therefore, fresh water requirement will be reduced upto 200 m<sup>3</sup>/day. Industrial effluent generation will be increased from 76.53m<sup>3</sup>/day to 265.281 m<sup>3</sup>/day after expansion. Industrial effluent will be treated in the ETP comprises primary, secondary and tertiary treatment unit. Treated effluent will be discharged into underground GIDC effluent drainage line to CETP Vapi leading to the Arabian Sea. ETP sludge will be sent to TSDF. Used oil will be sent to authorized recycler/re-processor. Total power requirement from DGVCL will be increased from 125 KVA to 425 KVA after expansion. DG set (1x 63 KVA + 1x 100 KVA) will be installed. Natural gas requirement will be increased from 1650 SCM/day to 3450 SCM/day after expansion.

Public hearing / consultation was exempted as per stage Section 7 (i), III Stage (3), Para (i)(b) of EIA Notification 2006 due to project being located in notified GIDC.

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

- i) Adequate stack height shall be provided to gas fired boiler.
- ii) The levels of PM10, SO2, NOX, CO and VOC shall be monitored in ambient air.
- iii) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits imposed by GPCB.
- iv) Prior permission for total fresh water requirement from GIDC water supply should be obtained. The water consumption should not exceed 200 m3/day. No ground water should be used.
- v) Total industrial effluent generation shall not exceed 265 m3/day. Effluent (80 m3/day) shall be reused for counter current washing to conserve fresh water. Remaining effluent shall be treated in the ETP comprising primary, secondary and tertiary treatment and treated effluent shall be discharged to CETP after conforming to the standards prescribed for the effluent discharge and obtaining permission from the GPCB. Chrome effluent stream shall be segregated and treated separately. No process effluent shall be discharged in and around the project site. Efforts shall be made to treat ammonical nitrogen in the effluent.
- vi) Treated effluent should be passed through guard pond. Online pH meter, flow meter and TOC analyzer should be installed. Efforts shall be also made to explore the possibility of recycling/reuse of the treated effluent.
- 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) Green belt should be developed in 291 m2 out of total plant area.
- ix) All the recommendations made in the risk assessment report should be satisfactorily implemented.
- x) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

#### 10.2.3 Bulk Drug Manufacturing Unit (19.70 MTPM) at Plot No.29 P (I), Raichur Growth Centre Industrial Area, Village Chicksugur, District Raichur, Karnataka by M/s J. K. Chemicals Pvt. Ltd. - regarding EC

The project authorities and their consultant ( Right source Industrial Solutions Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 30th Meeting of the Expert Appraisal Committee (Industry) held during 15th–16th December, 2011 for preparation of EIA/EMP. All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B' and appraised at State level. However, applicability of general condition due to project location within 10 Km from interstate boundary, proposal is treated as category 'A' and appraised at Central Level.

M/s J. K. Chemlabs Pvt. Ltd. have proposed for bulk drugs manufacturing Unit(19.70 MTPM) at Plot No 29 P (I), Raichur Growth Centre Industrial Area, Village Chicksugur, District Raichur, Karnataka. Total plot area is 8910 m2 of which greenbelt will be developed in 3118.50 m2. Project site is located within 10 Km for the interstate boundary. Krishna River is flowing at 7.6 km. Total cost of project is Rs. 4.98 Crores. No national park /wildlife sanctuary is located within 10 Km distance. Following products will be manufactured :

S.N.	Products	Quantity (TPM)
1.	Montelukast Sodium	1.00
2.	Moxifloxacin Hydrochloride	1.00
3.	Irbesartan	2.00
4.	Lansoprazole	3.00
5.	Sumatriptan Succinate	0.07
6.	Levetiracetam	2.00
7.	Amoldipine Besylate	2.00
8.	Levofloxacin HCl hemihydrates	2.00
9.	Lamivudine	2.00
10.	Carvedilol	1.00
11.	Simvastatin	1.50
12.	Valcyclovir HCl Monohydrate	1.50
	Total	19.70

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 7 locations during March, 2012 to May, 2012 and submitted baseline data indicate ranges of concentrations of PM10 (56.54  $\mu\text{g}/\text{m}^3$  to 62  $\mu\text{g}/\text{m}^3$ ), PM2.5 (26  $\mu\text{g}/\text{m}^3$  to 33.08  $\mu\text{g}/\text{m}^3$ ), SO<sub>2</sub> (5.45  $\mu\text{g}/\text{m}^3$  to 8.07  $\mu\text{g}/\text{m}^3$ ) and NO<sub>x</sub> (7.1  $\mu\text{g}/\text{m}^3$  to 9.2  $\mu\text{g}/\text{m}^3$ ) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 0.817  $\mu\text{g}/\text{m}^3$ , 3.317  $\mu\text{g}/\text{m}^3$  and 4.430  $\mu\text{g}/\text{m}^3$  with respect to PM10, SO<sub>2</sub> and NO<sub>x</sub>. The resultant concentrations are within the NAAQS.

Bagfilter alongwith stack of 32 m height will be provided to coal fired boiler. Scrubber will be provided to the process vents to control process emissions viz. HCl, SO<sub>2</sub> and NH<sub>3</sub>. All the solvent storage tanks will be connected with the vent condensers with chilled water circulation. Total fresh water requirement from KIADB water supply will be 32.20 m<sup>3</sup>/day. Industrial effluent generation will be 26.04 m<sup>3</sup>/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS/COD effluent stream will be treated in effluent treatment plant (ETP) comprising primary, secondary and tertiary treatment. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted. Inorganic & evaporation salt and ETP sludge will be sent to Treatment Storage Disposal Facility (TSD) for hazardous waste. Fly ash will be sold to brick manufacturers. Waste oil and used batteries will be sold to authorized recyclers/re-processors. Power (500 KVA) will be sourced from SEB. D.G. set (1x500 KVA + 1x 100 KVA) will be installed. Coal will be used as fuel in boiler.

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

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

- i) Bag filter shall be provided to the boiler to control particulate emissions within permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/KSPCB guidelines.
- ii) The levels of PM10, SO<sub>2</sub>, NO<sub>x</sub>, VOC, NH<sub>3</sub> and HCl shall be monitored in ambient air.
- iii) Two stage chilled water/caustic scrubber should be provided to process vents to control HCl. Two stage scrubber with caustic lye media solution should be provided to process vents to control SO<sub>2</sub>. Two stage scrubber with chilled water media should be provided to process vents to control NH<sub>3</sub>. The scrubbing media should be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber should be monitored regularly and maintained properly. At no time, the emission levels should go beyond the prescribed standards.
- iv) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits imposed by KSPCB.

- v) Total fresh water requirement from KIADB water supply shall not exceed 32.20 m<sup>3</sup>/day and prior permission shall be obtained from the competent Authorities.
- vi) Trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD should be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream should be treated in ETP and then passed through RO system. Condensate and recover water will be recycled/reused within factory premises. 'Zero' effluent discharge should be adopted and no effluent will be discharged outside the premises.
- vii) All the solvent storage tanks should be connected with vent condensers with chilled brine circulation.
- viii) As proposed, process organic residue and spent carbon shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt should be disposed off to the TSDF. The ash from boiler should be sold to brick manufacturers/cement industry.
- ix) The company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from KSPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire-fighting facilities in case of emergency.
- x) Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust should be avoided.
- xi) Solvent management should be as follows :
  - Reactor should be connected to chilled brine condenser system
  - Reactor and solvent handling pump should have mechanical seals to prevent leakages.
  - The condensers should be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
  - Solvents should be stored in a separate space specified with all safety measures.
  - Proper earthing should be provided in all the electrical equipment wherever solvent handling is done.
  - Entire plant where solvents are used should be flame proof. The solvent storage tanks should be provided with breather valve to prevent losses.

10.2.4 Resin Manufacturing Unit at Plot no. 514, 515, 474/1, 474/2, 475/2 Village Sikra, Taluka Bhachau, District Kutch, Gujarat by M/s Euro Decore Pvt. Ltd. (formerly known as Subhnen Veneers Pvt. Ltd.) - regarding EC

The project authorities and their consultant gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 94th Meeting of the Expert Appraisal Committee (Industry) held during 12th-14th May, 2009 for preparation of EIA/EMP report. MoEF vide letter dated 21st June, 2012 has extended the validity of TOR for one more year. All the Resin Plants located outside notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Euro Decore Pvt. Ltd. (formerly known as Subhnen Veneers Pvt. Ltd.) have proposed for setting up of Resin Manufacturing Unit at Plot no. 514, 515, 474/1, 474/2, 475/2 Village Sikra, Taluka Bhachau, District Kutch, Gujarat. Total plot area is 1,57,075.32 m<sup>2</sup>. No national park/wildlife

sanctuaries are located within 10 km distance. Cost of resin plant is Rs. 0.4895 Crore and Cost of dyeing section is 14.9822 Crore. Following products will be manufactured:

S.N.	Product	Existing Capacity	Proposed capacity	Total capacity
1	Vaneer (MTPM)	750	--	750
2	Plywood (MTPM)	1620	--	1620
3	Block board (MTPM)	460	--	460
4	Flush door (MTPM)	150	--	150
5	Decorative Vaneer (MTPM)	250	--	250
6	Vaneer Dying, m <sup>2</sup> /M	--	75000	75000
7	PF resin (MTPM)	-	240	240

Ambient air quality monitoring was carried out at 7 locations march to March –April 2010 and January 2012 and submitted data indicates as PM<sub>10</sub> (70–99 ug/m<sup>3</sup>), PM<sub>2.5</sub> (33–51 ug/m<sup>3</sup>), SO<sub>2</sub> (23 – 43 ug/m<sup>3</sup>) and NO<sub>x</sub> (25-46ug/m<sup>3</sup>). Predicted value of ground level concentration due to proposed expansion is PM<sub>10</sub> (1.66 ug/m<sup>3</sup>), SO<sub>2</sub> (0.24 ug/m<sup>3</sup>) and NO<sub>x</sub> (1.30 ug/m<sup>3</sup>). The resultant concentrations are within the NAAQS. Multicyclone and dust collector will be provided to waste wood fired boiler. Fresh water requirement will be increased from 38.0 m<sup>3</sup>/day to 68.5 m<sup>3</sup>/day after commissioning of resin and dyeing plant. 20.0 m<sup>3</sup>/day water will be met from ground water source and remaining water will be sourced from rainwater harvesting pond. Industrial effluent generation will be 19.5 m<sup>3</sup>/day. The Committee advised them to pass the treated industrial effluent through Reverse Osmosis as dyeing effluents contain colour. Permeate shall be reused /recycled in process or horticulture purpose. RO rejects shall be dried. ETP sludge will be sent to TSDF. Used oil will be sold to authorized recycler/re-processor. Ash from wood will be used as manure.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 1st January, 2013. The issues raised during public hearing were regarding impact on nearby animal and bird sanctuary, steps to be taken for industrial accident prevention, social activities and medical activities, arrangement for storage of phenol formaldehyde. Regarding, animal & bird sanctuary, project proponent has confirmed that there is no animals and birds sanctuary within 10 Km distance. Project Authorities have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

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

- i) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.
- ii) Bag filter alongwith stack of adequate height should be installed to waste wood 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) Total ground water requirement should not exceed 20 m<sup>3</sup>/day and prior permission should be obtained from the Central Ground Water Authority/State Ground Water Board.
- v) Industrial effluent generation shall not exceed 19.5 m<sup>3</sup>/day. Industrial effluent shall be treated in ETP followed by reverse osmosis. Treated effluent shall be reused/recycled in process or horticulture purpose. RO rejects shall be dried. Water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB. No effluent shall be discharged outside the premises and 'Zero' effluent discharge shall be maintained.
- vi) 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.

- vii) Green belt should be developed in 33% of total plant area.
- viii) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- ix) All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 1st January, 2013 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhopal.
- x) At least 5 % of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.

10.2.5 Coal Bed Methane (CBM) in Block :RM-CBM-2008/IV,Rajmahal CBM Block in Pakur District, Jharkhand by M/s Essar Oil Limited (E&P Division)- regarding EC

The project authorities and their consultant (SENES Consultants India Pvt. Ltd.)gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 23rd Meeting of the Expert Appraisal Committee (Industry) held during 30th– 31st May, 2011 for preparation of EIA/EMP. All the oil and gas production projects are listed at S.N. 1(b) under under Category 'A' and appraised at the Central level.

M/s Essar Oil Limited (E&P Division) have proposed for the exploration and test production of Coal Bed Methane (CBM) in Block: RM (E)-CBM-2008/IV, Rajmahal CBM Block, Jharkhand. The RM (E)-CBM-2008/IV, Rajmahal CBM Block covers an area of 1128 Km<sup>2</sup> encompassing the districts of Dumka, Pakur and Sahebganj, Jharkhand. However, 98 % of the total geographical area of the CBM block falls within Pakur District. Project proponent clarified that CBM activity will be carried out in Pakur District only as public hearing was carried out for same district only. It is reported that there is no ecologically sensitive areas viz. national park, wildlife sanctuaries located within or 10 Km radius of the block boundary. Torai River, Bansloi River, Tirghana River, Pagla River and Brahmani River are flowing within 10 Km distance from block. 0.5 acre of land is required for corehole drilling and 1.5-2.0 acres land will be required for test/pilot well drilling. Land required for installation of surface facilities for CBM gas processing will be approx.. 4-5 acres of land. No diversion of forest land is involved for this project. Total cost of project is Rs. 1046 Crores. Drilling will be carried out to a depth of 2000m. Following are the details of the proposed activities:

Exploratory Core hole	30 wells
Test Wells	3 wells
Pilot wells	20 nos.
Four support wells for each pilot well(directional wells)	4 x 20 = 80 nos.
<b>TOTAL NO. OF WELLS</b>	<b>133 Wells</b>
Gas Gathering Stations	3
Main compressor stations	1
Interconnecting and transportation Pipeline (Gas & Water)	~60 km.

Following are the co-ordinates of the block:

Ref Point	Latitude (N)			Longitude (E)		
A	240	45'	21"	870	35'	51"
B	240	45'	21"	870	48'	34"
C	240	34'	48"	870	48'	34"
D	240	15'	15"	870	38'	38"

E	240	15'	31"	870	37'	58"
F	240	31'	15"	870	33'	40"
G	240	42'	13"	870	36'	45"

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 13 locations during October to December, 2011 and submitted baseline data indicate ranges of concentrations of PM10 (66 µg/m<sup>3</sup> to 286 µg/m<sup>3</sup>), PM2.5 (32 µg/m<sup>3</sup> to 132 µg/m<sup>3</sup>), SO<sub>2</sub> (4.6 µg/m<sup>3</sup> to 12.20 µg/m<sup>3</sup>) and NO<sub>x</sub> (19.90 µg/m<sup>3</sup> to 46.30 µg/m<sup>3</sup>) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 0.59 µg/m<sup>3</sup>, 17.94 µg/m<sup>3</sup> and 0.01046 µg/m<sup>3</sup> with respect to PM10, NO<sub>x</sub> and CO. The resultant concentrations are within the NAAQS.

Provision of stack height for DG set as per CPCB standards. Once CBM gas is generated, D.G. sets will be replaced by Gas Generation. Water sprinkling and periodic maintenance of equipment. Design of flare stack as per CPCB guidelines. Consistent effort to minimize the flaring.

Total water requirement from local water supplier for core hole drilling (25 m<sup>3</sup>/core hole) and test/pilot well (75 m<sup>3</sup>/day). Initially water requirement will be met from local water supplier and subsequently will be met from the produced water. Each test/pilot well is expected to produce about 50 m<sup>3</sup>/day. Produced water will be treated through Reverse Osmosis. Domestic waste water will be treated in septic tank followed by soak pit.

Drill cuttings (5 MT/core hole & 150 MT/test or pilot wells) will be generated during each well operation. Drill cuttings will be separated in a solid control system and will be sent to a HDPE lined pit for temporary storage and then disposed as per CPCB guidelines. Domestic solid waste will be segregated and disposed through local contractors at approved municipal sites. Waste oil generated from core hole and test / pilot well drill machine/equipment and used batteries will be sold to authorized recyclers / re-processors.

Enclosures and vibration isolators will be provided to control noise. 20 kVA DG set will be installed for core hole drilling. 125 kVA & 950 kVA DG set will be installed during drilling of Test/Pilot well. 40 kVA GG set will be installed during operation stage. 180 kVA DG set will be installed in GGS/MCS facility during construction. 1330 kVA GG set will be installed in GGS/MCS during operation phase.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Bihar State Pollution Control Board on 24th November, 2012. The issues raised were regarding use of drilling pipe after exploration, whether exploration will be done in the agricultural land, compensation for land, implementation of safety measures, local employment, use of gas for fuel by villagers, availability of irrigation water etc. In response, project proponent informed that after exploration bore will be capped with cement. Efforts will be made to acquire waste land for drilling purpose. For which, no objection will be obtained from villagers. BOP will be installed in well as safety measures. Local educated/experience person/ technical educated persons will be hired. Issues raised during public hearing have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

After deliberations, the Committee desired following additional information:

- (i) State Government clearance regarding to use tribal land for the said purpose.
- (ii) Characteristics of produce water.
- (iii) Treatment scheme for produce water before disposal.
- (iv) Disposal plan for RO rejects.
- (v) Detailed break up for 5 % of project cost for Enterprises Social responsibility.

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

10.2.6 Pesticides Manufacturing Unit at Plot no.43/1, Dahej – GIDC Industrial Estate, Taluka Vagra, District Bharuch, Gujarat by M/s Tagros Chemicals India Ltd.- regarding EC.

The project authorities 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 35th Meeting of the Expert Appraisal Committee (Industry) held during 11th - 12th May, 2012 for preparation of EIA/EMP report. All the Pesticides plants are listed at S.N. 5(b) under Category 'A' and appraised at the Central level.

M/s Tagros Chemicals India Ltd. have proposed for setting up of Pesticides Manufacturing Unit at Plot No.43/1, Dahej – GIDC Industrial Estate, TalukaVagra, District Bharuch, Gujarat. Total plot area is 71,359 m<sup>2</sup> of which greenbelt will be developed in 21,359 m<sup>2</sup> area. Total cost of project is Rs. 150 Crores. Narmada River is flowing at a distance of 5.3 Km. Following products will be manufactured:

S.N.	Product Name	Proposed Production Capacity (MTPM)
1	D V Acid Chloride	200
2	Metamitron Technical	100
3	Cypermethrin Technical	150
4	Permethrin Technical	75
5	Alphacypermethrin Technical	50
6	Meta phenoxyBenzaldehyde	200
7	MPBA (Metaphenoxybenzyl Alcohol)	100
8	Deltamethrin Technical	10
9	RRCMA	30
10	Dicamba	50
11	Carfentrazone	100
12	Sulfentrazone	100
13	Thiamethoxam	50
14	Ethofumesate	50

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during Summer & Winter Season 2012 and submitted baseline data indicates that ranges of concentrations of PM10 (51.06 µg/m<sup>3</sup> to 97.65 µg/m<sup>3</sup>), PM2.5 (7.51 µg/m<sup>3</sup> to 46.32 µg/m<sup>3</sup>), SO<sub>2</sub> (18.12 µg/m<sup>3</sup> to 33.75 µg/m<sup>3</sup>) and NO<sub>x</sub> (12.28 µg/m<sup>3</sup> to 19.19 µg/m<sup>3</sup>) respectively. Committee advised the consultant to give details of months for which ambient air quality monitoring is carried out in the EIA/EMP report. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 0.30, 0.018 µg/m<sup>3</sup> and 0.34 µg/m<sup>3</sup> with respect to PM 2.5, SO<sub>2</sub> and NO<sub>x</sub>. The resultant concentrations are within the NAAQS

Two stage water scrubber followed by alkali scrubber will be provided to control process emissions viz. HCl, Cl<sub>2</sub>, HBr and SO<sub>2</sub>. Bagfilter will be provided to coal fired boiler. Fresh water requirement from GIDC water supply will be 1383 m<sup>3</sup>/day. Industrial effluent generation will be 904 m<sup>3</sup>/day. Effluent will be segregated into High COD/TDS effluent stream, Low COD/TDS effluent stream and cyanide effluent stream. High COD/TDS effluent will be treated in MEE followed by ATFD. Low COD/TDS effluent stream will be treated in biological ETP. Cyanide effluent will be given prior hypo treatment. Used oil will be sent to CPCB authorized re-processors. Process/ distillation residue, date expired products, spent solvent will be sent for incineration in Common Incineration Facility. ETP sludge, MEE salt will be sent in TSDF. Total power requirement from MGVCCL will be 4.5 MW. DG set (1x 1000 KVA, 1x 1500 KVA and 1 x 2500 KVA will be installed. Coal (50 MTPA) will be used as raw material.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 17th April, 2013. The issues raised during public hearing were regarding employment, public awareness about chemical and its reactions, rain water harvesting, solvent recovery etc and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

After deliberations, the Committee desired following additional information:

- 1 After treatment, flue gas shall be sent to incinerator. Details of Incinerator to be provided.
- 2 Effluent treatment scheme should be rechecked.
- 3 Characteristics of effluent to be submitted.
- 4 Condensate of the MEE should be reused.

- 5 MoU with the coal supplied alongwith coal characteristics.
- 6 All solvent storage should be installed with condensers.
- 7 Modify the sever damage distance remains within the plant area. Revised layoit to be submitted.

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

102.7 Pesticide Manufacturing Unit at SP 3-7/B, Keshvana Industrial Area, Tehsil Kothputli, District Jaipur, Rajasthan by M/s Agrow Allied Ventures Pvt.Ltd - regarding EC

The project authorities and their consultant (EQMS 'A' '38') gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 4th Meeting of the Reconstituted Expert Appraisal Committee (Industry) held during 8th – 9th January, 2013 for preparation of EIA/EMP report. All units producing technical grade pesticides are listed at S.N. 5(b) under category 'A' and appraised at Central level.

M/s Agrow Allied Ventures Pvt. Ltd. have proposed for setting up of the Pesticide Manufacturing Unit at SP 3-7/B, Keshvana Industrial Area, Tehsil Kothputli, District Jaipur, Rajasthan. Total plot area is 40,400 m<sup>2</sup> of which greenbelt will be developed in 13332 m<sup>2</sup>. Cost of project is Rs. 40.0 Crore. No national park/wildlife sanctuary/reserve forest is located within 10 km distance. Following products will be manufactured:

S.N.	Products	Quantity (MTPM)	Quantity (MTPA)
1	2,4-D Sodium Salt	173	2080
2	2,4-D Acid Technical	141	1690
3	2,4-D Amine Salt	150	1800
4	2,4-D Ethyl Ester Technical	50	600
5	Clodinafop- Propargyl Chloride Technical	1.7	20
6	Lambda Cyhalothrin Technical	1.7	20
	Total	517.4	6210
<b>By Products</b>			
1	HCl (28 to 30 %)	100	1200
2	Recovered Di Chloro Phenol (30%)	60	720

Ambient air quality monitoring was carried out at 6 locations during January, 2013 to March, 2013 and submitted data indicate ranges of concentration as PM<sub>10</sub> (53–77ug/m<sup>3</sup>), SO<sub>2</sub> (9.9 – 18.0 ug/m<sup>3</sup>) and NO<sub>x</sub> (14.0-18.3 ug/m<sup>3</sup>). Predicted value of ground level concentration due to proposed project is: PM (0.323 ug/m<sup>3</sup>), SO<sub>2</sub> (0.179 ug/m<sup>3</sup>), NO<sub>x</sub> (0.179 ug/m<sup>3</sup>), HCl (0.016 ug/m<sup>3</sup>) and Cl<sub>2</sub> (0.011 ug/m<sup>3</sup>). The resultant concentrations are within the NAAQS.

Cyclone followed by Bagfilter will be provided to coal fired boiler (2 TPH) and hot air generator. Two stage water and one stage alkali scrubber will be provided to process vents of Chlorination vessel of phenol to control process emissions viz. HCl and Cl<sub>2</sub>. Total water requirement will be 50.5 m<sup>3</sup>/day. Out of which fresh water requirement from ground water source will be 25.8 m<sup>3</sup>/day and recycled water will 14.7 m<sup>3</sup>/day. Effluent generation will be 15.45 m<sup>3</sup>/day and treated in ETP. Cyanide effluent stream will be treated with hypochloride solution. The Committee advised to install RO after ETP for further treatment of treated water. ETP sludge will be sent to TSDF. Used oil will be sent to authorized recycler/re-processors. Residue will be sent to CHWIF site. HCl will be sold to actual users. Power requirement from Rajasthan Electricity Board will be 1500 KVA. Coal (30 TPD) will be consumed.

Public hearing / consultation was exempted due to project being located in notified RIICO as per stage Section 7 (i), III Stage (3), Para (i)(b) of EIA Notification 2006

After deliberations, the Committee desired following additional information:

- 1 Recheck one month data for hydrocarbon and VOCs
- 2 MoU with the coal supplier alongwith coal characteristics.
- 3 Details of safe chlorine storage and handling system to be submitted.
- 4 Incorporate RO in the ETP and submit revised scheme alongwith RO rejects disposal plan.
- 5 Layout of proposed Greenbelt.

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

10.2.8 Exploratory Drilling and Testing of Hydrocarbons in NELP-IV Block; AA-ONN-2002/3 in Dima Hasao Districts in Assam by M/s Oil India Limited - regarding EC.

The project authorities and their Consultant (Asian Consulting Engineers Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 14th Meeting of the Expert Appraisal Committee (Industry) held during 16th–17th September, 2010 for preparation of EIA/EMP report. MoEF vide letter dated 22nd May, 2013 has extended the validity of TOR for one year. All the on-shore and offshore oil and gas projects belong to S.N. 1 (b) and are placed under Category 'A' and appraised at the Central level.

M/s Oil India Limited have proposed for the Exploratory Drilling and Testing of Hydrocarbons in NELP-IV Block; AA-ONN-2002/3 in Karbi Anglong and North Cachar Hills, Assam. M/s OIL and M/s ONGC are having 30% and 70% participating interest (PI) in the block respectively. M/s OIL is the operator of the block. Production Sharing Document for the block was signed on 6th April, 2004. The block covers an area of 1095 sq. Km. The block is located in Karbi Anglong and Dima Hasao Districts in Assam. OIL intends to drill five exploratory and appraisal wells in Dima Hasao District, Assam. The cost of project is Rs. 100 Crore. The depth of the wells will vary from 2000 m to 2500 m. Two reserve forests viz. Dhansisri RF and Langting Mupa RF are located within the block. Proposed drilling sites are located outside the forest land. Following are the co-ordinates of the block AA-ONN/2002/3 (Karbi Anglong & North Cachar) :

Points	Longitude	Latitude
A	930 26' 42.96"	250 38' 20.88"
B	930 25' 40.33"	250 40' 22.20"
C	930 0 7' 48.04"	250 40' 20.87"
D	930 0 4' 11.00"	250 15' 00.00"
E	930 22' 37.00"	250 15' 00.00"
F	930 28' 23.33"	250 18' 19.01"
A	93O19'57.00"	25O32'53.00"
B	93O15"35.00	25O40'63.00

PAs informed the Committee that ambient air quality monitoring was carried out at 8 locations during December, 2011- January, 2012 and submitted data indicate ranges of concentrations as PM10 (29-72 ug/m3), PM2.5 (15-30 ug/m3), SO2 (1-5 ug/m3) and NOx (2.0- 8 ug/m3). Incremental concentration due to proposed project was estimated to be NOx (16.8 ug/m3). Air emissions from D.G. sets will be dispersed by providing adequate stack height. Fresh water requirement will be 25 m3/day, which will be procured from tanker. Water based mud (WBM) will be used. Total wastewater generation will be around 3.5 m3/day. Drill cutting (DC) will be separated from water based mud (WBM) and washed properly and unusable drilling fluids (DF) will be disposed off in well designed lined pit with impervious liner for solar drying. Disposal of drill cuttings and drill mud will be carried out in accordance with the GSR 546 (E) dated 30th August, 2005. Used oil will be sent to authorized recyclers. HSD (250 LPH) will be used as fuel in rig and D.G. sets during drilling period. DG sets (4 x 750 KVA) will be installed. Blow out prevention techniques will be part of drilling rig unit. Blow out preventers (BOP) will be installed to control

fluid from the formation gushing to the surface. In the event the well is unsuccessful, the well bore will be cement plugged.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Assam Pollution Control Board on 20th February, 2013 for Dima Hasao District. The issues raised were regarding pollution control measures, local employment, development of the area, to develop the village roads and etc. In response, project proponent informed that project will initiate and proceed on the basis of EIA/EMP suggestions. Local jobs opportunity will arise, temporarily will arise, in unskilled or semi skilled category depending upon the requirement of project during the project execution period. Improvement in existing infrastructure will be provided to the area. All the issues have been satisfactorily responded by the project proponent and incorporated in the final EIA/EMP report.

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

- i. This EC is only for Exploratory Drilling. In case Development drilling is to be done in future, prior clearance must be obtained from the Ministry.
- ii. As proposed, no well shall be developed in the forest land
- iii. Ambient air quality should be monitored near the closest human settlements as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for PM10, PM2.5, SO<sub>2</sub>, NO<sub>x</sub>, CO, methane & Non-methane HC etc.
- iv. Mercury should also be analyzed in air, water and drill cuttings twice during drilling period.
- v. Approach road should be made pucca to minimize generation of suspended dust.
- vi. The company should make the arrangement for control of noise from the drilling activity. Acoustic enclosure should be provided to DG sets and proper stack height should be provided as per CPCB guidelines.
- vii. Total water requirement should not exceed 25 m<sup>3</sup>/day and prior permission should be obtained from the concerned agency.
- viii. The company should construct the garland drain all around the drilling site to prevent runoff of any oil containing waste into the nearby water bodies. Separate drainage system should be created for oil contaminated and non-oil contaminated. Effluent should be properly treated and treated wastewater should conform to CPCB standards.
- ix. 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 Shillong.
- x. Good sanitation facility should be provided at the drilling site. Domestic sewage should be disposed off through septic tank/ soak pit.

- xi. Oil spillage prevention scheme should be prepared. In case of oil spillage/contamination, action plan should be prepared to clean the site by adopting proven technology. The recyclable waste (oily sludge) and spent oil should be disposed of to the authorized recyclers.
- xii. The company should comply with the guidelines for disposal of solid waste, drill cutting and drilling fluids for onshore drilling operation notified vide GSR.546(E) dated 30th August, 2005.
- xiii. The Company should take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. Possibility of using ground flare should be explored. At the place of ground flaring, the overhead flaring stack with knockout drums should be installed to minimize gaseous emissions during operation.
- xiv. The company should develop a contingency plan for H<sub>2</sub>S release including all necessary aspects from evacuation to resumption of normal operations. The workers should be provided with personal H<sub>2</sub>S detectors in locations of high risk of exposure along with self containing breathing apparatus.
- xv. On completion of drilling, the company have to plug the drilled wells safely and obtain certificate from environment safety angle from the concerned authority.
- xvi. Blow Out Preventer (BOP) system should be installed to prevent well blowouts during drilling operations. BOP measures during drilling should focus on maintaining well bore hydrostatic pressure by proper pre-well planning and drilling fluid logging etc.
- xvii. Emergency Response Plan (ERP) should be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- xviii. The company should take measures after completion of drilling process by well plugging and secured enclosures, decommissioning of rig upon abandonment of the well and drilling site should be restored to the original condition. In the event that no economic quantity of hydrocarbon is found a full abandonment plan should be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations.
- xix. Abandoned well inventory and remediation plan shall be submitted within six months from the date of issue of letter.
- xx. Occupational health surveillance of the workers should be carried out as per the prevailing Acts and Rules.
- xxi. In case the commercial viability of the project is established, the Company should prepare a detailed plan for development of oil and gas fields and obtain fresh environmental clearance from the Ministry.
- xxii. Restoration of the project site should be carried out satisfactorily and report should be sent to the Ministry's Regional Office at Shillong.
- xxiii. Oil content in the drill cuttings should be monitored by some Authorized agency and report should be sent to the Ministry's Regional Office at Shillong.
- xxiv. Under Enterprise Social Commitment (ESC), sufficient budgetary provision should be made for health improvement, education, water and electricity supply etc. in and around the project.
- xxv. An audit should be done to ensure that the Environment Management Plan is implemented in totality and report should be submitted to the Ministry's Regional Office.
- xxvi. A social audit shall be carried out for the whole operation area with the help of reputed institute like Madras Institute of Social Science etc.

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

10.2.9 Specialty Chemicals Manufacturing Unit at Sy. No. 382, Village Neja, Taluka & District Khambhat, Gujarat by M/s Trion Chemicals Pvt. Ltd. - regarding EC

The project authorities and their consultant (Ramans Enviro Services Pvt. Ltd. ) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 1st Meeting of the Expert Appraisal Committee (Industry) held during 24th -25th September, 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 Trion Chemicals Pvt. Ltd has proposed for setting up of specialty chemicals manufacturing unit at Sy. No. 382, Village Neja, Taluka & District Khambhat, Gujarat. Total plot area is 33200 m<sup>2</sup> of which greenbelt will be developed in 10000 m<sup>2</sup>. Project cost is Rs. 18 Crores. It is reported that no national park/wildlife sanctuary /reserved forest is located within 7 Km distance. The Committee advised the Project Authority and environmental consultant to follow TOR points and submit the details of national park/wildlife sanctuary /reserved forest within 10 Km distance. Following products will be manufactured:-

S.N.	Product	Production Capacity (MTPM)
1	Trichloro Isocynurate (TCCA)	1000
2	Sodium Dichloro Isocynaurate Dihydrate (SIDC)	400
By products		
1	Sodium Chloride (Salt)	300
2	Sodium Hypochloride	400 KLPM

Ambient air quality monitoring was carried out at 6 locations March-May 2012 and submitted data indicates as PM<sub>10</sub> (51.86–83.00 ug/m<sup>3</sup>), PM<sub>2.5</sub> (18.73–64.00 ug/m<sup>3</sup>), SO<sub>2</sub> (3.79–18.64 ug/m<sup>3</sup>) and NO<sub>x</sub> (1.96-37.68 ug/m<sup>3</sup>). Predicted value of ground level concentration due to proposed project is PM<sub>10</sub> (0.21 ug/m<sup>3</sup>), NO<sub>x</sub> (0.328 ug/m<sup>3</sup>) and SO<sub>2</sub> (0.002 ug/m<sup>3</sup>). The resultant concentrations are within the NAAQS except PM<sub>10</sub>.

Stack height of 30 m will be provided to gas fired Thermic fluid heater and hot air generator. Two stage alkali scrubber will be provided to Chlorination vessel and Flash dryer. Venturi followed by common two stage alkali scrubber will be provided to filtration system. Bagfilter will be provided to Granulator. Total fresh water requirement from ground water source will be 43.00 m<sup>3</sup>/day. Remaining water requirement (197 m<sup>3</sup>/day) will be met from treated effluent. Industrial effluent generation will be 263.0 m<sup>3</sup>/day. Effluent will be treated in ETP comprising mechanical vapour compressor with concentrate dryer. ETP sludge and process waste will be sent to TSDF. Used oil and discarded containers will be sent to authorized recyclers / re-processor.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 5th March, 2012. The issues raised during public hearing were regarding anticipated chlorine leakage, storage of chlorine, water requirement, greenbelt, employment, disposal of hazardous waste etc and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

After deliberations, the Committee desired following additional information:

- 1 Recheck one month data for hydrocarbon and VOCs
- 2 Revised material balance data to be submitted.
- 3 Details of safe chlorine storage and handling system to be submitted.
- 4 Note on Cl<sub>2</sub> leakage and preparedness.
- 5 Details of national park/wildlife sanctuary /reserved forest within 10 Km distance

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

10.2.10 Manufacture of Synthetic Resin (2300 MTPM at Plot No.44/1, Changodar Industrial Estate, Sarkhej-Bavla Highway, Village Changodar, TalukaSanand, District Ahmedabad, Gujarat by M/s Nirav Chemical Industries - regarding EC.

The project authorities and their consultant (M/s Enkay Enviro Services Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 21st Meeting of the Expert Appraisal Committee (Industry) held during 23rd–24th March, 2011 for preparation of EIA/EMP report. All the Synthetic Organic Chemical including resins plants are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Nirav Chemical Industries have proposed for the Manufacture of Synthetic Resin (2300 MTPM) at Plot No. 44/1, Changodar Industrial Estate, Sarkhej-Bavla Highway, Village Changodar, Taluka Sanand, District Ahmedabad, Gujarat. At present the unit is manufacturing synthetic resin (Epoxy resin/polyster resin/ Epoxy hardner solution) by formulation activity only. Proposed unit will be installed in the existing premises. Total project area is 2,470 sq.m of which greenbelt will be developed in 497 m<sup>2</sup>. Total cost of the project is Rs. 290.43 Lakhs. Rs. 15.00 Lakhs and Rs. 5 Lakhs are earmarked towards capital cost and recurring cost/annum for pollution control measures. No eco-sensitive area/wildlife sanctuary are located within 10 Km distance. Following products will be manufactured:

S.N.	Name of the Product	Production Capacity (MTPM)	Batch Size, (Kg.)	Batches per Month Nos.	Purity % (wt)	Yield %
<b>Products (Synthetic Resin) :</b>						
A-1	Unsaturated Polyester Resin	2000	10,000	200	100%	91.93
A-2	Alkyd Resin				100%	83
B-1	Saturated Polyester Resin	300	2000	150	100%	83
B-2	Epoxy Resin				75%	100
B-3	Vinyl Ester Resin				100%	100
<b>By-Products :</b>						
1.	Methanol	63.0	--	--	99%	--

Ambient air quality monitoring was carried out at 6 locations October to December-, 2012 and submitted data indicates as PM<sub>10</sub> (48.9–91.2 ug/m<sup>3</sup>), PM<sub>2.5</sub> (14.5–42.5 ug/m<sup>3</sup>), SO<sub>2</sub> (15.2 – 31.5 ug/m<sup>3</sup>) and NO<sub>x</sub> (13.2-27.8 ug/m<sup>3</sup>). Predicted value of ground level concentration due to proposed expansion is PM<sub>10</sub> (0.540 ug/m<sup>3</sup>), NO<sub>x</sub> (0.265 ug/m<sup>3</sup>) and SO<sub>2</sub> (1.405 ug/m<sup>3</sup>). The resultant concentrations are within the NAAQS.

Multicyclone followed bagfilter will be provided to agro waste/white coal/ imported coal fired thermic fluid heater to control particulate emissions. All solvent storage will be provided to vent condenser having chilled water or brine circulation. Water requirement from ground water source will be increased from 11.0 m<sup>3</sup>/day to 19.5 m<sup>3</sup>/day after commissioning of the proposed project. Industrial effluent generation will be increased from 0.5 m<sup>3</sup>/day to 1.1 m<sup>3</sup>/day. Industrial effluent will be treated in ETP and treated water will be reused for gardening purpose. No effluent will be discharged outside

the plant premises and 'Zero' effluent discharge will be maintained. ETP sludge will be sent to TSDF site. Waste / spent 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 Gujarat Pollution Control Board on 26th April, 2013. The issues raised were regarding greenbelt area, air pollution control measures, borewell, waste from raw materials, local employment etc. and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

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

- i) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.
- ii) Bag filter alongwith stack of adequate height should be installed to agro waste/white coal/ imported coal fired thermic fluid heater to control particulate emission.
- iii) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored.
- iv) Total ground water requirement should not exceed 19.5 m<sup>3</sup>/day and prior permission should be obtained from the Central Ground Water Authority/State Ground Water Board.
- v) As proposed, Industrial effluent will be treated in ETP. Treated effluent shall be recused for horticulture purpose. Water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB.
- vi) No effluent shall be discharged outside the plant premises and 'Zero' effluent discharge shall be maintained.
- 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) Green belt should be developed in 33% of total plant area.
- ix) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

10.2.11 Expansion of Granulates Single Super Phosphate (66,000 to 1,00,000 TPA) and addition of Boronated SSP (25,000 TPA) and LABSA (20,000 TPA) at Plot No.4807/11, Jhamarkotra Road, Village Umra, Tehsil Girwa, District Udaipur, Rajasthan by M/s Rama Phosphates Ltd.-regarding EC.

The project authorities and their consultant (M/s Enkay Enviro Services Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 28th Meeting of the Expert Appraisal Committee (Industry) held during 20th– 21st October, 2011 for preparation of EIA/EMP report. All the Synthetic Organic Chemical including resins plants are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Rama Phosphate Ltd. has proposed for expansion of Granulated Single Super Phosphate (66,000 TPA to 1,00,000 TPA) and addition of Boronated SSP (25,000 TPA) and LABSA (20,000 TPA) at Plot No. 4807/11, Jhamarkotra Road, Village Umra, Tehsil Girwa, District Udaipur, Rajasthan. Total plot area is 73,200 m<sup>2</sup>. Total cost of expansion project is Rs. 1329.5 Lakhs. Expansion will be done in the existing unit. Environmental clearance was accorded by the Ministry

vide letter no. J-11011/116/2009-IA-II (I) dated 5th May, 2009 for the existing unit. Udai Sagar lake is located at a distance of 4.0 Km from the site. Following products will be manufactured:

S.N.	Products	Capacity (TPA)		
		Existing	Proposed	Total
1	SSP	1,81,000	--	1,81,000
2	GSSP	66,000	1,00,000	1,66,000
3	NPK	60,000	--	60,000
4	Boronated SSP	--	25,000	25,000
5	LABSA	--	20,000	20,000
		3,07,000	1,35,000	4,42,000

Rock Phosphate, Sulphuric Acid, Urea, DAP, MOP, Borex Powder, LAB will be used as raw materials.

Additionally, PAs informed to the Committee that ambient air quality monitoring was carried out at 6 locations during December, 2011 – February 2012 and submitted baseline data indicate range of concentrations of PM10 (18.9 µg/m<sup>3</sup> to 234.9 µg/m<sup>3</sup>), SO<sub>2</sub> (4.0 µg/m<sup>3</sup> to 12.5 µg/m<sup>3</sup>) and NO<sub>x</sub> (9.8 µg/m<sup>3</sup> to 36.9 µg/m<sup>3</sup>) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 1.6 µg/m<sup>3</sup>, 6.2 µg/m<sup>3</sup> and 8.3 µg/m<sup>3</sup> with respect to SPM, SO<sub>2</sub> and NO<sub>x</sub> respectively.

Flue gas containing SiF<sub>4</sub>, SO<sub>2</sub> from mixer will be passed through cyclone, bag dust collector, venture scrubber and scrubbing tower and discharge into atmosphere through stack. Cyclone dust collector will be provided to dryer in GSSP manufacturing and NPK manufacturing. Pulse jet dust collector will be provided at the ball mill to control dust emissions. Gasses during SSP production from mixer and den will be passed through absorption stages as under ejector, cyclone separator and multistage scrubbing tower.

Total fresh water requirement from tanker water supply will be increased from 180 m<sup>3</sup>/day to 313.5 m<sup>3</sup>/day after expansion. Industrial wastewater generation will be increased from 55 m<sup>3</sup>/day to 95 m<sup>3</sup>/day. The blow down contains fluoro-silicic acid and precipitated silica. Industrial wastewater will be reused again in the process. Domestic wastewater generation will be increased from 4 to 5.5 m<sup>3</sup>/day and treated in the STP.

Used oil will be reused. Wet scrubber sludge will be reused in the process. Spent acid from LABSA will be reused in SSP plant. Dust from dust collector will be reused in the process.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Rajasthan State Pollution Control Board on 25th April, 2013. The issues raised were regarding local employment, village development programme, water scarcity, wastewater discharge etc. and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

After deliberations, the Committee desired following additional information:

1. Water harvesting details of the existing unit and proposed unit.
2. Greenbelt layout plan of the existing and proposed expansion.
3. Fluoride monitoring from the stack of existing unit.
4. Details of handling and disposal of H<sub>2</sub>SiF<sub>6</sub> liquor and separation of SiO<sub>2</sub> in existing unit and proposed expansion.

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

10.2.12 Expansion of Dyes and Dyes Intermediates Manufacturing Unit (2,200 MTPM to 6,000 MTPM) and Co-generation Power Plant (5 MW) at Sy. No. 804, 805, 807 to 822, 824 to 839 & 849, Village Dudhwada, Tehsil Padra, District Vadodara, Gujarat by M/s Bodal Chemicals Ltd. (Unit VII)-regarding EC

The project authorities and their consultant (M/s Raman Enviro Services Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 20th Meeting of the Expert Appraisal Committee (Industry) held during 3rd–4th March, 2011 for preparation of EIA/EMP report. All the Synthetic Organic Chemical plants are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Bodal Chemicals Ltd. (Unit VII) have proposed for expansion of Dyes and Dyes Intermediates Manufacturing Unit (2,200 MTPM to 6,000 MTPM) and Co-generation Power Plant (5 MW) at Sy. No. 804, 805, 807 to 822, 824 to 839 & 849, Village Dudhwada, Tehsil Padra, District Vadodara, Gujarat. Expansion will be carried out in the existing plant having land area of 142000 m<sup>2</sup>. Out of which, greenbelt will be developed in 42,600 m<sup>2</sup>. The cost of proposed expansion will be Rs. 85 Crore. No national park/wildlife sanctuary/ reserve forest is located within 10 Km distance. Following existing and proposed products will be manufactured:

S.N	Product	Capacity (MTPM)		
		Existing	Proposed	Ultimate
1	H-Acid	150	--	150
2	Beta Naphthol	500	--	500
3	Acetanilide	150	500	650
4	Acetanilide Chloro Sulphonated mass	200	800	700 – Captive 300
5	Venyl Sulphone (ASC)	200	500	700
6	Reactive black Dyes (Ramzole dyes)	500	750	1250
7	Reactive Red, Yellow & Others	250	250	500
8	Direct Acid Dyes	250	1000	1250
Total		2200	3800	6000
9	Cogeneration Power Plant	--	5.0 MW	5.0 MW
By-products :				
1	Hydrochloric Acid (HCl)	220-390	1500	1720-1890
2	Spent H <sub>2</sub> SO <sub>4</sub>	1400-1600	2275	3670-3870
3	Glauber Salt (from VS plant)	90	210	300
4	Glauber Salt (from H Acid plant)	150	0	150
5	Acetic Acid	35	85	120
6	Gypsum Sludge	850	--	850

Additionally, PAs informed to the Committee that ambient air quality monitoring was carried out at 6 locations during April, 2011 – May 2012 and submitted baseline data indicates that range of concentrations of PM<sub>10</sub> (55 µg/m<sup>3</sup> to 92 µg/m<sup>3</sup>), SO<sub>2</sub> (10.0 µg/m<sup>3</sup> to 24.0 µg/m<sup>3</sup>) and NO<sub>x</sub> (16.00 µg/m<sup>3</sup> to 41.00 µg/m<sup>3</sup>) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 1.10 µg/m<sup>3</sup>, 2.20 µg/m<sup>3</sup> and 7.1 µg/m<sup>3</sup> with respect to SPM, SO<sub>2</sub> and NO<sub>x</sub> respectively. The resultant concentrations are within the NAAQS. Packed column followed by two venturi scrubbers followed by alkali scrubber will be provided to Chlorosulphonator & Decomposition section. Two stage cyclone separator followed by wet scrubber will be provided to spray dryer. ESP will be provided to coal fired boiler. Fresh water requirement from ground water source will be increased from 1400 m<sup>3</sup>/day to 2205 m<sup>3</sup>/day after expansion. Industrial effluent generation will be increased from 630 m<sup>3</sup>/day to 1115 m<sup>3</sup>/day after expansion. Out of which, concentrated effluent stream (293 m<sup>3</sup>/day) will be incinerated to achieve zero discharge. Diluted effluent stream (452 m<sup>3</sup>/day) will be treated in existing effluent treatment plant to meet with prescribed norms for the disposal to ECP channel and Effluent (370 m<sup>3</sup>/day) will be reused in the process. Process sludge from filtration and neutralization, ETP Sludge and Incineration ash will be sent to TSDF Plant. Iron sludge will be sent to cement manufacturing unit. Distillation residue will be sent for incineration. Spent H<sub>2</sub>SO<sub>4</sub> will be reused in SSP plant. Spent HCl will be reused as captive consumption for dyes manufacturing. Fly ash will be sent to cement manufacturing and brick manufacturing unit.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 23rd February, 2012. The issues raised were regarding local employment, greenbelt, power consumption, ground water drawl, rainwater harvesting, no. of borewells in the industry etc. and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

The Committee also discussed the compliance status report dated 14th May, 2013 on the conditions stipulated in the existing environmental clearance, which were monitored by the Ministry's regional office, Bhopal. It is reported that out of 11 specific conditions, unit has complied 3 conditions, 5 are partly complied and 3 are non-complied. Out of 16 general conditions, 4 conditions are not complied, 5 conditions are partly complied, 4 conditions are agreed to be complied and 3 conditions have been complied. House keeping of the unit was found bad. Lot of spillage was observed in the process vessels. Greenbelt was not carried out as per EMP etc. The Committee found compliance report not satisfactory. Therefore, the Committee desired that first of all unit shall comply with the existing EC conditions. After deliberations, the Committee desired following additional information:

5. Compliance of the conditions stipulated in the existing unit.
6. Recommendation on proposed expansion project from GPCB.
7. Pointwise reply /commitment on the issues raised by the public in public hearing report.

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

10.2.13 Glycine, Glycolic Acid and their Esters & Salts at Plot No.460/1, Village Poicha (Rania), Tehsil Savli, District Vadodara, Gujarat by M/s Avid Organics Pvt. Ltd - regarding EC.

The project authorities and their consultant (M/s Green Circle, Inc. stay granted as per Hon'ble High Court on 25th July, 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 35th Meeting of the Expert Appraisal Committee (Industry) held during 11th-12th May, 2012 for preparation of EIA/EMP report. All the Synthetic Organic Chemical including resins plants are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Avid Organics Pvt. Ltd have proposed for setting up of Glycine, Glycolic Acid and their Esters & Salts at Plot No.460/1, Village Poicha (Rania), Tehsil Savli, District Vadodara, Gujarat. Total plot area is 4973 m<sup>2</sup> of which greenbelt will be developed in 1687 m<sup>2</sup>. The cost of project is Rs. 510.00 Lakhs. No Eco-sensitive areas are located within 10 Km distance. Mahi River is flowing at distance of 10 Km. Project proponent confirmed that environmental clearance is required for production capacity of 500 MTPM instead 850 MTPM. Following products will be manufactured:

S.N.	Products	Proposed (MTPM)
1	Glycine	250
2	Glycolic Acid	160
3	Ester Salts	100
4	Choline Bitartrate	50
5	Chlorhexidine	70
6	Chlorhexidine Salt	100
7	Ferrous Fumarate	50
8	Sodium Fumarate	100

Additionally, PAs informed to the Committee that ambient air quality monitoring was carried out at 6 locations during October, 2012 – December, 2012 and submitted baseline data indicate range of concentrations of PM<sub>10</sub> (77 µg/m<sup>3</sup> to 97 µg/m<sup>3</sup>), PM<sub>2.5</sub> (32 µg/m<sup>3</sup> to 53 µg/m<sup>3</sup>), SO<sub>2</sub> (12.0 µg/m<sup>3</sup> to 18.0 µg/m<sup>3</sup>) and NO<sub>x</sub> (18.32 µg/m<sup>3</sup> to 26.5 µg/m<sup>3</sup>) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 0.15 µg/m<sup>3</sup>, 0.045 µg/m<sup>3</sup> and 0.05 µg/m<sup>3</sup> with respect to SPM, SO<sub>2</sub> and NO<sub>x</sub> respectively. The resultant concentrations are within the NAAQS. Briquettes/wood chips fired IBR boiler and thermic fluid heater will be installed. Scrubber will be provided to process stack. Fresh water requirement from ground water source will be 196.5 m<sup>3</sup>/day. Industrial effluent generation will be 15.2 m<sup>3</sup>/day. Industrial effluent will be treated in ETP followed by MEE. Either treated effluent will be reused or sent to CETP Nandesari after treatment. The Committee advised them to come with clear scheme for effluent treatment.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 3rd April, 2013. The issues raised were regarding air pollution control measures, local employment, water quality of borewell, deterioration of ground water in the nearby villages etc.

After deliberations, the Committee desired following additional information:

- 1) There is variation in the list of products and production capacity as compared to Form-1 and EIA/EMP report. Give specific reasons.
- 2) At page iv, project cost is mentioned as Rs. 5 Crore. As per presentation, project cost is mentioned as Rs. 510 Lakh. Give reason for variation.
- 3) Copy of consent to establish for the existing unit.
- 4) Copy of Consent to operate for the existing unit.
- 5) Water balance to be rechecked.
- 6) Details of process emissions and its control measures.
- 7) Pointwise reply /commitment on the issues raised by the public in public hearing report.
- 8) 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.

The proposal was deferred till the desired information is submitted. The complete proposal will be appraised by the Committee after submission of desired information.

#### Terms of Reference

10.2.14 Resin Manufacturing Unit at Plot No.344, Village Ujedyta, Taluka Talod, District Sabarkantha, Gujarat by M/s Galaxy Mica Pvt. Ltd.- regarding TORs.

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

M/s Galaxy Mica Pvt. Ltd. have proposed for setting up of resin Manufacturing Unit at Plot No.344, Village Ujedyta, Taluka Talod, District Sabarkantha, Gujarat. Total plot area is 26517.28 m<sup>2</sup>. The cost of project is Rs. 8 Crore. Following products will be manufactured:

S.N.	Product	Quantity
1	Laminated Sheet /Electrical Insulation Board	2,50,000 Nos./Month
2	P. F. Resin	750 MTPM
3	MF Resin	250 MTPM
4	UF Resin	100 MTPM

Multi-cyclone dust collector will be provided to coal fired steam boiler and thermic fluid heater. Scrubber will be provided to control process emissions. Total fresh water requirement from ground water source will be 42.753 m<sup>3</sup>/day. Industrial effluent generation will be 9.68 m<sup>3</sup>/day. Industrial effluent will be treated in ETP followed by evaporator to achieve zero discharge. ETP sludge will be sent to TSD. Used oil will be sent to authorized recycler/re-processors.

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

1. Executive summary of the project
2. Justification of the project.
3. Photographs of proposed plant site.
4. Promoters and their back ground.
5. Regulatory framework.
6. A map indicating location of the project and distance from severely polluted area
7. Project location and plant layout.
8. Infrastructure facilities including power sources.
9. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
10. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
11. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
12. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
13. Details of the total land and break-up of the land use for green belt and other uses.
14. List of products alongwith the production capacities.
15. Detailed list of raw materials required and source, mode of storage and transportation.
16. Manufacturing process details alongwith the chemical reactions and process flow chart.
17. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
18. Ambient air quality monitoring at 6 locations within the study area of 5 km. aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
19. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM10, PM2.5, SO2, NOx including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
20. Air pollution control measures viz. Multi-cyclone and bag filter etc. Shall be proposed for the effective control of gaseous emissions within permissible limits.
21. Control methanol emission from drying section.
22. Details of VOC monitoring system in the working zone environment, if any.
23. Name of all the solvents to be used in the process and details of solvent recovery system.
24. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
25. Details of water and air pollution and its mitigation plan.
26. An action plan to control and monitor secondary fugitive emissions from all the sources.
27. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
28. Permission for the drawl of 42.753 m3/day ground water from CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
29. Action plan for 'Zero' discharge of effluent shall be included.
30. Treatment of phenol in the effluent, if any.
31. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
32. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
33. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
34. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
35. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
36. A write up on "Safe Practice" followed for methanol handling, storage, transportation and unloading to be submitted.
37. A write up on "Treatment of workers affected by accidental spillage of methanol/ phenol".
38. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
39. An action plan to develop green belt in 33 % area

40. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
41. Details of occupational health programme.
  - i. To which chemicals, workers are exposed directly or indirectly.
  - ii. Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii. What measures company have taken to keep these chemicals within PEL/TLV.
  - iv. How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v. What are onsite and offsite emergency plan during chemical disaster.
  - vi. Liver function tests (LFT) during pre-placement and periodical examination.
42. Details of occupational health surveillance programme.
43. Socio-economic development activities shall be in place.
44. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
45. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
46. Corporate Environmental Responsibility
  - (a) Does the company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
  - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
  - (d) Does the company has a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
47. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
48. Public hearing to be conducted and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
49. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

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

The Committee prescribed the above TORs for preparation of EIA/EMP reports. The proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the Gujarat 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.

10.2.15 Expansion of Pigment Manufacturing Unit (290 MTPM) at Sy. No.161, 162, 163, 164, 167 & 168, Village Indrad, Tehsil Kadi, District Mehsana, Gujarat by M/s Asahi Songwon Colors Ltd. - regarding TORs.

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

M/s Asahi Songwon Colors Ltd. have proposed for expansion of Pigment Manufacturing Unit (290 MTPM) at Sy. No.161, 162, 163, 164, 167 & 168, Village Indrad, Tehsil Kadi, District Mehsana, Gujarat. Total plot area is 41000 m<sup>2</sup>. Total cost of Project is Rs. 16.35 crore of which Rs.3.5 crore is earmarked for environment management. MoEF vide letter no. J-11011/1060/2007-IA II (I) Ltd. dated 22nd September, 2008 has issued environmental clearance for the existing unit. No wildlife Sanctuary/ Reserve Forest is located within 10 Km distance. Following Products will be manufactured:

S.N.	Products	Existing capacity (MTPM )	Additional capacity MTPM )	Total capacity (MTPM)
1.	Pigment Green-7	120	120	240
2.	Violet -23	---	50	50
Total		120	170	290
By-Product				
1.	Copper sulphate	---	30	30

Bagfillter will be provided to lignite / agro brick / coal fired boiler. Bagfillter will be provided to spin flesh dryer. Three Stage water Scrubber followed by alkali scrubber to Reaction Vessal System – II. Total water requirement after expansion will be 890 m<sup>3</sup>/day. Out which 430 m<sup>3</sup>/day water requirement will be met from recycled water of RO permeate & Condensate water from MEE. Fresh water requirement from ground water source will be increased from 185.8 m<sup>3</sup>/day to 460m<sup>3</sup>/day after expansion. Effluent will be treated in ETP followed by micro filtration and RO. Permeates will be recycled / reused in process. RO rejects will be concentrated in MEE. ETP sludge and MEE salt will be sent to TSDF site used oil will be sent to authorized recycle Inorganic acid Hcl and Halogenated compounds will be Sold to M/s Arvind Mills Ltd.

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

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Photographs of the existing and proposed plant area.
5. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
6. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing I existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
7. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
8. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s)
9. Regulatory framework.
10. A map indicating location of the project and distance from severely polluted area
11. Project location and plant layout.
12. Infrastructure facilities including power sources.
13. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
14. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
15. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
16. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.

17. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
18. Details of the total land and break-up of the land use for green belt and other uses.
19. List of products alongwith the production capacities.
20. Detailed list of raw materials required and source, mode of storage.
21. Explore the possibility to use the cleaner technology developed by the CPCB for pigment manufacturing.
22. Manufacturing process details alongwith the chemical reactions and process flow chart.
23. Action plan for the transportation of raw material and products.
24. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
25. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
26. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM10, SO<sub>2</sub>, HCl, NO<sub>x</sub> including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
27. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
28. Name of all the solvents to be used in the process and details of solvent recovery system.
29. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
30. Details of water and air pollution and its mitigation plan
31. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
32. An action plan to control and monitor secondary fugitive emissions from all the sources.
33. 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.
34. Permission from Competent Authority for the drawl of 460 m<sup>3</sup>/day water. Water balance chart including quantity of effluent generated recycled and reused and effluent discharge.
35. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent.
36. Action plan for implementation of zero effluent discharge.
37. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
38. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
39. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
40. Material Safety Data Sheet for all the Chemicals are being used/will be used.
41. A copy of the 'Memorandum of Understanding' signed with cement manufacturers indicating clearly that they will utilized all the organic solid waste generated and iron sludge.
42. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF.
43. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
44. An action plan to develop green belt in 33 % area.
45. 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.
46. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Thresh Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.

- vii) Details of occupational health surveillance programme.
- 47. Socio-economic development activities shall be in place.
- 48. Note on compliance to the recommendations mentioned in the CREP guidelines.
- 49. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
- 50. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
- 51. Corporate Environmental Responsibility
  - (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
  - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
  - (d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
- 52. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 53. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
- 54. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
- 55. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

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

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

10.2.16 Agro/Chemical Intermediates Manufacturing Unit at Plot No. Z/34, Dahej, SEZ Area, Taluka Vagra, District Bharuch, Gujarat by M/s Meghmani Unichem LLP -regarding TORs.

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

M/s Meghmani Unichem LLP have proposed for setting up of Agro/chemical Intermediate Manufacturing Unit at Plot No. Z/34, Dahej SEZ Area, Taluka Vagra, District Bharuch, Gujarat. Total plot area is 53,830 m<sup>2</sup>. Cost of project is Rs.100 Crore. Green belt will be developed in 17,765 m<sup>2</sup>. No forest land is involved. Following Products will be Manufactured:

Plant	S.N.	Product	Production Capacity (MTPM)
Plant-A	1	3,4 OR 2,3 OR 2,4 OR 2,5 OR 2,6 (Dichloro Nitro Benzene)	800*
	2	2,4,5, OR 2,3,6 (Trichloro Nitro Benzene)	
	3	Ortho OR Meta OR Para (chloro Aniline)	1200*
	4	2,4,5-Trichloro Aniline Ortho OR Para Anisidine	
	5	2,4,5-Trichloro Aniline	
	6	Ortho OR Para Anisidine	
	7	2-Methyl Cyclohexyl Acetate	
	8	2-Tertiary Butyl Cyclohexyl	
	9	4-Tertiary Butyl Cyclohexyl	
	10	4-Chloro 2- hydroxyl Aniline	1000*
	11	p-Hydroxyaniline	
Plant- B	12	Paracetamol	1200
Plant- C	13	Pigment Red-122	40*
	14	Pigment Violet-19	
	15	Pigment Violet-23	50
	16	Dispersion Blue	50

Plant	S.N.	By- Products	Quantity (MTPM)
Plant-A	1	Spent Sulphuric Acid	648.5
Plant-B	2	Dil.Acetic Acid	1677.71
Plant-C	3	Dil.Acetic Acid	50
	4	Dil.Phosphoric Acid	1027
	5	Dil. Caustic Soda Sloution	142.5
	6	Dil.Nitric Acid	87.5
	7	Resist Salt Solution	760

Stack of 30m height will be provided to Gas fired boiler. Coal/ Light fired boiler will be provided with bagfilter and dust collector. Water requirement from GIDC water supply will be 1410 m<sup>3</sup>/day. Industrial effluent generation will be 948 m<sup>3</sup>/day. Industrial effluent will be treated in ETP. Treated effluent will be discharged through underground drainage system and ultimately disposed in deep sea. ETP waste will be sent to TSDF. Process residue (TOR) and spent carbon will be sent to cement plant. Gypsum will be sold to cement plant. Used oil will be sold to authorized recycle. Spent sulphuric acid, acetic acid, oil. phosphoric acid, Nitric acid will be sent to authorized users. DG set (300 KVA) will be installed.

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

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework.
5. Plant layout alongwith details of facility.
6. A copy of Gazette Notification issued by the Govt. of Gujarat indicating location of the project in notified GIDC should be included necessarily.
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 photographs and site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
10. Present land use based on satellite imagery for the study area of 10 km radius.
11. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
12. Details of the total land and break-up of the land use for green belt and other uses.
13. List of products alongwith the production capacities.

14. Detailed list of raw material required and source, mode of storage and transportation.
15. Manufacturing process details alongwith the chemical reactions and process flow chart.
16. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
17. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
18. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO including HC and VOCs should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
19. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
20. Name of all the solvents to be used in the process and details of solvent recovery system.
21. Design details of ETP, incinerator, if any alongwith control of Dioxin & Furan, boiler, scrubbers/bag filters etc.
22. Details of water and air pollution and its mitigation plan
23. An action plan to control and monitor secondary fugitive emissions from all the sources.
24. Action plan for odour assessment and control to be submitted.
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 quantity of fresh water requirement. Water balance chart including quantity of effluent generated recycled and reused and discharged. Recycling /Reuse of treated effluent to the maximum extent.
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. Action plan for the management of fly ash generated from boiler should be included.
30. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
31. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilized all the organic solid waste generated.
32. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF.
33. Risk assessment for storage for chemicals/solvents.
34. Material safety data sheet to be submitted. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
35. An action plan to develop green belt in 33 % area. Layout map indicating greenbelt to be submitted.
36. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
37. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Thresh Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
38. Details of occupational health surveillance programme.
39. Socio-economic development activities shall be in place.
40. Note on compliance to the recommendations mentioned in the CREP guidelines.
41. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.

42. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
43. Total capital cost and recurring cost/annum for environmental pollution control measures.
44. Corporate Environmental Responsibility
  - (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
  - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
  - (d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
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. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

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

It was decided that TORs prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of detailed report for the above mentioned project in addition to all the relevant information as per the Generic Structure of EIA given in Appendix III and IIIA in the EIA Notification, 2006. After detailed deliberations, the Committee exempted the public hearing as per Section 7 (i), III Stage (3), Para (i) (b) of EIA Notification 2006, subject to submission of authentic document from the State Govt. indicating that the project is located in the notified industrial area. The final EIA/EMP report shall be submitted to the Ministry for obtaining environmental clearance.

9.2.17 Product Mix Change in the existing Bulk Drugs & Intermediates Manufacturing Unit (5853.67 Kg/day) at Sy. No. 50/1, Village Mukteswara puram, Mandal Jaggayya pet District Krishna, Andhra Pradesh by M/s RA Chem Pharma Ltd.- regarding TORs.

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

M/s RA Chem Pharma Ltd have proposed for product mix change in existing Bulk Drug & Intermediates manufacturing Unit at Sy. No.50/1, Village Mukteswara puram, Mandal Jaggayya pet District Krishna, Andhra Pradesh. Total cost of project is Rs 21.59 Crore. Total plot area is 8.688ha of which greenbelt will be developed in 6.857 ha. MoEF vide letter no. J-11011/9/2002-Ia II (I) dated 19th August, 2003 has accorded environmental clearance for the existing unit in the name M/s IGOR Pharmachem Ltd. Subsequently name of the company has been changed to M/s RA Chem Pharma Ltd. Existing unit was engaged in the manufacturing of following products :

S.N.	Product	Quantity (Kg/Day)	Quantity (MTPM)
1	Folic Acid	255	7.65

2	Trichloro Acetone	4325	129.75
3	Butyl Cyano Acetate	421	12.63
4	Tri amino Pyrimidine Sulphate	800	24
5	Para amino Benzoyl Glutamic acid	800	24
	Total	6601	198.03

Now, project proponent has proposed to manufacture following products:

S.N.	Product	Applications	Quantity (Kg/Day)	Quantity (MTPM)
1	Drotaverine Hydrochloride	Antispasmodics	133.33	4.00
2	Entacapone	Antiparkinsonian	100.00	3.00
3	Fexofenadine Hydrochloride	Anti-histamine	33.33	1.00
4	Lamotrigine	Anticonvulsant	400.00	12.00
5	Mebeverine Hydrochloride	Antispasmodic Agent	266.67	8.00
6	Tamsulosin Hydrochloride	Alpha-adrenergic blocker	16.67	0.50
7	Midazolam Hydrochloride	Anxiolytic	33.33	1.00
8	Fomepizole	Antidotes	16.67	0.50
9	Hydralazine Hydrochloride	antihypertensive	66.67	2.00
10	Metaxalone	Autonomic agent	400.00	12.00
11	Meclizine Hydrochloride	Anticholinergic	100.00	3.00
12	Itraconazole	Antifungal	66.67	2.00
13	Levocertirzine di Hydrochloride	Antihistamine	66.67	2.00
14	Pranlukast hemihydrate	Antiasthmatic agent	10.00	0.30
15	5-Nitro-2-Propoxy Acetanilide	Falimint Intermediate	66.67	2.00
16	5-Cyanophthalide	Citalopram Hydrobromide Intermediate	20.00	0.60
17	3-(4-Chloro Phenyl)-Glutaric Acid Monoamide	Baclofen Intermediate	3.33	0.10
18	2-(2,3-dichloro phenyl)-2-phenyl ethylene hydrazine carboxi dimiamidine	Lamotrigine Intermediate	666.67	20.00
19	3,4-dihydroxy-5-nitrobenzaldehyde	Entacapone Intermediate	250.00	7.50
20	R-5-(2-(amino propyl)-2-methoxy benzene sulfonamide	Tamsulosin Intermediate	16.67	0.50
21	2-amino methyl-7-chloro-1,3-dihydro-5-(2-fluoro phenyl)-1H-1,4-benzodiazepine di maleate	Midazolam Intermediate	200.00	6.00
22	2-cyano-N,N-diethyl acetamide	Entacapone Intermediate	66.67	2.00
23	Doxazosin Maleate	alpha-Adrenergic Blocking Agent	33.33	1.00
24	Oxalamine Phosphate	Cough suppressant	66.67	2.00
25	Oxalamine Citrate	Cough suppressant	66.67	2.00
26	Ractopamine Hydrochloride	beta-adrenergic agonist	100.00	3.00
27	Zilpaterol	Bronchodilator	16.67	0.50
28	Tapentadol Hydrochloride	Analgesic	33.33	1.00
29	Zoledronic acid	Calcium regulator	3.00	0.09
30	Fenofibrate	Antihyperlipidemic	100.00	3.00

Coal fired boiler (10 TPH) will be used. Total water requirement will be 174.0 m<sup>3</sup>/day. DG sets (2x 500 KVA) will be installed. Industrial effluent generation will be 100 m<sup>3</sup>/day. Effluent will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS/COD effluent stream will be treated in effluent treatment plant (ETP) followed by RO. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted. Inorganic & evaporation salt and ETP sludge will be sent to Treatment Storage Disposal Facility (TSDF) for hazardous waste. Fly ash will be sold to brick manufacturers. Waste oil and used batteries will be sold to authorized recyclers/re-processors.

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. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
6. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
7. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
8. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s)
9. Regulatory framework
10. A map indicating location of the project and distance from severely polluted area
11. Infrastructure facilities including power sources.
12. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
13. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
14. Present land use based on satellite imagery for the study area of 10 km radius.
15. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
16. Details of the total land and break-up of the land use for green belt and other uses.
17. List of products alongwith the production capacities.
18. Detailed list of raw material required and source, mode of storage and transportation.
19. Manufacturing process details alongwith the chemical reactions and process flow chart.
20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
21. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
22. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM10, 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.
23. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
24. Name of all the solvents to be used in the process and details of solvent recovery system.
25. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
26. Details of water and air pollution and its mitigation plan
27. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
28. An action plan to control and monitor secondary fugitive emissions from all the sources.
29. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
30. Source and permission for the drawl of 174 m<sup>3</sup>/day water from the competent authority. Water balance chart including quantity of effluent generated recycled and reused and discharged.
31. Action plan for 'Zero' discharge of effluent should be included.
32. 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).
33. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste.

34. Action plan for the management of fly ash generated from boiler should be included. Tie-up or agreement with brick manufacturer to be provided.
35. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
36. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilize all the organic solid waste generated.
37. A copy of 'Memorandum of Understanding' (MoU) signed with coal supplier for imported coal and brick manufacturers for management of fly ash.
38. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
39. 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.
40. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
41. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
42. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
43. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
44. Details of occupational health programme.
  - 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.
45. Socio-economic development activities should be in place.
46. Note on compliance to the recommendations mentioned in the CREP guidelines.
47. 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.
48. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
49. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
50. Public hearing 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.
51. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

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

The Committee prescribed the above ToRs for preparation of EIA/EMP reports. The proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns raised

alongwith the replies during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

10.2.18 Proposed LPG Pipeline from Kochi Refinery to Coimbatore at District Ernalkulam, Kerala by M/s BPCL.-regarding TORs.

The above project proposal was considered in the 6th REAC (I) meeting held during 5th-7th March, 2013. It was noted that the pipeline is passing through the eco-sensitive area. Therefore, the project proposal was reconsidered in the EAC (I) meeting. As per the Environmental Impact Assessment Notification, 2006 schedule Item 6(a), oil and gas transportation pipeline (crude and refinery/petrochemical products), passing through national parks/sanctuaries./coral reefs /ecologically sensitive areas including LNG Terminal is included as Category A and attracts prior environmental clearance from the Ministry as per the procedures of the said notification.

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

1. Approval of the forest land (1.47 Km forest land) alongwith details of the compensatory afforestation should be enclosed.
2. Present land use based on satellite imagery for the study area of 10 km radius indicating location of National Park/Wild life sanctuary/Reserve Forests within 10 km radius of the project.
3. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, from the Standing Committee of the National Board for Wildlife as the project is located within 10 Km distance of Peechi Vazhani Wildlife Sanctuary.
4. Recommendations from the State Forest Department regarding the impact of the proposed plant on the surrounding Reserve forests.
5. Executive summary of the project, Feasibility study report and pipeline route survey report.
6. Details of environmental policy of the Company.
7. Project description and project Benefits.
8. Land use details of the site based on satellite imagery.
9. Details of land to be acquired. Details of rehabilitation and resettlement involved, if any.
10. Process details with animated model.
11. Animated Computer Model for prospective years regarding safety and risk point of view.
12. Proposal for safety buffer zone around the proposed site with map.
13. A list of industries within 10 km radius of the project.
14. Details of the storage and technical specifications with safety aspects & standards
15. Site details including satellite imagery for 5 km around the site.
16. Details and status of environmental clearance under CRZ Notification if the pipeline passes through CRZ area.
17. Land use along with maps & cropping pattern, vegetation, ecology, flora & fauna
18. Demography & socio-economics of the area.
19. Baseline data collection for air, water and soil for:
  - a. Ambient air quality monitoring for PM10, SO2, NOx, CO.
  - b. Background levels of hydrocarbons (methane & non-methane).
  - c. Soil sample analysis.
  - d. Base line underground and surface water quality in the vicinity of project.
  - e. Climatology & meteorology including wind speed, wind direction, temperature, rainfall etc.
  - f. Measurement of noise levels within 1 Km.
20. Details of water consumption and source of water supply, waste water generation, treatment and utilization of treated water generated from the facilities and effluent disposal and measures for release of effluent in case of fire.
21. Detailed solid waste generation, collection, segregation, its recycling and reuse, treatment and disposal.
22. Assessment of impact on air, water, soil, solid/hazardous waste and noise levels.
23. Details of proposed preventive measures for leakages and accident.
24. Noise monitoring within one km.
25. Type of seismic zone.
26. Environmental Management Plan for construction and operational phase.

27. Action plan for proper restoration of laying the pipeline.
28. Risk Assessment & Disaster Management Plan
  - a. Identification of hazards
  - b. Consequence Analysis
  - c. Risk assessment should also include leakages and proposed measures for risk reduction.
  - d. Corrosion management of pipe line.
29. Details of proposed Occupational Health Surveillance program for the employees and other labour.
30. Details of accidents happened globally on pipeline.
31. Details of proper restoration of land after laying the pipelines.
32. Environmental Monitoring programme.
33. Total capital cost and recurring cost/annum for environmental pollution control measures.
34. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
35. A tabular chart indicating point-wise compliance of the TOR.
36. A tabular chart indicating point-wise clarifications to the issues raised during public hearing/consultation.

The Committee decided that the proponent should prepare EIA/EMP report based on the above TORs and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

The following general points should be noted:

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

The Committee decided that the proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting districtwise public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns emerged during the Public Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP alongwith 'Certificate of Accreditation' issued by the QCI should be submitted to the Ministry for obtaining environmental clearance.

- 10.2.19 Manufacture of Sorbitol (175 MT/day), Sorbitol Power 10 MT/day) and Malito 10 (MT/day) at Plot No.459, 460, 462, 463, Village Morgar, Tehsil Bhachau, District Kutch, Gujarat by M/s Sanstar Biopolymers Ltd. -regarding TORs

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

- 10.2.20 Expansion of Rayon Grade Pulp Production from 74,400 TPA to 100,000 TPA at Village KodiyalHospet, Tehsil Ranebennur, District Haveri, Karnataka by M/s Grasim Industries Limited - regarding TORs

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

10.2.21 Resin Manufacturing Unit (2350 MTPM) at Block No.4/2, 11/P1, 11/P2, 12/P1 and 12/P2, Village NaniAdboli, Taluka Mahemdabad, District Kheda, Gujarat by M/s Kraft Laminate - regarding TORs.

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP report. All the Resin Units located outside the notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Kraft Laminate have proposed for setting up of Resin Manufacturing Unit (2350 MTPM) at Block No.4/2, 11/P1, 11/P2, 12/P1 and 12/P2, Village NaniAdboli, Taluka Mahemdabad, District Kheda, Gujarat. Plot area is 18816 m<sup>2</sup> of which greenbelt will be developed in 6200m<sup>2</sup>. Total cost of the project is Rs.9.15 Crore. Following products will be manufactured:

S.N.	Product	Proposed Production Capacity (MTPM)
1.	Melamine Formaldehyde Resin	350
2.	Phenol Formaldehyde Resin	1000
3.	Urea Formaldehyde Resin	1000

Bagfillter will be provided to Coal/ Lignite/ wood / agro waste fired boiler (5TPD) and thermic fluid heater. Water requirement from groundwater source will be 15.42m<sup>3</sup>/day. Industrial Waste water generation will be 3.54m<sup>3</sup>/day. Effluent will be treated in ETP. No effluent will be discharged outside the Plant Premises. Electric power requirement will be 200 KVA. DG Set (250 KVA) will be installed. ETP sludge will be sent to TSDF.

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

1. Executive summary of the project
2. Justification of the project.
3. Photographs of proposed plant site.
4. Promoters and their back ground.
5. Regulatory framework.
6. A map indicating location of the project and distance from severely polluted area
7. Project location and plant layout.
8. Infrastructure facilities including power sources.
9. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
10. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
11. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
12. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
13. Details of the total land and break-up of the land use for green belt and other uses.
14. List of products alongwith the production capacities.
15. Detailed list of raw materials required and source, mode of storage and transportation.
16. Manufacturing process details alongwith the chemical reactions and process flow chart.
17. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
18. Ambient air quality monitoring at 6 locations within the study area of 5 km. aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
19. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM10, PM2.5, SO<sub>2</sub>, NO<sub>x</sub> including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
20. Air pollution control measures viz. Multi-cyclone and bag filter etc. Shall be proposed for the effective control of gaseous emissions within permissible limits.

21. Control methanol emission from drying section.
22. Details of VOC monitoring system in the working zone environment, if any.
23. Name of all the solvents to be used in the process and details of solvent recovery system.
24. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
25. Details of water and air pollution and its mitigation plan.
26. An action plan to control and monitor secondary fugitive emissions from all the sources.
27. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
28. Permission for the drawl of 15.5 m<sup>3</sup>/day ground water from CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
29. Action plan for 'Zero' discharge of effluent shall be included.
30. Treatment of phenol in the effluent, if any.
31. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
32. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
33. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
34. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
35. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
36. A write up on "Safe Practice" followed for methanol handling, storage, transportation and unloading to be submitted.
37. A write up on "Treatment of workers affected by accidental spillage of methanol/ phenol".
38. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
39. An action plan to develop green belt in 33 % area
40. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
41. Details of occupational health programme.
  - i. To which chemicals, workers are exposed directly or indirectly.
  - ii. Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii. What measures company have taken to keep these chemicals within PEL/TLV.
  - iv. How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v. What are onsite and offsite emergency plan during chemical disaster.
  - vi. Liver function tests (LFT) during pre-placement and periodical examination.
42. Details of occupational health surveillance programme.
43. Socio-economic development activities shall be in place.
44. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
45. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
46. Corporate Environmental Responsibility
  - (a) Does the company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
  - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
  - (d) Does the company has a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.

47. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
48. Public hearing to be conducted and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
49. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

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

The Committee prescribed the above TORs for preparation of EIA/EMP reports. The proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the Gujarat 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.

10.2.22 Expansion of Resin Manufacturing Unit at Block No.153, Kadi Road, Village Dhanot, TalukaKalol, District Gandhinagar, Gujarat by M/s Salasar Laminates Ltd - regarding TORs.

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP report. All the Resin Units located outside the notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Salasar Laminates Ltd. have proposed for expansion of Resin Manufacturing Unit at Block No. 153, Koli Road, Village Dhanot, Taluka Kalol, District Gandhinagar, Gujarat. Total plot area is 20,943 m3. Following products will be manufacturing:

S.N.	Product (s)	Production Capacity (MTPM)		
		Existing	Proposed	Total
1.	Melamine Formaldehyde Resin	15	1185	1200
2.	Phenol Formaldehyde Resin	32	1568	1600
3.	Urea Formaldehyde Resin	--	1000	1000

Bagfillter followed by water scrubber will be provided to Coal/ Lignite/ wood / agro waste fired boiler and Thermic fluid heater. Total fresh water requirement from groundwater source will be increased from 17.71 m3/day to 23.73m3/day after expansion. Industrial effluent generation will be 7.12m3/day. Effluent will be treated in ETP followed by evaporation. No effluent will be discharged outside the plant premises. ETP sludge will be sent to TSDF. DG set (415 KVA) will be installed. Electric power requirement will be 425 KVA. Coal / agro waste (1.5 MTPH) will be consumed. Greenbelt will be developed in 7995 m2.

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

1. Executive summary of the project
2. Justification of the project.

3. Photographs of proposed plant site.
4. Promoters and their back ground.
5. Copy of consent to establish issued by State Pollution Control Board for existing resin plant.
6. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB. If environment clearance not obtained, give reasons.
7. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing I existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
8. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
9. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s)
10. Regulatory framework.
11. A map indicating location of the project and distance from severely polluted area
12. Project location and plant layout.
13. Infrastructure facilities including power sources.
14. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
15. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
16. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
17. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
18. Details of the total land and break-up of the land use for green belt and other uses.
19. List of products alongwith the production capacities.
20. Detailed list of raw materials required and source, mode of storage and transportation.
21. Manufacturing process details alongwith the chemical reactions and process flow chart.
22. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
23. Ambient air quality monitoring at 6 locations within the study area of 5 km. aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
24. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM10, PM2.5, SO2, NOx including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
25. Air pollution control measures viz. Multi-cyclone and bag filter etc. Shall be proposed for the effective control of gaseous emissions within permissible limits.
26. Control methanol emission from drying section.
27. Details of VOC monitoring system in the working zone environment, if any.
28. Name of all the solvents to be used in the process and details of solvent recovery system.
29. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
30. Details of water and air pollution and its mitigation plan.
31. An action plan to control and monitor secondary fugitive emissions from all the sources.
32. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
33. Permission for the drawl of 23.7 m<sup>3</sup>/day ground water from CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
34. Action plan for 'Zero' discharge of effluent shall be included.
35. Treatment of phenol in the effluent, if any.
36. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
37. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
38. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.

39. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
40. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
41. A write up on "Safe Practice" followed for methanol handling, storage, transportation and unloading to be submitted.
42. A write up on "Treatment of workers affected by accidental spillage of methanol/ phenol".
43. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
44. An action plan to develop green belt in 33 % area
45. 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.
46. 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.
47. Details of occupational health surveillance programme.
48. Socio-economic development activities shall be in place.
49. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
50. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
51. Corporate Environmental Responsibility
  - (a) Does the company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
  - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
  - (d) Does the company has a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
52. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
53. Public hearing 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.
54. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

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

The Committee 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 Gujarat 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.

10.2.23 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 TORs.

The project authorities along with their consultant [M/s Anand Consultants] gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of References for the preparation of EIA/EMP report. All Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Intas Pharmaceuticals Limited have 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>. The cost of project is Rs. 4.00 Crore. 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	Imatinib Mesylate	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	Erlotinib HCl	0	300	300
10	Sorafenib Tosylate	0	300	300
11	Lapatinib Ditosylate mono hydrate	0	300	300
12	Methotrexate	0	350	350
	TOTAL	6,300	17,775	24,075

Water venture scrubber followed by caustic scrubber have been provided to control process emissions in the existing unit. Fresh water requirement will be increased from 460 m<sup>3</sup>/day to 511 m<sup>3</sup>/day after expansion. Industrial effluent generation will be increased from 335 m<sup>3</sup>/day to 361 m<sup>3</sup>/day after expansion. Industrial effluent will be segregated. Process effluent will be sent to MEE. The condensate will be sent to ETP. Treated effluent will be passed through RO and permeate will be recycled/reused for boiler feed water and cooling tower make up water. Existing DG sets (5500 KVA + 1010 KVA) are installed. Power requirement will be 5500 KVA. Solid waste incinerator has been installed in the existing unit. ETP sludge will be sent to TSDF. Spent solvent will be sent to authorized solvent recovery unit.

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

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30th May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
2. Executive summary of the project
3. Justification of the project.
4. Promoters and their back ground.

5. Regulatory framework.
6. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the GPCB.
7. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s)
8. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
9. Project location and plant layout.
10. Infrastructure facilities including power sources.
11. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
12. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
13. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
14. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
15. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
16. Details of the total land and break-up of the land use for green belt and other uses.
17. List of products alongwith the production capacities.
18. Detailed list of raw material required and source, mode of storage.
19. Manufacturing process details alongwith the chemical reactions and process flow chart.
20. Action plan for the transportation of raw material and products.
21. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
22. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
23. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
24. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
25. Name of all the solvents to be used in the process and details of solvent recovery system.
26. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
27. Details of water and air pollution and its mitigation plan.
28. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16th September, 2009.
29. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
30. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
31. Source and Permission from competent Authority for the drawl of water. Water balance chart for existing and expansion project including quantity of effluent generated recycled and reused and effluent discharge.
32. Attempt to be made for reduction for usage of water.
33. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
34. Zero discharge effluent concepts to be adopted.
35. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
36. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
37. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.

38. Material Safety Data Sheet for all the Chemicals are being used/will be used. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
39. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
40. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
41. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
42. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
43. 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.
44. Details of occupational health surveillance programme.
45. Socio-economic development activities shall be in place.
46. Note on compliance to the recommendations mentioned in the CREP guidelines.
47. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
48. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
49. Total capital cost and recurring cost/annum for environmental pollution control measures.
50. Corporate Environmental Responsibility
  - (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
  - (c ) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
  - (d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
51. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
52. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart.
53. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

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

It was decided that TORs prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the

relevant information as per the Generic Structure of EIA given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report should be submitted to the Gujarat Pollution Control Board for public hearing. The issues emerged and response to the issues raised during should be incorporated in the EIA report. The final EIA/EMP alongwith Certificate of Accreditation issued by the QCI should be submitted to the Ministry for obtaining environmental clearance.

10.2.24 Installation of GCS Bankia for receiving Gas from wells located at Ghotaru, Kharatar and, Bankia fields for purification compression and delivery at Plot No.214/34, Village Chak No.21-22-23 NTM, Tehsil Ramgarh, District Jaisalmer, Rajasthan by M/s Deep Industries Limited- regarding TORs

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

10.2.25 Expansion of Bulk Drugs & Intermediates (from 9.66 MTPA to 1800 MTPA) at Survey No.38/A, 39, 39/A, 40/B//2 & 41/C, Village Wangapally, Taluka Yadagirigutta, District Nalgonda, Andhra Pradesh by M/s Enal Drugs Pvt. Ltd. - regarding TORs

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

M/s Enal Drugs Pvt. Ltd. have proposed for expansion of Bulk Drugs & Intermediates (from 9.66 MTPA to 1800 MTPA) at Survey No.38/A, 39, 39/A, 40/B//2 & 41/C, Village Wangapally, Taluka Yadagirigutta, District Nalgonda, Andhra Pradesh. It is proposed to implement in 3 phases (Phase- I (720 MTPA), Phase II (720 MTPA) and Phase III (360 MTPA). Existing unit do not have EX since it is an intermediates manufacturing unit established in June 2006. Plot area will be increased from 5.65 ha. to 6.46 ha. Greenbelt will be developed in 22592 m2. No national park or wild life sanctuary or eco-sensitive area is located within 10 m distance. Total cost of project is Rs. 40.12 Crore. Rs. 5.0 Crore and Rs. 6.0 Crore are earmarked towards capital cost and recurring cost per annum for environmental management plan. Reserve forests viz. Mala Gutta and Mallappa Gutta are located at 5 Km and 6 Km distance respectively. Aler River is flowing at a distance of 8 Km. Following products will be manufactured:

S.N.	Product	Quantity (TPA)	Therapeutic Category
<b>Proposed Bulk Drugs- Campaigs Products</b>			
1	Lansoprazole	300	Anti-ulcerative
2	Omeprazole	360	Anti-ulcerative
3	Esomeprazole Magnesium	300	Anti-ulcerative
4	Rabeprazole Sodium	240	Anti-ulcerative
5	Risedronate Sodium	300	Atihypocalcemic Agent
6	Clopidogrel Bisulfate	180	Antiplatelet drug
7	Losartan Potassium	180	Antihypertensive
8	Betahistine Dihydrochloride	300	Anti-vertigo Agent
9	Entacapone	180	antiparkinsonian
10	Zaleplon	180	Sedative/Hypnotic drug
11	Dexlansoprazole	180	Anti-ulcerative
12	Dextrabeprazole	180	Anti-ulcerative
<b>Proposed Bulk Drug Intermediates-Campaign Products</b>			
S.No.	Product	TPA	Intermediates to the product
13	2-Hydroxy-3-nitroacetophenone	180	Pranlukast Intermediates

14	4-(4-Methyl piperzino methyl) benzoic acid Dihydrochloride	180	Imatinib Intermediates
15	N-(2-Methyl-5-nitrophenyl)-4-(3-pyridyl)-2-pyrimidine amine	180	Imatinib Intermediates
16	2-Chloro methyl-3-methyl-4-(2,2,2-trifluoroethoxy pyridine) Hydrochloride	180	Lansoprazole Intermediates
17	Pyridine-2-(Chloro ethyl)-4-(3-methoxy propoxy)-3-methyl Hydrochloride	180	Rabeprazole Intermediates
18	2[4-Chloro-3-methyl-2-pyridinyl-methyl) thio]-1H benzimidazole	180	Rabeprazole Intermediates
19	2-Chloro methyl-3,5-dimethyl-4-methoxy pyridine Hydrochloride	180	Omeprazole Intermediates
20	2,5-Bis-(2,2,2-Trifluoroethoxy) benzoic acid	180	Flecainide Acetate Intermediates
21	3-Amino-1H-pyrazole-4-carbonitrile Scrubber will be provided to control process emissions. Total water requirement will be increased from	180	Zaleplon Intermediates
22	3-Pyridyl acetic acid Hydrochloride	180	Risedronate Sodium Intermediate
23	2-Butyl-4-chloro-5-(hydroxyl methyl)-1-[[2-[(triphenyl methyl)tetrazol-5-yl] biphenyl-4-yl]methyl] imidazole	180	Losartan Intermediate
24	6-Methyl-4-phenyl-3,4-dihydrocoumarin	180	Tolterodine Intermediate
Total (any 6 Products at a time)		1800	

. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS/COD effluent stream will be treated in effluent treatment plant (ETP) comprising primary, secondary and tertiary treatment. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted. Inorganic & evaporation salt and ETP sludge will be sent to TSDF. Fly ash will be sent to cement plant /brick manufacturers.

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

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30th May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
2. Executive summary of the project
3. Justification of the project.
4. Promoters and their back ground.
5. Regulatory framework.
6. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the SPCB.
7. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s)
8. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
9. Project location and plant layout.
10. Infrastructure facilities including power sources.
11. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
12. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
13. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
14. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
15. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.

16. Details of the total land and break-up of the land use for green belt and other uses.
17. List of products alongwith the production capacities.
18. Detailed list of raw material required and source, mode of storage.
19. Manufacturing process details alongwith the chemical reactions and process flow chart.
20. Action plan for the transportation of raw material and products.
21. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
22. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
23. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
24. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
25. Name of all the solvents to be used in the process and details of solvent recovery system.
26. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
27. Details of water and air pollution and its mitigation plan.
28. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16th September, 2009.
29. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
30. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
31. Source and Permission from competent Authority for the drawl of water. Water balance chart for existing and expansion project including quantity of effluent generated recycled and reused and effluent discharge.
32. Attempt to be made for reduction for usage of water.
33. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
34. Zero discharge effluent concepts to be adopted.
35. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
36. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
37. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
38. Material Safety Data Sheet for all the Chemicals are being used/will be used. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
39. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
40. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
41. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
42. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
43. Details of occupational health programme.
  - a. To which chemicals, workers are exposed directly or indirectly.
  - b. Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - c. What measures company have taken to keep these chemicals within PEL/TLV.
  - d. How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - e. What are onsite and offsite emergency plan during chemical disaster.
  - f. Liver function tests (LFT) during pre-placement and periodical examination.

44. Details of occupational health surveillance programme.
45. Socio-economic development activities shall be in place.
46. Note on compliance to the recommendations mentioned in the CREP guidelines.
47. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
48. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
49. Total capital cost and recurring cost/annum for environmental pollution control measures.
50. Corporate Environmental Responsibility
  - (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
  - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
  - (d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
51. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
52. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart.
53. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

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

It was decided that TORs prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the Generic Structure of EIA given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report should be submitted to the State Pollution Control Board for public hearing. The issues emerged and response to the issues raised during should be incorporated in the EIA report. The final EIA/EMP alongwith Certificate of Accreditation issued by the QCI should be submitted to the Ministry for obtaining environmental clearance.

10.2.26 Resin Manufacturing Unit (450 TPM) at Survey No. 68 p 3/p, National Highway No. 8 A, Village Timbadi, Taluka Morbi, District Rajkot, Gujarat by M/s Rizon Laminates Pvt. Ltd-regarding TORs.

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP report. All the Resin Units located outside the notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Rizon Laminates Pvt. Ltd have proposed for setting up of Resin Manufacturing Unit (450 TPM) at Survey No. 68 p 3/p, National Highway No. 8 A, Village Timbadi, Taluka Morbi, District Rajkot, Gujarat. Plot area is 11331 m<sup>2</sup> of which greenbelt will be developed in 3800 m<sup>2</sup>. Total cost of the project is Rs.8.30 Crore. Following products will be manufactured:

S.N.	Product	Capacity (MTPM)
1.	Melamine Formaldehyde Resin	150
2.	Phenol Formaldehyde Resin	300

Bagfillter will be provided to Coal/ Lignite/ waste fired boiler (5TPD). Water requirement from groundwater source will be 14.6 m<sup>3</sup>/day. Industrial Waste water generation will be 1.8 m<sup>3</sup>/day. Effluent will be treated in ETP. No effluent will be discharged outside the Plant Premises. ETP sludge will be sent to TSDF. Electric power requirement will be 275 KVA. DG Set (300 KVA) will be installed as standby arrangement.

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

1. Executive summary of the project
2. Justification of the project.
3. Photographs of proposed plant site.
4. Promoters and their back ground.
5. Regulatory framework.
6. A map indicating location of the project and distance from severely polluted area
7. Project location and plant layout.
8. Infrastructure facilities including power sources.
9. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
10. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
11. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
12. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
13. Details of the total land and break-up of the land use for green belt and other uses.
14. List of products alongwith the production capacities.
15. Detailed list of raw materials required and source, mode of storage and transportation.
16. Manufacturing process details alongwith the chemical reactions and process flow chart.
17. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
18. Ambient air quality monitoring at 6 locations within the study area of 5 km. aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
19. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub> including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
20. Air pollution control measures viz. Multi-cyclone and bag filter etc. Shall be proposed for the effective control of gaseous emissions within permissible limits.
21. Control methanol emission from drying section.
22. Details of VOC monitoring system in the working zone environment, if any.
23. Name of all the solvents to be used in the process and details of solvent recovery system.
24. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
25. Details of water and air pollution and its mitigation plan.
26. An action plan to control and monitor secondary fugitive emissions from all the sources.
27. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
28. Permission for the drawl of 14.6 m<sup>3</sup>/day ground water from CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
29. Action plan for 'Zero' discharge of effluent shall be included.
30. Treatment of phenol in the effluent, if any.

31. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
32. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
33. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
34. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
35. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
36. A write up on "Safe Practice" followed for methanol handling, storage, transportation and unloading to be submitted.
37. A write up on "Treatment of workers affected by accidental spillage of methanol/ phenol".
38. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
39. An action plan to develop green belt in 33 % area
40. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
41. Details of occupational health programme.
  - i. To which chemicals, workers are exposed directly or indirectly.
  - ii. Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii. What measures company have taken to keep these chemicals within PEL/TLV.
  - iv. How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v. What are onsite and offsite emergency plan during chemical disaster.
  - vi. Liver function tests (LFT) during pre-placement and periodical examination.
42. Details of occupational health surveillance programme.
43. Socio-economic development activities shall be in place.
44. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
45. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
46. Corporate Environmental Responsibility
  - (a) Does the company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
  - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
  - (d) Does the company has a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
47. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
48. Public hearing to be conducted and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
49. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.

- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

The Committee prescribed the above TORs for preparation of EIA/EMP reports. The proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the Gujarat 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.

10.2.27 Molasses based distillery (80 KLPD) and 2.5 MW power at Sabitgarh Village Post Karora, Tehsil Khurja in District Bulandshahar, UP by M/s Triveni Engineering & Industries Ltd. - regarding TORs.

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

10.2.28 Molasses based distillery (80 KLPD) and 3.0 MW power at BhikkiBilaspur Village, Tehsil Muzaffarnagar, District Muzaffarnagar, Uttar Pradesh by M/s Triveni Engineering & Industries Ltd- regarding TORs.

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

10.2.29 Resin manufacturing Unit (3250 MT/M ) at Survey No.389, Village Nava Sadulka, Taluka Morbi, District Rajkot, Gujarat by M/s Graffiti Industries. - regarding TORs.

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP report. All the Resin Units located outside the notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Graffiti Industries have proposed for setting up of Resin manufacturing Unit (3250 MT/M ) at Survey No.389, Village Nava Sadulka, Taluka Morbi, District Rajkot, Gujarat. Plot area is 17402 m<sup>2</sup>. Total cost of the project is Rs.9.0 Crore. Following products will be manufactured:

S.N.	Product	Capacity (MTPM)
1.	Melamine Formaldehyde Resin	750
2.	Phenol Formaldehyde Resin	1000
3.	Urea Formaldehyde Resin	1500
4	Electrical Insulation Board & HP Decorative Laminated Sheets	3,00,000 Nos./ Month

Multi cyclone Dust Collector will be provided to Coal/ Lignite/ waste fired boiler (4TPD) and Thermic Fluid Heater. Scrubber will be provided to control process emissions. Water requirement from groundwater source will be 37.56 m<sup>3</sup>/day. Industrial Waste water generation will be 13.1 m<sup>3</sup>/day. Effluent will be treated in ETP. No effluent will be discharged outside the Plant Premises. Electric power requirement will be 275 KVA. DG Set (250 KVA) will be installed as standby arrangement. ETP sludge will be sent to TSDF.

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

1. Executive summary of the project
2. Justification of the project.
3. Photographs of proposed plant site.
4. Promoters and their back ground.
5. Regulatory framework.
6. A map indicating location of the project and distance from severely polluted area
7. Project location and plant layout.
8. Infrastructure facilities including power sources.
9. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
10. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
11. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
12. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
13. Details of the total land and break-up of the land use for green belt and other uses.
14. List of products alongwith the production capacities.
15. Detailed list of raw materials required and source, mode of storage and transportation.
16. Manufacturing process details alongwith the chemical reactions and process flow chart.
17. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
18. Ambient air quality monitoring at 6 locations within the study area of 5 km. aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
19. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM10, PM2.5, SO2, NOx including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
20. Air pollution control measures viz. Multi-cyclone and bag filter etc. Shall be proposed for the effective control of gaseous emissions within permissible limits.
21. Control methanol emission from drying section.
22. Details of VOC monitoring system in the working zone environment, if any.
23. Name of all the solvents to be used in the process and details of solvent recovery system.
24. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
25. Details of water and air pollution and its mitigation plan.
26. An action plan to control and monitor secondary fugitive emissions from all the sources.
27. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
28. Permission for the drawl of 37.56 m3/day ground water from CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
29. Action plan for 'Zero' discharge of effluent shall be included.
30. Treatment of phenol in the effluent, if any.
31. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
32. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
33. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
34. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
35. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
36. A write up on "Safe Practice" followed for methanol handling, storage, transportation and unloading to be submitted.
37. A write up on "Treatment of workers affected by accidental spillage of methanol/ phenol".
38. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
39. An action plan to develop green belt in 33 % area

40. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
41. Details of occupational health programme.
  - i. To which chemicals, workers are exposed directly or indirectly.
  - ii. Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii. What measures company have taken to keep these chemicals within PEL/TLV.
  - iv. How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v. What are onsite and offsite emergency plan during chemical disaster.
  - vi. Liver function tests (LFT) during pre-placement and periodical examination.
42. Details of occupational health surveillance programme.
43. Socio-economic development activities shall be in place.
44. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
45. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
46. Corporate Environmental Responsibility
  - (a) Does the company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
  - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
  - (d) Does the company has a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
47. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
48. Public hearing to be conducted and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
49. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

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

The Committee prescribed the above TORs for preparation of EIA/EMP reports. The proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the Gujarat 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.

10.2.30 Resin Manufacturing Unit (1500 TPM) at Survey No.35/1, 35/2 and 36, Village Alwa, Tehsil Hansot, District Bharuch, Gujarat by M/s Krifor Industries Pvt. Ltd- regarding TORs.

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP report. All the Resin Units located outside the notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Krifor Industries Pvt. Ltd have proposed for setting up of Resin Manufacturing Unit (1500 TPM) at Survey No.35/1, 35/2 and 36, Village Alwa, Tehsil Hansot, District Bharuch, Gujarat. Proposed unit will be installed in the existing particle board unit. Total plot area of the existing unit is 72400 m<sup>2</sup>. Land required for proposed unit within existing plant will be 1132.2 m<sup>2</sup>. Total project cost is Rs124 Lakh. Rs 7.0 Lakh and 2.0 Lakh are earmarked towards capital cost and recurring cost per annum for implementation of Environment management plan. Kim River is flowing within 10 Km distance. No national park and reserve forest is located within 10Km distance. Following products will be manufactured:

S.N.	Product	Capacity (MTPM)
1.	Melamine Urea Formaldehyde Resin	1500

Bagfilter alongwith stack of 36 m height will be provided to coal fired thermopack. Water requirement from ground water source will be 5.5 m<sup>3</sup>/day. Power requirement from DGVCL (daxin Gujarat Vij Company Ltd.) will be 60KVA. Coal (25 MTPD) will be used. Diesel (15 LPD) will be Consumed. DG Set (200 KVA) will be installed. Used oil will be reused as lubricants in the machineries.

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

1. Executive summary of the project
2. Justification of the project.
3. Photographs of proposed plant site.
4. Promoters and their back ground.
5. Regulatory framework.
6. A map indicating location of the project and distance from severely polluted area
7. Project location and plant layout.
8. Infrastructure facilities including power sources.
9. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
10. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
11. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
12. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
13. Details of the total land and break-up of the land use for green belt and other uses.
14. List of products alongwith the production capacities.
15. Detailed list of raw materials required and source, mode of storage and transportation.
16. Manufacturing process details alongwith the chemical reactions and process flow chart.
17. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
18. Ambient air quality monitoring at 6 locations within the study area of 5 km. aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
19. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM10, PM2.5, SO<sub>2</sub>, NO<sub>x</sub> including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
20. Air pollution control measures viz. Multi-cyclone and bag filter etc. Shall be proposed for the effective control of gaseous emissions within permissible limits.
21. Control methanol emission from drying section.

22. Details of VOC monitoring system in the working zone environment, if any.
23. Name of all the solvents to be used in the process and details of solvent recovery system.
24. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
25. Details of water and air pollution and its mitigation plan.
26. An action plan to control and monitor secondary fugitive emissions from all the sources.
27. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
28. Permission for the drawl of 5.5 m<sup>3</sup>/day ground water from CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
29. Action plan for 'Zero' discharge of effluent shall be included.
30. Treatment of phenol in the effluent, if any.
31. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
32. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
33. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
34. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
35. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
36. A write up on "Safe Practice" followed for methanol handling, storage, transportation and unloading to be submitted.
37. A write up on "Treatment of workers affected by accidental spillage of methanol/ phenol".
38. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
39. An action plan to develop green belt in 33 % area
40. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
41. Details of occupational health programme.
  - i. To which chemicals, workers are exposed directly or indirectly.
  - ii. Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii. What measures company have taken to keep these chemicals within PEL/TLV.
  - iv. How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v. What are onsite and offsite emergency plan during chemical disaster.
  - vi. Liver function tests (LFT) during pre-placement and periodical examination.
42. Details of occupational health surveillance programme.
43. Socio-economic development activities shall be in place.
44. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
45. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
46. Corporate Environmental Responsibility
  - (a) Does the company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
  - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
  - (d) Does the company has a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
47. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.

48. Public hearing to be conducted and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
49. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

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

The Committee prescribed the above TORs for preparation of EIA/EMP reports. The proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the Gujarat 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.

- 10.2.31 Grass root Refinery (9 MMTPA) cum Petrochemical Complex (Rajasthan Refinery Project) at Village Saajiyali RoopjiKanthawad, Tehsil Pachpadra, District Barmer, Rajasthan by M/s HPCL. - regarding TORs.

The project proposal was considered in the 7th Reconstituted Expert Appraisal Committee (Industry) held during 4th April, 2013-5th April, 2013 and the Committee recommended the proposal for award of TOR for preparation of EIA/EMP report for setting up of Grass root Refinery (9 MMTPA) cum Petrochemical Complex (Rajasthan Refinery Project) at Village Leelala, Leelasar, Januon Ki Dhani, Sagarmani Godaron Ki Dhani, Tehsil Baytu, District Barmer Rajasthan.

Further, project proponent has informed that they have shifted the location of proposed refinery at new location namely Village Saajiyali RoopjiKanthawad, Tehsil Pachpadra, District Barmer, Rajasthan. Project proponent has submitted following comparative statement for existing site and new site:

S.N.	Description	Existing Site (Baytu)	New Site (Pachpadra)
1	Tehsil	Baytu	Pachpadra
2	District	Barmer	Barmer
3	Location	8 Km from NH-112 and 40 Km from Barmer town	Adjacement to NH-112 & SH-28 and Close to Balotra town (17 Km)
4	Land Use	Barren / Agriculture	Predominantly Barren
5	Land Ownership	Private	Government/Private (98% govt./2% pvt. )
6	Site topography	Undulated, needs grading 2-5m variation	Fairly flat, minimal grading
7	National Highway	8 KM from NH-112	0.5 Km to NH-112
8	Railway Line	10 to 12 KM (Baytu)	10 to 12w KM (Balotra)
9	Power Source	Power ;source at Baytu (8 km, Construction) / Barmer (46 kim, Permanent)	Power source at Balotra (20 Km. Construction/ Permanent)
10	Water Source	From Indira Gandhi Canal (185 Km)	From Indira Gandhi Canal (185 Km)
11	Social Infrastructure	40 KM (Barmer)	17 KM (Balotra) 90 KM (Jodhpur) 100 KM (Barmer)
12	Length of Crude Pipeline (between Mangla oil field of Cairn Energy and site)	30 KM	70 KM
13	Length of NG Pipeline (between source Cairn Energy field and site)	20 KM	60 KM
14	Length of Production Pipeline (upto Salawas nearest station)	140 KM	80 KM
15	Nearest Defence Installation	Uttarlal – 26 KM	Uttarlal – 80 KM
16	Distance from Pakistan Border	120 KM	152 KM

tions will remain the same. The Cost of project will be reduced from Rs. 2512 crore to Rs. 1352 crore.

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

1. Executive summary of the project.
2. Project Description and Project Benefits.
3. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours

- should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. A photograph of the site should also be included.
4. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
  5. Topography of the area should be given clearly indicating whether the site requires any filling. If so, details of filling, quantity of fill material required, its source, transportation etc. should be given.
  6. Location of national parks/wildlife sanctuary/reserve forests within 10 km. radius should specifically be mentioned. A map showing land use/land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.
  7. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
  8. Permission from the tribals, if tribal land has also to be acquired along with details of the compensation plan.
  9. Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department. .
  10. Project site layout plan to scale using AutoCAD showing raw materials and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
  11. A list of industries within 10 km radius of the project.
  12. Details of facilities alongwith utilities to be provided for the proposed project.
  13. Manufacturing process details alongwith the chemical reactions and process flow diagram.
  14. List of products alongwith the production capacities.
  15. Detailed list of raw material required and source, mode of storage and transportation. Details of the storage and technical specifications with safety aspects & standards.
  16. Mass balance for the raw material and products should be included.
  17. Proposal for safety buffer zone around the proposed site with map.
  18. Baseline data collection for air, water and soil for the period of 3 months (except monsoon season) for :
    - i. Ambient air quality monitoring for PM2.5, PM10, SO2, NOx, CO.
    - ii. Background levels of hydrocarbons (methane & non-methane HC) and VOCs.
    - iii. Soil sample analysis.
    - iv. Base line underground and surface water quality in the vicinity of project.
    - v. Climatology & meteorology including wind speed, wind direction, temperature, rainfall etc.
    - vi. Measurement of noise levels.
  19. Action plan to achieve smokeless flare should be included.
  20. Details of Sulphur balance in the proposed refinery unit.
  21. Unit-wise air pollution control devices to be installed.
  22. Details of water consumption and source of water supply, waste water generation, treatment and utilization of treated water generated from the facilities and effluent disposal. Detailed water balance chart to be submitted.
  23. Details of proposed effluent treatment plant alongwith water quality of inlet and outlet of ETP.
  24. A note on the impact of drawl of water on the nearby River/Canal during lean season. Proved details of peak and lean season flow of the river /canal.
  25. Hydrogeological study of the area to be carried out and report submitted.
  26. Ground water modeling showing the pathways of the pollutants should be included.
  27. Detailed solid waste generation, collection, segregation, its recycling and reuse, treatment and disposal.
  28. Explore the possibility for utilization of treated wastewater in exploration /development wells in nearby oil fields.
  29. Note on compliance to the recommendations mentioned in the CREP for oil refineries and petrochemical industries.
  30. A note on implementation of new refinery standards for refineries.
  31. Quantification of oil sludge generation from the proposed refinery including management plan for the oily sludge handling. Details of temporary storage for the oil sludge.
  32. Details of catalyst waste generated from the refinery along with temporary storage facility at site. Action plan for disposal of the catalyst solid waste.
  33. Land use & cropping pattern, vegetation, ecology, flora & fauna
  34. Demography & socio-economics of the area.
  35. Assessment of impact on air, water, soil, solid/hazardous waste and noise levels.
  36. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.

37. Details of proposed preventive measures for leakages and accident.
38. Details of Vapour Recovery System.
39. Earmarking of area for parking of Lorries at a remote location to avoid congestion.
40. Traffic management with adequate width of approach road to avoid congestion and to have safe exit in emergencies.
41. Type of seismic zone.
42. Full Quantitative Risk Assessment & Disaster Management Plan should include:
  - a. Identification of hazards
  - b. Consequence Analysis
  - c. Determination of Individual Risk and Societal Risk
  - d. Proposed measures for risk reduction.
  - e. Petroleum vapour intrusion impact study.
43. 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.
44. Action plan for development of green belt in 33% alongwith layout plan.
45. Total capital cost and recurring cost/annum for environmental pollution control measures. Break up details should also be included.
46. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
47. Environmental monitoring programme including online stack monitoring system as well as continuous ambient air quality monitoring system. Method/System to be adopted to ensure correct calibration of automatic monitoring system.
48. Details of Corporate Social Responsibility (CSR) including sufficient budgetary provision for health improvement, education, water and electricity supply etc. in and around the project.
49. Corporate Environmental Responsibility
  - (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
  - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
  - (d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
50. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
51. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
52. A tabular chart indicating point-wise compliance of the TOR.
 

The following general points should be noted:

  - i. All documents should be properly indexed, page numbered.
  - ii. Period/date of data collection should be clearly indicated.
  - iii. Authenticated English translation of all material provided in Regional languages.
  - iv. The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
  - v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.

- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant should be included.

It was decided that TORs prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA/EMP report for the above mentioned project in addition to all the relevant information as per the Generic Structure of EIA given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report should be submitted to the Rajasthan State Pollution Control Board for conducting public hearing/consultation. The issues emerged and response to the issues raised during public hearing should be incorporated in the EIA/EMP report and submitted to the Ministry for obtaining environmental clearance.

10.2.32 Exploratory Drilling of 10 Wells in NELP-VI, Onshore Block CY-ONN-2004/2 in Ariyalur District, Tamil Nadu by M/s ONGC. - regarding TORs.

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

M/s ONGC have proposed for exploratory drilling of 10 Wells in NELP-VI, Onshore Block CY-ONN-2004/2 in Ariyalur District, Tamil Nadu. The block was awarded to ONGC (80 %) & BPCL (20%) with ONGC as operator. The production sharing contract (PSC) between ONGC and BPCL was signed on 02.03.2007. The Petroleum Exploration License (PEL) was granted w.e.f. 30.05.2008 for 7 years. The cost of drilling project is Rs. 20.00 Crore. Block area is 375 Km<sup>2</sup>. Environmental clearance was obtained for 4 locations vide MoEF letter no. J-11011/842/2007-IA II(I) dated 14th January, 2011. Now, it is proposed to drill additional 10 wells. Coordinates of the block are as given below:

Coordinates						
Point	Longitude			Latitude		
	Deg	Min	Sec.	Deg	Min	Sec.
A	79	19	0.00	11	2	0.00
B	79	13	37.00	11	9	25.00
C	79	16	33.00	11	12	33.60
D	79	19	56.00	11	9	51.00
E	79	22	30.00	11	11	24.00
F	79	24	45.70	11	14	1.60
G	79	31	27.00	11	14	3.70
H	79	31	27.00	11	9	54.00
I	79	20	9.00	11	3	18.00
A	79	19	0.00	11	2	0.00

Only water based drilling mud will be used. The quantity of drilling cuttings generated will be around 300-400 m<sup>3</sup>. Water requirement for domestic and drilling will be 25 m<sup>3</sup>/day. The quantity of wastewater produced will be about 15 m<sup>3</sup>/day.

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

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, SO2, NOx, VOCs, Methane and non-methane HC.
  - (iii) Soil sample analysis (physical and chemical properties) at the areas located at 5 locations.
  - (iv) Ground and surface water quality in the vicinity of the proposed wells site.
  - (v) Climatology and Meteorology including wind speed, wind direction, temperature rainfall relative humidity etc.
  - (vi) Measurement of Noise levels within 1 km radius of the proposed wells.
  - (vii) Vegetation and land use; Animal resources
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.

10.2.33 Additional Exploratory Drilling of 10 Wells in NELP-1, Offshore Block KG/DWN-98/2 in KG Basin, Andhra Pradesh by M/s ONGC- regarding TORs.

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

M/s ONGC have proposed for additional exploratory drilling of 10 Wells in NELP-1, Offshore Block KG/DWN-98/2 in KG Basin, Andhra Pradesh. The NELP-1 block KG-DWN-98/2 located off the coast of Godavari Delta in the east coast of India was initially awarded to CEIL with 100% in the 1st round of NELP bidding in April, 2000 and later 90 % of PI and operatorship was acquired by ONGC in March, 2005. The block currently covers an area of 7294 sq. km. Coordinates of the location in KG-DWN-98/2 Block are as given below:

S.N.	Location Name	X	Y	Water Depth (m)	Target Depth (m)	Nearest Distance to the Coast (in Km)	Well Cost (Rs. Crore)
1	KG-DWN-98/2-APP-1	646094.00	1809376.00	620	3000	24.7	240
2	KG-DWN-98/2-APP-2	645570.00	1804236.40	760	3000	28.7	235
3	KG-DWN-98/2-APP-3	647185.00	1802377.00	850	3000	30.9	230
4	KG-DWN-98/2-APP-4	643900.00	1787990.00	1140	5000	41.6	400
5	KG-DWN-98/2-APP-5	635905.00	1781884.00	1280	5000	43.7	400
6	KG-DWN-98/2-APP-6	630831.00	1757247.00	1560	5000	64.11	400
7	KG-DWN-98/2-APP-7	655756.00	1816998.38	738	5000	23.00	400
8	KG-DWN-98/2-APP-8	639468.50	1794712.50	842	5000	34.00	400
9	KG-DWN-98/2-APP-9	659581.12	1821677.50	741	5000	25.20	400
10	KG-DWN-98/2-APP-10	648422.88	1722016.88	2583	6000	105	480

Only water based drilling mud will be used. The quantity of drilling cuttings generated will be around 300-400 m<sup>3</sup>. Water requirement for domestic and drilling will be 25 m<sup>3</sup>/day. The quantity of wastewater produced will be about 15 m<sup>3</sup>/day. Captive generator (6 Nos. of 1200 HP) will be installed.

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

1. Executive summary of the project.
2. No. of exploratory wells for which environmental clearance is accorded and No. of new wells proposed during expansion. Status and No. of the wells which are completed and closed.
3. Project Description and Project Benefits;
4. Distance from coast line.
5. Commitment for no drilling will be carried within 1.0 Km.
6. Details of sensitive areas such as coral reef, marine water park, sanctuary and any other eco-sensitive area.

7. Approval for the forest land from the State/Central Govt. under Forest (Conservation) Act, 1980, if applicable.
8. CRZ clearance as per CRZ Notification dated 6th January, 2011.
9. Climatology and meteorology including wind speed, wave and currents, rainfall etc.
10. Base line data collection for surface water for one season leaving the monsoon season within 1 km for each exploratory wells, particularly in respect of oil content.
11. Actual source of water and 'Permission' for the drawl of water from the Competent Authority. Detailed water balance, waste water generation and discharge.
12. Noise abatement measures and measures to minimize disturbance due to light and visual intrusions in case coastally located.
13. Procedure for handling oily water discharges from deck washing, drainage systems, bilges etc.
14. Procedure for preventing spills and spill contingency plans.
15. Procedure for treatment and disposal of produced water.
16. Procedure for sewage treatment and disposal and also for kitchen waste disposal.
17. Procedure for handling solid waste and any waste segregation at source for organic, inorganic and industrial waste.
18. Storage of chemicals on site.
19. Commitment for the use of WBM and synthetic oil based mud in special case.
20. Risk assessment and mitigation measures including whether any independent reviews of well design, construction and proper cementing and casing practices have been followed.
21. Handling of spent oils.
22. Handling of oil from well test operations.
23. Mud make up and mud and cuttings disposal procedures.
24. H2S emissions control plans, if required.
25. Details of all environment and safety related documentation within the company in the form of guidelines, manuals, monitoring programmes including Occupational Health Surveillance Programme etc.
26. Restoration plans and measures to be taken for decommissioning of the rig and restoration of on-shore support facilities on land.
27. Documentary proof for membership of common disposal facilities, if required.
28. Any litigation pending against the project or any directions/order passed by any Court of Law against the project. If so, details thereof.
29. Total capital and recurring cost for environmental pollution control measures.
30. A tabular chart with index for point-wise compliance of above TOR.

The following general points should be noted:

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

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

The Committee decided that the proponent should prepare EIA/EMP Report based on the above TORs. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The final EIA/EMP alongwith 'Certificate of Accreditation' issued by the QCI should be submitted to the Ministry for obtaining environmental clearance. The committee noted that public hearing is not required as project site is located in off-shore.

**30<sup>th</sup> July, 2013**

### **10.3.0 Consideration of the Projects:**

#### **Environmental Clearance**

- 10.3.1 Expansion of 1.1 MTPA Integrated Steel Plant by Addition of 2x1.2 MTPA Iron Ore Pelletization Plant, Coal Gasifier and 2.4 MTPA Iron Ore Grinding and Beneficiation Plant at Phase-I of Siltara Industrial Growth Centre, Village Mandhar, District Raipur in Chhattisgarh by **M/s Sarda Energy and Minerals Ltd- regarding Environment Clearance.**

The Committee deferred the consideration of the proposal on the following grounds:

- i. Existing phase I project for which Environment Clearance (EC) was accorded by MoEF vide F.No.J-11011/999/2007-IA.II(I) dated 23.12.2008 is yet to be implemented by M/s Sarda Energy and Minerals Limited; and
  - ii. M/s Sarda Energy and Minerals Limited is already established and operating iron ore pellet plant of 0.6 MTPA without obtaining prior environmental clearance from the Ministry of Environment and Forests (MoEF). The Consent to Establish was issued by the Chhattisgarh Environment Conservation Board vide letter no. 5613/TS/CECB/2006 dated 10.11.2006. As per the MoEF circular no.J-11013/41/2006-IA.II(I) dated 21.11.2006, *the applications received for NOC by the State Pollution Control Boards before 14.9.2006 may be considered as per provisions of the said Acts. However, they will have to obtain environmental clearance from the relevant Authority by 30.6.2007, if the category requires EIA clearance as per the EIA Notification dated 14.9.2006. Projects not seeking clearance under EIA Notification, 2006 by 30.6.2007 will be treated as violation cases under section 15 of Environment (Protection) Act, 1986.* In the present proposal, M/s Sarda Energy and Minerals Limited has not obtained EC from MoEF by 30.6.2007 for the 0.6 MTPA iron ore pelletization plant and it will be treated as a violation case. Hence, the Committee recommended that the MoEF shall deal with the violation matter in accordance with its Office Memorandum No. J-11013/41/2006-IA.II(I) dated 12.12.12 and 27.6.2013.
- 10.3.2 Expansion of Chrysotile Fibre Cement Sheeting Plant at Village- Bramanpur, Dist- Jaunpur, Uttar Pradesh by **M/s UAL-Uttar Pradesh Industries Ltd.- regarding Environment Clearance.**

M/s UAL vide letter No.Nil dated 10.9.2012 submitted the final EIA/EMP report to the Ministry. The aforesaid proposal was deferred by the Ministry vide letter No.J-11011/386/2010-IA.II(I) dated 16.1.2013 with a request to re-validate EIA/EMP report by the QCI/NABET accredited consultant as the consultant (M/s.EMTRC Consultants Private Limited) engaged by the proponent was not accredited by the QCI for the Asbestos milling and asbestos based products. The proponent vide

letter no. UAL-UP/2013-14 dated 22.4.2013 submitted the EIA/EMP report through the QCI/NABET accredited consultant – M/s. B.S.Envi-Tech Private Limited, Hyderabad. The said EIA/EMP report was placed before the EAC for consideration.

The Committee deferred the consideration of the proposal as the data contained in the EIA/EMP report was not revalidated by the M/s. B.S.Envi-Tech Private Limited, Hyderabad. The Committee asked the consultant (M/s. B.S.Envi-Tech Private Limited, Hyderabad) to conduct one month fresh AAQ monitoring to verify the data provided by the M/s.EMTRC Consultants Private Limited, New Delhi. Further, the Committee asked the proponent to submit the stack emission data on asbestos fibre count and the data on fibre concentration monitored in the work zone.

10.3.3 Manufacture of Structural Rolled Products (2,16,000 MTPA) in Induction Furnace and Rolling Mill and Ferro Alloys at Village Palhori, Khasra No. 213/197/91/1, Paonta Sahib, Sirmour, Himanchal Pradesh by **M/s India Steels- Regarding Environment Clearance.**

The Committee deferred the consideration of the proposal and recommended that a site visit shall be undertaken by the Regional Office of the MoEF at Chandigarh to verify the existing plant (Manufacturing of Structural Rolled Products – 29000 TPA) including its compliance status and the report shall be submitted to the EAC for further consideration of the proposal.

**Terms of Reference**

10.3.4 Proposed modification cum expansion of existing integrated steel project at Kalinga Nagar Industrial Complex, District Jaipur, Odisha by **M/s VISA Steel Limited- regarding ToRs**

The project authorities along with their consultant (M/s Global Experts, Bhubaneshwar) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA/EMP report. The steel plants are listed at S.No. 3(a) in primary metallurgical industry under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s Visa Steel Limited have proposed for modification cum expansion of existing integrated steel project by setting up sinter plant - 0.36 MTPA, Calcined lime – 0.105 MTPA and captive power generation of 2x150 MW at Kalinga Nagar Industrial Complex, District Jaipur, Odisha. The proposed modification cum expansion will be carried out within the existing plant premises of 486 Ha. No additional land is required for the proposed modification cum expansion. No Forest land is involved. No national park/wild life sanctuary/ecologically sensitive area is located within 10 km radius of the project site. The Brahmani river is located at a distance of 6 km from the project site. The longitude and latitude of the project site is 86°03' 38.19" E and 20° 56'47.56" N respectively. Total cost of the project is Rs. 1630.51Crores. No court cases/litigation is pending against the project.

The status of Environmental Clearance obtained by project authorities, details of the operational units and proposed modification cum expansion are as given below:-

Status of EC and Operational units at VISA Steel Limited							
S. No	Description	EC Received :-		Existing Operational Units		Applied for ToR	
		Size	Capacity (MTPA)	Size	Capacity (Million Tonne)	Size	Capacity (Million Tonne)
1.	Blast Furnace	1 x 250 CuM	0.600	1 x 250 CuM	0.225		
		2 x 250 CuM					
2.	Coke Oven plant	88 Ovens	0.80	88 Ovens	0.40		

Status of EC and Operational units at VISA Steel Limited								
S. No	Description	EC Received :-		Existing Operational Units		Applied for ToR		
		Size	Capacity (MTPA)	Size	Capacity (Million Tonne)	Size	Capacity (Million Tonne)	
		1) J-11011/33/2007-1A II (I), Dated 12.06.2007, 2) J-11011/1000/2007-1A II (I), Dated 03.07.2008, 3) Amendment J-11011/1000/2007-1A II (I), Dated 05.03.2012						
		88 Ovens						
3.	Coal based sponge iron plant	2 x 500 TPD	0.90	2 x 500 TPD	0.30			
		2 x 500 TPD						
		2 x 500 TPD						
4.	Captive Power Plant	100 MW (WHRB)	356 MW	2 x 25 MW (WHRB of DRI, CO & MBF)	50 MW			
		1 x 25 MW (CFBC)		1 x 25 MW (CFBC)	25 MW			
		1 x 150 MW (CFBC)					2 x 150 MW (In place of 1 x 150 MW + 1 x 81 MW)	300 MW
		1 x 81 MW (CFBC)						
5.	Ferro Chrome Plant	2 x 16.5 MVA	0.15	2 x 16.5 MVA	0.05			
		4 x 16.5 MVA						
6.	Steel Melt Shop	1 x 80 T EAF & Billet Caster	1.80	1 x 80 T EAF & Billet Caster	0.60			
		1 x 80 T EAF & Billet Caster						
		1 x 80 T EAF & Billet Caster						
7.	Rolling Mill (BWRM)	0.5 MTPA	1.50	0.5 MTPA	0.50			
		0.5 MTPA						
		0.5 MTPA						
8.	Sinter Plant	Nil		Nil		36 Sq. Meter	0.36	
9.	Lime Calcination Plant	Nil		Nil		300 TPD	0.105	

Limestone (2,22,180 TPA), iron ore fines (3,32,640 TPA), coke breeze (25200 TPA), Dolomite (32040 TPA), Quartzite (9720 TPA), kiln char (2,70,000 TPA), coal fine (1,00,000 TPA) and raw coal (15,48,000 TPA) are the raw materials that will be used. The water requirement is 248 m<sup>3</sup>/hr will be sourced from Kharsuan river. The power requirement is 43 MW which will be met from captive power plant.

The power plant will be equipped with ESP and low NOx burner. Lime calcinations plant will be equipped with bag filter. Stack of adequate height will be provided. The wastewater generated will be reused after adequate treatment. The solid wastes generated are lime and sinter dust which will be used in recycled. The fly ash (4,83,000 TPA) will be used in the brick manufacturing. The bottom ash (1,20,000 TPA) will be disposed through High Concentration Slurry Disposal System.

The justification presented to the Committee for setting up of 2x150 MW captive power plant in place of 1 x 150 MW and 1 x 81 MW are as below:-

- 2X150 MW FBC PP is techno-economically preferable to 1x150 MW & 1x81 MW CFBC PP
- Complete satisfactory utilization of in plant solid waste DRI Kiln char & coal fines
- Maintaining high temperature & pressure of the steam reduces the steam requirement, Station Heat Rate (SHR) from 2900 to 2600 kcal/kwh and subsequently reduction of fuel coal requirement.
- Complete utilization of generated power in the plant processes with minimum dependency on erratic state grid supply.
- Utilization of in-plant iron ore fines in sinter unit
- Sinter plant and lime plant are the supporting units

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

1. Executive summary of the project
2. Iron ore/Coal linkage documents
3. Photographs of the existing and proposed plant area
4. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
5. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
6. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
7. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s)
8. A line diagram/flow sheet for the process and EMP
9. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
10. A copy of the mutual agreement for land acquisition signed with land oustees.
11. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. A photograph of the site should also be included.
12. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
13. Topography of the area should be given clearly indicating whether the site requires any filling. If so, details of filling, quantity of fill material required, its source, transportation etc. should be given.
14. Location of national parks/wildlife sanctuary/reserve forests within 10 km. radius should specifically be mentioned. A map showing land use/land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.
15. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
16. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates should also be included.
17. Details and classification of total land (identified and acquired) should be included.
18. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
19. Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department.
20. A list of industries containing name and type in 25 km radius should be incorporated.
21. Residential colony should be located in upwind direction.
22. List of raw material required, analysis of all the raw materials and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".

23. Petrological and Chemical analysis and other chemical properties of raw materials used (with GPS location of source of raw material) i.e. ores, minerals, rock, soil, coal, iron, dolomite quartz etc. using high definition and precision instruments mentioning their detection range and methodology such Digital Analyzers, AAS with Graphite furnace, ICPMS, MICRO-WDXRF, EPMA, XRD, Nano studies or at least as per ISO-10500 and WHO norms. These analysis should include trace element and metal studies like Cr (vi) Ni, Fe, As, Pb, Zn, Hg, Se, S etc. Presence of radioactive elements (U, Th etc.), if applicable, should also be included.
24. Petrography, grain size analysis and Major element analysis of raw material and soil from project site and raw material should be done on the same parameters along with analysis for SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, MgO, MnO, K<sub>2</sub>O, CaO, FeO, Fe<sub>2</sub>O<sub>3</sub>, P<sub>2</sub>O<sub>5</sub>, H<sub>2</sub>O, CO<sub>2</sub>.
25. If the rocks, ores, raw material has trace elements their petrography, ore microscopy, XRD, elemental mapping EPMA, XRF is required to quantify the amount present in it and hence future risk involved while using it and management plan.
26. Action plan for excavation and muck disposal during construction phase.
27. Studies for fly ash, muck, slurry, sludge material disposal and solid waste generated, if the raw materials used has trace elements and a management plan should also be included.
28. Manufacturing process details for all the plants should be included.
29. Mass balance for the raw material and products should be included.
30. Energy balance data for all the components of steel plant including proposed power plant should be incorporated.
31. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
32. Data generated in the last three years i.e. air, water, raw material properties and analysis (major, trace and heavy metals), ground water table, seismic history, flood hazard history etc.
33. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
34. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
35. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
36. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
37. Air quality modelling for steel plant for specific pollutants needs to be done. APCS for the control of emissions from the kiln and WHRB should also be included to control emissions within 50 mg/Nm<sup>3</sup>.
38. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be included.
39. Ambient air quality modelling along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
  - i. Emissions (g/second) with and without the air pollution control measures
  - ii. Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height) on hourly basis
  - iii. Model input options for terrain, plume rise, deposition etc.
  - iv. Print-out of model input and output on hourly and daily average basis
  - v. A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
  - vi. Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
  - vii. Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
  - viii. No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
  - ix. Graphs of monthly average daily concentration with down-wind distance

- x. Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
  - xi. Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
40. A plan for the utilization of waste/fuel gases in the WHRB for generating power have to be set out.
  41. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided. The alternate method of raw material and end product transportation should also be studied and details included.
  42. One season data for gaseous emissions other than monsoon season is necessary.
  43. 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.
  44. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
  45. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included. Information regarding surface hydrology and water regime should be included.
  46. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
  47. Ground water modelling showing the pathways of the pollutants should be included
  48. Column leachate study for all types of stockpiles or waste disposal sites at 20°C-50°C should be conducted and included.
  49. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
  50. Permission for the drawl of water from the State Irrigation Department or concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
  51. A note on the impact of drawl of water on the nearby River during lean season.
  52. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
  53. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean River discharge as well as flood occurrence frequency.
  54. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
  55. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
  56. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
  57. Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from any other source should be included.
  58. The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, and lakes), sub-surface and ground water with a monitoring and management plans.
  59. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
  60. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly slag from all the sources, char and fly ash. Copies of MOU regarding utilization of ash should also be included.

61. Details of evacuation of ash, details regarding ash pond impermeability and whether it would be lined, if so details of the lining etc. need to be addressed.
62. A note on the treatment, storage and disposal of all type of slag should be included. Details of secured land fill as per CPCB guidelines should also be included.
63. End use of solid waste and its composition should be covered. Toxic metal content in the waste material and its composition should also be incorporated particularly of slag.
64. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
65. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
66. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
67. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
68. Occupational health:
  - a. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
  - b. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
  - c. Annual report of health status of workers with special reference to Occupational Health and Safety.
  - d. Action plan for the implementation of OHS standards as per OSHAS/USEPA.
  - e. Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
69. Corporate Environment Policy
  - i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
  - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
  - iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
70. 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.
71. Impact of the project on local infrastructure of the area such as road network and whether any additional infrastructure needs to be constructed and the agency responsible for the same with time frame.
72. Environment Management Plan (EMP) to mitigate the adverse impacts due to the project along with item wise cost of its implementation. Total capital cost and recurring cost/annum for environmental pollution control measures should be included.
73. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines must be prepared.
74. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on public hearing issues and item-wise details along with time bound action plan should be included. Socio-economic development activities need to be elaborated upon.
75. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart.

76. A note on identification and implementation of Carbon Credit project should be included.
77. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof should also be included.

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 in Regional languages should be provided.
- iv. The letter/application for environmental clearance should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The 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 should also be followed.
- viii. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI) / National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation should be provided. The draft EIA/EMP report shall be submitted to the Odisha Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

The TORs prescribed shall be valid for a period of two years for submission of the EIA/EMP reports along with Public Hearing Proceedings.

#### 10.3.5 Proposed Steel plant at Silpahari Industrial Area (Notified Industrial Area), Village Silpahari, Tehsil & District Bilaspur, Chhattisgarh by **M/s Nachiketa power and steel private Limited.- regarding ToRs.**

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

M/s Nachiketa Power and Steel Private Limited have proposed to set up Steel Plant at Sipahari Industrial Area, Silpahari village, Bilaspur Tehsil and District, Chattisgarh. The total land requirement is 39 acres and the same is in possession of management from the Chhattisgarh State Industrial Development Corporation (CSIDC). The latitude and longitude of the project site is 22<sup>o</sup> 01' 0.33" N and 82<sup>o</sup> 11'16.08" E respectively. No Forest land is involved. No national park/wild life sanctuary/ecologically sensitive area is located within 10 km radius of the project site. No R&R issues are involved. Arpa river is flowing at a distance of 4 kms from the project site. The water requirement is 2575 KLD which will be supplied by CSIDC. The power requirement is 900 MW which will be met from Captive Power Plant and Jharkhand State Electricity Board (JSEB). Total cost of the project is Rs.275 crores. No court cases/litigation is pending against the project.

The details of the plant configuration and production capacities are as below:

S.No.	Particulars	Unit Configuration	Production Capacity
1.	Iron Ore Beneficiation and Pelletization	----	3,00,000 TPA
2.	Manufacturing of Sponge Iron	3x100 TPD	90,000 TPA
3.	Manufacturing of Steel Ingots and Billets through Induction Furnace with Concast	2x15 MT/HEAT	90,000 TPA
4.	Manufacturing of Structural items through rolling mill	300 TPD	90,000 TPA
5.	Manufacturing of Ferro Alloys	2x9 MVA	Fesi-12600 TPA SiMn-28400 TPA FeMn-37000 TPA
6.	Power generation (i) Generation of Power (WHRB)  (ii) Generation of power (FBC)	3x2 MW  1x15 MW	6 MW } 21MW (Total) 15 MW

Iron ore fines, bentonite, limestone, coal, furnace oil, dolomite, petcoke, and Manganese ore are the raw materials that are used. Pellet plant, DRI kilns and the FBC boiler will be equipped with Electro Static Precipitator. Fume Extraction system with bag filters will be provided to the induction furnace and submerged Electric Arc Furnace. Stack of adequate height will be provided. Used oil will be sold to registered recyclers.

The proponent has submitted a copy of the certificate (No.CSIDC/ALT/09/7327 dated 29.10.2009) obtained from CSIDC stating that the project site under consideration was transferred to M/s Nachiketa Power and Steel Private Limited for industrial purpose and requested the Committee to exempt the project from the Public Hearing. The Committee noted that the proponent has not submitted the relevant documents i.e. Gazette Notification of Industries Department, State Govt. of Chhattisgarh declaring the project site as a notified industrial area. Hence, the Committee decided not to exempt the project from the Public Hearing.

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

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. A line diagram/flow sheet for the process and EMP
4. Iron ore, Coal and Limestone linkage documents
5. A copy of the mutual agreement for land acquisition signed with land oustees.
6. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. A photograph of the site should also be included.
7. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
8. Topography of the area should be given clearly indicating whether the site requires any filling. If so, details of filling, quantity of fill material required, its source, transportation etc. should be given.
9. Location of national parks/wildlife sanctuary/reserve forests within 10 km. radius should specifically be mentioned. A map showing land use/land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.
10. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
11. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates should also be included.
12. Details and classification of total land (identified and acquired) should be included.
13. Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department. .

14. A list of industries containing name and type in 25 km radius should be incorporated.
15. List of raw material required, analysis of all the raw materials and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
16. Petrological and Chemical analysis and other chemical properties of raw materials used (with GPS location of source of raw material) i.e. ores, minerals, rock, soil, coal, iron, dolomite quartz etc. using high definition and precision instruments mentioning their detection range and methodology such Digital Analyzers, AAS with Graphite furnace, ICPMS, MICRO-WDXRF, EPMA, XRD, Nano studies or at least as per I30-10500 and WHO norms. These analysis should include trace element and metal studies like Cr (vi) Ni, Fe, As, Pb, Zn, Hg, Se, S etc. Presence of radioactive elements (U, Th etc.), if applicable, should also be included..
17. Petrography, grain size analysis and Major element analysis of raw material and soil from project site and raw material should be done on the same parameters along with analysis for SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, MgO, MnO, K<sub>2</sub>O, CaO, FeO, Fe<sub>2</sub>O<sub>3</sub>, P<sub>2</sub>O<sub>5</sub>, H<sub>2</sub>O, CO<sub>2</sub>.
18. If the rocks, ores, raw material has trace elements their petrography, ore microscopy, XRD, elemental mapping EPMA, XRF is required to quantify the amount present in it and hence future risk involved while using it and management plan.
19. Action plan for excavation and muck disposal during construction phase.
20. Studies for fly ash, muck, slurry, sludge material disposal and solid waste generated, if the raw materials used has trace elements and a management plan should also be included.
21. Manufacturing process details for all the plants should be included.
22. Mass balance for the raw material and products should be included.
23. Energy balance data for all the components of steel plant including proposed power plant should be incorporated.
24. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
25. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
26. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
27. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
28. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
29. Air quality modelling for steel plant for specific pollutants needs to be done. APCS for the control of emissions from the kiln and WHRB should also be included to control emissions within 50 mg/Nm<sup>3</sup>.
30. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be included.
31. Ambient air quality modelling along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
  - i) Emissions (g/second) with and without the air pollution control measures
  - ii) Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height) on hourly basis
  - iii) Model input options for terrain, plume rise, deposition etc.
  - iv) Print-out of model input and output on hourly and daily average basis
  - v) A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
  - vi) Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
  - vii) Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
  - viii) No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
  - ix) Graphs of monthly average daily concentration with down-wind distance

- x) Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
  - xi) Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
32. A plan for the utilization of waste/fuel gases in the WHRB for generating power have to be set out.
  33. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided. The alternate method of raw material and end product transportation should also be studied and details included.
  34. One season data for gaseous emissions other than monsoon season is necessary.
  35. 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.
  36. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
  37. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included. Information regarding surface hydrology and water regime should be included.
  38. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
  39. Ground water modelling showing the pathways of the pollutants should be included
  40. Column leachate study for all types of stockpiles or waste disposal sites at 20°C-50°C should be conducted and included.
  41. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
  42. Permission for the drawl of water from the State Irrigation Department or concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
  43. A note on the impact of drawl of water on the nearby River during lean season.
  44. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
  45. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean River discharge as well as flood occurrence frequency.
  46. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
  47. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
  48. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
  49. Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from any other source should be included.
  50. The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, and lakes), sub-surface and ground water with a monitoring and management plans.
  51. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
  52. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly slag from all the sources, char and fly ash. Copies of MOU regarding utilization of ash should also be included.
  53. Details of evacuation of ash, details regarding ash pond impermeability and whether it would be lined, if so details of the lining etc. need to be addressed.

54. A note on the treatment, storage and disposal of all type of slag should be included. Details of secured land fill as per CPCB guidelines should also be included. R&D plan to explore use of SMS slag may be submitted.
55. End use of solid waste and its composition should be covered. Toxic metal content in the waste material and its composition should also be incorporated particularly of slag.
56. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
57. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
58. Detailed description on flora and fauna (terrestrial and aquatic) exists in the study area should be given with special reference to rare, endemic and endangered species.
59. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
60. Details regarding expected Occupational & Safety Hazards. Protective measures for Occupational Safety & Health hazards so that such exposure can be kept within permissible exposure level so as to protect health of workers. Health of the workers with special reference to Occupational Health. Plan of exposure specific health status evaluation of workers; pre placement and periodical health status of workers; plan of evaluation of health of workers by pre designed format, chest x ray, Audiometry, Spirometry Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations and plan of monthly and yearly report of the health status of workers with special reference to Occupational Health and Safety.
61. Corporate Environment Policy
  - i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
  - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
  - iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report
62. 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.
63. Impact of the project on local infrastructure of the area such as road network and whether any additional infrastructure needs to be constructed and the agency responsible for the same with time frame.
64. Environment Management Plan (EMP) to mitigate the adverse impacts due to the project along with item wise cost of its implementation. Total capital cost and recurring cost/annum for environmental pollution control measures should be included.
65. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines must be prepared.
66. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on public hearing issues and item-wise details along with time bound action plan should be included. Socio-economic development activities need to be elaborated upon.
67. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart.
68. A note on identification and implementation of Carbon Credit project should be included.
69. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof should also be included.

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 in Regional languages should be provided.
- iv. The letter/application for environmental clearance should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The 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 should also be followed.
- viii. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI) / National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation should be provided. The draft EIA/EMP report shall be submitted to the Chhattisgarh Environment Conservation Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

The TORs prescribed shall be valid for a period of two years for submission of the EIA/EMP reports along with Public Hearing Proceedings.

10.3.6 Proposed expansion of Tannery unit (Raw hide to finish leather) at 415/4, Khasra no. 729 & 1006, Akrapur Village, Andar Nagar Palika, Unnao District, Uttar Pradesh by **M/s AKI India Private Limited- regarding ToRs**

The project authorities along with their consultant (M/s Perfact Enviro Solutions Private Limited) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA/EMP report. The leather/skin/hide processing industries located outside the industrial area are covered under Category 'A' as per para 4(f) of the Schedule of the EIA notification 2006 and appraised at Central level.

M/s. AKI India Private Limited have proposed to expand the tannery unit from 60 hides/day to 1000 hides/day capacity at 415/4, Khasra no. 729 & 1006, Akrapur Village, Andar Nagar Palika, Unnao District, Uttar Pradesh. The existing plant (60 hides/day) has already been installed at 415/4, Khasra no. 729 & 1006, Akrapur Village, Andar Nagar Palika, Unnao District, Uttar Pradesh on a land measuring plot area of 16633.22 sqm. The unit was sold to M/s. AKI India Private Limited on 23.5.2011. The proposed expansion will be carried out in the existing plant area of 16633.22 sqm. No Forest land is involved. No National Park, Wildlife Sanctuary and Archeological monuments is exists within 10 km radius of the project site. No court cases/litigation is pending against the project. Total cost of the expansion project is Rs.3 crore.

The existing and proposed product details are as below:

Type of Plot	Hides/Skins per day	weight of Hides/Skins in Kg per day	Weight of Hides/Skins in Tons per day
<b>Existing capacity</b>	60 hides/skins per day	1440 kg/day	1.44 TPD
<b>Proposed capacity</b>	1000 hides/skins per day	24000 kg/day	24.0 TPD

The raw materials required are raw hides, hydrated lime, sodium sulphide, basic chrome sulphate, sulphuric acid, common salt, soda bi carbonate, ammonium sulphate and sodium format. The water requirement of existing unit is 48 KLD. The total water requirement after expansion will be 820 KLD (350 KLD of fresh water & 470 KLD of treated water). The source of water is Ground Water. The total power requirement for the leather cluster is 1500 KVA which will be provided by Uttar Pradesh State Electricity Board and there will be DG sets of capacity 3 x 500 KVA for power back up. The multi-fuel Boiler of 5.0 TPH capacity will be installed.

For mitigation of impacts of air pollution, stack height of 33 m above ground Level shall be provided for boiler & stack height of 4.5 m above roof level shall be provided for D.G. Sets. Also Multi cyclone dust collector will be provided to control particulate emissions from boiler. The waste water generation will be 570 KLD. The Industrial Effluent shall be treated in Effluent Treatment Plant (ETP) of 600 KLD and chrome shall be recovered from Chrome recovery unit. The treated effluent would be reused for Boiler, Gardening, Cooling, Process & wash & Misc. purposes & excess treated water of 72 KLD shall be disposed off in drain of the area. Process waste generated will include 2.0 TPD of fleshing which will be sold to glue manufacturers. 1.0 TPD of shaving which will be sold to leather board manufacturer & 1.0 TPD of trimmings or splitting which will be sold to lower quality of leather goods manufacturers, fly ash to fertilizers and brick manufacturer. The Hazardous waste will include 2.4 Lt/day of used oil from machineries/D.G. Set which will be sold to authorized vendor of CPCB & ETP dried Sludge of approx. 264 kg/day shall be generated. The supernatant from CRU has less than 2 mg/l concentration of total chromium. ETP Sludge shall be disposed off at Secured land fill at TSDF (UPWM) at Rania, Ramabai nagar.

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

1. Executive summary of the project
2. Photographs of the existing and proposed plant area
3. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
4. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
5. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
6. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s)
7. A line diagram/flow sheet for the process and EMP
8. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
9. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
10. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
11. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing land use / land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc. in 10 km of the project site.
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 should be included.
13. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
14. A list of industries containing name and type in 10 km radius shall be incorporated.
15. List of raw material required and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
16. Manufacturing process details for all the process units should be included.

17. Mass balance for the raw material and products should be included.
18. Energy balance data for all the components should be incorporated.
19. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
20. Vehicular pollution control and its management plan should be submitted.
21. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
22. 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.
23. Air quality modeling for all the plants for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm<sup>3</sup> should be included.
24. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be included.
25. Sources of secondary emissions, its control and monitoring as per the CPCB guidelines should be included. A full chapter on fugitive emissions and control technologies should be provided.
26. 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.
27. Ambient air quality modeling should be included for the day (24 hrs) for maximum GLC along with following :
  - i) Emissions (g/second) with and without the air pollution control measures
  - ii) Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity
  - iii) Model input options for terrain, plume rise, deposition etc.
  - iv) Print-out of model input and output on hourly and daily average basis
  - v) A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
  - vi) Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
  - vii) Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
  - viii) No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
  - ix) Graphs of monthly average daily concentration with down-wind distance
  - x) Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
  - xi) Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
28. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
29. One season data for gaseous emissions other than monsoon season is necessary.
30. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
31. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used along with a Piper and Piper Duro-V diagram. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.
32. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
33. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
34. Permission for the drawl of water from the concerned authority and water balance data including quantity of effluent generated & its characteristics, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
35. A note on treatment of wastewater generated from different plant shall be included.

36. A note on odour control problem in leather finishing unit shall be included.
37. A note on the impact of drawl of water on the nearby River during lean season.
38. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
39. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
40. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
41. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
42. Action plan for the green belt development plan in 33 % area should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
43. Disaster Management Plan including risk assessment & damage control needs to be addressed and included. Landslide hazard map and mitigation plan, Earthquake history and management plan should be submitted.
44. Action plan for solid/hazardous waste generation, storage, utilization and disposal should be covered.
45. Occupational health:
  - a. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
  - b. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
  - c. Annual report of health status of workers with special reference to Occupational Health and Safety.
  - d. Action plan for the implementation of OHS standards as per OSHAS/USEPA.
  - e. Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
46. Corporate Environment Policy
  - i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
  - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
  - iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
47. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
48. Total capital cost and recurring cost/annum for environmental pollution control measures.
49. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
50. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

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 in Regional languages should be provided.
- iv. The letter/application for environmental clearance should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The 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 should also be followed.
- viii. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI) / National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc.

It was decided that 'TORs' prescribed by the Reconstituted Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report shall be submitted to the Uttar Pradesh Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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

10.3.7 Coal based Co-Generation Power Plant of 15 MW capacity for our proposed unit to be located at plot no. 808/D, 3<sup>rd</sup> phase, Notified Industrial Area, GIDC Vapi, Tahsil- Pardi, District Valsad, Gujarat by **M/s Gayatrishakti Paper & Boards Ltd.- regarding ToRs.**

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

10.3.8 Proposed 1.5 MTPA Cement Clinker Grinding & Packing Unit at Melamaruthur Village, Ottapidaram Taluk, Tuticorin District, Tamil Nadu by **M/s Modern Building Materials Pvt. Ltd- regarding ToRs.**

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA/EMP report. The stand alone cement grinding units are covered under Category 'B' as per para 3(b) of the Schedule of the EIA notification 2006. However, project site is located within 10 Km radius of Gulf of Mannar Bio Sphere Reserve and treated as category 'A' project due to applicability of general condition of the EIA notification, 2006 and appraised at Central level.

M/s. Modern Building Materials Private Limited have proposed to set up a 1.5 MTPA Cement Grinding Unit at survey no. 412 & 413, Melamaruthur Village, Ottapidaram Taluk, Tuticorin District, Tamil Nadu. The land requirement for the project is 40 acres. No Forest land is involved. No court cases/litigation is pending against the project. The water requirement is 100 KLD which will be sourced from the ground water and desalination plant of M/s Coastal Energen Private Limited. The power requirement is 9 MW which will be met from M/s. Tamil Nadu State Electricity Board and M/s Coastal Energen Private Limited. The raw materials required are Clinker, fly ash, Gypsum and cement. D.G set of 1.5 MVA will be installed as a standby power back up. Total cost of the project is Rs.220 crores.

The Project Authorities submitted that proposed project is a part of the Environmental Management Plan of M/s Coastal Energen Private Limited. The fly ash generated from the 2x600 MW power plant of M/s Coastal Energen Private Limited will be used in the proposed 1.5 MTPA Cement Clinker Grinding unit and it will be pneumatically conveyed that is likely to reduce the pollution load due to fly ash disposal. The environmental clearance for the 2x600 MW power plant of M/s Coastal

Energen Private Limited was accorded by the Ministry vide F.No.J-11011/41/2008-IA.II(T) dated 5.5.2009. The Coastal Regulation Zone (CRZ) clearance for the intake/outfall of sea water of M/s Coastal Energen Private Limited as accorded by the Ministry vide F.No. 11-32/2009-IA-III dated 10.8.2009. The site of 1.5 MTPA Cement Clinker Grinding unit is located adjacent to the power plant site. Public Hearing for the thermal power plant was held on 5.4.2008.

Stack of adequate height will be provided. There are no sources of process emission. No wastewater will be generated from the plant. Dust collected from the air pollution control equipment will be recycled in the process and there will be no solid wastes in the plant.

After detailed deliberations, the Committee categorized the project into Category B-2 and recommended that the project shall be exempted from preparation of EIA report as well as conducting public hearing as per Para 7(II) of EIA Notification 2006 due to no additional land and water allocation requirement, use of energy efficient technology, no clinker manufacturing at the proposed site, 'zero' effluent discharge, utilization of all the solid waste in the process itself including utilization of fly ash etc. Further, the Committee asked the proponent to submit an Environmental Management Plan for the proposed 1.5 MTPA Cement Clinker Grinding unit.

*The Member Secretary – Industry sector apprised the EAC that as per paragraph 7 of the EIA Notification 2006, for categorization of projects into B1 or B2 except township and area developmental projects, the Ministry shall issue appropriate guidelines from time to time. The MoEF was to issue the guidelines for categorization of category B projects into category B1 and B2. As on 29.7.2013, MoEF had not issued such guidelines. However, the Committee categorized the project into Category B-2 and recommended that the project shall be exempted from preparation of EIA report as well as conducting public hearing. The Committee asked the proponent to submit an Environmental Management Plan for the proposed 1.5 MTPA Cement Clinker Grinding unit for consideration.*

10.3.9 Proposed establishment of Iron-ore Pelletization Plant of 250 MTPD capacity and 2 MW captive power plant at S.Y. No. 1059A Part, 1053B/3 Part, 1059B/2 Full, 1059/B1 Full, Guggarahatti Village, Taluk & District Bellary of Karnataka State. **M/s MAA Corp Industries Pvt. Ltd- regarding ToRs.**

The project authorities along with their consultant (M/s. KRS Enterprises, Bangalore) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of References for the preparation of EIA/EMP report. The proposed project activity is covered under Category (A) and listed at S.N.3(a) of the Schedule of the EIA notification 2006 and have to be appraised at the Central level.

M/s MAA Corp Industries Private Limited have proposed to set up a Iron-ore Pelletization Plant of 250 MTPD capacity and 2 MW captive power plant at S.Y. No. 1059A Part, 1053B/3 Part, 1059B/2 Full, 1059/B1 Full, Guggarahatti Village, Taluk & District Bellary, Karnataka. The land requirement for the proposed project is 8.00 acres. The latitude and longitude of the project site is 15° 07' 02.35" N and 76° 53'44.09" E respectively. No Forest land is involved. No National Park, Wildlife Sanctuary is exists within 10 km radius of the project site. No court cases/litigation is pending against the project. The Bellary Reserved Forest and Mincheri Reserved Forest are located at a distance of 3.5km and 7.8 km respectively. Project cost is Rs. 36 Crores.

The raw materials required are iron ore fines (78750 TPA), coal (7500 TPA) and bentonite (1500 TPA). The power requirement is 2000 KVA and will be met from GESCOM. The water requirement is 120 m<sup>3</sup>/day which will be met from bore well and rain water harvesting pond.

The pellet plant will be equipped with ESP and bag filter. Stack of adequate height will be provided. ESP and bag filter dust will be recycled in the process. Used oil will be sold to registered recyclers.

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

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. Copies of iron ore/coal linkage documents

4. A line diagram/flow sheet for the process and EMP
5. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
6. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
7. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
8. Break up of small, medium and large farmers from whom the land is being acquired. If small farmers are involved, a detailed R&R plan.
9. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing land use / land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc. in 10 km of the project site.
10. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
11. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates should also be included.
12. Details and classification of total land (identified and acquired) should be included.
13. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
14. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
15. Permission and approval for the use of forest land and recommendations of the State Forest Department regarding impact of proposed expansion on the surrounding reserve forests, if applicable, should be included.
16. A list of industries containing name and type in 10 km radius shall be incorporated.
17. Residential colony should be located in upwind direction.
18. List of raw material required and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
19. Studies for slurry, sludge material and solid waste generated should also be included, if the raw materials used has trace elements and a management plan.
20. Manufacturing process details for all the process units should be included.
21. Possibility of installation of WHRB will be explored and details included
22. Mass balance for the raw material and products should be included.
23. Energy balance data for all the components should be incorporated.
24. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
25. Sources of secondary emissions, its control and monitoring as per the CPCB guidelines should be included. A full chapter on fugitive emissions and control technologies should be provided.
26. 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.
27. Vehicular pollution control and its management plan should be submitted.
28. A write up on use of high calorific hazardous wastes from all the sources in kiln and commitment regarding use of hazardous waste should be included.
29. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
30. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
31. 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.

32. Air quality modeling for all the plants proposed for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm<sup>3</sup> should be included.
33. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be included.
34. Ambient air quality modeling along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
  - i. Emissions (g/second) with and without the air pollution control measures
  - ii. Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height using SODAR on hourly basis
  - iii. Model input options for terrain, plume rise, deposition etc.
  - iv. Print-out of model input and output on hourly and daily average basis
  - v. A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
  - vi. Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
  - vii. Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
  - viii. No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
  - ix. Graphs of monthly average daily concentration with down-wind distance
  - x. Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
  - xi. Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
35. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
36. One season data for gaseous emissions other than monsoon season is necessary.
37. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
38. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used along with a Piper and Piper Duro-V diagram. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.
39. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
40. Ground water modelling showing the pathways of the pollutants should be included
41. Column leachate study for all types of stockpiles or waste disposal sites, at 20 °C-50 °C should be conducted and included.
42. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
43. Permission for the drawl of water from the concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
44. A note on the impact of drawl of water on the nearby River during lean season.
45. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
46. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1;10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
47. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
48. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.

49. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
50. The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, and lakes), sub-surface and ground water with a monitoring and management plans.
51. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
52. Action plan for solid/hazardous waste generation, storage, utilization and disposal. A note on the treatment, storage and disposal of all type of solid waste should be included. End use of solid waste and its composition should be covered.
53. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
54. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
55. Action plan for the green belt development plan in 33 % area should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
56. Disaster Management Plan including risk assessment & damage control needs to be addressed and included.
57. Details regarding expected Occupational & Safety Hazards. Protective measures for Occupational Safety & Health hazards so that such exposure can be kept within permissible exposure level so as to protect health of workers. Health of the workers with special reference to Occupational Health. Plan of exposure specific health status evaluation of workers; pre placement and periodical health status of workers; plan of evaluation of health of workers by pre designed format, chest x ray, Audiometry, Spirometry Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations and plan of monthly and yearly report of the health status of workers with special reference to Occupational Health and Safety.
58. Corporate Environment Policy
  - i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
  - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
  - iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
59. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
60. A note on identification and implementation of Carbon Credit project should be included.
61. Total capital cost and recurring cost/annum for environmental pollution control measures.
62. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
63. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

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 in Regional languages should be provided.

- iv) The letter/application for environmental clearance should quote the MOEF file No. and also attach a copy of the letter.
- v) The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi) The 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 should also be followed.
- viii) The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI) / National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc.

It was decided that 'TORs' prescribed by the Reconstituted Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report shall be submitted to the Karnataka Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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

**10.3.10 Proposed Expansion of Cement Plant (Clinker from 3.30 to 4.5 MTPA and Cement from 4.48 to 6.0 MTPA) at Village : Awarpar, Taluka: Korpana, District: Chandrapur, Maharashtra by M/s Ultra Tech Cement Ltd. (Unit: Awarpur Cement Works)- regarding ToRs.**

The project authorities and their consultant (M/s. J.M.EnviroNet Private Limited, Gurgaon) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA/EMP report. All the Cement Plants ( $\geq 1.0$  MTPA) are listed at S.No. 3(b) under Category 'A' of the schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

As per the Ministry circular dated 15.3.2010, the Chandrapur district (Areas: MIDC Chandrapur, Tadoli, Ghuggus and Ballapur) is having a CEPI index of 83.88 and the moratorium for consideration of projects is yet to be lifted by the Ministry. However, in the present proposal under consideration, the proponent submitted a letter no. MPCB/ROC/1554/2013 dated 26.7.2013 of Maharashtra Pollution Control Board stating that village : Awarpar, Taluka: Korpana, District: Chandrapur does not come under critically polluted area. Hence, the Committee agreed to consider the proposal.

M/s Ultra Tech Cement Limited (Unit: Awarpur Cement Works) have proposed to expand the clinker production from 3.3 MTPA to 4.5 MTPA and Cement from 4.48 to 6.0 MTPA at village : Awarpar, Taluka: Korpana, District: Chandrapur, Maharashtra. The latitude and longitude of the project site is 19° 46' 32" N to 19° 47' 53" N and 79° 08'18.8" E to 79° 09'20.6" E respectively. The proposed expansion will be carried out within the existing plant area of 307.35 Ha. No additional land is required for the proposed expansion. No Forest land is involved. No National Park, Wildlife Sanctuary is exists within 10 km radius of the project site. Manikgarh reserve forest is located at a distance of 6.1km from the project site. The water bodies located within the study area are – Pengana river (7.5km in NW direction), Bop Nallah (3 km in N direction), Amal Nallah (2.5km in W direction), Amalnala Dam (8.5 km in S direction), Chandanvayl Nala (9.0 km in SE direction), Tutra Nala (8 km in SE direction) and Lokhandi Nala (2 km in ESE direction). No court cases/litigation is pending against the project. Total cost of the project is Rs.248.7 crores.

The existing and proposed product details are as below:-

Units	Existing Capacity	Proposed expansion capacity	Total capacity after expansion
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Units	Existing Capacity	Proposed expansion capacity	Total capacity after expansion
Clinker (MTPA)	3.3 (EC obtained vide letter no.J-11011/146/2003-IA.II(I) dated 8.4.2005)	1.2 (Phase I – 0.3 & Phase II – 0.9)	4.5
Cement (MTPA)	4.48 (EC obtained vide letter no.J-11011/404/2009-IA.II(I) dated 2.8.2010)	1.52	6.0
Captive Power Plant (MW)	2x23 & 1x25 (EC obtained vide letter no.J-13011/12/1997-IA.II(T) dated 2.5.2012 (amended))	Nil	71(2x23 & 1x25)
Coal Washery	1.2 MTPA (EC obtained vide letter no.J-11015/132/2008-IA.II(I) dated 2.1.2009)	Nil	1.2

The water requirement after the proposed expansion is 4465 KLD which will be met from Amal Nallah and Wardha river. The power requirement for the proposed expansion is 5.1 MW which will be sourced from Captive Power Plant, Grid and WHRS. The raw materials required are limestone, shale, iron ore, laterite/bauxite, gypsum, fly ash and coal. Limestone and shale will be sourced from Naokari Limestone Mine by conveyor belt located at a distance 1 km away from the plant site. The proposal for limestone mine expansion was considered in the EAC (Mining) meeting held on 16.5.2013.

All major sources of air pollution will be provided with bag filters/ESP/water spraying arrangements to keep the emissions level below permissible limits. Clinker and flyash will be stored in silos. No industrial wastewater will be generated from the cement plant. Dust collected from various air pollution control equipment will be recycled back in the process. Used oil will be sold to registered recyclers.

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

1. Executive summary of the project
2. Photographs of the existing and proposed plant area
3. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
4. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
5. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
6. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s)
7. Copies of coal linkage and limestone linkage documents
8. A line diagram/flow sheet for the process and EMP
9. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
10. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
11. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan

- sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
12. Break up of small, medium and large farmers from whom the land is being acquired. If small farmers are involved, a detailed R&R plan.
  13. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing land use / land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc. in 10 km of the project site.
  14. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
  15. Details and classification of total land (identified and acquired) should be included.
  16. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
  17. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
  18. Permission and approval for the use of forest land and recommendations of the State Forest Department regarding impact of proposed expansion on the surrounding reserve forests, if applicable, should be included.
  19. A list of industries containing name and type in 10 km radius shall be incorporated.
  20. Residential colony should be located in upwind direction.
  21. List of raw material required and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
  22. Petrological and Chemical analysis and other chemical properties of raw materials used (with GPS location of source of raw material) i.e. ores, minerals, rock, soil, coal, iron, dolomite quartz etc. using high definition and precision instruments mentioning their detection range and methodology such Digital Analyzers, AAS with Graphite furnace, ICPMS, MICRO-WDXRF, EPMA, XRD, Nano studies or at least as per I30-10500 and WHO norms. These analysis should include trace element and metal studies like Cr (vi) Ni, Fe, As, Pb, Zn, Hg, Se, S etc. Presence of radioactive elements (U, Th etc.).
  23. Petrography, grain size analysis and Major element analysis of raw material and soil from project site and raw material should be done on the same parameters along with analysis for SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, MgO, MnO, K<sub>2</sub>O, CaO, FeO, Fe<sub>2</sub>O<sub>3</sub>, P<sub>2</sub>O<sub>5</sub>, H<sub>2</sub>O, CO<sub>2</sub>.
  24. If the rocks, ores, raw material has trace elements their petrography, ore microscopy, XRD, elemental mapping EPMA, XRF is required to quantify the amount present in it and hence future risk involved while using it and management plan.
  25. Studies for fly ash, muck disposal, slurry, sludge material and solid waste generated should also be included, if the raw materials used has trace elements and a management plan.
  26. Manufacturing process details for all the plants should be included.
  27. Possibility of installation of WHRB will be explored and details included
  28. Mass balance for the raw material and products should be included.
  29. Energy balance data for all the components including proposed power plant should be incorporated.
  30. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
  31. Sources of secondary emissions, its control and monitoring as per the CPCB guidelines should be included. A full chapter on fugitive emissions and control technologies should be provided.
  32. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> May, 2008.
  33. Vehicular pollution control and its management plan should be submitted.
  34. A write up on use of high calorific hazardous wastes from all the sources in kiln and commitment regarding use of hazardous waste should be included.
  35. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
  36. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.

37. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
38. Air quality modeling for all the proposed plants including limestone mine for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm<sup>3</sup> should be included. Cumulative impacts of cement plant, Captive Power Plant and mines located at a distance of 1.0 km on the ambient air quality shall be assessed.
39. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be included.
40. Ambient air quality monitoring along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
  - i. Emissions (g/second) with and without the air pollution control measures
  - ii. Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height using SODAR on hourly basis
  - iii. Model input options for terrain, plume rise, deposition etc.
  - iv. Print-out of model input and output on hourly and daily average basis
  - v. A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
  - vi. Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
  - vii. Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
  - viii. No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
  - ix. Graphs of monthly average daily concentration with down-wind distance
  - x. Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
  - xi. Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
41. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
42. One season data for gaseous emissions other than monsoon season is necessary.
43. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
44. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used along with a Piper and Piper Duro-V diagram. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.
45. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
46. Ground water modelling showing the pathways of the pollutants should be included
47. Column leachate study for all types of stockpiles or waste disposal sites, at 20 °C-50 °C should be conducted and included.
48. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
49. Permission for the drawl of water from the concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
50. A note on the impact of drawl of water on the nearby River during lean season. Five year action plan to reduce intake of water from the river by enhancing the water use by rain water harvesting.
51. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.

52. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
53. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
54. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
55. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
56. The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, lakes), sub-surface and ground water with a monitoring and management plans.
57. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
58. Action plan for solid/hazardous waste generation, storage, utilization and disposal. A note on the treatment, storage and disposal of all type of solid waste should be included. End use of solid waste viz. fly ash etc. and its composition should be covered.
59. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
60. Action plan for the green belt development plan in 33 % area should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
61. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
62. Disaster Management Plan including risk assessment & damage control needs to be addressed and included.
63. Occupational health:
  - a. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
  - b. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
  - c. Annual report of health status of workers with special reference to Occupational Health and Safety.
  - d. Action plan for the implementation of OHS standards as per OSHAS/USEPA.
  - e. Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
64. Plan for the implementation of the recommendations made for the cement plant in the CREP guidelines must be prepared.
65. Corporate Environment Policy
  - i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
  - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
  - iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
66. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.

67. A note on identification and implementation of Carbon Credit project should be included.
68. Total capital cost and recurring cost/annum for environmental pollution control measures.
69. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
70. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

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 in Regional languages should be provided.
- iv. The letter/application for environmental clearance should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The 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 should also be followed.
- viii. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI) / National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc.

It was decided that 'TORs' prescribed by the Reconstituted Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report shall be submitted to the Maharashtra Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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

#### 10.3.11 Expansion Proposal by addition of Steel Melting and Rolling Mill at Village Juri District East Singhbhum, Jharkhand by **M/s Shash Sponge & Power Ltd.- regarding TORs.**

The aforesaid proposal was earlier placed before the Reconstituted Expert Appraisal Committee (Industry) in its 8<sup>th</sup> meeting held during 16-17<sup>th</sup> May, 2013 wherein, the Committee deferred the proposal, as the Project Proponent did not attend the meeting.

As the project has been placed twice before the Committee, the Project Proponent did not attend this meeting as well, the committee was of the view that the proposal shall be delisted and the file be closed.

#### 10.3.12 Proposed Greenfield cement plant (Clinker production: 1.5 MTPA and Cement production: 2.0 MTPA) and captive power:30 MW at Angadi Raichur and Indanur Villages, Kodangal Mandal, Mahabubnagar District, Andhra Pradesh by **M/s Seetharam Cements Limited - regarding ToRs.**

The project authorities and their consultant (M/s B.S. Envi-Tech Private Limited, Hyderabad) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA/EMP report. All the Cement Plants ( $\geq 1.0$  MTPA) are listed at S.No. 3(b) under Category 'A' of the

schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s Seetharam Cements Limited have proposed to set up Greenfield cement plant (Clinker production: 1.5 MTPA and Cement production: 2.0 MTPA) and captive power:30 MW at Angadi Raichur and Indanur Villages, Kodangal Mandal, Mahabubnagar District, Andhra Pradesh. The land requirement for the project is 324.38 acres. No Forest land is involved. No National Park, Wildlife Sanctuary is located within 10 km radius of the project site. No court cases/litigation is pending against the project. Gandlepalle Reserved Forest is located at a distance of 0.5km from the project site. The latitude and longitude of the project site is 17° 3' 43.18" N to 17° 4' 32.15" N and 77° 30' 1.68" E to 77° 31' 6.15" E respectively. Total cost of the project is Rs.1000 crores.

The water requirement is 1300 KLD which will be met from Daulathabad water reservoir, borewells within the plant site and mine pit. The power requirement is 25 MW which will be met from Captive Power Plant. The raw materials required are limestone, iron ore, laterite/bauxite, gypsum, fly ash and coal. Limestone will be sourced from the captive Limestone Mine by conveyor belt. The proposal for limestone mine expansion was submitted to the EAC (Mining).

To control air pollution, bag house for the Kiln/raw mill and ESP for cooler and Bag filters will be installed. Stacks as per CPCB norms will be installed. Low NOx burners will be installed to reduce NOx emissions. There will be no wastewater generation from the cement plant. The effluent from the power plant will be utilized for dust suppression and gardening purpose. No wastewater will be discharged outside the plant Fly ash generated from the power plant will be used for cement manufacturing process.

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

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. Copies of coal linkage and limestone linkage documents
4. A line diagram/flow sheet for the process and EMP
5. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
6. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
7. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
8. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates should also be included.
9. Break up of small, medium and large farmers from whom the land is being acquired. If small farmers are involved, a detailed R&R plan.
10. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing land use / land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc. in 10 km of the project site.
11. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
12. Details and classification of total land (identified and acquired) should be included.
13. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
14. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.

15. Permission and approval for the use of forest land and recommendations of the State Forest Department regarding impact of proposed expansion on the surrounding reserve forests, if applicable, should be included.
16. A list of industries containing name and type in 10 km radius shall be incorporated.
17. Residential colony should be located in upwind direction.
18. List of raw material required and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
19. Petrological and Chemical analysis and other chemical properties of raw materials used (with GPS location of source of raw material) i.e. ores, minerals, rock, soil, coal, iron, dolomite quartz etc. using high definition and precision instruments mentioning their detection range and methodology such Digital Analyzers, AAS with Graphite furnace, ICPMS, MICRO-WDXRF, EPMA, XRD, Nano studies or at least as per I30-10500 and WHO norms. These analysis should include trace element and metal studies like Cr (vi) Ni, Fe, As, Pb, Zn, Hg, Se, S etc. Presence of radioactive elements (U, Th etc.).
20. Petrography, grain size analysis and Major element analysis of raw material and soil from project site and raw material should be done on the same parameters along with analysis for SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, MgO, MnO, K<sub>2</sub>O, CaO, FeO, Fe<sub>2</sub>O<sub>3</sub>, P<sub>2</sub>O<sub>5</sub>, H<sub>2</sub>O, CO<sub>2</sub>.
21. If the rocks, ores, raw material has trace elements their petrography, ore microscopy, XRD, elemental mapping EPMA, XRF is required to quantify the amount present in it and hence future risk involved while using it and management plan.
22. Studies for fly ash, muck disposal, slurry, sludge material and solid waste generated should also be included, if the raw materials used has trace elements and a management plan.
23. Manufacturing process details for all the cement plant, captive power plant and mine should be included.
24. Possibility of installation of WHRB will be explored and details included
25. Mass balance for the raw material and products should be included.
26. Energy balance data for all the components including proposed power plant should be incorporated.
27. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
28. Sources of secondary emissions, its control and monitoring as per the CPCB guidelines should be included. A full chapter on fugitive emissions and control technologies should be provided.
29. 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.
30. Vehicular pollution control and its management plan should be submitted.
31. A write up on use of high calorific hazardous wastes from all the sources in kiln and commitment regarding use of hazardous waste should be included.
32. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
33. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
34. 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.
35. Air quality modeling for all the plants proposed including mine for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm<sup>3</sup> should be included. Cumulative impacts of cement plant, Captive Power Plant and mines on the ambient air quality shall be assessed.
36. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be included.
37. Ambient air quality monitoring along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
  - i) Emissions (g/second) with and without the air pollution control measures
  - ii) Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height using SODAR on hourly basis
  - iii) Model input options for terrain, plume rise, deposition etc.
  - iv) Print-out of model input and output on hourly and daily average basis

- v) A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
  - vi) Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
  - vii) Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
  - viii) No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
  - ix) Graphs of monthly average daily concentration with down-wind distance
  - x) Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
  - xi) Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
38. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
  39. One season data for gaseous emissions other than monsoon season is necessary.
  40. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
  41. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used along with a Piper and Piper Duro-V diagram. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.
  42. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
  43. Ground water modelling showing the pathways of the pollutants should be included
  44. Column leachate study for all types of stockpiles or waste disposal sites, at 20 °C-50 °C should be conducted and included.
  45. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
  46. Permission for the drawl of water from the concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
  47. A note on the impact of drawl of water on the nearby River during lean season.
  48. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
  49. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1;10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
  50. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
  51. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
  52. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
  53. The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, lakes), sub-surface and ground water with a monitoring and management plans.
  54. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
  55. Action plan for solid/hazardous waste generation, storage, utilization and disposal. A note on the treatment, storage and disposal of all type of solid waste should be included. End use of solid waste viz. fly ash etc. and its composition should be covered.

56. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
57. Action plan for the green belt development plan in 33 % area should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
58. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
59. Disaster Management Plan including risk assessment & damage control needs to be addressed and included. Landslide hazard map and mitigation plan, Earthquake history and management plan should be submitted.
60. Details regarding expected Occupational & Safety Hazards. Protective measures for Occupational Safety & Health hazards so that such exposure can be kept within permissible exposure level so as to protect health of workers. Health of the workers with special reference to Occupational Health. Plan of exposure specific health status evaluation of workers; pre placement and periodical health status of workers; plan of evaluation of health of workers by pre designed format, chest x ray, Audiometry, Spirometry Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations and plan of monthly and yearly report of the health status of workers with special reference to Occupational Health and Safety.
61. Plan for the implementation of the recommendations made for the cement plant in the CREP guidelines must be prepared.
62. Corporate Environment Policy
  - i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
  - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
  - iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
63. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
64. A note on identification and implementation of Carbon Credit project should be included.
65. Total capital cost and recurring cost/annum for environmental pollution control measures.
66. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
67. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

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 in Regional languages should be provided.
- (iv) The letter/application for environmental clearance should quote the MOEF file No. and also attach a copy of the letter.
- (v) The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- (vi) The 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 should also be followed.

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

It was decided that 'TORs' prescribed by the Reconstituted Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report shall be submitted to the Andhra Pradesh Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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

#### 10.3.13 Proposed Alumina Refinery of 0.7 MTPA & Co-generation Power Plant of 30 MW at Seri Guma and Guma Panchayats in Rayagada district, Odisha by **M/s RSB Metal Tech Pvt. Ltd- regarding ToRs.**

The project authorities along with their consultant (M/s. Vimta Labs Limited, Hyderabad) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of References for the preparation of EIA/EMP report. The proposed project activity is covered under Category (A) and listed at S.N.3(a) of the Schedule of the EIA notification 2006 and have to be appraised at the Central level.

M/s RSB Metaltech Pvt. Ltd have proposed for setting up a Alumina Refinery: 0.7 MTPA (with required Red Mud Pond), Steam cum Power plant: 2 x 250 TPH boilers & 30 MW TG (with required Ash Pond) and Township at Village Talaanchalbad, Baraja, Lekhpai, Mandaput, Deulaguma, Seriguma, Kaskadango, Lamberi, Kusupai, Chancharajori, Tumbitarai, Sembiri, Palapai and Balapai in Seriguma panchayat under Kalyan Singhpur Tehsil and Raikona, Dumapai, and Kiaparu in Guma panchayat under Rayagada Tehsil, District Rayagada, Odisha. Total land requirement of the project will be 1516.45 Acres. Out of the 1515.45 acres, government land is 984.54 acres (Non Forest – 882.43 acres and Revenue Forest – 98.11 acres) and private land is 530.91 acres. 82.97 acres of private land purchased through sister concern. 4(1) notice for acquisition of 266.23 Ac. published. Survey work to start on 03.08.2013. Alienation of 508.77 Ac. of Govt. land started. No National Park, Wildlife Sanctuary is exists within 10 km radius of the project site. No court cases/litigation is pending against the project. There are eight Reserved Forests and four Protected Forests exists within the study area. There are eleven water bodies exist in the study area. The Seriguma village is located at a distance of 0.3km from the project site. Total cost of the project is Rs. 3160.81 Crores. PAs informed during presentation, Rs. 304.79 Crores and Rs. 6.89 Crores are earmarked towards capital and recurring cost/annum for environmental protection measures.

Bauxite (21,00,000 TPA), caustic soda (42000 TPA), lime (21,000 TPA), fuel oil (56,000 KLPA), coal (3,85,000 MTA), synthetic flocculant (196 MTA) and CGM (154 TPA) will be used as raw materials. Bauxite will be sourced from the mines located at a distance of 12km from the refinery. The water requirement is 12252 KLD which will be sourced from Sirikana river (about 10km) a tributary of Nagavalli river.

To control the air emissions, installation of ESPs of 99.9% efficiency to limit the SPM concentrations below 50 mg/Nm<sup>3</sup> both in Calciner and co-generation plant stacks, provision of one 120 -m high stacks for calcination unit and one 150 -m high stack for co-generation plant for wider dispersion of gaseous emissions and installation of de-dusting systems equipped with bag filters, dry fog system and dust suppression at all the raw material handling and transfer areas.

The wastewater generation will be 5639 KLD. High mud density will be achieved in new technology HRD/DCWs for minimizing wash water usage. Sanitary effluent will be treated and recycled for green belt. Boiler and CT Blow downs will be polished and re-used in off-sites. The acidic effluent (from cleanings) directed to Red Mud pond for self neutralization. Oil water separator will be provided to remove Oil & Grease.

Following are the solid/hazardous waste management and disposal details:-

Solid Waste	Quantity	Treatment and Disposal
Red Mud Cake (dry),	0.87 MTPA	Dumped in red mud pond and alkaline water recycled
Coal Ash (dry)	0.17 MTPA	Utilized/ dumped in ash pond and water recycled back
Lime Grit	26 T/month	Sent to red mud pond
Thickened Sludge	3.6 T/month	Manure for Greenbelt

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

1. Executive summary of the project.
2. Photographs of the proposed plant area
3. A line diagram/flow sheet for the process and EMP
4. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
5. Process Flow sheet and EMP
6. Documentary proof of bauxite linkage, coal linkage and fuel supply.
7. Copy of agreement for land acquisition signed with land oustees.
8. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. A photograph of the site should also be included.
9. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
10. Topography of the area should be given clearly indicating whether the site requires any filling. If so, details of filling, quantity of fill material required, its source, transportation etc. should be given.
11. Location of national parks/wildlife sanctuary/reserve forests within 10 km. radius should specifically be mentioned. A map showing land use/land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.
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 should be included.
13. Coordinates of the plant site as well as ash pond with topo sheet should also be included.
14. Details and classification of total land (identified and acquired) should be included.
15. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
16. Permission from the tribals, if tribal land has also to be acquired along with details of the compensation plan.
17. Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department. .
18. A list of industries containing name and type in 25 km radius should be incorporated.
19. Residential colony should be located in upwind direction.
20. List of raw material required, analysis of all the raw materials and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
21. Petrological and Chemical analysis and other chemical properties of raw materials used (with GPS location of source of raw material) i.e. ores, minerals, rock, soil, coal, iron, dolomite quartz etc. using high definition and precision instruments mentioning their detection range and methodology such Digital Analyzers, AAS with Graphite furnace, ICPMS, MICRO-WDXRF, EPMA, XRD, Nano studies or at least as per I30-10500 and

- WHO norms. These analysis should include trace element and metal studies like Cr (vi) Ni, Fe, As, Pb, Zn, Hg, Se, S etc. Presence of radioactive elements (U, Th etc.), if applicable, should also be included..
22. Petrography, grain size analysis and Major element analysis of raw material and soil from project site and raw material should be done on the same parameters along with analysis for SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, MgO, MnO, K<sub>2</sub>O, CaO, FeO, Fe<sub>2</sub>O<sub>3</sub>, P<sub>2</sub>O<sub>5</sub>, H<sub>2</sub>O, CO<sub>2</sub>.
  23. If the rocks, ores, raw material has trace elements their petrography, ore microscopy, XRD, elemental mapping EPMA, XRF is required to quantify the amount present in it and hence future risk involved while using it and management plan.
  24. Action plan for excavation and muck disposal during construction phase.
  25. Studies for fly ash, muck, slurry, sludge material disposal and solid waste generated, if the raw materials used has trace elements and a management plan should also be included.
  26. Manufacturing process details for all the plants should be included.
  27. Mass balance for the raw material and products should be included.
  28. Energy balance data for all the components of alumina refinery including proposed power plant should be incorporated.
  29. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
  30. Data generated in the last three years i.e. air, water, raw material properties and analysis (major, trace and heavy metals), ground water table, seismic history, flood hazard history etc.
  31. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
  32. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
  33. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
  34. 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.
  35. Air quality modelling for alumina refinery for specific pollutants needs to be done. APCS for the control of emissions from the kiln and WHRB should also be included to control emissions within 50 mg/Nm<sup>3</sup>.
  36. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be included.
  37. Ambient air quality modelling along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
    - i. Emissions (g/second) with and without the air pollution control measures
    - ii. Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height) on hourly basis
    - iii. Model input options for terrain, plume rise, deposition etc.
    - iv. Print-out of model input and output on hourly and daily average basis
    - v. A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
    - vi. Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
    - vii. Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
    - viii. No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
    - ix. Graphs of monthly average daily concentration with down-wind distance
    - x. Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
    - xi. Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.

38. A plan for the utilization of waste/fuel gases in the WHRB for generating power have to be set out.
39. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided. The alternate method of raw material and end product transportation should also be studied and details included.
40. One season data for gaseous emissions other than monsoon season is necessary.
41. 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.
42. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
43. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included. Information regarding surface hydrology and water regime should be included.
44. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
45. Ground water modelling showing the pathways of the pollutants should be included
46. Column leachate study for all types of stockpiles or waste disposal sites at 20°C-50°C should be conducted and included.
47. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
48. Permission for the drawl of water from the State Irrigation Department or concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
49. A note on the impact of drawl of water on the nearby River during lean season.
50. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
51. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean River discharge as well as flood occurrence frequency.
52. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
53. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
54. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
55. Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from any other source should be included.
56. The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, and lakes), sub-surface and ground water with a monitoring and management plans.
57. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
58. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly slag from all the sources, char and fly ash. Copies of MOU regarding utilization of ash should also be included.
59. Details of evacuation of ash, details regarding ash pond impermeability and whether it would be lined, if so details of the lining etc. need to be addressed.
60. A note on the treatment, storage and disposal of all type of solid waste should be included. Identification and details of land to be used for red mud/ coal ash disposal should be included. Details of secured land fill as per CPCB guidelines should also be included. R&D plan to explore use of Red Mud may be submitted.

61. End use of solid waste and its composition should be covered. Toxic metal content in the waste material and its composition should also be incorporated particularly of red mud.
62. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
63. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
64. Primary fresh data on flora and fauna (terrestrial and aquatic) exists in the study area should be given with special reference to rare, endemic and endangered species.
65. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
66. Details regarding expected Occupational & Safety Hazards. Protective measures for Occupational Safety & Health hazards so that such exposure can be kept within permissible exposure level so as to protect health of workers. Health of the workers with special reference to Occupational Health. Plan of exposure specific health status evaluation of workers; pre placement and periodical health status of workers; plan of evaluation of health of workers by pre designed format, chest x ray, Audiometry, Spirometry Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations and plan of monthly and yearly report of the health status of workers with special reference to Occupational Health and Safety.
67. Corporate Environment Policy
  - i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
  - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
  - iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report
68. 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.
69. Impact of the project on local infrastructure of the area such as road network and whether any additional infrastructure needs to be constructed and the agency responsible for the same with time frame.
70. Environment Management Plan (EMP) to mitigate the adverse impacts due to the project along with item wise cost of its implementation. Total capital cost and recurring cost/annum for environmental pollution control measures should be included.
71. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on public hearing issues and item-wise details along with time bound action plan should be included. Socio-economic development activities need to be elaborated upon.
72. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart.
73. A note on identification and implementation of Carbon Credit project should be included.
74. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof should also be included.

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 in Regional languages should be provided.
- iv. The letter/application for environmental clearance should quote the MOEF file No. and also attach a copy of the letter.

- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The 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 should also be followed.
- viii. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI) / National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation should be provided. The draft EIA/EMP report shall be submitted to the Odisha Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

The TORs prescribed shall be valid for a period of two years for submission of the EIA/EMP reports along with Public Hearing Proceedings.

#### **10.4.0 Reconsideration**

10.4.1 Proposed asbestos sheet manufacturing plant (216,000 TPA) at Survey No. 265/1-4; 266/1,2,3,4; 268; 285, village Rachakpura, Shedriya Grampanchayat, Niwali Tehsil, Tonk District, Rajasthan by **M/s Visaka Industries Ltd - regarding reconsideration for grant of ToRs.**

The aforesaid proposal was considered by the Reconstituted Expert Appraisal Committee (Industry) in its 5<sup>th</sup> meeting as item no.5.2.23 held during 31<sup>st</sup> January, 2013 – 1<sup>st</sup> February, 2013 for the grant of Terms of Reference (ToRs). The Committee deferred the consideration of the proposal and asked the proponent to check back the availability of ground water in Niwai block of Tonk District of Rajasthan and submit a report in this regard. The Committee also asked the proponent to submit copy of the permission obtained from the Central Ground Water Authority for the withdrawal of ground water for the proposed project. The Committee decided to consider the proposal on receipt of the said documents from the proponent.

The proponent vide letter Nil dated 20.3.2013 submitted the aforesaid additional information.

The project authorities along with their consultant (M/s. Enkay Enviro Services Private Limited) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA/EMP report. All the Asbestos milling and asbestos based products have been listed at Sl. No. 4(c) of Schedule of EIA Notification, 2006 as Category 'A' and have to be appraised at the Central level.

M/s Visaka Industries Limited have proposed to set up a asbestos sheet manufacturing plant (216,000 TPA) at Survey No. 265/1-4; 266/1,2,3,4; 268; 285, village Rachakpura, Shedriya Grampanchayat, Niwali Tehsil, Tonk District, Rajasthan. The land requirement is 22.5 acres. No Forest land is involved. No National Park, Wildlife Sanctuary within 10 km radius of the project site. No court cases/litigation is pending against the project. There is a reserve forest located at a distance of 5.4km from the project site. Dahil Nadi water body is located at a distance of 3.2km from the project site. Total cost of the project is Rs.56.62 crores. Rs. 50 lakhs is earmarked towards the environmental pollution abatement.

The raw materials required are cement (7553 TPM), fly ash (4676 TPM), Chrysotile asbestos fibre (1438TPM) and Pulp (108 TPM). The water requirement is 240 KLD and will be sourced from

bore well. The power requirement is 750 KVA which will be sourced from Rajasthan State Electricity Board. Two Nos of D.G. set of 500 KVA capacity each will be installed as a standby power source.

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

- 1 Executive Summary of the project.
- 2 Photographs of the proposed plant area.
- 3 A line diagram/flow sheet for the process and EMP
- 4 The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
- 5 Modern up-to-date Asbestos plant with automatic bag opening devices should be installed.
- 6 The safety measures adopted during import and transport of Asbestos from Canada or any other country should be included.
- 7 Present land use of study area for 10 Km radius should be included. Detailed topographical map indicating drainage pattern and other features of the area should also be included.
- 8 Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land viz. allotment letter should be included.
- 9 High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 km radius area from proposed site should be incorporated. The same should be used for land use /land-cover mapping of the area.
- 10 Project site layout plan to scale using AutoCAD, raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 Km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
- 11 For the project location within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
- 12 Geo-technical data by a bore hole of upto 40 mts. in every One sq. km area such as ground water level, SPTN values, soil fineness, geology, shear wave velocity etc. for liquefaction studies. This will help making a future Seismic Hazard and Earthquake Risk Management area.
- 13 Site-specific micro-meteorological data including inversion height and mixing height should be included
- 14 Details of the other industries located in 10 km radius should be included
- 15 One season base line data on air, water, soil & noise etc. should be included
- 16 A chapter on chemistry of asbestos, handling of asbestos material, precautions proposed for the direct contact, arrangements made for storage and monitoring of asbestos fibres etc. other details as per given below:
  - i. Size of silica sand, transportation, storage, spillway of melt and temperature management for float glass and mirror Industry along with silicosis management and toxicity studies and management for Ag etc.
  - ii. Source and location of Asbestos (GPS) even if imported, size in F/ml, levels in environment, Chemical composition of raw material as especially amount of Tremolite, Crocidolite, Amosite and other amphiboles, Hexavalent chromium in raw material especially in serpentine, talc and chrysotile, Electron microscopy, XRD and Raman Spectra studies.
  - iii. Health Management Plan for Mesothelium, Lung cancer and Asbestosis related problems in asbestos industries.
- 17 Petrological and Chemical analysis and other chemical properties of raw materials used (with GPS location of source of raw material) i.e. ores, minerals, rock, soil, coal, iron, dolomite quartz etc. using high definition and precision instruments mentioning their detection range and methodology such Digital Analyzers, AAS with Graphite furnace, ICPMS, MICRO-WDXRF, EPMA, XRD, Nano studies or at least as per I30-10500 and WHO norms. These analysis should include trace element and metal studies like Cr (vi) Ni, Fe, As, Pb, Zn, Hg, Se, S etc. Presence of radioactive elements (U, Th etc.), if applicable, should also be included.
- 18 Petrography, grain size analysis and Major element analysis of raw material and soil from project site and raw material should be done on the same parameters along with analysis for SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, MgO, MnO, K<sub>2</sub>O, CaO, FeO, Fe<sub>2</sub>O<sub>3</sub>, P<sub>2</sub>O<sub>5</sub>, H<sub>2</sub>O, CO<sub>2</sub>.
- 19 If the rocks, ores, raw material has trace elements their petrography, ore microscopy, XRD, elemental mapping EPMA, XRF is required to quantify the amount present in it and hence future risk involved while using it and management plan.

- 20 Mode of transport of raw materials from sources are to be shown. All the trucks for raw material and finished product transportation must be "Environmentally Compliant"
- 21 Studies are also required for management of muck disposal, slurry, sludge material and solid waste generated if the raw materials used has trace elements and a management plan.
- 22 Air quality modeling for the Asbestos handling system. Ambient air quality monitoring modelling along with cumulative impact. Following are to be included as an annexure for the day (24 hrs) considered for maximum GLC:
  - i. Emissions (g/second) with and without the air pollution control measures
  - ii. Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height) on hourly basis
  - iii. Model input options for terrain, plume rise, deposition etc.
  - iv. Print-out of model input and output on hourly and daily average basis
  - v. A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
  - vi. Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
  - vii. Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
  - viii. No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
    - ix. Graphs of monthly average daily concentration with down-wind distance
    - x. Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
    - xi. Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
    - xii. Existing stack emission data and fibre concentration in the work zone.
- 23 Sources of secondary emissions, its control and monitoring as per the CPCB guidelines and latest notification vide G.S.R. 414(E) dated 30<sup>th</sup> May, 2008 should be included.
- 24 Chemical characterization of RSPM and incorporation of RSPM data. Location of one AAQMS in downwind direction.
- 25 Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be included.
- 26 Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
- 27 Actual source and permission for the drawl of water from bore well from the SGWB/CGWA or concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included
- 28 Ground water monitoring minimum at 8 locations should be included.
- 29 Scheme for proper storage of asbestos fibres and disposal of solid/hazardous waste should be included.
- 30 Presence of aquifer/aquifers within 1 km of the project boundaries should be included. Management plan for recharging the aquifer should be given so as to limit the water extraction within permissible limit of CWC or CGWB should be included.
- 31 Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used along with a Piper and Piper Duro-V diagram. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.
- 32 Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management should be included.
- 33 Ground water modeling showing the pathways of the pollutants should be included
- 34 Column leachate study for all types of stockpiles or waste disposal sites, at 20°C-50°C should be conducted and included.

- 35 All samplings for water have to be done during the peak summer time (Sampling number, dates and standard deviation should be included).
- 36 Incorporation of water harvesting plan for the project is necessary, if source of water is bore well should be ensured.
- 37 Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents should be included.
- 38 If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
- 39 Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from asbestos bearing effluent should be included.
- 40 The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, lakes), sub-surface and ground water with a monitoring and management plans should be included.
- 41 All stock piles should be on top of a stable liner to avoid leaching of materials to ground water.
- 42 The green belt should be around the project boundary in 33 % area and a scheme for greening of the traveling roads should also be incorporated. All rooftops/terraces should have some green cover.
- 43 Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
- 44 Details regarding expected Occupational & Safety Hazards. Protective measures for Occupational Safety & Health hazards so that such exposure can be kept within permissible exposure level so as to protect health of workers. Health of the workers with special reference to Occupational Health. Plan of exposure specific health status evaluation of workers; pre placement and periodical health status of workers; plan of evaluation of health of workers by pre designed format, chest x ray, Audiometry, Spirometry Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations and plan of monthly and yearly report of the health status of workers with special reference to Occupational Health and Safety.
- 45 Detailed action plan for compliance of the directions (including the recent Kalyaneswari case) of the Hon'ble Supreme Court of India regarding occupational health and safety measures in asbestos industries should be included.
- 46 Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
- 47 Compliance to the recommendations mentioned in the CREP guidelines should be included.
- 48 An action plan on entire operation should be automatic and closed system for all operations for fibre handling and processing should be included.
- 49 Details of arrangement for measurement and monitoring of asbestos fibre (Phase contrast microscope) should be included.
- 50 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.
- 51 EMP should include the concept of waste-minimization, recycle/reuse/recovery techniques, Energy conservation, and natural resource conservation.
- 52 EMP should include a clear map for plantation/green belt.
- 53 Commitment that laboratory for monitoring asbestos fibres will be established at the site.
- 54 Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
- 55 At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be included. Socio-economic development activities need to be elaborated upon.
- 56 Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof should also be included.

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 in Regional languages should be provided.

- iv. The letter/application for environmental clearance should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The 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 should also be followed.
- viii. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI) / National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee-1 (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation should be provided. The draft EIA/EMP report shall be submitted to Rajasthan Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

The TORs prescribed shall be valid for a period of two years for submission of the EIA/EMP reports, after public consultation.

#### **10.5.0 Any Other Item**

##### **10.5.1 Proposed Iron Ore Pelletizing Plant (1.20 MTPA) along with Iron Ore Washery (2.0 MTPA) at Gidhali, Village Kusumkasa, Tehsil Balod, District Durg in Chhattisgarh by **M/s Godawari Power and Ispat Limited- regarding extension of validity of TOR****

Terms of Reference (ToRs) to the above proposal was accorded by MoEF vide letter no. J-11011/230/2011-IA II (I) dated 10.6.2011. The Project Proponent (PP) vide letter No. GPIL/MOEF/13-14/085 dated 10.5.2013 requested MoEF for extension of validity of ToR. The PP also made a presentation before the Committee.

It was submitted by the proponent following are the reasons for seeking extension of validity of ToR:

- i. Draft EIA/EMP report was prepared and submitted to the Member Secretary, Chhattisgarh Environment Conservation Board (CECB), Raipur 16.3.2012 for conducting the Public Consultation as per EIA Notification, 2006.
- ii. Addl. District Collector, Dist. Balod served notice on 13.7.2012 to all the concerned for conducting the Public Consultation on 29.8.2012.
- iii. The notice for public consultation was published in the national & local newspapers on 28.7.2012 for public consultation on 29.8.2012.
- iv. Vicinity of the proposed project area is sensitive in nature.
- v. Due to the prevailing unfavourable conditions, the Public Consultation of 29.8.2012 was postponed by the Addl. District Collector, Balod vide communication dated 25.8.2012
- vi. The adjournment of Public Consultation is also notified in the national & local newspapers on 26.8.2012.

- vii. Subsequently, the Add. Collector, Balod communicated vide letter dated 3.9.2012. The notice for public consultation was notified in the national & local newspapers on 8.9.2012 indicating fresh date & venue of public consultation.
- viii. However, the next date 10.10.2012 for conducting the Public Hearing, was again postponed, due to further deterioration in the situation.
- ix. On the basis of the notice dated 6.10.2012 received from the Addl. District Collector, the proposed Public consultation postponed till further notice. This notice has also been published in the national & local newspapers on 7.10.2012.
- x. In spite of several attempts made by the District Authorities, due to prevailing circumstances, the public Consultation could not be held till now.
- xi. In view of the above, Public Consultation was inordinately delayed.

After detailed deliberations, the committee recommended for the extension of validity of TOR for a period of one year with effect from 9.6.2013.

10.5.2 Proposed 1 MTPA Integrated Steel Plant project at Villages Govindpur, Deogirisai, Digarsai, Bhurkuli, Tehsil Saraikela in District Saraikela-Kharsawan in Jharkhand by **M/s Jagaannathpur Steel Limited- regarding extension of validity of TOR**

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

10.5.3 Enhancement of production capacity of Coke Oven Plant (non recovery type) from 0.3 MTPA to 0.4 MTPA and WHRB from 22.5 MW to 30 MW at Sy. No. 212 A/2z, 264 A/1, 265 and 271, Kudithini Village, Bellary Taluq and District, Karnataka by M/s Sathavahana Ispat Ltd. - **regarding amendment in ToRs**

Terms of Reference (ToRs) to the above proposal was accorded by MoEF vide letter no. J-11011/62/2012-IA II (I) dated 18.12.2012. The Project Proponent (PP) vide letters dated 28.12.2012, 19.2.2013, 25.3.2013 and 22.7.2013 requested MoEF to exempt the project from conducting public hearing (PH) since the PH for the earlier project was conducted on 9.9.2010 wherein the public were informed about the possibility of enhancing production facilities of the Coke Oven from 300000 TPA to 400000 TPA due to operational efficiency without any additional equipment installations and investment. The PP also made a presentation before the Committee.

After detailed deliberations, the Committee recommended that the project shall not be exempted from conducting Public Hearing.

10.5.4 Expansion of Integrated Steel Plant [Sponge Iron-7,26,000TPA, Blast furnace – 318500 TPA, WHRB-60 MW, CPP-135 MW, Ingot/billet-6,24,000 TPA from Electric Arc Furnace, Ingot/billet – 4,09,500 TPA from induction furnace (4x30 T), Rolling Mill – 2,50,000 TPA, Producer Gas Plant – 12000 Nm<sup>3</sup>/hr, Oxygen Plant– 300 Nm<sup>3</sup>/hr, Coal washery – 4000000 TPA, Sinter Plant – 4,08100 TPA, Coke Oven - 2,00,000 TPA and Air Separation Plant – Oxygen – 3000 Nm<sup>3</sup>/hr, Nitrogen – 12000 Nm<sup>3</sup>/hr, Argon – 70 Nm<sup>3</sup>/hr] at Village Taraimal, Tehsil Gharghoda, District Raigarh in Chhattisgarh by **M/s Nalwa Steel & Power Limited - regarding extension of validity of TORs and amendment in ToR in respect of production capacities**

Terms of Reference (ToRs) to the above proposal was accorded by MoEF vide letter no. J-11011/1108/2007-IA II (I) dated 13.4.2011. The Project Proponent (PP) vide letter No. NSPL/EMD/2013/37 dated 8.4.2013 requested MoEF for extension of validity of ToR and amendment in ToR in respect of induction furnace production capacity. The PP also made a presentation before the Committee.

It was submitted by the proponent following are the reasons for seeking extension of validity of ToR:

- i. Draft EIA/EMP report was prepared and submitted to the Member Secretary, Chhattisgarh Environment Conservation Board (CECB) on 31.10.2011 for conducting the Public Consultation as per EIA Notification, 2006.
- ii. Date for Public Hearing is awaited from CECB

The amendment sought by the proponent in the ToR in respect of induction furnace production capacity is as below:-

S.No.	Name of Units	Existing Capacity	Proposed Addition	Final Capacity
1.	Blast Furnace	Nil	318500 TPA	318500 TPA
2.	Sponge Iron Plant	198000 TPA	726000 TPA	924000 TPA
3.	Sinter Plant	Nil	408100 TPA	408100 TPA
4.	Coke Oven	Nil	200000 TPA	200000 TPA
5.	Steel Making Shop (EAF)	--	624000 TPA	624000 TPA
6.	Steel Making Shop	160000 TPA (2x12 tons+1x30 tons Induction Furnace)	269500 TPA By replacing the 4x12 T IF with 3x40 t IF <b>(Now proposed be 3x30 T Induction Furnace)</b>	269500 TPA
<b>Total Steel Production</b>				<b>2744100 TPA</b>
7.	Rolling Mill	250000 TPA	200000 TPA	450000 TPA
8.	Coal Washery	1320000 TPA	4000000 TPA	5320000 TPA
9.	WHRB based CPP	8 MW	60 MW	68 MW
10.	AFBC based CPP using coal, rejects and char	16 MW	135 MW	151 MW
<b>Total Power Generation</b>				<b>219 MW</b>
11.	Producer Gas Plant	12000 Nm <sup>3</sup> /hr	12000 Nm <sup>3</sup> /hr	24000 Nm <sup>3</sup> /hr
12.	Oxygen Plant	100 Nm <sup>3</sup> /hr	3000 Nm <sup>3</sup> /hr	3100 Nm <sup>3</sup> /hr

After detailed deliberations, the committee recommended for the extension of validity of TOR for a period of one year with effect from 12.4.2013 and amendment in the ToR in respect of induction furnace production capacity as mentioned above.

10.5.5 Proposed expansion from 100 TPD Sponge Iron Plant and 1x6 & 1x3 T Induction Furnace to Integrated Steel Plant at villages Ginigera and Basapur, Taluka & District Koppal in Karnataka by **M/s Scan Ispats Limited-regarding extension of validity of TORs**

Terms of Reference (ToRs) to the above proposal was accorded by MoEF vide letter no. J-11011/557/2010-IA II (I) dated 31.12.2010. The Project Proponent (PP) vide letter No. Nil dated 12.12.2012 requested MoEF for extension of validity of ToR. The PP also made a presentation before the Committee.

It was submitted by the proponent following are the reasons for seeking extension of validity of ToR:

- Project was delayed due to non-availability of iron ore supply from Bellary, Chitradurga and Tumkur districts of Karnataka.

After detailed deliberations, the committee recommended for the extension of validity of TOR for a period of one year with effect from 30.12.2012.

10.5.6 Proposed 3.5 MTPA Cement Plant & 100 MW Captive Power plant (2x50 MW of FBC power plant and 8MW of WHRB) at Peddagariapadu Village, Dachehalli Mandal, Guntur District, Andhra Pradesh **M/s Chettinad Cement Corporation limited- regarding extension of validity of TORs**

Terms of Reference (ToRs) to the above proposal was accorded by MoEF vide letter no. J-11011/421/2011-IA II (I) dated 13.10.2011. The Project Proponent (PP) vide letter No. Chettinad Cement/Dachepalli Plant – New/ToR Extn/2013 dated 26.4.2013 requested MoEF only for extension of validity of ToR for one more year. The PP also made a presentation before the Committee.

It was submitted by the proponent following is the reason for seeking extension of validity of ToR:

- Awaiting issuance of Mines ToR to carry out EIA Study for both Plant & Mines simultaneously so that common EIA can be prepared to go for a common Public Consultation (as the proposal is an Green Field Project of Integrated Cement Plant including Captive Power Plant, Waste Heat Recovery Boiler & Captive Limestone Mine)

After detailed deliberations, the committee recommended for the extension of validity of TOR for a period of one year with effect from 12.10.2013.

10.5.7 Proposed 2.0 MTPA Green Field integrated Steel Plant at Village Bhada, Tehsil Janjgir, District Janjgir-Champa, Chhattisgarh **by M/s Prakash Industries Limited - regarding extension of validity of TORs**

Terms of Reference (ToRs) to the above proposal was accorded by MoEF vide letter no. J-11011/223/2011-IA II (I) dated 21.7.2011. The Project Proponent (PP) vide letter No. PIL/BHADA/2013-14/1 dated 16.5.2013 requested MoEF for extension of validity of ToR. The PP also made a presentation before the Committee.

It was submitted by the proponent following is the reason for seeking extension of validity of ToR:

- Due to uncertainty of raw materials, land issues, recession in the steel industry resulted in delay of implementation of the project
- Delay in land acquisition & its diversion
- Delay in obtaining coal linkage

After detailed deliberations, the committee recommended for the extension of validity of TOR for a period of one year with effect from 20.7.2013.

10.5.8 Expansion of Cement Plant from 0.66 MTPA to 1.0 MTPA at Village Malkhed, District Gulbarga in Karnataka by **M/s South India Cement Limited – regarding extension of validity of TORs**

Terms of Reference (ToRs) to the above proposal was accorded by MoEF vide letter no. J-11011/127/2011-IA II (I) dated 5.5.2011. The Project Proponent (PP) vide letter No. SICL/MOEF/2013 dated 29.4.2013 requested MoEF for extension of validity of ToR. The PP also made a presentation before the Committee.

It was submitted by the proponent following are the reasons for seeking extension of validity of ToR:

- i. Existing Cement Plant (0.066 MTPA) has become sick unit in November 2005 due to financial constraints.
- ii. New Resourceful Management has associated with promoters to revive the existing plant operations and to implement the expansion proposal
- iii. Resolving existing cement plant issues has taken time.
- iv. Common Draft EIA report has been prepared for Cement Plant & Mine and is due for submission to KSPCB for Public Hearing.

After detailed deliberations, the committee recommended for the extension of validity of TOR for a period of one year with effect from 4.5.2013.

10.5.9 Proposed Cement Plant (3.0 MTPA), Clinker Unit (1.4 MTPA), Coal Washery (0.96 MTPA) along with 2x20 MW Captive Power Plant at Village Pataidih (Semradih

Panchayat), Tehsil Masturi, District Bilaspur in Chhattisgarh and proposed new Limestone Mine i.e. Chilhati Limestone Mine, District Bilaspur in Chhattisgarh **by M/s SKS Cement Limited (A subsidiary of SKS Ispat and Power Limited) – regarding extension of validity ToRs.**

Terms of Reference (ToRs) to the above proposal was accorded by MoEF vide letter no. J-11011/252/2011-IA II (I) dated 12.8.2011. The Project Proponent (PP) vide letter No. SKSIPL/MOEF/1963 dated 13.5.2013 requested MoEF for extension of validity of ToR. The PP along with their consultant (M/s. Vimta Labs, Hyderabad) also made a presentation before the Committee.

It was submitted by the proponent following are the reasons for seeking extension of validity of ToR:

- i. Stage- I forest clearance for Chilhati Limestone mining is still awaited. Hence validity of time limit of TOR for Mining project is extended for 1 year on 24.7.2013.
- ii. For the cement plant establishment, the proponent has applied for 98.151 ha of private land through the State Government.
- iii. State Industries Department has already taken a favourable decision to acquire 98.151 ha of private land in Village Pataidih, Bilaspur district
- iv. State Govt. granted principle approval to acquisition of 98.151 ha land on 26.07.2011. The land acquisition officer/CSIDC are waiting for certain orders/guidelines from court or law.
- v. During last year 2011-12, some villagers had gone to the court of law challenging the procedure adopted by the State, in some cases wherein the State tried to acquire land for private Companies
- vi. Hon'ble High Court (single Bench), Bilaspur had given a verdict that the present system adopted by the State in Land Acquisition matter is wrong.
- vii. State has gone in to Appeal before double bench. The final verdict is expected shortly being on important issue
- viii. Under such circumstance, the State Officials are awaiting for a final verdict from the Court of Law so that land acquisition process can be speeded up. In view of this, the land acquisition process is getting delayed in the State.

After detailed deliberations, the committee recommended for the extension of validity of TOR for a period of one year with effect from 11.8.2013.

10.5.10 Expansion of 2.00 MTPA Clinkerisation Plant with 35 MW captive power plant at village vayur abdas, District Kutch in Gujarat by **M/s Jaiparkash Associates Limited regarding extension of validity of TORs.**

Terms of Reference (ToRs) to the above proposal was accorded by MoEF vide letter no. J-11011/333/2011-IA II (I) dated 12.8.2011. The Project Proponent (PP) vide letter No. JCCL/SP-III/EXPANSION/2013 dated 27.5.2013 requested MoEF for extension of validity of ToR. The PP also made a presentation before the Committee.

It was submitted by the proponent following are the reasons for seeking extension of validity of ToR:

- Public Hearing is pending with State Authorities since 4<sup>th</sup> February 2013. It is not expected to arrange Public Hearing before the expiry of current tenure of ToRs.
- Conducting of Public Hearing, finalization of minutes of the meeting and preparation of final EIA/EMP report and further submission of final EIA report to MoEF may take some more time.

After detailed deliberations, the committee recommended for the extension of validity of TOR for a period of one year with effect from 11.8.2013.

10.5.11 Proposed Cement plant (Cement 5.5 MTPA; Clinker 4.5 MTPA) alongwith Captive Power Plant (3x25 MW), DG Set (3x6 MW) and Waste Heat Recovery (15 MW) at District Karur, Tamil Nadu by **M/s Grasim Industries Ltd-regarding extension of validity ToRs.**

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

**10.5.12 Proposed Zinc Smelter Complex Zinc Smelter (0.25 MTPA), Captive Power Plant (90 MW) at Village Zawar, Tessil Girwa and Sarada, District Udaipur in Rajasthan by M/s Hindustan Zinc Limited – regarding Extension of validity ToR.**

The proponent vide letter no.HZL/ZM/Project/ENV/2013-14/19 dated 4.7.2013 informed the Ministry that they would like to withdraw the application filed for additional ToR and continue with the ToR originally granted.

In view of above, the Committee has recommended that the proposal shall be delisted and the file be closed.

**10.5.13 Expansion of pulp production capacity from 500 TPD to 650 TPD by modernization and debottlenecking the process at Sreeram Nagar, Rajahmundry, East Godavari District, Andhra Pradesh by M/s Andhra Pradesh Paper Mills Limited- regarding Site Visit report discussion**

The aforesaid proposal was considered in the 32<sup>nd</sup> meeting of the Expert Appraisal Committee (Industry) held during 27-28<sup>th</sup> January 2012, wherein the Committee sought OHS data analysis of workers and flood hazard management plan for River Godavari. Further, taking into account the issues raised in Public Hearing, the Committee also recommended for a site visit by a Sub-Committee of EAC (Industry). The proposal will be re-considered after site visit without calling the project proponent.

Accordingly, the Sub-Committee of EAC (Industry) consisting of Dr. R.M. Mathur and Dr. S.K. Dave along with Dr. V.P. Upadhyay, Member Secretary – EAC(Industry) visited the industry and associated facilities including a few areas where CSR activity has been done during 31.5.2013 and 1.6.2013. The Managing Director and other Executives of the A.P. Paper Mills were present during discussion and field visit.

The sub-committee submitted its report to the REAC (Industry) and the findings of the sub-committee are given below:-

1. The industry has existing pulp capacity of 500 TPD and has proposed to increase pulp capacity by 150 TPD, thus, totaling to 650 TPD. Existing paper manufacturing capacity of 593 TPD and Captive Power Capacity of 46 MW will remain unchanged. Water Consumption will increase from 40920 KLD to 49100 KLD; Waste Water Generation will increase from 29980 KLD to 35955 KLD and ETP Sludge from existing 30-33 MTD to 45 MTD. ETP sludge is proposed to be used for burning in boilers.
2. The cost of present modernization cum-expansion has been given as Rs. 19.6 Crore, however, it was informed that cost may go up on the question of such low figure of investment for increasing the capacity by 150 TPD, it was informed that the existing paper mill has the capacity to accommodate proposed increase in production hence, the cost is at lower side. The sub-committee has asked the industry to provide item-wise breakup of cost involved for the proposed modernization. It was stated that the information will be sent.
3. 6 CFBC Boilers, 1 Recovery Boiler and 2 Rotary Lime Kiln are fitted with ESP and the particular matter emission from the stack is within 50 mg/Nm<sup>3</sup> as per data provided by the industry.
4. ETP has a design capacity of 90,000 KLD with 2 primary clarifiers, 1 Sludge thickener, Sludge Filter, Aeration Tank with Air Blowers and 2 Secondary clarifiers of 6000 m<sup>3</sup> each.
5. The discharge parameters as per the report of the Project Authority indicate that the parameters like COD, TDS and Colour are approaching the standard. Improvement in these parameters before discharge is required.
6. Following ETP improvement projects have been taken up by the project :

S. No.	Improvement Project	Investment (INR Lac)	Completion Date
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i.	Sewage Water Treatment Plant	520	May - 2013
ii.	8000 KL Impervious RCC Effluent Tank	100	March - 2012
iii.	5000 KL Black Liquor Spill Control Storage tank with level controls	40	Nov.-2012
iv.	Additional Blower and OTT Diffuser Membranes	150	March - 2013
v.	Recycling of Water-Scheme complete with automation, storage tanks, pumps etc.	15	Nov.-2012
vi.	Fossil Fuel reduction in boilers through structured projects		July - 2012
vii.	Use of GCC Slurry in place of powder-dust emission & powder handling reduction	20	April - 2013
viii.	Road construction to reduce dust emission control	600	June - 2013
	<b>Total</b>	<b>1455</b>	

7. The project has also planned investment for following ETP and safety improvement projects which are in pipeline.

S. No.	Improvement Project	Investment (INR Lac)	Target Date
i.	Aeration Basin Expansion with new oil free turbo blowers	335	Oct. - 2013
ii.	Sludge Press for achieving desired dryness – Alternate Fuel for boilers including Boiler Loading System upgrade	700	Feb. - 2014
iii.	Advanced Instrumentation, Analysis equipment etc.	10	Oct. - 2013
iv.	Upgrades on Spill Control including instrumentation	25	Nov. - 2013
v.	Enclosed Dust Control System	80	Oct. - 2013
vi.	Secondary Clarifier Upgrades	25	July - 2013
vii.	Green Belt Development across the boundary – Pipelines, Pumps etc. – Pump erected, tree plantation with the onset of monsoon	10	Sep. - 2013
viii.	Continuous H <sub>2</sub> S and Reduced Sulfur Monitoring System	15	Aug. - 2013
	<b>Total</b>	<b>1200</b>	

The industry has earlier carried out modernisation of the paper mill by establishing a pulp mill of 550 tonne Capacity. The environmental clearance was accorded by the Ministry vide J-11011/98/2004-IA-II(I) dated 31<sup>st</sup> January, 2005. The industry operates with, "Total Chlorine free bleaching by switching over to use of oxygen in first stage bleaching." The bleaching effluents are fed to recovery boiler for steam generation.

The industry has carried out further modernization by installing the facility and equipments for production of A4 Size Paper. It is understood that cost of modernization is approx. Rs. 90 crore. More than 90% work of installation is already complete. M/s. A.P. Paper Mill has not informed about the environmental clearance status for the above modernization. The Sub-Committee has requested for the details. It appears that the modernization has been done without environmental clearance which amounts to violation of EIA Notification, 2006.

The industry operates by Kraft Pulping process. The Sub-Committee wanted following information from this industry in respect of emissions, water discharge and solid waste management.

- i. Maladorous Emissions; (a) Total Reduced Sulphur (b) Hydrogen Sulphide (c) Methyl Mercaptan (d) Dye Methyl Sulphide & (e) Dye Methyl Dye Sulphide (in Kg. / t of air dried pulp).

- ii. Particulate matter, SO<sub>2</sub> and NO<sub>x</sub> (Kg. per tonne) emissions from various units including lime kiln.
- iii. Volatile Organic Compounds (VOCs) emissions in Kg./ t from black liquor oxidation.
- iv. Waste Water Generation, BOD, TSS, COD & Chlorinate Organic Compounds (dioxins, furans, AOX) in Kg. per tonne of air dried pulp.
- v. Quantity of release of Phosphorus and Nitrogen in waste water.
- vi. The quantity of solid waste generated including waste water treatment sludge, lime sludge and ash and their disposal means.
- vii. Energy Consumption in GJ / T Paper in different units like chipper, digester, evaporator, washing, bleaching, soda recovery, paper machine, decanter and utilities etc. including specific energy consumption in steam and power.

During visit of the Sub-Committee, it was observed that Occupational Health Centre needs major revamping particularly by providing a lady Doctor, maintaining good housekeeping, equipping the laboratory with laboratory equipments. During discussion, with Dr. Dave and the Medical Doctor of the OHC, it was observed from the disease profile that 10% to 20% of the workers may be having high EIOSINOPHYLLS. This needs serious investigation by the industry. The OHC should statistically analyse that trend of disease profile over a period of time from already collected data and develop needed action plan for remedial measures. This may be done for both employees and village population. Further, the space inside the OHC is so limited that a single room is being used for various purposes which may have patients from different disease profiles and that may have chances of spreading infections. Similarly, waste bins of different biomedical wastes should have segregated places to avoid mixing and infection with clear marking of waste category in local and English language on outside of the bins. OHC is neither well-equipped nor maintained. It needs to be strengthened. Equipment like Audiometer is not available. Data is not recorded systematically in one register failing which it is not possible to comment on overall health status of workers. Data should be properly recorded and analysed by age, sex, duration of exposure, Department-wise and smoking habit. Overall housekeeping is very poor.

Project needs to revamp the environmental laboratory and review the present online AAQ Stations. For example: the AAQ Station near ETP is surrounded by tree canopies which may not allow the dust particles. The roads are damaged from the chipper section area to inside the industry. The solid wastes have been kept at half a dozen places and all metal, rubber, plastic & chemical containers are haphazardly dumped. This will create environmental impact specially the leachates will find the way to the drains and finally will pollute the river. The project should immediately build solid waste storage areas for each kind of the waste and also make a planning for disposal / utilization of such wastes. The storm water drains are fully filled with silt that will result in flooding in the industrial area. The chipper section needs upgradation in the conveyer area, parts of which are not under enclosure. The fine dust with the help of wind is spreading in a vast area creating particulate matter increase in ambient air.

Industry needs to develop well demarcated truck parking area with facilities of sanitation, rest shed and drinking water to drivers and transport workers. At present, there is limited space along road and truck parking creates congestion inside the area.

The industry has also been asked to provide details of notices issued by State pollution Control Board including copy of consent to establish and consent to operate including water discharge data and online monitoring details for the last one year to the Sub-Committee at earliest.

The industry has also provided details about CSR investment proposed which includes grants to schools, scholarships, water shed development, drinking water, women empowerment, etc. A few of the CSR activities were visited by the Sub-Committee. The industry has provided RO based water treatment system in the village located on the bank of river Godavari where final discharge point of the effluent water is located. Two tanks of 3,000 KL each have been attached with the RO System for supply of drinking water. In addition, an overhead water tank for storing the river water has also been built by the industry (before the industry was taken over by present management) for the villagers to meet the needs other than drinking water. However, due to non-availability of electricity, RO System does not operate and this will be a limitation by the villagers to have purified drinking water. It was suggested that a DG Set may also be provided to the villagers for running the RO System and the villagers should contribute as a cooperative for the oil for running DG Set. The Presentation made about CSR during meeting does not match with the actual site condition as observed during site inspection. It is felt that more investment should be made by the industry on children education, primary health care and assistance for irrigation in agriculture.

The industry executives also accompanied the Committee Members to another CSR Site where some work related to water shed development and providing facility to a primary school in a village Mamadiloa, Anandpuram Mandalam have been done. It was observed that the industry has provided Desks to the children which have height not suitable for small children as seen at the site and also feedback given by the teachers. The industry representatives assured to adjust the bench and the desk to make comfortable sitting for the small children. The teachers requested for books from the industry. The school needs a good toilet and plantation in the area. The project has assured to provide such facility. The water shed project made in the village does not seem to be CSR activity as it has been made to irrigate the plantation of **Casuarina** of the villagers planted for the industry. Further, the industry is diverting the water from a check-dam created by irrigation department to a reservoir developed on Government land to facilitate irrigation in plantation meant for industry. This is not a CSR activity. It was requested that project should make a CSR planning on the basis of feedback from the village people to meet their real social and community needs.

*It is recommended that the issue of violation of EIA Notification, 2006 may be addressed by the Ministry as per provisions of E(P) Act, 1986. M/s. A.P. Paper Mill Ltd. may be advised to submit the details on the various parameters by submitting the data and action plan as suggested in the report.*

The REAC (Industry) accepted the site visit report of the sub-committee and recommended the following:

As the proposal involves violation, the Committee recommended that MoEF shall deal with the violation matter in accordance with its Office Memorandum No. J-11013/41/2006-IA.II(I) dated 12.12.12 and 27.6.2013.

**31<sup>th</sup> July, 2013**

## 10.6 Consideration of the Projects:

### **Terms of Reference**

- 10.6.1. Proposed expansion of steel plant by addition of Steel Melt Shop – 1,01,000 TPA, Slab casting unit – 96000 TPA and TMT producing unit – 91200 TPA at survey no. 97, Sidiginamola village, Bellary Taluk and District, Karnataka by **M/s Janki Corporation Limited - regarding ToRS.**

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

M/s.Janki Corporation Limited have proposed for expansion of steel plant by setting up Steel Melt Shop – 1,01,000 TPA, Slab casting unit – 96000 TPA and TMT producing unit – 91200 TPA at Survey No. 97, Sidiginamola village, Bellary Taluk and District, Karnataka. The proposed expansion will be carried out within the existing plant premises of 385 acres. No additional land is required for the proposed expansion. No Forest land is involved. No national park/wild life sanctuary/ecologically sensitive area is located within 10 km radius of the project site. The longitude and latitude of the project site is 77° 5' 0" E and 15° 9'0" N respectively. Total cost of the project is Rs. 98.15 Crores. No court cases/litigation is pending against the project.

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

S.No.	Plant facilities	Existing (TPA)	Units under implementation (TPA) EC obtained vide F.No.J-11011/576/2009-IA-II (I) dated 23.1.2012	Proposed Expansion (TPA)	Total (TPA)
1.	Sponge Iron Plant	1,80,000	2,20,000	--	4,00,000

		(6 x100 TPD)	(2 x 350TPD)		
2.	Pellet Plant	6,00,000	--	--	6,00,000
3.	Captive Power Plant	15 MW	--	--	15 MW
4.	Iron ore Beneficiation Plant	--	6,00,000	--	6,00,000
<b>5.</b>	<b>SMS unit</b>	--	--	<b>1,01,000</b>	<b>1,01,000</b>
<b>6.</b>	<b>Slab casting unit</b>	--	--	<b>96,000</b>	<b>96,000</b>
<b>7.</b>	<b>TMT producing unit</b>	--	--	<b>91,200</b>	<b>91,200</b>

DRI lumps, DRI fines, pig iron scrap, plant return scrap, ferroalloys and deoxidizers, fluorspar and calcined lime are the raw materials that will be used. The water requirement is 4000 KLD and the power requirement is 33 MW which will be met from grid and captive power plant.

Stack of adequate height will be provided. The wastewater generated will be reused after adequate treatment. The solid wastes generated are scrap which will be reused in the process. The slag generated will be used for landfill and road construction.

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

1. Executive summary of the project
2. Iron ore/Coal linkage documents
3. Photographs of the existing and proposed plant area
4. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
5. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
6. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
7. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s)
8. A line diagram/flow sheet for the process and EMP
9. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
10. A copy of the mutual agreement for land acquisition signed with land oustees.
11. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. A photograph of the site should also be included.
12. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area. Baseline data of 2011 may also be used.
13. Topography of the area should be given clearly indicating whether the site requires any filling. If so, details of filling, quantity of fill material required, its source, transportation etc. should be given.
14. Location of national parks/wildlife sanctuary/reserve forests within 10 km. radius should specifically be mentioned. A map showing land use/land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.
15. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
16. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates should also be included.
17. Details and classification of total land (identified and acquired) should be included.
18. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.

19. Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department.
20. A list of industries containing name and type in 25 km radius should be incorporated.
21. Residential colony should be located in upwind direction.
22. List of raw material required, analysis of all the raw materials and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
23. Petrological and Chemical analysis and other chemical properties of raw materials used (with GPS location of source of raw material) i.e. ores, minerals, rock, soil, coal, iron, dolomite quartz etc. using high definition and precision instruments mentioning their detection range and methodology such Digital Analyzers, AAS with Graphite furnace, ICPMS, MICRO-WDXRF, EPMA, XRD, Nano studies or at least as per I30-10500 and WHO norms. These analysis should include trace element and metal studies like Cr (vi) Ni, Fe, As, Pb, Zn, Hg, Se, S etc. Presence of radioactive elements (U, Th etc.), if applicable, should also be included.
24. Petrography, grain size analysis and Major element analysis of raw material and soil from project site and raw material should be done on the same parameters along with analysis for SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, MgO, MnO, K<sub>2</sub>O, CaO, FeO, Fe<sub>2</sub>O<sub>3</sub>, P<sub>2</sub>O<sub>5</sub>, H<sub>2</sub>O, CO<sub>2</sub>.
25. If the rocks, ores, raw material has trace elements their petrography, ore microscopy, XRD, elemental mapping EPMA, XRF is required to quantify the amount present in it and hence future risk involved while using it and management plan.
26. Action plan for excavation and muck disposal during construction phase.
27. Studies for fly ash, muck, slurry, sludge material disposal and solid waste generated, if the raw materials used has trace elements and a management plan should also be included.
28. Manufacturing process details for all the plants should be included.
29. Mass balance for the raw material and products should be included.
30. Energy balance data for all the components of steel plant including power plant should be incorporated.
31. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
32. Data generated in the last three years i.e. air, water, raw material properties and analysis (major, trace and heavy metals), ground water table, seismic history, flood hazard history etc.
33. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
34. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
35. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
36. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
37. Air quality modelling for steel plant for specific pollutants needs to be done. APCS for the control of emissions from the kiln and WHRB should also be included to control emissions within 50 mg/Nm<sup>3</sup>.
38. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be included.
39. Ambient air quality modelling along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
  - i. Emissions (g/second) with and without the air pollution control measures
  - ii. Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height) on hourly basis
  - iii. Model input options for terrain, plume rise, deposition etc.
  - iv. Print-out of model input and output on hourly and daily average basis
  - v. A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
  - vi. Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant

- vii. Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
  - viii. No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
  - ix. Graphs of monthly average daily concentration with down-wind distance
  - x. Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
  - xi. Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
40. A plan for the utilization of waste/fuel gases in the WHRB for generating power have to be set out.
  41. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided. The alternate method of raw material and end product transportation should also be studied and details included.
  42. One season data for gaseous emissions other than monsoon season is necessary.
  43. 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.
  44. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
  45. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included. Information regarding surface hydrology and water regime should be included.
  46. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
  47. Ground water modelling showing the pathways of the pollutants should be included
  48. Column leachate study for all types of stockpiles or waste disposal sites at 20°C-50°C should be conducted and included.
  49. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
  50. Permission for the drawl of water from the State Irrigation Department or concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
  51. A note on the impact of drawl of water on the nearby River during lean season.
  52. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
  53. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean River discharge as well as flood occurrence frequency.
  54. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
  55. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
  56. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
  57. Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from any other source should be included.
  58. The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, and lakes), sub-surface and ground water with a monitoring and management plans.

59. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
60. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly slag from all the sources, char and fly ash. Copies of MOU regarding utilization of ash should also be included.
61. Details of evacuation of ash, details regarding ash pond impermeability and whether it would be lined, if so details of the lining etc. need to be addressed.
62. A note on the treatment, storage and disposal of all type of slag should be included. Details of secured land fill as per CPCB guidelines should also be included.
63. End use of solid waste and its composition should be covered. Toxic metal content in the waste material and its composition should also be incorporated particularly of slag.
64. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
65. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
66. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
67. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
68. Occupational health:
  - a. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
  - b. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
  - c. Annual report of health status of workers with special reference to Occupational Health and Safety.
  - d. Action plan for the implementation of OHS standards as per OSHAS/USEPA.
  - e. Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
69. Corporate Environment Policy
  - i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
  - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
  - iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
70. 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.
71. Impact of the project on local infrastructure of the area such as road network and whether any additional infrastructure needs to be constructed and the agency responsible for the same with time frame.
72. Environment Management Plan (EMP) to mitigate the adverse impacts due to the project along with item wise cost of its implementation. Total capital cost and recurring cost/annum for environmental pollution control measures should be included.
73. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines must be prepared.

74. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on public hearing issues and item-wise details along with time bound action plan should be included. Socio-economic development activities need to be elaborated upon.
75. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart.
76. A note on identification and implementation of Carbon Credit project should be included.
77. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof should also be included.

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 in Regional languages should be provided.
- iv. The letter/application for environmental clearance should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The 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 should also be followed.
- viii. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI) / National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation should be provided. The draft EIA/EMP report shall be submitted to the Karnataka Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

The TORs prescribed shall be valid for a period of two years for submission of the EIA/EMP reports along with Public Hearing Proceedings.

#### 10.6.2 Expansion of Cement Grinding Unit from 100 TPD (2x50TPD) to 250 TPD by installing 2x75 TPD at Village Chalbapur, Chittranjan Road, P.O.Sitarampur, District Burdwan, West Bengal by M/s. Sanjay Intra Ltd - regarding ToRS.

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA/EMP report. The stand alone cement grinding units are covered under Category 'B' as per para 3(b) of the Schedule of the EIA notification 2006. However, project site is located within 10 Km of radius of Critically Polluted Area - IISCO Burnpur and treated as category 'A' project due to applicability of general condition of the EIA notification, 2006 and appraised at Central level.

M/s. Sanjay Intra Limited have proposed to expand the Cement Grinding Unit from 100 TPD (2x50TPD) to 250 TPD by installing 150 TPD (2x75 TPD) at Village Chalbapur, Chittranjan Road, P.O.Sitarampur, District Burdwan, West Bengal. The land requirement for the project is 3.43 acres. No Forest land is involved. No National Park, Wildlife Sanctuary and Archeological monuments exists within 10 km radius of the project site. No court cases/litigation is pending against the project. Damodar river is located at a distance of 4.9km from the project site. The power requirement is 300

KVA and the water requirement is 3.5 KLD during the operation phase. The water will be drawn from Kulti municipality. Clinker, Fly ash and Gypsum are the raw materials that will be used.

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

1. Executive summary of the project
2. Iron ore/Coal linkage documents
3. Photographs of the existing and proposed plant area
4. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
5. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
6. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
7. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s)
8. A line diagram/flow sheet for the process and EMP
9. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
10. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
11. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
12. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing land use / land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc. in 10 km of the project site.
13. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
14. Details and classification of total land (identified and acquired) should be included.
15. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
16. A list of industries containing name and type in 10 km radius shall be incorporated.
17. List of raw material required and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
18. Manufacturing process details for the cement grinding unit should be included.
19. Mass balance for the raw material and products should be included.
20. Energy balance data for all the components should be incorporated.
21. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
22. Sources of secondary emissions, its control and monitoring as per the CPCB guidelines should be included. A full chapter on fugitive emissions and control technologies should be provided.
23. 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.
24. Vehicular pollution control and its management plan should be submitted.
25. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
26. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
27. Air quality modeling for all the plants for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm<sup>3</sup> should be included.
28. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be included.

29. Ambient air quality monitoring should be included for the day (24 hrs) for maximum GLC along with following :
  - i) Emissions (g/second) with and without the air pollution control measures
  - ii) Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity
  - iii) Model input options for terrain, plume rise, deposition etc.
  - iv) Print-out of model input and output on hourly and daily average basis
  - v) A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
  - vi) Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
  - vii) Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
  - viii) No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
  - ix) Graphs of monthly average daily concentration with down-wind distance
  - x) Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
  - xi) Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
30. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
31. One season data for gaseous emissions other than monsoon season is necessary.
32. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
33. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used along with a Piper and Piper Duro-V diagram. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.
34. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
35. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
36. Permission for the drawl of water from the concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
37. A note on the impact of drawl of water on the nearby River during lean season.
38. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
39. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
40. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
41. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
42. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
43. Action plan for the green belt development plan in 33 % area should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
44. Disaster Management Plan including risk assessment & damage control needs to be addressed and included. Landslide hazard map and mitigation plan, Earthquake history and management plan should be submitted.

45. Action plan for solid/hazardous waste generation, storage, utilization and disposal should be covered.
46. Occupational health:
  - a. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
  - b. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
  - c. Annual report of health status of workers with special reference to Occupational Health and Safety.
  - d. Action plan for the implementation of OHS standards as per OSHAS/USEPA.
  - e. Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
47. Corporate Environment Policy
  - i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
  - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
  - iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
48. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
49. Total capital cost and recurring cost/annum for environmental pollution control measures.
50. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
51. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

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 in Regional languages should be provided.
- iv. The letter/application for environmental clearance should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The 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 should also be followed.
- viii. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI) / National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc.

It was decided that 'TORs' prescribed by the Reconstituted Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report shall be submitted to the West Bengal Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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

10.6.3 Proposed 0.6 MTPA Iron Ore Pellet Plant at Village Salrapenth, Panchayat Mahadeijoda, Tehsil-Sadar, District-Keonjhar, Odisha **by K.K. Pellets Private Ltd - regarding ToRS.**

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of References for the preparation of EIA/EMP report. The proposed project activity is covered under Category (A) and listed at S.N.3(a) of the Schedule of the EIA notification 2006 and have to be appraised at the Central level.

M/s K.K. Pellets Private Limited have proposed to set up a Iron-ore Pelletization Plant of 0.6 MTPA capacity at Village Salrapenth, Panchayat Mahadeijoda, Tehsil-Sadar, District-Keonjhar, Odisha. The land requirement for the proposed project is 33 acres. The latitude and longitude of the project site is 21° 40' 57" N and 85° 30'34" E respectively. No Forest land is involved. No National Park, Wildlife Sanctuary is exists within 10 km radius of the project site. Kadal river is located at a distance of 2km from the project site. No court cases/litigation is pending against the project. Project cost is Rs. 158.85 Crores. Rs. 7.5 crores and Rs.1.5 crores per annum is earmarked towards the capital cost and recurring cost towards the environmental protection measures.

The raw materials required are iron ore fines (658200 TPA), coal (13200 TPA), coke (10200 TPA), oil (9600 KL) and bentonite (9000TPA). The power requirement is 4.5 KVA and will be met from OPTCL. The water requirement is 12 m<sup>3</sup>/hr which will be met from Kadal river and rain water harvesting pond.

The pellet plant will be equipped with ESP and bag filter. Stack of adequate height will be provided. ESP and bag filter dust will be recycled in the process. Used oil will be sold to registered recyclers.

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

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. Copies of iron ore/coal linkage documents
4. A line diagram/flow sheet for the process and EMP
5. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
6. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
7. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
8. Break up of small, medium and large farmers from whom the land is being acquired. If small farmers are involved, a detailed R&R plan.
9. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing land use / land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc. in 10 km of the project site.
10. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste

- disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
11. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates should also be included.
  12. Details and classification of total land (identified and acquired) should be included.
  13. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
  14. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
  15. Permission and approval for the use of forest land and recommendations of the State Forest Department regarding impact of proposed expansion on the surrounding reserve forests, if applicable, should be included.
  16. A list of industries containing name and type in 10 km radius shall be incorporated.
  17. Residential colony should be located in upwind direction.
  18. List of raw material required and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
  19. Studies for slurry, sludge material and solid waste generated should also be included, if the raw materials used has trace elements and a management plan.
  20. Manufacturing process details for all the process units should be included.
  21. Possibility of installation of WHRB will be explored and details included
  22. Mass balance for the raw material and products should be included.
  23. Energy balance data for all the components should be incorporated.
  24. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
  25. Sources of secondary emissions, its control and monitoring as per the CPCB guidelines should be included. A full chapter on fugitive emissions and control technologies should be provided.
  26. 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.
  27. Vehicular pollution control and its management plan should be submitted.
  28. A write up on use of high calorific hazardous wastes from all the sources in kiln and commitment regarding use of hazardous waste should be included.
  29. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
  30. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
  31. 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.
  32. Air quality modeling for all the plants proposed for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm<sup>3</sup> should be included.
  33. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be included.
  34. Ambient air quality modeling along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
    - i. Emissions (g/second) with and without the air pollution control measures
    - ii. Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height using SODAR on hourly basis
    - iii. Model input options for terrain, plume rise, deposition etc.
    - iv. Print-out of model input and output on hourly and daily average basis
    - v. A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
    - vi. Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
    - vii. Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.

- viii. No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
  - ix. Graphs of monthly average daily concentration with down-wind distance
  - x. Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
  - xi. Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
35. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
  36. One season data for gaseous emissions other than monsoon season is necessary.
  37. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
  38. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used along with a Piper and Piper Duro-V diagram. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.
  39. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
  40. Ground water modelling showing the pathways of the pollutants should be included
  41. Column leachate study for all types of stockpiles or waste disposal sites, at 20 °C-50 °C should be conducted and included.
  42. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
  43. Permission for the drawl of water from the concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
  44. A note on the impact of drawl of water on the nearby River during lean season.
  45. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
  46. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
  47. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
  48. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
  49. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
  50. The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, and lakes), sub-surface and ground water with a monitoring and management plans.
  51. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
  52. Action plan for solid/hazardous waste generation, storage, utilization and disposal. A note on the treatment, storage and disposal of all type of solid waste should be included. End use of solid waste and its composition should be covered.
  53. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
  54. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
  55. Action plan for the green belt development plan in 33 % area should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.

56. Disaster Management Plan including risk assessment & damage control needs to be addressed and included.
57. Details regarding expected Occupational & Safety Hazards. Protective measures for Occupational Safety & Health hazards so that such exposure can be kept within permissible exposure level so as to protect health of workers. Health of the workers with special reference to Occupational Health. Plan of exposure specific health status evaluation of workers; pre placement and periodical health status of workers; plan of evaluation of health of workers by pre designed format, chest x ray, Audiometry, Spirometry Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations and plan of monthly and yearly report of the health status of workers with special reference to Occupational Health and Safety.
58. Corporate Environment Policy
  - i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
  - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
  - iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
59. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
60. A note on identification and implementation of Carbon Credit project should be included.
61. Total capital cost and recurring cost/annum for environmental pollution control measures.
62. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
63. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

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 in Regional languages should be provided.
- iv) The letter/application for environmental clearance should quote the MOEF file No. and also attach a copy of the letter.
- v) The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi) The 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 should also be followed.
- viii) The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI) / National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc.

It was decided that 'TORs' prescribed by the Reconstituted Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report shall be submitted to the Odisha Pollution Control Board for public hearing. The issues emerged and response to the issues shall be

incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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

**10.6.4 Modification cum expansion from existing 75,000 TPA Integrated Steel Plant and 14 MW Power Plant to 500,000 TPA Integrated Steel Plant and 84 MW Power Plant at village Lamloi, Tehsil Rajgangpur, Sundargarh Odisha by M/s OCL Iron and Steel Limited- regarding ToRs.**

The project authorities along with their consultant (M/s Global Experts, Bhubaneswar) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA/EMP report. The steel plants are listed at S.No. 3(a) in primary metallurgical industry under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s OCL Iron and Steel Limited have proposed for modification cum expansion of existing integrated steel project by setting up of 2x350 TPD DRI & 1x300 TPD DRI plant (in place of 2x500 DRI PLANT), 1x100T EAF (in place of 3x15 T IF), and 0.5 MTPA Rolling Mill (in place of 0.5 MTPA Rolling Mill) and expansion of CFBC capacity from 40 MW to 50 MW at village Lamloi, Tehsil Rajgangpur, Sundargarh Odisha. The proposed modification cum expansion will be carried out within the existing plant premises of 341.6 acres. No Forest land is involved. No national park/wild life sanctuary/ecologically sensitive area is located within 10 km radius of the project site. Shankh river is located at a distance of 12 km from the project site. The longitude and latitude of the project site is 84°33' 30" E and 22° 13'42" N respectively. Total cost for the modification cum expansion project is Rs. 1705.30 Crores. No court cases/litigation is pending against the project.

The status of Environmental Clearance obtained by project authorities, details of the operational units and proposed modification cum expansion are as given below:-

FACILITIES	Environmental Clearance Obtained vide MoEF letter No. J-11011/160/2010-IA-II(I) dated 29.03.2012	Revision in Project Configuration applied to MoEF vide our letter No OISL-D/EXP-ENV/01 dated 04.03.2013		
	Configuration after expansion	Proposed expansion [REVISED]	Configuration after expansion [REVISED]	Reasons for changes
Coal Washery	1x50 TPH		1x50 TPH [Existing]	No Change
	1x300 TPH		1x300 TPH	
DRI Plant	4x100 TPD		4x100 TPD [Existing]	No change in approved capacity. Only change in configuration for better operational flexibility.
	2x500 TPD	2x350 TPD & 1x300 TPD [in place of 2x500 TPD]	2x350 TPD & 1x300 TPD	
<b>Steel Melt Shop</b>				EAF, LF, VD, AOD for alloy steel production for better economic viability and market demand. Also, proposed revised configuration shall consume entire DRI production.
Induction Furnace	2x12 T		2x12 T [Existing]	
	4x15 T	1x15 T [in place of 4x15 T]	1x15 T	
Electric Arc Furnace	Nil	1x100 T	1x100 T	
Ladle Furnace	1x14 T		1x14 T [Existing]	

FACILITIES	Environmental Clearance Obtained vide MoEF letter No. J-11011/160/2010-IA-II(I) dated 29.03.2012	Revision in Project Configuration applied to MoEF vide our letter No OISL-D/EXP-ENV/01 dated 04.03.2013		
	Configuration after expansion	Proposed expansion [REVISED]	Configuration after expansion [REVISED]	Reasons for changes
	1x30 T	1x100 T [in place of 1x30 T]	1x100 T	
Vacuum Degassing	Nil	1x100 T	1x100 T	
AOD	Nil	1x100 T	1x100 T	
Billet Caster	1x2 strand		1x2 strand [Existing]	
	1x3 strand	1x4 strand	1x4 strand	
Rolling Mills	0.2 MTPA	0.125 MTPA TMT +0.375 MTPA Alloy Rounds [in place of 0.2 MTPA]	0.125 MTPA TMT +0.375 MTPA Alloy Rounds	
WHRB	8 MW		8 MW [Existing]	
	20 MW	20 MW	20 MW	
AFBC /	6 MW		6 MW [Existing]	To consume plant waste/middlings and meet power requirement.
CFBC	40 MW	50 MW [in place of 40 MW]	50 MW	

Coal (2240000 TPA), iron ore (672000 TPA), scrap procurement (210000TPA), Dolomite (32000 TPA), burnt lime(41000 TPA), ferro alloys (9500 TPA) and furnace oil (20000 TPA) are the raw materials that will be used. The water requirement is 10600 KLD will be sourced from Shankh river. The power requirement will be met from captive power plant.

To control the air emissions, adequate dust extraction measure at different raw material handling sites, adequate capacity of ESP & Bag houses at different point source emissions, dust suppression system using Water Sprinklers and separate haulage road with water sprinkling for transportation vehicles will be provided. The wastewater generated will be reused after adequate treatment. Middlings and kiln char will be used in FBC CPP. SMS scrap will be recycled in the process.

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

1. Executive summary of the project
2. Iron ore/Coal linkage documents
3. Photographs of the existing and proposed plant area
4. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
5. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
6. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
7. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s)
8. A line diagram/flow sheet for the process and EMP

9. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
10. A copy of the mutual agreement for land acquisition signed with land oustees.
11. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. A photograph of the site should also be included.
12. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
13. Topography of the area should be given clearly indicating whether the site requires any filling. If so, details of filling, quantity of fill material required, its source, transportation etc. should be given.
14. Location of national parks/wildlife sanctuary/reserve forests within 10 km. radius should specifically be mentioned. A map showing land use/land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.
15. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
16. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates should also be included.
17. Details and classification of total land (identified and acquired) should be included.
18. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
19. Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department.
20. A list of industries containing name and type in 25 km radius should be incorporated.
21. Residential colony should be located in upwind direction.
22. List of raw material required, analysis of all the raw materials and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
23. Petrological and Chemical analysis and other chemical properties of raw materials used (with GPS location of source of raw material) i.e. ores, minerals, rock, soil, coal, iron, dolomite quartz etc. using high definition and precision instruments mentioning their detection range and methodology such Digital Analyzers, AAS with Graphite furnace, ICPMS, MICRO-WDXRF, EPMA, XRD, Nano studies or at least as per I30-10500 and WHO norms. These analysis should include trace element and metal studies like Cr (vi) Ni, Fe, As, Pb, Zn, Hg, Se, S etc. Presence of radioactive elements (U, Th etc.), if applicable, should also be included.
24. Petrography, grain size analysis and Major element analysis of raw material and soil from project site and raw material should be done on the same parameters along with analysis for SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, MgO, MnO, K<sub>2</sub>O, CaO, FeO, Fe<sub>2</sub>O<sub>3</sub>, P<sub>2</sub>O<sub>5</sub>, H<sub>2</sub>O, CO<sub>2</sub>.
25. If the rocks, ores, raw material has trace elements their petrography, ore microscopy, XRD, elemental mapping EPMA, XRF is required to quantify the amount present in it and hence future risk involved while using it and management plan.
26. Action plan for excavation and muck disposal during construction phase.
27. Studies for fly ash, muck, slurry, sludge material disposal and solid waste generated, if the raw materials used has trace elements and a management plan should also be included.
28. Manufacturing process details for all the plants should be included.
29. Mass balance for the raw material and products should be included.
30. Energy balance data for all the components of steel plant including proposed power plant should be incorporated.
31. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
32. Data generated in the last three years i.e. air, water, raw material properties and analysis (major, trace and heavy metals), ground water table, seismic history, flood hazard history etc.
33. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) should be

- collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
34. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
  35. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
  36. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
  37. Air quality modelling for steel plant for specific pollutants needs to be done. APCS for the control of emissions from the kiln and WHRB should also be included to control emissions within 50 mg/Nm<sup>3</sup>.
  38. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be included.
  39. Ambient air quality modelling along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
    - i. Emissions (g/second) with and without the air pollution control measures
    - ii. Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height) on hourly basis
    - iii. Model input options for terrain, plume rise, deposition etc.
    - iv. Print-out of model input and output on hourly and daily average basis
    - v. A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
    - vi. Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
    - vii. Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
    - viii. No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
    - ix. Graphs of monthly average daily concentration with down-wind distance
    - x. Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
    - xi. Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
  40. A plan for the utilization of waste/fuel gases in the WHRB for generating power have to be set out.
  41. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided. The alternate method of raw material and end product transportation should also be studied and details included.
  42. One season data for gaseous emissions other than monsoon season is necessary.
  43. 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.
  44. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
  45. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included. Information regarding surface hydrology and water regime should be included.
  46. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
  47. Ground water modelling showing the pathways of the pollutants should be included
  48. Column leachate study for all types of stockpiles or waste disposal sites at 20°C-50°C should be conducted and included.
  49. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and

groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.

50. Permission for the drawl of water from the State Irrigation Department or concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
51. A note on the impact of drawl of water on the nearby River during lean season.
52. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
53. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean River discharge as well as flood occurrence frequency.
54. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
55. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
56. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
57. Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from any other source should be included.
58. The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, and lakes), sub-surface and ground water with a monitoring and management plans.
59. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
60. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly slag from all the sources, char and fly ash. Copies of MOU regarding utilization of ash should also be included.
61. Details of evacuation of ash, details regarding ash pond impermeability and whether it would be lined, if so details of the lining etc. need to be addressed.
62. A note on the treatment, storage and disposal of all type of slag should be included. Details of secured land fill as per CPCB guidelines should also be included.
63. End use of solid waste and its composition should be covered. Toxic metal content in the waste material and its composition should also be incorporated particularly of slag.
64. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
65. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
66. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
67. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
68. Occupational health:
  - a. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
  - b. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
  - c. Annual report of health status of workers with special reference to Occupational Health and Safety.
  - d. Action plan for the implementation of OHS standards as per OSHAS/USEPA.

- e. Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
69. Corporate Environment Policy
- i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
  - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
  - iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
70. 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.
71. Impact of the project on local infrastructure of the area such as road network and whether any additional infrastructure needs to be constructed and the agency responsible for the same with time frame.
72. Environment Management Plan (EMP) to mitigate the adverse impacts due to the project along with item wise cost of its implementation. Total capital cost and recurring cost/annum for environmental pollution control measures should be included.
73. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines must be prepared.
74. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on public hearing issues and item-wise details along with time bound action plan should be included. Socio-economic development activities need to be elaborated upon.
75. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart.
76. A note on identification and implementation of Carbon Credit project should be included.
77. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof should also be included.

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 in Regional languages should be provided.
- iv. The letter/application for environmental clearance should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The 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 should also be followed.
- viii. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI) / National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc.

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

Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

The TORs prescribed shall be valid for a period of two years for submission of the EIA/EMP reports along with Public Hearing Proceedings.

10.6.5 Carbon Black (1,50,000 MTPA) and Captive Power (45 MW) at Village Menakur, Taluka Naidupeta, District SPS Nellore, Andhra Pradesh by M/s Hi-Tech Carbon- regarding TORs.

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

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

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

M/s Bharat Oman Refineries Limited (BORL) have proposed for expansion of Refinery by Debottlenecking (6 MMTPA to 7.5 MMTPA crude processing) at Village Agasode, Tehsil Bina, District Sagar, Madhya Pradesh. Environmental clearance was granted vide MoEF letter No. J-11011/21/94-IA II (I) dated 16th February, 1995 to M/s Bharat Oman Refineries Limited for 6 MMTPA Refinery. No additional land is required. The cost of project is Rs. 1950 Crore. Following is the configuration of the existing refinery and after debottlenecking:

S.N.	Unit	Existing Capacity (MMTPA)	Capacity after Debottlenecking (MMTPA)
1	Crude/Vacuum Distillation	6.0	7.5
2	Integrated Full Conversion Hydrocracker and Diesel Hydrotreater	1.952/1.637	2.537/2.128
3	Delayed Coker Unit	1.357	1.76
4	Hydrogen Unit	0.077	0.096
5	Naphtha Hydrotreater	1.0	1.25
6	CCR Reformer Unit	0.54	0.76
7	Isomerization Unit	0.31	0.387
8	Sulphur Recovery Unit	2x180 MTPD	3x180 MTPD
9	SWS I & II	125 T/hr & 49 T/hr	156 T/hr & 61 T/hr
10	Amine Regeneration Unit	473 T/hr of lean amine	591 T/hr of lean Amine
11	ATF Mercox	0.55	0.55
12	LPG treating Unit	0.122	0.152

Additional Sulphur recovery unit will be installed. Additional water requirement from Betwa River will be 0.66 MGD. Additional effluent generation will be 50 m<sup>3</sup>/hr and treated in existing ETP. Additional power requirement from CPP and grid will be 20 MW. Additional oily sludge will be reprocessed in Delayed Coker Unit (DCU).

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of EIA/EMP subject to submission of the above mentioned addl. information:

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30th May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
2. Executive summary of the project.

3. Project Description and Project Benefits.
4. Site details including satellite imagery for 5 km around the site.
5. A list of industries within 10 km radius of the project.
6. Details of facilities alongwith utilities to be provided for the proposed project.
7. Manufacturing process details alongwith the chemical reactions and process flow diagram.
8. List of products alongwith the production capacities.
9. Detailed list of raw material required and source, mode of storage and transportation.
10. Details of the storage and technical specifications with safety aspects & standards w.r.t existing unit. Is there additional storage required for the proposed expansion.
11. Proposal for safety buffer zone around the proposed site with map.
12. Details indicating National Park/Wild life Sanctuary/Eco sensitive area/reserve forest within 10 Km.
13. Land use along with maps & cropping pattern, vegetation, ecology, flora & fauna
14. Demography & socio-economics of the area.
15. Baseline data collection for air, water and soil for the period of 3 months except monsoon for :
  - i. Ambient air quality monitoring for PM2.5, PM10, SO2, NOx, CO.
  - ii. Background levels of hydrocarbons (methane & non-methane HC) and VOCs.
  - iii. Soil sample analysis.
  - iv. Base line underground and surface water quality in the vicinity of project.
  - v. Climatology & meteorology including wind speed, wind direction, temperature, rainfall etc.
  - vi. Measurement of noise levels.
16. Give existing status of stack emission, raw water requirement, treated effluent quantity & quality data, noise pollution and solid waste management in the existing units.
17. Action plan to achieve smokeless flare should be included.
18. Details of Sulphur balance in the existing refinery unit. Additional SO2 emissions due to the proposed expansion.
19. Unit-wise air pollution control devices to be installed.
20. Details of water consumption and source of water supply, waste water generation, treatment and utilization of treated water generated from the facilities and effluent disposal and measures for release of effluent in case of fire. Water Balance chart for existing and proposed expansion project.
21. Details of existing and proposed effluent treatment plant alongwith water quality of inlet and outlet of ETP.
22. Action plan to reduce wastewater discharge from the all existing units.
23. Efforts shall be made to make use of rain water harvested. Capacity of the water reservoir should be created to meet the water requirement for 2-3 months.
24. Detailed solid waste generation, collection, segregation, its recycling and reuse, treatment and disposal.
25. Note on compliance to the recommendations mentioned in the CREP for oil refineries and petrochemical industries.
26. A note on implementation of new refinery standards for refineries.
27. Quantification of oil sludge generation from the existing and proposed refinery and management of the oil sludge in the existing refinery. Details of temporary storage for the oil sludge.
28. Details of catalyst waste generated from the refinery along with temporary storage facility at site. Action plan for disposal of the catalyst solid waste.
29. Status of existing secured landfill sites. Design details as well as ground water monitoring around the project site.
30. Details of membership of TSDF for hazardous waste disposal.
31. Assessment of impact on air, water, soil, solid/hazardous waste and noise levels.
32. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
33. Details of proposed preventive measures for leakages and accident.
34. Details of Vapour Recovery Systems in the refinery.
35. Earmarking of area for parking of Lorries at a remote location to avoid congestion.
36. Traffic management plan with adequate width of approach road to avoid congestion and to have safe exit in emergencies.
37. Type of seismic zone.
38. Full Quantitative Risk Assessment for the entire Refinery considering the existing Plant and proposed expansion which shall cover:
  - a. Identification of hazards
  - b. Consequence Analysis
  - c. Determination of Individual Risk and Societal Risk

- d. Proposed measures for risk reduction to ALARP Region.
- 54. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
- 39. Details including existing green belt developed. Action plan for development of green belt in 33%. Layout plan for greenbelt.
- 40. Total capital cost and recurring cost/annum for environmental pollution control measures. Break up details should also be included.
- 41. Details of environmental management cell alongwith the qualification and duties of all the personals involved.
- 42. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
- 43. Environmental monitoring programme with details of online stack monitoring system as well as continuous ambient air quality monitoring system. Calibration methods adopted for the automatic monitoring station.
- 44. Details of Corporate Social Responsibility (CSR) including sufficient budgetary provision for health improvement, education, water and electricity supply etc. in and around the project.
- 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. Corporate Environmental Responsibility
  - (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
  - (c ) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
  - (d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
- 47. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
- 48. A tabular chart indicating point-wise compliance of the TOR.

The following general points should be noted:

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

It was decided that TORs prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA/EMP report for the above mentioned project in addition to all the relevant information as per the Generic Structure of EIA given in Appendix III and IIIA in the EIA

Notification, 2006. The draft EIA/EMP report should be submitted to the MP Pollution Control Board for conducting public hearing/consultation. The issues emerged and response to the issues raised during public hearing should be incorporated in the EIA report. The final EIA/EMP with public hearing should be submitted to the Ministry for obtaining environmental clearance.

10.6.7 Expansion of Agro/Chemical Intermediates Manufacturing Unit at Plot No.CH-3, GIDC Industries Estate, Dahej, Taluka Vagra, District Bharuch, Gujarat by M/s Meghmanni Unichem LLP- regarding TORs.

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

M/s Meghmani Unichem LLP have proposed for expansion of Agro/Chemical Intermediates Manufacturing Unit at Plot No.CH-3, GIDC Industries Estate, Dahej, Taluka Vagra, District Bharuch, Gujarat. Total plot area is 10924.25 m<sup>2</sup>. Cost of project is Rs.45 Crore. Following products will be manufactured:

S.N.	Product	Existing (MTPM)	Proposed (MTPM)	Total (MTPM)
1	Para Amino Phenol	300	900	1200
2	Paracetamol	1250	0	1250
3	Ortho or Para Cumidine	0	120	120
By-product				
1	Diluted Acetic Acid	1750	0	1750

Existing gas fired boiler (10 TPH) will be used. Water requirement for GIDC water supply will be increased from 189 m<sup>3</sup>/day to 433.33 m<sup>3</sup>/day after expansion. Effluent generation will be increased from 109 m<sup>3</sup>/day to 405 m<sup>3</sup>/day after expansion. Effluent will be treated in ETP. Treated effluent will be discharged into GIDC drainage line. ETP sludge will be sent to TSDF. Spent catalyst/spent oil will be sent to authorized recyclers. Dil. Acetic Acid will be sent to registered recycler. Power consumption will be 1500 KVA. It was noted that copy of Gazette Notification for industrial area and environmental clearance were not submitted.

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

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
2. Executive summary of the project
3. Justification of the project.
4. Promoters and their back ground.
5. Regulatory framework.
6. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the GPCB.
7. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
8. Project location and plant layout.
9. Infrastructure facilities including power sources.
10. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
11. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
12. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
13. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.

14. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
15. Details of the total land and break-up of the land use for green belt and other uses.
16. List of products alongwith the production capacities.
17. Detailed list of raw material required and source, mode of storage.
18. Manufacturing process details alongwith the chemical reactions and process flow chart.
19. Action plan for the transportation of raw material and products.
20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
21. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
22. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO including HC & VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
23. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
24. VOC and odour control management plan.
25. Name of all the solvents to be used in the process and details of solvent recovery system.
26. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
27. Details of water and air pollution and its mitigation plan.
28. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
29. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
30. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
31. Permission from competent Authority for the drawl of water. Water balance chart for existing and expansion project including quantity of effluent generated recycled and reused and effluent discharge.
32. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
33. Zero discharge effluent concepts to be adopted.
34. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
35. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
36. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
37. Material Safety Data Sheet for all the Chemicals are being used/will be used. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
38. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
39. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
40. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
41. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
42. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.

- vii) Details of occupational health surveillance programme.
- 43. Socio-economic development activities shall be in place.
- 44. Note on compliance to the recommendations mentioned in the CREP guidelines.
- 45. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
- 46. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
- 47. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 48. Corporate Environmental Responsibility**
  - (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
  - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
  - (d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
- 49. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
- 50. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
- 51. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.
- viii. Environmental Compliance report for all 13 industries under the group

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 in case the area under consideration does not fall in the pre 2006 notified industrial area (or) if located in the notified industrial area for which PH has already been held. 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.

#### 10.6.8 Expansion of Chlorinated Paraffin Wax (from 150 MTPM to 1500 MTPM) Manufacturing Unit at Survey No.1067/B, Village Chhatral, Kadid Road, TalukaKalol, District Gandhinagar, Gujarat by M/s Kemplast Industries – regarding TORs

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

M/s Kemplast Industries have proposed for Expansion of Chlorinated Paraffin Wax (150 MTPM) Manufacturing Unit at Survey No.1067/B, Village Chhatral, Kadid Road, TalukaKalol, District Gandhinagar, Gujarat. Plot area is 5005 m<sup>2</sup> of which greenbelt will be developed in 1691 m<sup>2</sup>. Following products will be manufactured:

S.N.	Product	Existing (MTPM)	Additional (MTPM)	After Expansion (MTPM)
1	Chlorinated Paraffin	150	1350	1500
<b>By-products</b>				
1	HCl (30% solution )	250	2500	2750
2	Sodium hypo Chloride	1.5	10.5	12
3	Calcium hypo Chloride	1.5	10.5	12

HCl absorption tower followed by water scrubber and alkali scrubber will be provided to control process emissions. Water requirement will be increased from 12.097 m<sup>3</sup>/day to 86.6 m<sup>3</sup>/day after expansion. Effluent generated in the form of diluted HCl and Calcium Hypo Chloride or Sodium Hypo Chloride, which will be sold to the actual users. DG set (100 KVA) will be installed.

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

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
2. Executive summary of the project
3. Justification of the project.
4. Promoters and their back ground.
5. Regulatory framework.
6. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the GPCB.
7. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
8. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s).
9. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
10. Project location and plant layout.
11. Infrastructure facilities including power sources.
12. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
13. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
14. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
15. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
16. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
17. Details of the total land and break-up of the land use for green belt and other uses.
18. List of products alongwith the production capacities.
19. Detailed list of raw material required and source, mode of storage.
20. Manufacturing process details alongwith the chemical reactions and process flow chart.
21. Action plan for the transportation of raw material and products.
22. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
23. 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.

24. 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>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, HCl, Cl<sub>2</sub> including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
25. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
26. Name of all the solvents to be used in the process and details of solvent recovery system.
27. Arrangement for Chlorine storage, handling and transportation. Measures to control Chlorine leakages.
28. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
29. Details of water and air pollution and its mitigation plan.
30. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
31. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
32. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
33. Source and Permission from competent Authority for the drawl of water. Water balance chart for existing and expansion project including quantity of effluent generated recycled and reused and effluent discharge.
34. Attempt to be made for reduction for usage of water.
35. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
36. Zero discharge effluent concepts to be adopted.
37. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
38. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
39. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
40. 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.
41. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
42. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
43. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
44. 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.
45. 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.
46. Socio-economic development activities shall be in place.
47. Note on compliance to the recommendations mentioned in the CREP guidelines.
48. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
49. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
50. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 51. Corporate Environmental Responsibility**

- (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
- (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
- (c ) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
- (d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
52. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
53. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart.
54. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

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

It was decided that TORs prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the Generic Structure of EIA given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report should be submitted to the Gujarat Pollution Control Board for public hearing. The issues emerged and response to the issues raised during should be incorporated in the EIA report. The final EIA/EMP alongwith Certificate of Accreditation issued by the QCI should be submitted to the Ministry for obtaining environmental clearance.

10.6.9 Synthetic Organic Chemicals Manufacturing Unit (1500 MTPA) at Khasra No.59/1/2(1-2), 2(3-14), 3(2-6), Village Nimbua, Tehsil DerraBassi, District Mohali, Punjab by M/s S. K. Solvochem Pvt. Ltd. – regarding TORs.

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

M/s S. K. Solvochem Pvt. Ltd. have proposed for setting up of Synthetic Organic Chemicals Manufacturing Unit (1500 MTPA) at Khasra No.59/1/2(1-2), 2(3-14), 3(2-6), Village Nimbua, Tehsil DerraBassi, District Mohali, Punjab. Interstate boundary (Punjab and Haryana) is located within 10 Km distance. Total plot area is 1.75 acre. Following products will be manufactured:

S.N.	Products	Capacity (MTPA)
1	2-Ethyl sodium hexonate	500
2	Acelofenic	150
3	Cloxacillin sodium	100
4	Ofloxacin	150
5	6-Amino pencillanic acid	150

6	Cephalexin mono-hydrate	100
7	Pentoprozole	50
8	Atenolol	150
9	Clarithromycin	150

Wet scrubber will be provided to control process emissions. Water requirement from ground water source will be 40 m<sup>3</sup>/day. Effluent will be treated in ETP. DG set (250 KVA) will be installed. Boiler ash generation will be 2.132 TPD.

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

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework.
5. A map indicating location of the project and distance from severely polluted area.
6. Project location and plant layout.
7. Infrastructure facilities including power sources.
8. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
9. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
10. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
11. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
12. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
13. Details of the total land and break-up of the land use for green belt and other uses.
14. List of products alongwith the production capacities.
15. Detailed list of raw material required and source, mode of storage.
16. Manufacturing process details alongwith the chemical reactions and process flow chart.
17. Action plan for the transportation of raw material and products.
18. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
19. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
20. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, NH<sub>3</sub> including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
21. Details of water and air pollution and its mitigation plan
22. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
23. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
24. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
25. Name of all the solvents to be used in the process and details of solvent recovery system.
26. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
27. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
28. Permission from CGWA/SGWA for the drawl of 40 m<sup>3</sup>/day ground water. Water balance chart including quantity of effluent generated recycled and reused and effluent discharge.
29. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
30. Zero discharge effluent concepts to be adopted.
31. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).

32. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
33. Material Safety Data Sheet for all the Chemicals are being used/will be used.
34. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
35. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
36. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
37. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
38. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
  - vii) Details of occupational health surveillance programme.
39. Socio-economic development activities shall be in place.
40. Note on compliance to the recommendations mentioned in the CREP guidelines.
41. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
42. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
43. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 44. Corporate Environmental Responsibility**
  - (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
  - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
  - (d) Does the company have a system of reporting of non-compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
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 issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
47. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

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

- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

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

#### 10.6.10 Expansion of Grain based Distillery (from 60 KLPD to 70 KLPD) at Kalukuntia Village, ManopadMandal, District Mahboobnagar, Andhra Pradesh by M/s Nadhi Bio-Products Ltd. – regarding TORs

The project authorities and their consultant gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP report. All non-molasses based distilleries (>30 KLD) are listed at S.N. 5(g) (i) (ii) under category 'A' and appraised at Central level.

M/s Nadhi Bio-Products Ltd. have proposed for expansion of grain based distillery (from 60 KLPD to 70 KLPD) at Kalukuntia Village, ManopadMandal, District Mahboobnagar, Andhra Pradesh. Total land acquired is 24 acres. MoEF vide letter no. J-11011/675/2009-IA II (I) dated 23<sup>rd</sup> December, 2010 has granted Environmental clearance for grain based Distillery 60 KLPD. Public hearing was held on 27<sup>th</sup> May, 2010. The cost of expansion project is Rs. 5.00 Crore. The project proponent informed that the boiler (25 TPH) is proposed for 60 KLPD distillery, which will cater the steam requirement for 70 TPD distillery. Therefore, excess steam/energy from existing boiler will be utilized. The fresh water requirement from Tungabhadra River will be 845 m<sup>3</sup>/day. No additional water will be required for expansion. No additional effluent will be generated. The project is based on zero effluent discharge concept. The thin slop will be treated in MEE to concentrate the solids to 30 % w/w. Thick slop from MEE and wet cake from decanter will be sold as cattle feed or taken to dryer to concentrate to 90 % solids. DDGS will be sold as cattle feed.

After deliberations, the Committee desired following additional information:

1. List of existing distillery units in the study area alongwith their capacity and sourcing of raw material.
2. Details of proposed products alongwith manufacturing capacity.
3. Details of raw materials, its source & availability of all raw materials including cereal grains requirement.
4. Sources and quantity of fuel (rice husk/coal etc.) for the boiler. Measures to take care of SO<sub>2</sub> emission. Stack height should be based on maximum sulphur content in the coal. Environmental impact of fuel burning.
5. Storage facility for raw materials, prepared alcohol, fuel and fly ash. Quantity of DGGS formed.
6. Ground water quality around proposed spent wash storage lagoon and the project area.
7. Details of water requirement, water balance chart for grain based Distillery and co-generation plant. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
8. Fresh water requirement should be restricted upto 10 Kl/Kl of alcohol for grain based distillery
9. Permission of withdrawal of water from competent authority.
10. Proposed effluent treatment system for grain based distillery (spent wash and spent lees) alongwith utility wastewater including CPP and scheme for achieving zero discharge.

#### 10.6.11 Expansion of Fertilizer Plant by adding Ammonia (2200 TPD) and Urea (3850 TPD) at Village Piprola/Kanth, Tehsil Sadar, District Shahjahanpur, Uttar Pradesh by M/s KRIBHCO Shyam Fertilizers Ltd – regarding TORs.

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

M/s KRIBHCO Shyam Fertilizers Ltd have proposed for Expansion of Fertilizer Plant by adding Ammonia (2200 TPD) and Urea (3850 TPD) at Village Piprola/Kanth, Tehsil Sadar, District Shahjahanpur, Uttar Pradesh. Total existing area is 780.75 acres. No additional land is required. Proposed expansion will be carried out in the existing premises. Total cost of project is Rs. 4132 Crore. Existing plant has an installed capacity of 864600 MTPA (2x 1310 MTPD) of Urea and 501600 MTPA (1x 1520 MTPD) of ammonia. Following facilities will be created :

S.N.	Plant & Facilities	Provision
1.	Ammonia Plant	2200 MTPD
2.	Urea Plant	3580 MTPD
3.	NG/LNG Transportation	By Pipeline
4.	Gas Metering Station	
5.	Product Storage & Handling Facilities	
	a) Urea Silo b) Empty Bag Storage c) Bagging Plant	30,000 MT (6+2) Slate of 60 TPH each
6.	Cooling Tower	
	a) Ammonia Plant b) Urea Plant	24000m <sup>3</sup> /hr 21000m <sup>3</sup> /hr
7.	Ammonia Storage	5,000 MT
8.	Power Generation & Supply	
	a) Power Generation (GTG) b) Substation For receiving power from State Grid c) Emergency D.G.Set	1x25 MW (ISO)  1x2000 kVA
9.	Steam Generation Facilities	
	HRSG (GT set)	100 MT/hr
10.	Water Supply Treatment & Distribution	
	a) Raw Water Supply System b) DM Water Plant c) Condensate Polishing Unit	From Bore Wells  (2+1)x150m <sup>3</sup> /hr (2+1)x200m <sup>3</sup> /hr
11.	Yard Piping	As per requirement
12.	Transportation Facilities a) Railway Siding a) Locomotive b) Road Transport	To be developed. 1 x 1200 HP
13.	Instrument Air Facilities a) Compressor (Centrifugal) b) Drying Unit c) Receiver	(1+1)x3000 Nm <sup>3</sup> /hr  (1+1)x3000 Nm <sup>3</sup> /hr
14.	Inter Gas Generation	600 Nm <sup>3</sup> /hr of N <sup>2</sup> . N <sup>2</sup> Liquid Storage: 30 m <sup>3</sup> vaporizer
15.	Safety & Fire Fighting System including fire water ring with Hydrant System	
16.	Effluent Treatment Plant (ETP) & Sewage Treatment Plant (STP)	
17.	Auxiliary services, workshop equipment, laboratory equipment, weighbridge, fire engine, continuous monitoring system, NDT equipment, telephone & telecommunication, Public Address System, etc.	
18.	General & Welfare Facilities	
19.	Construction Equipment	
20.	Non-plant Buildings	

Natural gas will be used as raw material. Dedusting system will be provided in the bagging plant to control the emissions. Additional fresh water requirement from ground water source will be 1122 m<sup>3</sup>/hr. Urea plant's process condensate and Ammonia Plant process condensate will be treated through hydrolyser/stripper and treated effluent will be recycled to DM plant and shall be used as boiler feed water after polishing. Domestic effluent will be treated in STP. Hazardous waste generated

in the plants such as spent catalyst, used oil etc will be sold to authorized vendor/recyclers. It was noted that gazette Notification for the industrial area was not submitted.

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

- 1 A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
- 2 Executive summary of the project
- 3 Justification of the project.
- 4 Promoters and their back ground.
- 5 Regulatory framework.
- 6 Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the UPPCB.
- 7 Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
- 8 Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s).
- 9 Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
- 10 Project location and plant layout.
- 11 Details of the existing fertilizer plant.
- 12 Infrastructure facilities including power sources for the proposed expansion.
- 13 Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
- 14 Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
- 15 Present land use based on satellite imagery for the study area of 10 km radius.
- 16 Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
- 17 Details of the total land and break-up of the land use for green belt and other uses.
- 18 List of products alongwith the production capacities.
- 19 Manufacturing process details alongwith the chemical reactions and process flow chart.
- 20 Detailed list of raw material required and source, mode of storage and transportation.
- 21 Ammonia storage tank shall not exceed 5000 T.
18. A note on the long term strategy for the gas availability. Alternative, if the gas is not available.
- 22 A note on the viability of the project in absence of non availability of gas.
18. Action plan for the transportation of raw materials and products.
19. Ambient air quality monitoring and stack emission data for the relevant parameters including PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, NH<sub>3</sub>, HC (Methane and Non-methane) and VOCs for all the stacks for the existing fertilizer plant.
20. Data for surface and ground water, treated effluent quality data, noise pollution and solid waste management for the existing plant should also be included.
21. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
22. Plant-wise air pollution control measures proposed for the control of emissions from all the sources particularly uncontrolled NO<sub>x</sub> emission and method to control NO<sub>x</sub>.
23. Name of all the solvents to be used in the process and details of solvent recovery system.
24. Details of water and air pollution and its mitigation plan.
25. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
26. An action plan to control and monitor secondary fugitive emissions from all the sources.
27. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
28. Details of water requirement for existing and proposed expansion. Water balance chart for existing and proposed expansion including water intake, effluent generated, recycled and reused and discharged is to be provided.
29. Action plan to reduce fresh water requirement. Methods adopted/to be adopted for the water conservation should be included.

30. Layout plan indicating surface water collection. Internal water supply arrangement to be submitted.
31. 'Permission' for the drawl of existing and proposed water requirement from the Competent authority.
32. Design details of the ETP and STP as well as air pollution control equipments (Bag filters/ wet scrubber etc.). Installation of Continuous TOC analyzer to holding tank before discharge of effluent.
33. Action plan for 'Zero' discharge of effluent should be included.
34. Ground water monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
35. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
36. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste.
37. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
38. Plan for the implementation of the recommendations made for the fertilizer plants in the CREP guidelines must be prepared and included.
39. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
40. An action plan to develop green belt in 33 % area. Layout map for existing and proposed greenbelt.
41. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
42. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
  - vii) Details of occupational health surveillance programme.
43. Socio-economic development activities should be in place.
44. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
45. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
- 46. Corporate Environmental Responsibility**
  - (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
  - (c ) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
  - (d ) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
47. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
48. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
49. A tabular chart with index for point wise compliance of above TORs.

The following general points should be noted:

- i. All documents should be properly indexed, page numbered.

- ii. Period/date of data collection should be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter and that raised in Public Hearing/consultation alongwith duly filled in Industry Sector questionnaire. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report where the above issues and the issues raised in the Public hearing have been incorporated.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

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

10.6.12 New project and expansion of existing specialty chemicals (11400 MT/A) at Plot No.K-38, Village Kirmiti, TalukaHigada, District Nagpur, Maharashtra by M/s Inventys Research Company Pvt. Ltd– regarding TORs.

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

10.6.13 Storage Capacity Realignment at the existing Salwas Depot near Jodhpur (Rajasthan) to receive product from Mundra Delhi Pipeline by M/s HPCL– regarding Amendment in EC.

M/s HPCL have proposed for amendment in the existing environmental clearance dated 20<sup>th</sup> June, 2005 to include the Storage Capacity Realignment at the existing Salwas Depot near Jodhpur (Rajasthan) to receive product from Mundra Delhi Pipeline. Environmental clearance was accorded to M/s HPCL for laying of multi-product pipeline from Mundra to Delhi on 20<sup>th</sup> June, 2005. EC was further amended for augmentation of its Ajmer/Jaipur Terminal Storage facilities vide MoEF letter no. J-11011/93/2005-IA II (I) dated 8<sup>th</sup> April, 2010.

Existing Salawas depot ( near Jodhpur) is operational for last 14 years, and caters to the MS, HSD and SKO petroleum product requirement of Jodhpur, Jaisalmer, Jalore, Barmer, Sirohi, Pali districts of Rajasthan. This depot is presently receiving the products Mundra-Delhi Pipeline Tap-off Terminal at Ajmer, through road tankers. It involves complex movement of 61700 trips X 450 Kms. of tank trucks per year. Now, project proponent has proposed for laying of multiproduct petroleum pipeline from Awa to Salawas, as a spur line of Mundra Delhi pipeline (92 Km) considering various environmental advantages. In order to operationalize the product movement, it is essential to have desired quantum of storage of all the products to be received at Salawas. The total existing storage capacity of the Salawas depot is 27000 KL. Now, the storage of petrol is inadequate to receive the quantum through the pipeline for operational necessity and therefore part of the diesel tank is being proposed for realigning for storage of MS from existing diesel facilities without any construction of additional tankages. However, the proposed spur pipeline from Awa to Salawas does not pass through any national parks/sanctuaries/coral reefs /ecological sensitive areas. Therefore no environmental clearance is required for proposed pipeline.

Earlier, the project proponent had submitted the proposal for construction of additional tankages for class A Motor Spirit in Salawas Depot. The proposed project is located in one of critically polluted area identified by the Central Pollution Control Board and listed at S.N. 23 of the 'Office Memorandum' issued by the Ministry vide letter dated 13<sup>th</sup> January, 2010 (available on the Ministry's website <http://www.envfor.nic.in>). Moratorium on the consideration of the project located in Salawas, Jodhpur, Rajasthan is not lifted so far. The proposal was placed before the EAC (I) held during 24<sup>th</sup>–

25<sup>th</sup> September, 2012 and the committee did not consider the proposal in light of above mentioned "Office Memorandum" dated 13<sup>th</sup> January, 2010. As per para 4.1.2 of O. M dated 13<sup>th</sup> January, 2010, projects of public interest, such as projects of national importance, pollution control, defence and security with prior approval of the Competent Authority will continue to be appraised in accordance with the procedure prescribed under EIA Notification, 2006 .

Now, the project proponent has revised the project proposal and scale down additional tankages to zero and opted for realignment of existing storage tanks with no construction. The project proponent informed that the realigned tankages of MS will be within the threshold limit as prescribed in MSIHC rules schedule II of column III.

After deliberations, the Committee desired following additional information:

1. Risk assessment report for Salawas Depot and proposed pipeline.
2. Disaster Management Plan.
3. Safety plan for the proposed modification.
4. Action plan on MB Lal Committee's recommendation on installation of Oil Storages.
5. Environmental management plan for Salawas Depot

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

10.6.14 Expansion of Refinery Plant by adding refinery unit (5th Crude Train), Coal Based Power Plant, Ethylene Propylene Diene Monomer Rubber, Poly Isoprene Rubber at Jamnagar Manufacturing Division, HSEF Dept, District Jamnagar, Gujarat by M/s Reliance Industries Ltd. – regarding TORs

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

M/s Reliance Industries Ltd. have proposed expansion of Refinery Plant by adding refinery unit (5th Crude Train), Coal Based Power Plant, Ethylene Propylene Diene Monomer Rubber, Poly Isoprene Rubber at Jamnagar Manufacturing Division, HSEF Dept, District Jamnagar, Gujarat. Plot area is 4.545 ha. Environmental clearance for setting up of 18 MMTPA Refinery Complex was issued on 15<sup>th</sup> May, 1995. Environmental Clearance for expansion of crude processing unit to 27 MMTPA was issued on 6<sup>th</sup> September, 2000. Environmental Clearance for expansion and modernization of crude processing capacity to 59.7 MMTPA and CPP (780 MW) was issued on 3<sup>rd</sup> August, 2005. Environmental Clearance for petrochemicals products slate ranging from C1 to C8 Compound, 8.5 MMTPA Lube oil cum Refinery Complex and CPP 2100 MW was issued on 30<sup>th</sup> March, 2010.

The Committee desired to conduct site visit by the Sub-committee of EAC to assess the existing environmental scenario and suggest for the additional TORs for studies. Therefore the proposal is deferred till the site visit is conducted.

10.6.15 Additional crude oil tanks ( 6 nos.) at Village Singach&Vadinar, Tehsil Lalpur and Khambhaliya, District Jamnagar, Gujarat by M/s Bharat Oman Refineries Limited– regarding TORs.

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

10.6.16 Integrated Fertilizer and Chemical Plant at Sy. No. 93, Village Jayanthipuram, Mandal Jaggiohpet, District Krishna, Andhra Pradesh by M/s VBC Fertilizers & Chemicals Ltd.- regarding TORs

The project authorities and their consultant (Bhagwati Ana Labs Ltd) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All the Fertilizer Plants are listed at S.N. 5(a) under Category 'A' and appraised at the Central level.

M/s VBC Fertilizers & Chemicals Ltd. have proposed for setting up of Integrated Fertilizer and Chemical Plant at Sy. No. 93, Village Jayanthipuram, Mandal Jaggiohpet, District Krishna, Andhra Pradesh. Total plot area is 498.93 acres. Krishna River is flowing at a distance of 2.7 Km, Paleru River is flowing at a distance of 1.8 Km. Nagarjun Sagar left bank canal is flowing at a distance of 1.12 Km. Total cost of project is Rs. 9600 Crore. No forest land is involved. Jaggayapeta Extension RF (50 m), Kunti madi R F (4.5 KM, S), Ginjupalle RF (7.5 Km), Venkatayapalem RF (8.0 Km) and Budavada RF (3.5 Km) are located within 10 Km distance. Following facilities will be created :

S.N.	Plant & Facilities	Provision
1.	Ammonia Plant	2 x 2200 MTPD
2.	Urea Plant	2 x 3580 MTPD
3.	Ammonium Nitrate	2 x 500 MTPD
4.	Nitric Acid	2 x 400 MTPD
5	Power Plant	2 x 67.5 MW

Natural gas from GAIL and coal (200 TPD) from WCL will be used as raw materials. Water requirement from Krishna & Paleru River will be 10 MGD. Power requirement from CPP will be 135 MW.

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

- 1 Executive summary of the project
- 2 Justification of the project.
- 3 Promoters and their back ground.
- 4 Regulatory framework.
- 5 Project location and plant layout.
- 6 Infrastructure facilities including power sources for the proposed expansion.
- 7 Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
- 8 Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
- 9 Present land use based on satellite imagery for the study area of 10 km radius.
- 10 Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
- 11 Details of the total land and break-up of the land use for green belt and other uses.
- 12 List of products alongwith the production capacities.
- 13 Manufacturing process details alongwith the chemical reactions and process flow chart.
- 14 Detailed list of raw material required and source, mode of storage and transportation.
18. A note on the long term strategy for the gas availability. Alternative, if the gas is not available.
- 15 A note on the viability of the project in absence of non availability of gas.
- 16 Action plan for the transportation of raw materials and products.
18. Ambient air quality monitoring and stack emission data for the relevant parameters including PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, NH<sub>3</sub>, HC (Methane and Non-methane) and VOCs for all the stacks for the existing fertilizer plant.
19. Data for surface and ground water, treated effluent quality data, noise pollution and solid waste management for the existing plant should also be included.
20. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
21. Plant-wise air pollution control measures proposed for the control of emissions from all the sources particularly uncontrolled NO<sub>x</sub> emission and method to control NO<sub>x</sub>.

22. Name of all the solvents to be used in the process and details of solvent recovery system.
23. Details of water and air pollution and its mitigation plan.
24. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
25. An action plan to control and monitor secondary fugitive emissions from all the sources.
26. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
27. Details of water requirement for proposed project. Water balance chart for proposed project including water intake, effluent generated, recycled and reused and discharged is to be provided.
28. Action plan to reduce fresh water requirement. Methods adopted/to be adopted for the water conservation should be included.
29. Layout plan indicating surface water collection. Internal water supply arrangement to be submitted.
30. 'Permission' for the drawl of existing and proposed water requirement from the Competent authority.
31. Design details of the ETP and STP as well as air pollution control equipments (Bag filters/wet scrubber etc.). Installation of Continuous TOC analyzer to holding tank before discharge of effluent.
32. Action plan for 'Zero' discharge of effluent should be included.
33. Ground water monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
34. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
35. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste.
36. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
37. Plan for the implementation of the recommendations made for the fertilizer plants in the CREP guidelines must be prepared and included.
38. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
39. An action plan to develop green belt in 33 % area. Layout map for existing and proposed greenbelt.
40. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
41. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
  - vii) Details of occupational health surveillance programme.
42. Socio-economic development activities should be in place.
43. 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. **Corporate Environmental Responsibility**
  - (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.

- (c ) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
  - (d ) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
46. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
47. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
48. A tabular chart with index for point wise compliance of above TORs.

The following general points should be noted:

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

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

#### 10.7.0 Reconsideration

10.7.1 Expansion of Fertilizer Plant at Sy. No. 20/4 K.M. Stone, Indore-Ujjain Road, Dharampuri, Village Rajoda, Tehsil-Sanwer, District Indore, Madhya Pradesh by M/s Rama Phosphates Ltd.- regarding EC-site visit report.

#### **Site visit report on M/s. Rama Phosphate Ltd at 20/4 K.M. Stone, Indore-Ujjain Road (Dharampuri), Village Rajoda, The Sanwer, Indore, M.P.**

With reference to Ministry's Letter cited above, the site visit was conducted on 3.6.2013 to find out the present status on the following aspects:

- 1 Stack emission data for SO<sub>2</sub> for the existing plant to be provided after recalibration of the monitoring kit.
- 2 Fluoride levels in the ground water.
- 3 Detailed health status of the workers and OHS plan.
- 4 Detailed water balance including input of water, water losses and output.
- 5 Documentary proof regarding source of water supply of existing unit is water tanker.
- 6 details of handling and disposal of H<sub>2</sub>SiF<sub>6</sub> liquor and separation of SiO<sub>2</sub> in existing unit and proposed expansion.
- 7 Explore the possibility by converting Sodium Silico Fluoride to H<sub>2</sub>SiF<sub>6</sub>.

Following were present during site visit:

- 1 Prof P. S. Dubey, Member, EAC (I),
- 2 Dr. Ajay Mehrotra, Director, Regional Office, MoEF, Bhopal
- 3 Sh. Achyut Mishra, Regional Officer, MPPCB, Indore

**Background:**

M/s Rama Phosphate Ltd. Indore had Presented the proposed expansion for existing fertilizer plant situated at Indore- Ujjain Raod, (Dharamपुरi) Village Rajoda, The Sanwer, Indore, M.P. in the meeting of 4<sup>th</sup> Reconstituted Expert Appraisal Committee held during 8<sup>th</sup> -9<sup>th</sup> January,2013 regarding Environmental Clearance. The unit is spread over 88,505 sq m. and manufacturing Single Super Phosphate and Sulphuric acid to the tune of 1,49,800 MT (2010-2011) & 1,46,603 MT(2011-2012) and 42,323 (2010-2011) & 54,691 MT per annum respectively. PA has valid consent under Air & Water Acts issued by MPPCB.

**Observations:**

- 1 Calibration of online SO<sup>2</sup> & HF analyzers was carried out regularly by M/s Endee Engineers Pvt.Ltd. The online reports do not show any anomaly.
- 2 The ground water monitoring was carried out at four locations including project site. Reports indicate that fluoride (as F) is less than 1.0 mg/l in the wells of surrounding three villages i.e., monitoring stations.
- 3 The detailed health status of the workers and OHS plan was shown during the visit which was found in order. It was submitted that all the employees have been provided medical facilities as per Factories Act.
- 4 The existing consumption of fresh water is around 296 KLPD which increase to 343 KLPD after proposed expansion. Presently, 12 KLPD water is recycled in the process as per details submitted.
- 5 The water supply bill was submitted which are attached as (AnnexureV)
- 6 Details of handling and disposal of H<sub>2</sub>SiF<sub>6</sub> Liquor and separation of SiO<sub>2</sub> in existing unit and proposed expansion was submitted. It was submitted that H<sub>2</sub>SiF<sub>6</sub> liquor is recycled through filter press back in to the process.
- 7 Regarding conversion of H<sub>2</sub>SiF<sub>6</sub> generated out of SSP manufacturing in to SSF (Sodium Silico Fluoride), PP confirmed that excessive water demand and generation of weak HCl handing makes this process entirely difficult from pollution control point of view. The increase in TDS after neutralization of HCl poses multiple pollution hazard problems. It was further submitted that scrubbing fluorine out of SSP manufacturing process in water and recycling 100% quantity of the same scrubbed water after filtering out its silica content through filter press back to SSP manufacturing process.
- 8 Acid plant was not found in operation during the visit.
- 9 Green belt was not found satisfactory and require sincere attention for development.
- 10 PA has submitted details of list of existing and proposed plant & machineries.
- 11 It was also learnt during the visit that PA has already planned to develop internal cemented road up to 200 m. It is recommended that remaining internal roads are to be cemented on priority basis.

It is evident from above that the case can be considered for environmental clearance for the proposed expansion, with stipulation of strict conditions as deemed fit.

**Recommendation:**

Based on the observations of the Sub Committee during the visit, the Committee recommended the project for environmental clearance subject to the following specific conditions:

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

- ii) Cyclone followed by bag filter should be provided to SSP plant and grinding section for controlling fugitive emissions.
- iii) The gaseous emissions (SO<sub>2</sub>, NO<sub>x</sub>, CO and Fluoride) and particulate matter from process stacks shall conform to the norms prescribed by the CPCB/ MP Pollution Control Board (MPPCB) from time to time. At no time, the emission levels shall go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency.
- iv) Fluoride monitoring through continuous fluoride analyzer shall be carried out in ambient air as well as stack.
- v) Internal road shall be shall be cemented on priority basis and action taken report be sent to MoEF Regional Office at Bhopal.
- vi) Total fresh water requirement from water tanker supply shall not exceed 343 m<sup>3</sup>/day. No ground water shall be used.
- vii) Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- viii) As proposed, industrial effluent shall be treated in effluent treatment plant (ETP) and recycled back in the process.
- ix) No effluent shall be discharged outside the premises and 'Zero' discharge shall be ensured.
- x) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- xi) On-site temporary storage of hazardous waste (Hydro-fluorosilic acid) shall be done as per the guidelines prescribed by MoEF/CPCB. Piezometric wells shall be installed to monitor the leaching of waste.
- xii) All the commitments made to the public during public hearing/public consultation meeting held on 20<sup>th</sup> April, 2012 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xiii) At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on public hearing issues and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program should be ensured accordingly in a time bound manner.
- xiv) A comprehensive Green belt development plan shall be developed in at least 33 % area in and around the plant as per the CPCB guidelines to mitigate the effects of air emissions in consultation with local DFO. The plan shall be submitted to the Regional Office of the Ministry at Bhopal 3 months of issue of environment clearance letter.

10.7.2 Phenol Formaldehyde Resin, Melamine Formaldehyde, Melamine Urea Formaldehyde Resin, Phenol Urea Formaldehyde Resin (60 MTPM) at Sy. No. 28, Dhameda-Solaiya Road, Village Anandpura (Solaiya), Post Solaiya, Taluka Mansa, District Gandhinagar, Gujarat by M/s Perfect Laminate – regarding EC

Project proposal was considered in the 6th Reconstituted Expert Appraisal Committee (Industry) meeting held during 5th March, 2013 – 7th March, 2013 and the Committee desired following information:

1. Collect ambient air quality data for one month.
2. Quantity of total water requirement and its break up in respect of fresh water requirement and recycled water.
3. Action plan for disposal of fly ash.

Project proponent informed that ambient air quality monitoring was carried out at 6 locations during May, 2013 and submitted baseline data indicates range of PM<sub>10</sub> (59.2–77.2 ug/m<sup>3</sup>), PM<sub>2.5</sub> (38.2–48.4 ug/m<sup>3</sup>), SO<sub>2</sub> (9.4 – 14.8 ug/m<sup>3</sup>) and NO<sub>x</sub> (16.4–24.3 ug/m<sup>3</sup>). The monitoring results are

within the NAAQS. Fresh water requirement from ground water source will be 6534.4 m<sup>3</sup>/day. Fly ash will be sent to brick manufacturers.

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

- i) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.
- ii) Bag filter alongwith stack of adequate height should be installed to lignite/ 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 6.534 m<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) Green belt should be developed in 33% of total plant area.
- 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 18<sup>th</sup> October, 2012 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhopal.
- xi) At least 5 % of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program should be ensured accordingly in a time bound manner.

10.7.3 Expansion in Dye Chemicals plant (10 MTM to 136 MTM) at Plot No.125/2, Ravi Industrial Estate, Village Bileshwarpura, P.O. Chhatrai, TalukaKalol, District Gandhinagar, Gujarat by M/s Bharat Dye Chem – regarding TOR

Project proposal was considered in the 36th Expert Appraisal Committee (Industry) meeting held during 11th-12th June, 2012 and the Committee desired copy of notification of industrial area.

Project proponent vide letter dated 29th May, 2013 has submitted a notification document related to tax. It was noted that no gazette notification indicating project located in the industrial area is submitted. Therefore, no public hearing exemption will be granted.

M/s Bharat Dye Chem have proposed for Expansion in Dye Chemicals plant (10 MTM to 136 MTM) at Plot No.125/2, Ravi Industrial Estate, Village Bileshwarpura, P.O. Chhatrai, TalukaKalol, District Gandhinagar, Gujarat. Total plot area is 3762 m<sup>2</sup>. Total project cost is Rs. 3.73 Crore. No

national park/wildlife sanctuary is located within 10 km distance. Following products will be manufactured :

S.N.	Name of Products	Quantity (MTPM)		
		Existing	Proposed	Total Quantity after expansion
1	Acid & Direct Dyes	5.0	100	105
a	Acid red – 1/18/57/97/106/131/249			
b	Acid yellow-42/151/79/49/99/110/194/220			
c	Acid orange-67/74			
d	Acid violet-54/90			
e	Direct red – 23/81/239			
2	2-Amino diphenyl 2 –Cresyl Ether	2.0	13	15.0
3	Amino Resorcine Diortho Cresyl Ether	0.5	4.5	5.0
4	2-Amino 2-4 Dichloro Diphenyl Ether	0.5	4.5	5.0
5	2-Amino 4-Chloro Diphenyl Ether	0.5	2.5	3.0
6	2-Amino Benzene Sulphone N-Ethyl Anilide	1.5	1.5	3.0

Water requirement will be increased from 2.8 m<sup>3</sup>/day to 19.5 m<sup>3</sup>/day after expansion. Effluent generation will be increased from 1.75 m<sup>3</sup>/day to 8.35 m<sup>3</sup>/day after expansion. Industrial effluent will be treated in ETP. Treated effluent will be discharged to CETP. ETP sludge, Iron Sludge and evaporation residue will be sent to TSDF. Used oil will be sent to authorized recyclers.

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

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
2. Executive summary of the project
3. Justification of the project.
4. Promoters and their back ground.
5. Regulatory framework.
6. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the SPCB.
7. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
8. Project location and plant layout.
9. Infrastructure facilities including power sources.
10. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
11. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
12. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
13. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
14. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
15. Details of the total land and break-up of the land use for green belt and other uses.
16. List of products alongwith the production capacities.
17. Detailed list of raw material required and source, mode of storage.
18. Manufacturing process details alongwith the chemical reactions and process flow chart.
19. Action plan for the transportation and storage of raw materials and products.
20. Sources and quantity of fuel (coal etc.) for the boiler. Measures to take care of SO<sub>2</sub> emission. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted, in case coal is used.

21. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
22. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
23. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, HCl, HC including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
24. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
25. Name of all the solvents to be used in the process and details of solvent recovery system.
26. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
27. Details of water and air pollution and its mitigation plan.
28. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
29. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
30. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
31. Permission from competent Authority for the drawl of water. Water balance chart for existing and expansion project including quantity of effluent generated recycled and reused and effluent discharge.
32. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
33. Zero discharge effluent concepts to be adopted.
34. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
35. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste.
36. Submit Ash management plan. MoU with cement plant for the use of fly ash.
37. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
38. Material Safety Data Sheet for all the Chemicals are being used/will be used. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
39. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
40. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
41. An action plan to develop green belt in 33 % area. Layout plan for green belt to be provided. Plant species selected will be of local/native origin
42. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
43. 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.
44. Details of occupational health surveillance programme.
45. Socio-economic development activities shall be in place.
46. Note on compliance to the recommendations mentioned in the CREP guidelines.
47. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
48. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.

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

**50. Corporate Environmental Responsibility**

(a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.

(b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.

(c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.

(d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.

51. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.

52. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.

53. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

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

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

10.7.4 Expansion of Bulk Drugs Manufacturing Unit at Gat no.350,Village Wadhirwarhe, Tehsil Igatpuri, District Nasik, Maharashtra by M/s Delta Finochem (P) Ltd- regarding EC.

Project proposal was considered in the 4<sup>th</sup> Expert Appraisal Committee (Industry) meeting held during 8<sup>th</sup>-9<sup>th</sup> January, 2013 and the Committee desired following information:

- i. Fresh monitoring report of ground water in and around the site.
- ii. Ground water monitoring report from MPCB/Central Ground Water Authority.
- iii. An adequate effluent treatment scheme

Project proponent vide letter dated 3<sup>rd</sup> April, 2013 has submitted above mentioned information. Ground water result of Maharashtra Pollution Control Board indicates BOD in the range of 1.25 mg/l to 36.0 mg/l. Since parameter of ground water is in higher side, the Committee desired to obtain view of State Pollution Control Board. The proposal is deferred till the desired information is received from SPCB.

10.7.5 Dye Intermediates (592 TPM) at Plot No.1712, 3rd phase, Village GIDC Vapi, Taluka, Pardi, District Valsad, Gujarat by M/s Sanhi Chemicals –regarding TOR

Project proposal was considered in the 4<sup>th</sup> Expert Appraisal Committee (Industry-2) meeting held during 11th-12th May, 2012 and the Committee desired following information:

1. Submit a revised treatment scheme for high TDS and low TDS effluent to be provided within factory premises instead of offsite treatment.
2. Greenbelt layout should be modified.

Project proponent vide letter dated 3<sup>rd</sup> September, 2012 has submitted additional information. EAC found additional information satisfactory.

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. A copy of Gazette Notification issued by the Govt. of Gujarat indicating location of the project in notified industrial area should be included necessarily.
8. Infrastructure facilities including power sources.
9. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
10. Project site location alongwith photographs of the project site and site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
11. Present land use based on satellite imagery for the study area of 10 km radius.
12. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
13. Details of the total land and break-up of the land use for green belt and other uses.
14. List of products alongwith the production capacities.
15. Detailed list of raw material required and source, mode of storage and transportation.
16. Manufacturing process details alongwith the chemical reactions and process flow chart.
17. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
18. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
19. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for 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.
20. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
21. Name of all the solvents to be used in the process and details of solvent recovery system.
22. Design details of ETP, incinerator, if any along with boiler, scrubbers/bag filters etc.
23. Details of water and air pollution and its mitigation plan
24. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
25. An action plan to control and monitor secondary fugitive emissions from all the sources.
26. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
27. Permission for the drawl of 57.01 m<sup>3</sup>/day water from the concerned agency. Water balance chart including quantity of effluent generated recycled and reused and discharged.
28. Action plan for 'Zero' discharge of effluent should be included.

29. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
30. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste.
31. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
32. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilize all the organic solid waste generated.
33. A copy of 'Memorandum of Understanding' (MoU) signed with coal supplier for imported coal and brick manufacturers for management of fly ash.
34. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
35. Risk assessment for storage for chemicals/solvents.
36. Material Safety Data Sheet for all the Chemicals are being used/will be used. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
37. An action plan to develop green belt in 33 % area. Layout plan of greenbelt.
38. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
39. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
  - vii) Details of occupational health surveillance programme.
40. Socio-economic development activities should be in place.
41. Note on compliance to the recommendations mentioned in the CREP guidelines.
42. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
43. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
44. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
45. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

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

It was decided that TORs prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of detailed report for the above mentioned project in addition to all the relevant information as per the Generic Structure of EIA given in Appendix III and IIIA in the EIA Notification, 2006. After detailed deliberations, the Committee exempted the public hearing as per Section 7 (i), III Stage (3), Para (i) (b) of EIA Notification 2006, subject to submission of authentic

document from the State Govt. indicating that the project is located in the notified industrial area. The final EIA/EMP report shall be submitted to the Ministry for obtaining environmental clearance.

10.7.6 Molasses based Distillery (ENA/RS/AA, 70 KLPD) Unit alongwith Cogen Power Plant (2.5 MW) at Sy. No. 79/2, 79/4, 80/1, 80/4, 86/1 Village Kenganoor and Sy No. 84/2, Pattihal KB, Taluk Bailhongal, District Belgaum, Karnataka by M/s. Lorvin Industries Ltd.– reg.

Project proposal was reconsidered in the meeting held during 31st January, 2013 -1st February, 2013 and 16th -17th May, 2013 and the Committee recommended the project proposal for environmental clearance. Project proposal was placed before the Committee due to following observations:

- i) Project proponent has submitted a proposal for setting up of plant at Sy. No. 79/2, 79/4, 80/1, 80/4, 86/1 Village Kenganoor and Sy No. 84/2, Pattihal KB in Belgaum District.
- ii) In the inspection report of State Pollution Control Board, it is reported that Sy. No. 79/2, 79/4, 80/1 of Village Kenganoor was not meeting the siting guidelines. SPCB has asked the project proponent to choose the alternative site for establishment of the proposed industry. Further, project proponent has decided to established unit at Sy. No. 84/2 of Pattihal KB Village.
- iii) Total plot area including Sy. No. 79/2, 79/4, 80/1, 80/4, 86/1 Village Kenganoor and Sy No. 84/2, Pattihal KB is 43 acres 16 gunthas.
- iv) Whereas Plot area of Sy No. 84/2, Pattihal KB is 8 acres 10 gunthas.
- v) Now, project proponent has proposed to erect the manufacturing unit on a plot area of 8 acres 10 gunthas at Sy No. 84/2, Pattihal KB. However, as per EIA/EMP report, proposed plant is proposed on area of 17.5 ha i.e. 43 acres of land.

After deliberations, the Committee desired following additional information:

- i. Clarify how the plant of same capacity can be installed on a smaller plot of 8 acres 10 gunthas land?
- ii. Submit layout map considering plot area of 8 acres 10 gunthas land.

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

#### **10.8.0 Any Other Item**

10.8.1 Expansion of Bokaro Steel Plant from 4 MT to 7 MT Crude Steel at Bokaro Steel City, Jharkhand by **M/s Steel Authority of India Ltd. – regarding extension of validity of Environment Clearance**

Environmental Clearance (EC) to the above proposal was accorded by MoEF vide letter no. J-11011/99/2007-IA II (I) dated 16.10.2008. The Project Proponent (PP) vide letter No. ECD/EMS/1-342 dated 14.3.2013 along with the updated Form I requested MoEF for extension of validity of EC. The PP also made a presentation before the Committee.

It was submitted by the proponent that the proposed project could not be established within validity period of the granted Environmental Clearance mainly because of:-

- i. Due to recession, decision taken by the SAIL board to do the expansion in two phases
- ii. Inordinate delay has occurred due to the protest raised by the local people and trade unions against the extension of the existing boundary wall, necessary for enabling construction activities for Steel Melt Shop(SMS) -III

After detailed deliberations, the Committee recommended for the extension of validity of EC by a period of five years with effect from 15.10.2013 subject to environmental safeguards.

10.8.2 Expansion of Sponge Iron Steel Plant (0.20 MTPA to 0.58 MTPA) and Steel Plant (2.00 MTPA) along with captive power plant (25 MW) at Komando, Sundergarh, Odisha by **M/s Rungta Mines Limited - regarding extension of validity of Environment Clearance**

Environmental Clearance (EC) to the above proposal was accorded by MoEF vide letter no. J-11011/304/2007-IA II (I) dated 12.12.2008. The Project Proponent (PP) vide letter No. RML/KSP-331/29/13-14 dated 30.5.2013 and letter no. RML/KSP-331/53/13-14 dated 10.7.2013 along with the updated Form I requested MoEF for extension of validity of EC. The PP also made a presentation before the Committee.

The EC was accorded for setting up the following units:

<b>Plant/facility</b>	<b>Product</b>	<b>Capacity</b>
<i>DRI Plant (3x350 TPD kilns)</i>	<i>Sponge iron</i>	<i>3,15,000 TPA</i>
<i>Mini blast furnace (2x262 m<sup>3</sup>)</i>	<i>Hot metal</i>	<i>3,82,520 TPA</i>
Steel melting shop, comprising <ul style="list-style-type: none"> <li>• Induction furnace (4x15 T)</li> <li>• Ladle furnace (2x15 T)</li> <li>• Billet caster (2x2 strand)</li> </ul>	Steel billets	2,00,000 TPA
<i>WHR based CPP</i>	<i>Electricity</i>	<i>42 MW</i>
<i>Coal based CPP</i>	<i>Electricity</i>	<i>25 MW</i>

The PP informed the Committee that they have already commissioned 200000 TPA steel plant and 40 MW (WHRB – 20 MW, Coal based – 20 MW) power plant which is ready for operation. The company not commissioned the 315000 TPA DRI, 2x15 T LRF, 382520 TPA blast furnace and 27 MW power plant.

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

- i. Delay in finalization of technical consultants.
- ii. Delay in finalization of contractors
- iii. Delay in installation of current plant due to contractor's problems
- iv. Steel Market fluctuation

After detailed deliberations, the Committee recommended for the extension of validity of EC by a period of five years with effect from 11.12.2013 subject to environmental safeguards.

10.8.3 Expansion of Clinker Production from 1.58 to 2.48 MTPA and cement production from 1.90 to 3.30 MTPA in Unit-III at Mellacheruvu Village & Mandal, Nalgonda, Andhra Pradesh by **M/s Home Industries Ltd- regarding amendment of specific condition in the Environment Clearance.**

Environmental Clearance (EC) to the above proposal was accorded by MoEF vide letter no. J-11011/76/2006-IA II (I) dated 25.5.2006 for expansion of clinker production from 1.58 to 2.48 MTPA and cement production from 1.90 to 3.30 MTPA along with 15 MW coal based thermal power plant in unit III at Mellacheruvu Village & Mandal, Nalgonda, Andhra Pradesh.

The Project Proponent (PP) vide letters dated 7.7.2006, 13.4.2007, 5.7.2007, 23.10.2007, 21.11.2008, 13.11.2009, 27.3.2013 and 9.5.2013 requested MoEF amendment of specific condition for particulate matter emission for the 15 MW CPP. The PP also made a presentation before the Committee.

The amendment requested by the proponent is as below:-

<b>Specific condition no. (i) as per</b>	<b>Amendment sought</b>
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<b>the EC dated 25.5.2006</b>	
The gaseous and particulate matter emissions from various units should conform to the standards prescribed by the State Pollution Control Board. At no time the particulate emissions from the Cement Plant and Captive Power Plant (CPP) should exceed 50 mg/Nm <sup>3</sup> .	The gaseous and particulate matter emissions from various units should conform to the standards prescribed by the State Pollution Control Board. At no time the particulate emissions from the Cement Plant should exceed 50 mg/Nm <sup>3</sup> and particulate emission from captive power plant should exceed 100 mg/Nm <sup>3</sup> .

The justification submitted by the proponent for the proposed amendment is as below:

- i. Consent For Establish (CFE) was obtained from Andhra Pradesh Pollution Control Board (APPCB) on 23.12.2003 as per EIA Notification, 1994 with SPM limit of 100 mg/Nm<sup>3</sup>
- ii. ESP was designed as per the CFE issued by APPCB dated 23.12.2003
- iii. As per the EIA report submitted to the Ministry at the time of consideration of expansion proposal, the particulate emissions from the Captive Power Plant (CPP) was mentioned as 100 mg/Nm<sup>3</sup>. However, in the EC granted on 25.5.2006, the particulate emissions from the Captive Power Plant (CPP) was mentioned as 50 mg/Nm<sup>3</sup>
- iv. APPCB in recent CFO order dated 15.3.2013 issued specific condition to get amendment from MoEF for emission limit of 100 mg/Nm<sup>3</sup> or comply with the SPM standard of 50 mg/Nm<sup>3</sup> as stipulated in the EC dated 25.5.2006 within six months time

The Committee recommended for the amendment in specific condition no (i) of the EC dated 25.5.2006 as mentioned below subject to the environmental safe guards.

**Specific condition (i):**

The gaseous and particulate matter emissions from various units should conform to the standards prescribed by the State Pollution Control Board. At no time the particulate emissions from the Cement Plant should exceed 50 mg/Nm<sup>3</sup> and particulate emission from captive power plant should exceed 100 mg/Nm<sup>3</sup>.

**10.8.4 Expansion of Integrated Steel Plant at Siltara industrial Growth Centre, Siltara, Raipur, Chhattisgarh by M/s Jayaswal Neco Industries Limited- regarding extension of validity in Environment Clearance.**

Environmental Clearance (EC) to the above proposal was accorded by MoEF vide letter no. J-11011/809/2007-IA II (I) dated 8.9.2008. The Project Proponent (PP) vide letter No. JNL/SPD/ENV/2013/115 dated 13.5.2013 along with the updated Form I requested MoEF for extension of validity of EC. The PP also made a presentation before the Committee.

The EC was accorded for setting up the following units (without coal based sponge iron plant and captive power plant):

<b>Name of Units</b>	<b>Expansion units</b>
Blast Furnace	1 MTPA
Iron ore Beneficiation of Pellet Plant	2.5 MTPA
Sinter Plant	2.0 (6000 TPD)
Coke Oven (Non-recovery)	0.60 MTPA
Oxygen Plant	400 TPD
Steel Melting Shop	2.0 (6000 TPD)
Rolling Mill	2.0 (6,000 TPD)
Cement Grinding unit	2.4 (7,200 TPD)
Captive power plant	30 MW-BF gas 42 MW- CO gas 72 MW

Out of the aforesaid units, the pellet plant (1.2 MTPA), Oxygen plant (400TPD) and Steel Melting Shop (2.00 MTPA) are expected to be commissioned by Dec 2014. The Rolling Mill (2.00 MTPA) and Cement Grinding Unit (2.40 MTPA) are expected to be commissioned by Mar 2015 and Dec 2015 respectively. The balance units are expected to be commissioned by Dec 2016.

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

- i. Financial tie-ups for balance units will take some more time.
- ii. After the financial tie-up, proponent will apply to CECB for obtaining Consent to Establish

After detailed deliberations, the Committee recommended for the extension of validity of EC by a period of five years with effect from 7.9.2013 subject to environmental safeguards.

10.8.5 Clinker (2.0 MTPA), Portland Slag Cement (PSC, 1.1 MTPA), Ordinary Portland Cement (OPC, 1.1 MTPA) and Captive Power Plant (CPP, 36 MW) at Village Gadivemula, District Kurnool, Andhra Pradesh by **M/s JSW Cement Limited (JSWCL)- regarding extension of validity of Environmental Clearance .**

Environmental Clearance (EC) to the above proposal was accorded by MoEF vide letter no. J-11011/889/2007-IA II (I) dated 25.8.2008 in the name of M/s Gayathri Cements. Thereafter, the Ministry vide letter no. J-11011/889/2007 dated 3.2.2010 transferred the said EC to M/s. JSW Cement Limited. The Project Proponent (PP) vide letter No. JSWCL/NDL/ENV/CPP/2013-14 dated 2.4.2013 along with the updated Form I requested MoEF for extension of validity of EC. The PP also made a presentation before the Committee.

The EC was accorded for setting up the following units:-

i.	Clinker	-	2.0 MTPA
ii.	Portland Slag Cement	-	1.1 MTPA
iii.	Ordinary Portland Cement	-	1.1 MTPA
iv.	Captive Power Plant	-	36 MW

Out of the aforesaid units, the proponent has not yet implemented the 36 MW Captive Power Plant due to non-availability of coal linkage.

After detailed deliberations, the Committee recommended for the extension of validity of EC by a period of five years with effect from 24.8.2013 subject to environmental safeguards.

10.8.6 Sponge Iron Plant and co-generation power plant (CP) at S.R. Kannadigai, Gummidipoondi, Thiruvallur, Tamil Nadu by **M/s Kanishk Steel Industries Ltd. – Amendment in Environment Clearance regarding change in kiln configuration.**

The aforesaid proposal was considered in the 1<sup>st</sup> meeting of the EAC (Industry) meeting held on 24-25<sup>th</sup> September, 2012. The committee did not accede to the requested amendment and recommended that, if desired, the proponent may submit revised proposal for replacement of old kilns with new kilns. Thereafter, the proponent vide letter no. Nil dated 1.2.2013 submitted the revised proposal to the Ministry and the proposal was placed before the EAC in its 7<sup>th</sup> meeting held on 4-5<sup>th</sup> April, 2013. The proponent did not attend the meeting and requested the Ministry vide letter dated 21.6.2013 to consider the proposal in the next EAC meeting. Accordingly, the proposal was placed before the EAC.

The Committee noted that as per the revised proposal submitted to the Ministry, the proponent have proposed to set up additional 2 rotary kiln to generate additional steam.

After detailed deliberations, the Committee recommended that aforesaid amendment in the EC accorded on 29.5.2008 cannot be done as it is an expansion proposal. M/s Kanishk Steel Industries Limited shall submit a fresh application in accordance with procedure stipulated in the EIA Notification, 2006 for the proposed expansion of steel manufacturing unit by addition of 2 rotary kiln to generate additional steam.

10.8.7 Proposed 250 TPD Pulp Plant, 250 TPD Paper Plant along with 10 MW co-generation power plant at Industrial Growth Center, Matia, District Goalpara, Assam by **M/s Kohinoor Pulp & Paper Pvt. Limited- regarding amendment in Environmental Clearance.**

Environmental Clearance to the above proposal was accorded by MoEF vide letter no. J-11011/464/2010-IA II (I) dated 3.9.2012. The PP vide letter dated 3.10.2012, 18.4.2013 and 24.5.2013 requested MoEF for amendment in the EC. The amendment sought by the proponent is as below:

<b>Units approved as per the EC dated 3.9.2012</b>	<b>Amendment sought</b>
10 MW Co-generation Power plant	47 MW power plant (15MW based on recovery boiler and 32 MW based on steam generated from CFBC boiler).

After detailed deliberations, the Committee recommended that aforesaid revision in the production capacities in the EC accorded on 3.9.2012 cannot be amended as it is a fresh expansion proposal which involves increase in pollution load and increase in raw materials requirement etc. Based on the Form-I and Pre-feasibility report submitted by the proponent, the proposal was considered by the EAC only for the grant of Terms of Reference.

The Committee noted that the capacity of the paper and pulp plant will not be changed and CPP capacity will be expanded from 10 MW to 47 MW. Further, the proposed expansion will be carried out within the existing area of 200 acres. No Forest land is involved. No national park/wild life sanctuary/ecologically sensitive area is located within 10 km radius of the project site. The water requirement will be increased from 18000 KLD to 20688 KLD. River Brahmaputra flows at a distance of 2.5km from the project site. Total cost of the project after the proposed expansion would be Rs.880 Crores.

Based on the Form-I and Pre-feasibility report submitted by the proponent, the Committee prescribed the following TORs for preparation of EIA/EMP Report:

1. Executive summary of the project
2. Coal linkage documents
3. Photographs of the existing and proposed plant area
4. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
5. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
6. Details of raw material and source of raw material shall be included.
7. Manufacturing process details of all the plants with process flow chart shall be included.
8. Sources and quantity of fuel for the boiler.
9. Action plan to control ambient air quality as per NAAQES Standards for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> as per GSR 826(E) dated 16<sup>th</sup> November, 2009.
10. 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>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub> and HC (methane & non-methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
11. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
12. An action plan to control and monitor secondary fugitive emissions from all the sources.
13. Surface and ground water quality within the study area.
14. Details of water requirement, wastewater generation, water balance chart for sugar, and co-generation plant. Measures for water conservation by recycling and reuse to minimize the fresh water requirement.
15. Proposed effluent treatment system for the CPP shall be included.
16. Details of solid waste management including management plan of disposal of boiler ash.
17. Green belt development as per the CPCB guidelines.
18. List of flora and fauna in the study area.

19. Noise levels monitoring at five locations within the study area.
20. 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.
21. 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.
22. EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
23. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
24. Action plan for rainwater harvesting measures at plant site to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
25. Details of occupational health surveillance programme.
26. Details of socio-economic welfare activities.
27. Action plan for post-project environmental monitoring.
28. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
29. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
30. 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 in Regional languages should be provided.
- iv. The letter/application for environmental clearance should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The 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 should also be followed.
- viii. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI) / National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation should be provided. The draft EIA/EMP report shall be submitted to the Assam Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

The TORs prescribed shall be valid for a period of two years for submission of the EIA/EMP reports along with Public Hearing Proceedings.

10.8.8 Expansion of Polyester Chips manufacturing from 36,000 MTPM to 49,500 and captive power generation from 4.5 MW to 8.7 MW at Plot No.11 & 215 to 231, GIDC Estate, Sarigam, Tehsil Umargaon, District Valsad in Gujarat by M/s JBF Industries Limited – amendment in EC.

Ministry vide letter no. J-11011/330/2010-IA II (I) dated 16th August, 2012 has issued environmental clearance to M/s JBF Industries for Expansion of Polyester Chips manufacturing from 36,000 MTPM to 49,500 and captive power generation from 4.5 MW to 8.7 MW.

Now, project proponent vide letter dated 20th March, 2013 has requested for amendment in captive power generation capacity from 8.7 MW to 9.9 MW by installation of a 1.2 MW dual fired power engine. It was informed that during normal operations, the power requirement is met from the gas turbine and the GEB source. In case of maintenance & shut down of the gas turbine/failure & shut down of the utility power from GEB, there is shortfall of 0.7 MW power. During gas turbine shut down, the VAM will not be operational also due to non availability of steam. So all electrical chillers will be in running conditions to fulfill cooling water requirement. The Power will be required for operation of these electrical chiller power. Hence, a 1.2 MW power source is required as a standby unit. There will be no change in power requirement. Natural gas will be used as fuel. There will be no change in air emission load, water pollution load, hazardous waste generation etc.

After detailed deliberations, The Committee recommended the project proposal for amendment in captive power generation capacity from 8.7 MW to 9.9 MW by installation of a 1.2 MW dual fired power engine.

10.8.9 Expansion of Bulk Drug Intermediates Unit (0.45 MTPM to 55.95 MTPM) at Block No.11088/B/P, 1088/A, Lamdapura Road, Village Manjusar, Tehsil Savli, District Vadodara, Gujarat by M/s Allchem Laboratories - Amendment in EC

Ministry vide letter no. J-11011/555/2010-IA II (I) dated 26th September, 2012 has issued environmental clearance to M/s Allchem Laboratories for manufacturing of following products:

S.N.	Products	Quantity(MTPM)	
		Existing	Total after Expansion
1	1-Benzylpiperazine, 99%	0.100	0.100
2	Dibutyl oxalate, 98%	0.100	0.100
3	1,4-Piperazinedicarboxaldehyde, 99%	0.100	0.100
4	1,4-Dibromobutane, 99%	0.100	0.100
5	1-(4-Fluorophenyl)piperazine, 99%	-	0.500
6	1-Benzyl-diethanolamine, 98%	0.050	0.050
7	1-(3-Chlorophenyl)piperazine, 99 %	-	8.000
	Other aryl piperazines		
8	1-[2-(2-Hydroxyethyl)ethoxy]piperazine, 99 %	-	3.000
9	1-(3-Chloropropyl)-4-(3-chlorophenyl)piperazine hydrochloride, 98 %	-	12.000
10	1-(2-Methoxyphenyl)piperazine hydrochloride, 98 %	-	2.000
11	Isovaleryl chloride, 98 %	-	1.500
12	2-Methoxybenzylamine, 98 %	-	0.500
13	1-Benzyl-4-piperidone, 98 %	-	2.000
14	Veratraldehyde, 98 %	-	0.500
15	1-Indanone, 98 %	-	2.000
16	1-(4-Fluorophenyl)piperazine, 98 %	-	0.500
17	N-Acetyl-4-piperidinecarboxylic acid, 99 %	-	1.000
18	4'-Chlorobenzhydrol, 98 %	-	0.500
19	Heptylamine, 99 %	-	5.000
20	4-Benzoyloxyaniline HCl, 98 %	-	0.500
21	Cyclobutanecarboxylic acid, 98 %	-	0.500
22	Diethyl cyclopentaneboxylate, 98 %	-	0.500
23	1-Iodonathalene, 98 %	-	0.500
24	1-Allyl imidazole, 98 %	-	0.250
25	2-Chlorobenzimidazole, 98 %	-	1.500
26	1-(4-Chlorophenyl)cyclobutanecarbonitrile, 98 %	-	1.000
27	3,5-Dimethyl-4-cyanophenol, 98 %	-	0.500

28	1-Boc-3-piperidone, 97 %	-	0.500
29	1-(3-Chloropropyl)-2-benzimidazolidinone, 98 %	-	3.000
30	1-Pyrrolidinebutanenitrile, 98 %	-	1.000
31	1-(4-Chlorophenyl)-4-hydroxypiperidine, 98 %	-	0.750
32	R & D Project (Less than 25 Kg each)	-	1.000
33	Kilo Lab (25 Kg to 500 Kg)	-	1.500
34	Advance Pharma Intermediates	-	3.500
Total		0.45	55.95

S.N.	By-Products	Quantity (MTPM)	
		Existing	Total after Proposed Expansion
1	Sodium Chloride	0.048	16.048
2	Potassium chloride	0.031	2.511
3	Sodium bromide	-	7.86
4	Potassium bromide	-	1.39
5	Ammonia solution 25% in water	-	1.94
6	Hydrochloric acid 30% in water	-	4.125
7	Hydrobromic acid 48% in water	-	8.22
8	Sodium sulphite	-	2.115
9	Polyaluminium Chloride	-	2.286
10	Cuprous bromide	-	0.65
Total		0.079	47.145

Now, they want to add the name of organic group in each products without increasing the quantity and same is also mentioned in the EIA/EMP report. Following products will be manufactured :

S.N.	Products	Quantity(MTPM)	
		Existing	Total after Expansion
1	1-Benzylpiperazine, 99%	0.100	0.100
2	Dibutyl oxalate, 98%	0.100	0.100
3	1,4-Piperazinedicarboxaldehyde, 99%	0.100	0.100
4	1,4-Dibromobutane, 99%	0.100	0.100
5	1-(4-Fluorophenyl)piperazine, 99%	-	0.500
6	1-Benzyl-diethanolamine, 98%	0.050	0.050
7	1-(3-Chlorophenyl)piperazine, 99 % Other aryl piperazines	-	8.000
8	1-[2-(2-Hydroxyethyl)ethoxy]piperazine, 99 %/ Other aliphatic piperazines	-	3.000
9	1-(3-Chloropropyl)-4-(3-chlorophenyl)piperazine hydrochloride, 98 %/ Other amines hydrochloride	-	12.000
10	1-(2-Methoxyphenyl)piperazine hydrochloride, 98 %/ Other aryl piperazines hydrochloride	-	2.000
11	Isovaleryl chloride, 98 %/ other acid chlorides	-	1.500
12	2-Methoxybenzylamine, 98 %/ other benzylamines	-	0.500
13	1-Benzyl-4-piperidone, 98 %/ other piperidones	-	2.000
14	Veratraldehyde, 98 %/ other aldehyde	-	0.500
15	1-Indanone, 98 %/ other ketones	-	2.000
16	1-(4-Fluorophenyl)piperazine, 98 %/ other aryl piperazines	-	0.500
17	N-Acetyl-4-piperidinecarboxylic acid, 99 %/ other piperidines	-	1.000
18	4'-Chlorobenzhydrol, 98 %/ other benzhydrol	-	0.500
19	Heptylamine, 99 %/ other aliphatic amines	-	5.000
20	4-Benzoyloxyaniline HCl, 98 %/ other anilinehydrochlorides	-	0.500
21	Cyclobutanecarboxylic acid, 98 %/ other carboxylic acids	-	0.500
22	Diethyl cyclopentaneboxylate, 98 %/ other carboxylic esters	-	0.500
23	1-Iodonathalene, 98 %/ other aromatic halides	-	0.500
24	1-Allyl imidazole, 98 %/ other imidazoles	-	0.250

25	2-Chlorobenzimidazole, 98 %/other benzimidazoles	-	1.500
26	1-(4-Chlorophenyl)cyclobutanecarbonitrile, 98 %/ other carbonitriles	-	1.000
27	3,5-Dimethyl-4-cyanophenol, 98 %/ other benzonitriles	-	0.500
28	1-Boc-3-piperidone, 97 %/ other Boc amides	-	0.500
29	1-(3-Chloropropyl)-2-benzimidazolidinone, 98 %/ / other benzimidazoles	-	3.000
30	1-Pyrrolidinebutanenitrile, 98 %/ other pyrrolidines	-	1.000
31	1-(4-Chlorophenyl)-4-hydroxypiperidine, 98 %/ other piperidines	-	0.750
32	R & D Project (Less than 25 Kg each)	-	1.000
33	Kilo Lab (25 Kg to 500 Kg)	-	1.500
34	Advance Pharma Intermediates	-	3.500
Total		0.45	55.95

Regarding industrial wastewater, the Committee did not agree for modification.

After detailed deliberations, The Committee recommended the project proposal for amendment in product list.

10.8.10 Bulk Drug and Intermediate Manufacturing Plant (708 TPA) at Sy.No.1305, 1385, 1386 & 1398, Village and Mandal Ramayampet, District Medak, Andhra Pradesh by M/s Metrochem API Private Limited – extension of validity of TOR

MoEF vide letter no. J-11011/25/2011-IA –II dated 2<sup>nd</sup> May 2011 has issued TOR for the above mention project.

Now, project proponent vide letter dated 12th April, 2013 has requested for extension of validity of TOR for one more year. Project proponent has submitted draft EIA/EMP report to APPCB for public hearing.

The Committee recommended the project proposal to extend the validity of TOR for another 1 year.

10.8.11 Expansion of Distillery Unit (60 KLPD to 100 KLPD) at Post KisanveerNagar, Tehsil Wai, District Satara, Maharashtra by M/s Kisan Veer Satara Sahakari Sakhar Karkhana Ltd Bhuinj - regarding extension of validity of Tor.

MoEF vide letter no. J-11011/211/2010-IA –II dated 29th June 2010 has issued TOR for the above mentioned project.

Now, project proponent vide letter dated 28<sup>th</sup> March, 2013 has requested for extension of validity of TOR for one more year. The Committee noted that project proponent has submitted application for revalidation after one year of expiry of TOR.

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

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
2. Executive summary of the project.
3. Detailed breakup of the land area alongwith latest photograph of the area.
4. Present land use based on satellite imagery and details of land availability for the project alongwith supporting document.
5. Details of site and information related to environmental setting within 10 km radius of the project site.
6. A copy of lease deed or allotment letter, if land is already acquired.
7. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the MPCB.

8. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
9. Information regarding eco-sensitive areas such as national park/wildlife sanctuary/ biosphere reserves within 10 km radius of project area.
10. List of existing distillery units in the study area alongwith their capacity and sourcing of raw material.
11. Details of proposed products along with manufacturing capacity.
12. Number of working days of the distillery unit.
13. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures. Capital cost shall be reviewed as seems to be very high.
14. Details of raw materials, its source with availability of all raw materials.
15. Sources and quantity of fuel (rice husk/coal etc.) for the boiler. Measures to take care of SO<sub>2</sub> emission. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted.
16. Storage facility for raw materials, prepared alcohol, fuel and fly ash.
17. Action plan to control ambient air quality as per NAAQES Standards for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> as per GSR 826(E) dated 16<sup>th</sup> November, 2009.
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>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
19. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
20. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
21. Details of the use of steam from the boiler.
22. Ground water quality around proposed spent wash storage lagoon and the project area.
23. Details of water requirement, water balance chart for molasses based Distillery. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
24. Source of water supply and permission of withdrawal of water from Competent Authority.
25. Proposed effluent treatment system for molasses based distillery (spent wash and spent lees) as well as domestic sewage and scheme for achieving zero discharge.
26. Spent wash generation should not exceed 8 KL/KL of alcohol production. Details of the spent wash treatment for molasses based distillery based distillery.
27. Capacity for spent wash holding tank and action plan to control ground water pollution.
28. Layout for storage of bagasse/biomass/coal.
29. Details of solid waste management including management of boiler ash.
30. Green belt development as per the CPCB guidelines.
31. List of flora and fauna in the study area.
32. Noise levels monitoring at five locations within the study area.
33. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
34. EMP should also include the concept of waste-minimization, recycle/reuse/ recover techniques, Energy conservation, and natural resource conservation.
35. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
36. Alcohol storage and handling area fire fighting facility as per norms. Provision of Foam System for fire fighting to control fire from the alcohol storage tank.
37. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
38. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Thresh Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.

- vi) Liver function tests (LFT) during pre-placement and periodical examination.
  - vii) Details of occupational health surveillance programme.
39. Details of socio-economic welfare activities.
  40. Traffic study of the area for the proposed projects in respect of existing traffic, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
  41. Action plan for post-project environmental monitoring.
  - 42. Corporate Environmental Responsibility**
    - (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
    - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
    - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
    - (d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
  43. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
  44. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
  45. A tabular chart with index for point-wise compliance of above TORs.

The following general points should be noted:

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

The Committee prescribed the above TORs for preparation of EIA/EMP reports. The proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns raised along with 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.

10.8.12 Manufacture of Phenol Formaldehyde Resin (135 MTPM) and Malamine Urea Formaldehyde Resin (34 MTPM) at S.No.258/1, Paiki, Village NaniChirai, Tehsil Bhachau, District Kutch, Gujarat by M/s Russaka Ply India Ltd – extension of validity of TOR.

MoEF vide letter no. J-11011/513/2010-IA –II dated 14<sup>th</sup> February 2011 has issued TOR for the above mention project.

Now, project proponent vide letter dated 13th May, 2013 has requested for extension of validity of TOR for one more year. It was noted that project proponent has submitted application for revalidation within one year.

The Committee recommended the project proposal to extend the validity of TOR for another 1 year.

10.8.13 Onshore Exploratory Drilling (8 Wells) for Oil and Gas exploration in Block CB-ONN-2005/8 at Tehsil Bharuch, Jhagadia&Karjan, District Bharuch & Vadodar, Gujarat by M/s Vasundhra Resources Ltd. Extension of validity of Tor.

MoEF vide letter no. J-11011/242/2011-IA –II dated 1<sup>st</sup> September 2011 has issued TOR for the above mention project.

Now, project proponent vide letter dated 22<sup>nd</sup> May, 2013 has requested for extension of validity of TOR for one more year.

The Committee recommended the project proposal to extend the validity of TOR for another 1 year.

10.8.14 Coal Bed Methane (CBM) in Block,SP(NE)-CBM-2008/IV , Sohampur CBM Block, Madhya Pradesh & Chhattisgarh by Essar Oil Limited (E&P Division)- Extension of validity of ToR.

MoEF vide letter no. J-11011/105/2011-IA –II dated 13th July, 2011 has issued TOR for the above mention project.

Now, project proponent vide letter dated 30<sup>th</sup> May, 2013 has requested for extension of validity of TOR for one more year.

The Committee recommended the project proposal to extend the validity of TOR for another 1 year.

10.8.15 Coal Bed Methane (CBM) in Block RM-CBM-2008/IV, IB Valley CBM Block, Orissa byEssar Oil Limited (E&P Division)-Extension of validity of ToR.

MoEF vide letter no. J-11011/107/2011-IA –II dated 13th July, 2011 has issued TOR for the above mention project.

Now, project proponent vide letter dated 30thMay, 2013 has requested for extension of validity of TOR for one more year.

The Committee recommended the project proposal to extend the validity of TOR for another 1 year.

10.8.16 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.

MoEF vide letter no. J-11011/104/2011-IA –II dated 13th July, 2011 2011 has issued TOR for the above mention project.

Now, project proponent vide letter dated 30thMay, 2013 has requested for extension of validity of TOR for one more year.

The Committee recommended the project proposal to extend the validity of TOR for another 1 year.

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#### **LIST OF PARTICIPANTS**

<b>Expert Appraisal Committee (Industry) :</b>
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1.	Shri M. Raman	Chairman	P
2.	Shri R.K. Garg	Vice-Chairman	P
3.	<b>Prof. R.C. Gupta</b>	<b>Member</b>	<b>A</b>
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	P
10.	<b>Dr. Antony Gnanamuthu</b>	<b>Member</b>	<b>A</b>
11.	Prof. C. S. Dubey	Member	P
12.	<b>Shri Niranjan Raghunath Raje</b>	<b>Member</b>	<b>A</b>
<b>MOEF Officials :</b>			
13.	Dr. V.P.Upadhyay	Member Secretary	
14.	Shri A.N. Singh	Scientist 'C'	
15.	Shri Sundar Ramanathan	Scientist 'C'	

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