

MINUTES OF 13th RECONSTITUTED EXPERT APPRAISAL COMMITTEE (INDUSTRY)
HELD DURING 18th NOVEMBER 2013 TO 20th NOVEMBER, 2013

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

TIME 10.30 A.M.

13.0 Opening Remarks of the Chairman

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

13.1 Confirmation of the Minutes of the 12th Reconstituted Expert Appraisal Committee (Industry) held during 30th September 2013 – 1st October, 2013.

The minutes of the 12th Reconstituted Expert Appraisal Committee (Industry) meeting held during 30th September 2013 – 1st October, 2013 were confirmed.

18th November, 2013

13.2.0 Consideration of the Projects:

Environmental Clearance

13.2.1 Expansion of Sponge Iron Plant (3x350 TPD) and Captive Power Plant of 38.5 MW into Sponge Iron Plant (4x350 TPD), Captive Power Plant of 98.5 MW, SMS - 15 T x 6 no. of induction furnace and Rolling Mill of 2x500 TPD at village Godwali & Bastali Biran, Tehsil Devassar & Chitrangi, District Singrauli, Madhya Pradesh by M/s Trimula Industries Limited - regarding Environment Clearance

1. The aforesaid proposal was considered in the 3rd meeting of the Reconstituted Expert Appraisal Committee (Industry) held during 3-5th December, 2012 wherein the Committee deferred the consideration of the proposal on the ground that the EIA/EMP report was prepared by M/s In Situ Enviro Care, Bhopal, who was a non-accredited consultant as on date. Therefore, Ministry vide letter dated 1.3.2013 deferred the proposal till the EIA/EMP report is validated by the QCI/NABET accredited consultant and submitted to the Ministry.

The Project Authorities (PAs) vide letter no. Nil dated 16.4.2013 submitted the EIA/EMP report through the QCI/NABET accredited consultant – M/s. Pollution and Ecology Control Services (PECS), Nagpur. The said EIA/EMP report was placed before the EAC in its 9th meeting held during 10-11th June, 2013 for consideration. The Committee deferred the consideration of the proposal as the EIA/EMP report submitted by the PAs was incomplete in several technical aspects including the compliance to the ToR conditions were not matching. The Committee asked the consultant (M/s. PECS, Nagpur) to conduct one month fresh AAQ monitoring to verify the data provided by the M/s In Situ Enviro Care, Bhopal. Further, the Committee asked the PAs to incorporate compliance to all the conditions stipulated in the Terms of Reference and submit the revised complete EIA/EMP report along with the certified compliance report of the existing unit from the Regional Office of MoEF at Bhopal.

The PAs vide letter no. TIL/MOEF/13-14/184 dated 12.8.2013 submitted the revised EIA/EMP report along with the certified compliance report of existing unit from the Regional Office of MoEF at Bhopal and one month AAQ data. The said report was placed before the EAC for consideration.

The PAs and their consultant M/s. Pollution and Ecology Control Services (PECS), Nagpur gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per the Terms of Reference (ToRs) awarded during the 17th meeting of the Expert Appraisal Committee (Industry -1) held on 13-14th December 2010 for preparation of EIA/EMP report. The ToR was awarded by MoEF vide F.No. J-11011/530/2010-IA.II(I) dated 29.12.2010 for preparation of EIA/EMP report. All the Steel Plants are listed at S.No. 3(a) under Primary Metallurgical Industries under "Category A" of the Schedule of EIA Notification 2006 and appraised at the Central level.

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

M/s Trimula Industries Limited have proposed to expand their Sponge Iron Plant (3x350 TPD) and power plant of 38.5 MW into Sponge Iron Plant (4x350 TPD), Power Plant of 98.5 MW, SMS - 15 T x 6 no. of induction furnace and Rolling Mill of 2x500 TPD at village Godwali & Bastali Biran, Tehsil Devassar & Chitrangi, District Singrauli, Madhya Pradesh. The Consent To Establish for the existing sponge iron unit (3x350 TPD) was accorded by the Madhya Pradesh Pollution Control Board vide letter no. 14384/TS/MPPCB/2005 dated 27.7.2005. The Environment Clearance for 20 MW CPP was accorded by the SEIAA, Madhya Pradesh vide letter no. 843/EPCO-SEIAA/11 dated 15.12.2011. The proposed expansion will be carried out in the existing area of 61.61 ha which is already in the possession of the PAs. The longitude and latitude of the project site is 82° 31' 27" E to 82° 31' 42" E and 24° 12' 12" N to 22° 12' 28" N respectively. PAs have confirmed that the proposed project site is not located within 10km of Critically Polluted Area. No Forest land is involved. No R&R issues are involved. No Defense Installation, Biosphere Reserve, National Park/Wild Life Sanctuary, Ecologically Sensitive Area is located within 10 km radius of the project site. No court case/litigation is pending against the proposed project. The water bodies located within the study area are Chalki river (5km), Kanjas river (6.5km), Bijul Nala (1.0 km) and Bijul river (8.0km). Godwali village is located at a distance of 1.5 km from the project site. The only industry in the study area of the project site is Coal mine of Northern Coal Field Limited located at a distance of 4 Km. The nearest reserve forest patch is 2.5 km away from the project site. Total cost of the project is Rs. 410.0 Crores. Rs. 4.035 crores and Rs.0.56 crores is earmarked for the capital cost and recurring cost per annum towards the environmental pollution control measures.

Following are the existing and proposed production capacities:

S.No.	Details	Existing	Proposed	Total (After expansion)
1.	Sponge Iron	3x350 TPD	1x350 TPD	4x350 TPD
2.	Captive Power Plant	38.5 MW [1x20 MW AFBC and 18.5 MW WHRB]	60 MW [AFBC - 44 MW and WHRB- 16 MW]	98.5 MW
3.	SMS	--	1095 TPD (15 T x 6)	1095 TPD (15 T x 6)
4.	Rolling Mill	--	1000TPD (2x500 TPD)	1000TPD (2x500 TPD)

The Environment Clearance for 20 MW CPP was accorded by the SEIAA, Madhya Pradesh vide letter no. 843/EPCO-SEIAA/11 dated 15.12.2011. Regional Office of MoEF at Bhopal had sent the certified compliance report for the existing unit vide letter 18-B-46/2011(SEAC)/1260 dated 7.8.2013. The Committee advised the PAs to take sincere efforts especially for monitoring of air and water quality and submission of its reports to ensure overall compliance of the existing unit. Further, the Committee also noted that the Madhya Pradesh Pollution Control Board (MPPCB) has issued show cause and directions under section 31A of the Air Act to the PAs and the PAs have complied with the directives of MPPCB. The compliance to the other Environmental Clearance (EC) conditions found to be satisfactory.

The raw materials for the proposed (1x350 TPD) sponge iron kiln will be iron ore (586TPD), coal (513 TPD) and dolomite (11 TPD). The sponge produced will be the raw material for SMS plant and waste gases produced will be utilized to generate power through WHRB. Sponge Iron (1075 TPD), Scrap (90 TPD), Ferro Alloys (90 TPD) will be used as raw material in Steel Melting Shop to produce MS billets. Billets will be manufactured by melting in induction furnace and casting in continuous casting machine. These billets will be used in rolling mills to produce bars. 16 MW power will be produced from Waste Heat Recovery Boiler (WHRB) and balance 44 MW will be produced from Atmospheric Fluidized Bed Combustion (AFBC) boiler in the proposed CPP expansion. This AFBC boiler utilizes coal (604 TPD) and char (257 TPD). The char is by product of DRI. For the coal linkage, the PAs have submitted the agreement made between M/s.Northern Coalfields Limited, Singrauli and M/s Trimula Industries Private Limited.

Ambient air quality monitoring has been carried out at 8 locations during January – March 2011, June – July 2013 and the data submitted indicated: PM₁₀ (44.1-70.2 µg/m³), PM_{2.5} (23.4-38.7 µg/m³), SO₂ (16.09-39.6 µg/m³) and NO_x (25.06-43.81µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs would be 0.51 µg/m³, 4.8µg/m³ and 4.41 µg/m³ with respect to PM₁₀, SO₂ and NO_x respectively. Bag filters will be installed at various places like day bin, Product Separation Circuit, Cooler Discharge, Ground Hopper for Coal and Iron Ore to control fugitive emission. The waste gas of kiln will be utilized to generate power in WHRB and also char which is generated will be fed to AFBC boiler to generate power. Fume extraction system with bag filters will be provided to control emissions from SMS unit and rolling mill. The cleaned gases will be vented to atmosphere through a stack of adequate height. Dust suppression system will be provided in loading and unloading areas. Dust extraction system with bag filters to control fugitive emissions from raw material handling areas.

Total water requirement after the proposed expansion will be 2788 KLD. Water will be source from Bijul River at the distance of 8 km. PAs have obtained permission from Water Resources Department, Govt. of Madhya Pradesh for drawl of water 720 KLD from Bijul river In addition to this, PAs have reported that they have constructed five ponds in the premises of the plant. The total capacity of all these ponds is 5,65,180 m³. At present, PAs using water from ponds itself & it is proposed to utilize same source for expansion phase also. There will be no withdrawal of ground water for the proposed project. No waste water will be generated from the proposed plant except from cooling tower and boiler blow down. A treatment plant will be set up to treat the wastewater. The wastewater after treatment will be reused in the plant premises. There will be no discharge of the effluent outside the plant premises and it will be a zero discharge unit.

The fly ash generation will be 170 TPD. All the fly ash generated will be utilized by the cement factories. During emergency, the ash will be disposed off safely in ash pond area to avoid environmental hazards. The slag generated will be utilized for land filling and village road making.

The Committee deliberated on the issues raised during Public Hearing/Public Consultation conducted by Madhya Pradesh Pollution Control Board on 8.11.2011 at Tehsil Chitrangi District Singrauli under the Chairmanship of Shri N.K. Jain, ADM - Singrauli District. The issues raised during public hearing are proper compensation of land, basic amenities in the nearby villages, employment to the locals, problems due to pollution etc which were addressed in the final EIA/EMP report.

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

- i. Trace element analysis of iron ore to be used especially for Arsenic (As), Nickel (Ni), Mercury (Hg) and Lead (Pb) parameter;
- ii. Undertaking from PAs stating that all the show cause notice issued by MPPCB have been replied and closed; and
- iii. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared over a period of five years and shall be submitted.

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

13.2.2 Proposed Cement plant (Cement 5.5 MTPA; Clinker 4.5 MTPA) along with Captive Power Plant (75 MW), DG Set (3x6 MW) and Waste Heat Recovery (15 MW) at Villages Vellianai & D.Gudalur, Tehsil - Karur & Vendasandur, Districts - Karur & Dindigul, Tamil Nadu by **M/s UltraTech Cement Limited - regarding Environment Clearance.**

1. The Project Authorities (PAs) 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 as per the Terms of Reference (ToRs) awarded during the 11th meeting of the Expert Appraisal Committee (Industry -1) held on 24-26th June, 2010 for preparation of EIA/EMP report. The ToR was awarded by MoEF vide F.No. J-11011/102/2010-IA.II(I) dated 19.7.2010 for preparation of EIA/EMP report. Thereafter, Ministry vide letter dated 11.1.2013 extended the validity of the ToR for a period of one year with effect from 19.7.2012 along with the stipulation of additional ToRs. The PAs submitted the final EIA/EMP report vide letter no.UTCL/ENV/DEL/2013/70 dated 15.7.2013 after conducting Public Hearing for grant of Environmental Clearance. All the Cement Plants (≥ 1.0 MTPA) are listed at S.No. 3(b) under Category 'A' of the schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

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

M/s UltraTech Cement Limited have proposed to set up an green field Cement Plant (Cement 5.5 MTPA; Clinker 4.5 MTPA) along with Captive Power Plant (75 MW), DG Set (3x6 MW) and Waste Heat Recovery (15 MW) at Villages Vellianai & D.Gudalur, Tehsil - Karur & Vendasandur, Districts - Karur & Dindigul, Tamil Nadu. The land requirement for the proposed project is 136.23 ha (Private land – 119.44 ha and Govt. land – 16.79 ha). The

longitude and latitude of the project site is 78° 06' 31.57" E to 78° 07' 5.11" E and 10° 48' 9.72" N to 10° 49' 23.16" N respectively. Out of the 136.23 ha total land, 119.44 private land have been acquired and balance 16.79 government land to be acquired by the PAs. No Forest land is involved. No Defense Installation, Biosphere Reserve, National Park/Wild Life Sanctuary, Ecologically Sensitive Area is located within 10 km radius of the project site. No court case/litigation is pending against the proposed project. The nearest railway station is Vellianai located at a distance of 5.0 km from the project site. State Highway (SH-74) is at 0.6km distance from the project site. Uppidamangalam Pond is located at a distance of 9.0 km from the project site. Total cost of the project is Rs. 2500 crores. Rs. 210 crores and Rs.10.5 crores is earmarked for the capital cost and recurring cost per annum towards the environmental pollution control measures. Rs. 125 crores is earmarked towards the Enterprise Social Commitment based on Public Hearing issues over a period of ten years. Rs.29.98 crores is earmarked for the implementation of R&R plan. Action plan for R&R have been prepared based on National R&R policy 2007.

The capacity of proposed project activity has been tabulated below:

S. No.	UNIT	Line I	Line II	Proposed Capacity
1.	Clinker (MTPA)	2.25	2.25	4.5 MTPA
2.	Cement (MTPA)	2.75	2.75	5.5 MTPA
3.	Captive Thermal Power Plant (CPP)	37.5	37.5	75 MW
4.	D. G. Set (MW)	-	-	3 x 6 MW
5.	Waste Heat Recovery Boiler (MW)	7.5	7.5	15 MW

The cement plant is based on the dry process technology for cement manufacturing with pre-heater and pre-calciner technology.

Limestone (6.70 MTPA), laterite/bauxite (0.46 MTPA), coal for cement plant (0.60 MTPA), coal for CPP (1.20 MTPA) gypsum (0.10 MTPA), fly ash (0.33 MTPA) and petcoke (0.525 MTPA) are the raw materials that will be used. The limestone will be sourced from mine of M/s. Grasim Industries Limited located at Thennilai village, Kadavur taluk Karur district. The limestone mine is located at a distance of 3km from the project site and will be transported to the plant site by closed conveyor. For the limestone mining project, M/s. Grasim Industries Limited have obtained ToR from SEIAA, Tamil Nadu vide letter no SEAC/F.No.345//M-XIX/TOR-67/2010 dated 1.9.2010. The application for Coal linkage for Cement Plant and Captive Power Plant has been submitted by the PAs to the Ministry of Coal vide letter dated 10.9.2010. However, the Project Authorities informed that as an interim arrangement imported coal supply has been tied up for supply of Indonesia Coal and South African Coal. The Committee asked the PAs to submit the requisite coal linkage documents along with the logistics arrangement for transport of coal from place of import to the plant site. Gypsum will be sourced from Tuticorin and Chennai. Petcoke will be procured from Reliance Industries Limited, Jamnagar and transported to the plant site by rail/road. Total Power requirement is 60 kwh/tonne of clinker production & 35 kwh/ tonne of cement production which will be sourced from Captive Power Plant (75 MW) & WHRB (15 MW) & D.G. Set (3x6 MW, for emergency backup).

Ambient air quality monitoring has been carried out at 8 locations during December – February 2012 and the data submitted indicated: PM₁₀ (41.80 to 68.20 µg/m³), PM_{2.5} (16.10 to 26.70µg/m³), SO₂ (6.10 to 10.60 µg/m³) and NO_x (10.30 to 18.10 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs would be 4.70 µg/m³, 6.44µg/m³ and 3.58 µg/m³ with respect to PM₁₀, SO₂ and NO_x respectively. The coal mill, cement mill and the packer units will be equipped with bag filter arrangement with 99.9% efficiency. To control air emission in the cement plant/CPP, bag house, bag filters and ESP will be installed. Atomized water sprinkling system will be provided at limestone and coal unloading hopper and handling area. Water spraying arrangements will be made, particularly raw material storage area, wagon tippler and truck tippler areas. Good housekeeping practices will be adopted to control the fugitive emissions.

The water requirement for the project would be 5000 KLPD and it will be met from bore wells. Permission for the drawl of 4300 KLD bore well water has been submitted by the PAs to the Central Ground Water Authority on 18.12.2012. The final approval of CGWA is yet to be obtained by the PAs. No industrial waste water will be generated in the Cement Plant. Domestic waste water generated from Cement Plant will be treated in the STP. The treated water will be utilized for Greenbelt Development. Rooftop Rainwater harvesting will be practiced within the plant premises.

No solid waste will be generated in cement manufacturing process. Dust collected from various pollution control equipments will be recycled back to the process. STP Sludge will be utilized as manure for green belt development within the plant premises. Out of the total plant area (i.e. 136.23 ha), 33% of total plant area will be developed under green belt / plantation in a scientific manner around the plant boundary, roadside, office buildings and stretches of open land.

The Committee deliberated on the issues raised during Public Hearing/Public Consultation conducted by Tamil Nadu Pollution Control Board on 22.05.2013 under the chairmanship of Tmt. S. Jayandhi(I.A.S) District Collector, District –Karur (Tamil Nadu) at Government High School Campus, Village Velliyanai, Taluka , District Karur (Tamil Nadu) and on 23.5.2013 under the chairmanship of District Collector, Dindigul District at S.E.T. Matriculation School (Opposite Kongu Polytechnic), Karur- Dindigul Road, Village D. Gudalur Taluka Vendasandur, District Dindigul, Tamil Nadu. The issues raised during public hearing are proper compensation of land, development work in near-by villages, employment to the locals, plantation & maintenance of trees, facilities for higher education & health, water conservation, road development, more plantation, employment facilities etc which were addressed in the final EIA/EMP report.

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

- i. Requisite coal linkage documents along with the logistics arrangement for transport of coal from place of import to the plant site;
- ii. Revised list of flora and fauna which exist in the study area;
- iii. Revised water balance chart for the proposed project;
- iv. Revised coal consumption details for the proposed CPP
- v. Undertaking from PAs stating that PAs will be complying with the revised SO₂ and NO_x emission standards; and
- vi. Revised Risk Assessment and Disaster Management Plan

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

- 13.2.3 Cement and Cement Clinker Manufacturing Unit [Cement, 0.66 MTPA (OPC 0.132 MTPA, & PSC 0.528 MTPA); Clinker 0.528 MTPA] at Debendra Nagar, Jhoom Basti, Badarpurghat, District Karimganj, Assam by **M/s Valley Strong Cements (Assam) Limited - regarding Environment Clearance.**

The ToR for the proposal cited above was awarded by MoEF vide F.No. J-11011/570/2009-IA.II(I) dated 9.12.2009 for preparation of EIA/EMP report.

The Committee noted that above proposal is listed at S.N. 3(b) under category 'B' and should have been appraised at the State Level by SEIAA/SEAC. Due to non-existence of the SEIAA/SEAC at Assam, the proposal was considered at the Central level during the grant of ToR.

Further, the Committee noted that SEIAA/SEAC for Assam was constituted by MoEF on 30.4.2013 in accordance with the EIA Notification, 2006. In view of this, the Committee recommended that aforesaid proposal along with the project file concerned shall be transferred to the SEIAA/SEAC - Assam for taking action as appropriate.

- 13.2.4 Expansion of Ferro Alloy Plant & Installation of Sinter Plant at Kalyaneshwari, Mouza Debipur, District Burdwan, West Bengal by **M/s Impex Ferro Tech Limited - regarding Environment Clearance.**

The Project Proponent did not attend the meeting. The Committee recommended that the proposal may be placed before the EAC as and when requested by the project proponent.

- 13.2.5 Sponge Iron Plant (2x100 TPD, 200 TPD) along with Captive Power Plant (8 MW; 4 MW WHRM & 4 MW FBC) at sy. no. 389 B, 401, 402, 407, 408, Village Halkundi, Taluga & District Bellary, Karnataka by **M/s Kumaraswamy Ispat Pvt. Limited - regarding Environment Clearance.**

The Committee noted that the proponent vide letter no. Nil dated 18.11.2013 expressed their inability to attend the meeting due to some unavoidable circumstances and requested to consider the proposal in the next EAC meeting. The Committee decided that the proposal may be placed before the EAC in the next EAC meeting.

- 13.2.6 Expansion of Integrated Cement Project Clinker (2.0 to 6.0MTPA), Cement (3.25 to 8.0 MTPA), CTPP (40 MW to 80 MW), D.G. Set (2.0 MW to 7.0 MW) & WHRB (2x9 MW) at Villages: Sangaria, Borakheri, Peerkhara and Rasulpura, Tehsil-Nimbahera, District Chittorgarh, Rajasthan by **M/s. Wonder Cement Limited regarding Environment Clearance.**

1. The Project Authorities (PAs) 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 as per the Terms of Reference (ToRs) awarded during the 2nd meeting of the Expert Appraisal Committee (Industry) held on 29-31st October 2012 for preparation of EIA/EMP report. The ToR was

awarded by MoEF vide F.No. J-11011/298/2012 IA.II(I) dated 18.12.2012 for preparation of EIA/EMP report. The PAs submitted the final EIA/EMP report vide letter dated 28.6.2013 after conducting Public Hearing for grant of Environmental Clearance. All the Cement Plants (≥ 1.0 MTPA) are listed at S.No. 3(b) under Category 'A' of the schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

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

M/s. Wonder Cement Limited (WCL) have proposed to expand their cement plant [Clinker from 2.0 to 6.0MTPA, Cement from 3.25 to 8.0 MTPA, CTPP from 40 MW to 80 MW, D.G. Set from 2.0 MW to 7.0 MW and WHRB (2x9 MW) at Villages: Sangaria, Borakheri, Peerkhera and Rasulpura, Tehsil- Nimbahera, District Chittorgarh, Rajasthan. The existing plants obtained Environment Clearance from MoEF vide letter no.J-11011/506/2007-IA.II(I) dated 11.6.2008 & 4.1.2011 and vide letter no.J-11011/437/2011-IA.II(I) dated 19.6.2012. Total plant area is 191.064 ha which is already under possession of WCL. The proposed expansion will be done within the existing plant premises, thus no additional land will be acquired for the proposed expansion project. The longitude of the project site is $74^{\circ} 37' 43.26''$ E to $74^{\circ} 8' 48.56''$ E and latitude is $24^{\circ} 39' 12.47''$ to $24^{\circ} 40' 14.8''$ N respectively. No Forest land is involved. No Defense Installation, Biosphere Reserve, National Park/Wild Life Sanctuary, Ecologically Sensitive Area is located within 10 km radius of the project site. No court case/litigation is pending against the proposed project. One Reserved Forest falls at a distance of 8.2 km in NW direction from the plant site. Three Protected Forests are present at a distance of 7.0 km, 8.0 km & 9.5 km in NW, WSW & NW direction, respectively from the plant site. The water bodies exist in the study area is Murliya dam (3.5km in N direction), Nimbahera River (7.0 km in ESE direction), Kadmali River (7.5 km in ESE direction), Gambhiri Reservoir (8.0 km in ENE direction), Uncha Talav (8.5 km in SSW direction) and Gambhiri River (9.6 km in ENE direction). Total cost of the project is Rs. 1288 crores. Rs. 205 crores and Rs.2.1 crores is earmarked for the capital cost and recurring cost per annum towards the environmental pollution control measures. Rs. 60 crores is earmarked towards the Enterprise Social Commitment based on Public Hearing issues over a period of ten years.

The details of the products along with their production capacity are given below:

Units	Existing Capacity (Line I)	Proposed Expansion Capacity		Total Capacity after Expansion
		Enhancement in Existing Line I	New Line II	
Clinker (MTPA)	2.0	1.0	3.0	6.0
Cement (MTPA)	3.25	0.75	4.0	8.0
Captive Thermal Power Plant (MW)	40.0	--	40.0	80.0
WHRB (MW)	--	1 x 9	1 x 9	18.0
D.G. Set (MW)	2.0	--	5.0	7.0

Regional Office of MoEF at Lucknow had sent the certified compliance report for the existing units vide letter IV/ENV/R/IND-93/643/08/327 dated 26.6.2013. The Committee noted that the compliance to the Environmental Clearance (EC) conditions is satisfactory.

Limestone (9.10 MTPA), Red Ochre (0.67 MTPA), Laterite (0.32 MTPA), GYPSUM (0.55 MTPA), fly ash (1.44 MTPA) and petcoke (3.68 MTPA) are the raw materials that will be used. The limestone will be sourced from captive limestone mines located at a distance of 1.5km from the project site and will be transported to the plant site by closed conveyor.

Pet coke will be used in the CPP and cement manufacturing operation. Pet coke of 9 lakhs MT will be supplied by M/s. Indian Oil Corporation Limited to M/s.WCL. In this regard, PAs have submitted the confirmation letter no. LC/WCL/01 dated 25.6.2013 obtained from IOCL. Gypsum will be sourced from Nagaur/Bikaner and transported to the plant site by road. Total power requirement after proposed expansion project will be sourced from existing & proposed Captive Power Plant, WHRB, AVVNL & D.G. Set (for back-up).

Ambient air quality monitoring has been carried out at 8 locations during December 2012 – February 2013 and the data submitted indicated: PM_{10} (46.08 to 72.80 $\mu\text{g}/\text{m}^3$), $PM_{2.5}$ (19.82 to 35.11 $\mu\text{g}/\text{m}^3$), SO_2 (6.58 to 10.91 $\mu\text{g}/\text{m}^3$) and NO_x (12.28 to 19.98 $\mu\text{g}/\text{m}^3$). AAQ modeling study for point source emissions including plant and mines indicates that the maximum incremental GLCs would be 7.38 $\mu\text{g}/\text{m}^3$, 7.38 $\mu\text{g}/\text{m}^3$ and 6.53 $\mu\text{g}/\text{m}^3$ with respect to PM_{10} , SO_2 and NO_x respectively. The major sources of pollution in a cement plant are the stacks attached to the process units. All major sources of air pollution will be provided with bag house, bag filters & ESP to maintain particulate matter emissions within permissible limit.

Existing water requirement for the project is 2571 KLD. Additional water requirement for the proposed expansion project will be 3673 KLD, which will be sourced from Ground Water, Mine Sump & Ghambiri Reservoir. CGWA Permission for 2470 KLD Ground Water has already been obtained from CGWA vide letter no. 21-4(212)WR/CGWA/2007-605 dated 20.5.2011. Application for obtaining permission for withdrawal of additional 3000 KLD Ground Water has been submitted to CGWA vide Letter No. WCL/CGWA/12-13 dated 10.6.2013. Further, agreement with Water Resource Department, Govt. of Rajasthan has been made to utilize 31.54 million cubic feet per annum (2446 KLD) from Gambhiri Reservoir. No industrial waste water will be generated in the Cement Plant. Domestic waste water generated from Cement Plant/Colony will be treated in the existing STP. The treated water will be utilized for Greenbelt Development/Horticulture activities and in captive power plant. Rain water harvesting structures has been constructed.

No solid waste will be generated in cement manufacturing process. Dust collected from various pollution control equipments is being/will be recycled back to the process. STP Sludge is being/will be utilized as manure for green belt development within the plant premises. Out of the total plant and colony area of 191.064 ha, 71.31 ha (i.e. 37 %) has been proposed to be developed under green belt / plantation. 23352 no. of trees have already been planted on 23.37 ha area and greenbelt is being developed continuously. Green belt has been developed in and around the plant area.

Public Hearing for this Proposed Expansion of Integrated Cement Project was conducted on 13.05.2013 under the chairmanship of Mr. N.K. Kothari, Additional District Collector, Chittorgarh, Rajasthan. The issues raised during public hearing are:- facilities for higher education & training, employment to the locals, adequate compensation of land, measures to overcome the pollution problems in the area, development work in near-by villages, measures to minimize the ground water consumption, plantation & maintenance of trees etc which were addressed in the final EIA/EMP report.

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

- i. Report on last Public Hearing(PH) conducted and how WCL has addressed the issues raised during the PH;
- ii. Pet Coke analysis;

- iii. Undertaking from PAs stating that PAs will be complying the revised SO₂ and NO_x emission standards;
- iv. Commitment from PAs that 90% of SO₂ emission will be reduced by lime firing;
- v. Report from D/o Agriculture, State Govt. of Rajasthan regarding ground water level in the project site and effects on cropping pattern in the surrounding villages due to the cement plant operations;
- vi. Revised Risk Assessment and Disaster Management Plan;
- vii. Details of land acquisition particularly from SC/ST community;
- viii. Medical reports of the workers employed in the WCL;
- ix. Action plan for control of fugitive emissions; and
- x. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared over a period of five years and shall be submitted.

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

13.2.7 Proposed Integrated Cement Plant (Clinker: 2.0MTPA, Cement: 2.5MTPA) along with 40MW coal based Captive Power Plant and WHRB 10 MW at villages Tonki, Temberni, Sonudal & Golpura, Tehsil Manawar, District Dhar, Madhya Pradesh by M/s UltraTech Cement Limited - regarding Environment Clearance.

1. The proposal cited above was originally considered in the 5th meeting of the Reconstituted Expert Appraisal Committee held during 31st January 2013 to 1st February, 2013. The Committee deferred the consideration of the proposal as the Public Hearing for the project was presided over by the officer of the rank of Sectional Officer (Revenue), Manawar, District Dhar, which is not in accordance with the procedure prescribed in the Environmental Impact Assessment (EIA) Notification, 2006. The Committee asked the Project Authorities (PAs) to approach the Madhya Pradesh Pollution Control Board to conduct the Public Hearing in accordance with the procedure prescribed in the Environmental Impact Assessment (EIA) Notification, 2006. Accordingly, Public Hearing was re-conducted on 30.5.2013 under the chairmanship of Additional District Magistrate, Dhar and the revised final EIA/EMP report was submitted to the Ministry vide letter no. UTCL/ENV/DEL/2013/64 dated 23.7.2013.

The said EIA/EMP report was placed before the EAC in its 11th meeting held during 26-27th August 2013 wherein the Committee deferred the consideration of the proposal till the total land of 231.28 ha is acquired by M/s. Ultra Tech Cement Limited. PAs vide letter dated 31.8.2013 submitted the information regarding the land acquisition. The said proposal was placed before the EAC for consideration.

The PAs 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 as per the Terms of Reference (ToRs) awarded

during the 35th meeting of the Expert Appraisal Committee (Industry -1) held on 26-27th April 2012 for preparation of EIA/EMP report. The ToR was awarded by MoEF vide F.No. J-11011/86/2012-IA.II(I) dated 21.5.2012 for preparation of EIA/EMP report. All the Cement Plants (≥ 1.0 MTPA) are listed at S.No. 3(b) under Category 'A' of the schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

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

M/s UltraTech Cement Limited have proposed to set up an green field Cement Plant Cement Plant (Clinker: 2.0MTPA, Cement: 2.5MTPA) along with 40MW coal based Captive Power Plant and WHRB 10 MW at villages Tonki, Temberni, Sonudal & Golpura, Tehsil Manawar, District Dhar, Madhya Pradesh. The land requirement for the proposed project is 231.28 ha (Private land – 106.35 ha and Govt. land – 124.93 ha). Out of the total 124.93 ha govt land, 121.20 ha have been acquired and the remaining 3.73 ha land is yet to be acquired. Out of the total 106.35 ha private land, 14.91 ha have been acquired through direct negotiation and the remaining 91.43 ha land acquisition is under process through Land Acquisition Act. The longitude and latitude of the project site is 75° 07' 3.13" E to 75° 08' 54.59" E and 22° 15' 41.50" N to 22° 16' 39.12" N respectively. No Forest land is involved. No Defense Installation, Biosphere Reserve, National Park/Wild Life Sanctuary, Ecologically Sensitive Area is located within 10 km radius of the project site. No court case/litigation is pending against the proposed project. Man river and Mandawadi river is located at a distance of 1.5km and 8.0 km respectively from the project site. Few patches of Lawani RF falls at a distance of 9.6km from the project site. Total cost of the project is Rs. 1600 crores. Rs. 70 crores and Rs. 2 crores earmarked for the capital cost and recurring cost per annum towards the environmental pollution control measures. Rs. 80.94 crores is earmarked towards the Enterprise Social Commitment based on Public Hearing issues over a period of ten years.

The capacity of proposed project activity has been tabulated below:

S. No.	UNIT	Proposed Capacity
1.	Clinker (MTPA)	2.0
2.	Cement (MTPA)	2.5
3.	CPP (MW)	40
4.	WHRB (MW)	10
5.	D.G. Set (MW)	2x6

The cement plant is based on the dry process technology for cement manufacturing with pre-heater and pre-calciner technology.

Limestone (3.20 MTPA), clay (0.17 MTPA), Iron sludge/ore/laterite (0.06 MTPA), Gypsum (0.12 MTPA), fly ash (0.62 MTPA), Coal (0.50), HSD (60 KLD), pet coke (0.2 MTPA) are the raw materials that will be used. The limestone will be sourced from Mohanpura & Sitapuri limestone mines. The limestone mines are located at a distance of 8-10 km from the project site and will be transported to the plant site by closed conveyor. The clay will be sourced from Sitapuri limestone mine. Pet coke will be sourced from M/s. Reliance Industries, Jamnagar. For the coal supply, the PAs have submitted an MoU made between them and M/s. Swiss Singapore Overseas Enterprises PTE Limited. As per the MoU, the coal will be imported from South Africa and Indonesia. The ash and sulphur

content in the coal will be 13-17% and 1% respectively. Calorific value in the coal would be 6000 kcal/kg. Total Power requirement for the proposed Integrated Cement Project will be sourced from CPP(40 MW) and WHRB (10 MW).

Ambient air quality monitoring has been carried out at 8 locations during summer season 2012 and the data submitted indicated: PM₁₀ (39.30 to 66.50 µg/m³), PM_{2.5} (15.10 to 36.50 µg/m³), SO₂ (6.10 to 10.50 µg/m³) and NO_x (8.10 to 16.30 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs would be 1.28 µg/m³, 7.41µg/m³ and 4.13 µg/m³ with respect to PM₁₀, SO₂ and NO_x respectively. The coal mill, cement mill and the packer units will be equipped with bag filter arrangement with 99.9% efficiency. To control air emission in the cement plant/ CPP, bag house, bag filters and ESP will be installed. Atomized water sprinkling system will be provided at limestone and coal unloading hopper and handling area. Water spraying arrangements will be made, particularly raw material storage area, wagon tippler and truck tippler areas. Good housekeeping practices will be adopted to control the fugitive emissions.

The water requirement for the project would be 3000 KLPD and it will be met from ground and surface water. Application for permission of ground water abstraction is reported to be under process with CGWA. The final approval of CGWA is yet to be obtained by the PAs. No industrial waste water will be generated in the Cement Plant. Domestic waste water generated from Cement Plant will be treated in the STP. The treated water will be utilized for Greenbelt Development. Rooftop Rainwater harvesting will be practiced within the plant premises.

No solid waste will be generated in cement manufacturing process. Dust collected from various pollution control equipments will be recycled back to the process. STP Sludge will be utilized as manure for green belt development within the plant premises. Green belt will be developed in about 33% of the total plant area.

Public Hearing for this Proposed Integrated Cement Plant was conducted on 30.05.2013 under the chairmanship of Mr. R.K. Mishra, Additional District Magistrate, Dhar, Tehsil – Manawar, District – Dhar, Madhya Pradesh. The issues raised during public hearing are:- proper compensation of land, basic amenities in the nearby villages, employment to the locals, impact on flora fauna, livestock and people due to pollution, impact on Man river water and measures to save local culture in the area etc which were addressed in the final EIA/EMP report.

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

- i. English translation of the award letter of District Magistrate;
- ii. Details of the land acquired especially from SC/ST community;
- iii. Permission obtained from the State Govt. for tribal land acquisition;
- iv. Arrangement for transport of coal from place of import to the plant site;
- v. Revised water balance chart for the proposed project with focus on reduction in consumption and enhancement on quantum of recharge;
- vi. Undertaking from PAs stating that PAs will be complying with the revised SO₂ and NO_x emission standards;

- vii. Revised Risk Assessment and Disaster Management Plan;
- viii. R&R action plan;
- ix. Commitment for fossil conservation, if any; and
- x. Commitment for effective management of work-zone environment.

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

13.2.8 Expansion of Steel Manufacturing Unit by addition of Electric Arc Furnace (20T) and Rolling Mill (200 TPD) at Village Ajnali, Opp. Focal Point, Mandi Gobindgarh, District Fatehgarh Sahib, Punjab **by M/s. Bhawani Industries Limited- regarding Environmental Clearance**

1. The aforesaid proposal was considered by the Reconstituted Expert Appraisal Committee (Industry) in its 3rd meeting held during 3-5th December, 2012. The Committee noted that the consultant (M/s CPTL Enviro Tech, Chandigarh) who prepared the EIA report was not accredited by QCI/NABET and deferred the proposal. Thereafter, the proponent submitted the revalidated EIA report by the M/s Envirotech India Consortium, Chandigarh. It may be noted that M/s Envirotech India Consortium, Chandigarh is also not accredited by the QCI/NABET. However, proponent has submitted an order of Hon'ble High Court of Chandigarh staying the applicability of QCI accreditation to the instant consultant. The proposal was placed before the EAC in its 7th meeting held during 4-5th April, 2013. The Committee deferred the consideration of the proposal as the members of the EAC have not received the EIA/EMP report from the proponent. Further, the Committee asked the M/s Envirotech India Consortium, Chandigarh to conduct fresh AAQ data/water quality data collection for at least a week period to verify the baseline data collected by the M/s CPTL Enviro Tech, Chandigarh.

The Project Authorities (PAs) vide letter no. Nil dated 4.5.2013 submitted the EIA/EMP report along with the fresh baseline data. The said EIA/EMP report was placed before the EAC in its 8th meeting held during 16-17th May 2013 for consideration. The committee deferred the consideration of the proposal as the EIA/EMP report submitted by the proponent was incomplete in several technical aspects. The Committee asked the proponent to submit the revised complete EIA/EMP report through the QCI/NABET accredited consultant.

The PAs vide letter no. 26.8.2013 submitted the revised EIA/EMP report through the QCI/NABET accredited consultant M/s. EMTRC Consultants Private Limited, Delhi. The said report was placed before the EAC for consideration.

The PAs and their consultant M/s. M/s. EMTRC Consultants Private Limited, Delhi gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per the Terms of Reference (ToRs) awarded during the 30th meeting of the Expert Appraisal Committee (Industry -1) held on 28-29th November 2011 for preparation of EIA/EMP report. The ToR was awarded by MoEF vide F.No. J-11011/498/2011-IA.II(I) dated 22.12.2011 for preparation of EIA/EMP report. The proposed expansion project is listed at S.No. 3(a) under category 'B' of Schedule of EIA Notification, 2006 and should have been appraised by SEIAA/SEAC. Due to location of the project falling within 10 km of radius of the Critically Polluted Area - Mandi Gobindgarh, as

per the general condition of EIA Notification, 2006, the proposal has been appraised by the Expert Appraisal Committee (Industry) in the Ministry.

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

M/s Bhawani Industries Limited have proposed to expand their Steel Manufacturing Unit by addition of Electric Arc Furnace (20T) and Rolling Mill (200 TPD) at Village Ajnali, Opp. Focal Point, Mandi Gobindgarh, District Fatehgarh Sahib, Punjab. M/s Bhawani Industries Limited is currently manufacturing Steel Ingots, Billets, Flats, Strip, ERW pipes, G.I pipes at Village Ajnali, Opp. Focal Point, Mandi Gobindgarh, District- Fatehgarh Sahib, Punjab. The existing approved capacity is of 200 TPD Concast Billet, 50 TPD Steel Ingots, 110 TPD Flats/Strips, 60 TPD ERW Pipes & 80 TPD G.I. Pipes for which they have provided two nos Induction Furnace of capacities 20 & 6 TPH and a Rolling Mill. Consent To Operate for the existing unit was obtained from Punjab Pollution Control Board vide letter no. ZO-I/FGS/WPC/2011-12/F-391 dated 11.3.2011. Total plant area is 15.2 ha. The proposed expansion will be done within the existing plant premises, thus no additional land will be acquired for the proposed expansion project. No Forest land is involved. No R&R issues are involved. No Defense Installation, Biosphere Reserve, National Park/Wild Life Sanctuary, Ecologically Sensitive Area is located within 10 km radius of the project site. No court case/litigation is pending against the proposed project. Total cost of the project is Rs. 23.5 Crores. Rs. 2.53 crores and Rs. 0.06 crores earmarked for the capital cost and recurring cost per annum towards the environmental pollution control measures. Rs. 120 lakhs is earmarked towards the Enterprise Social Commitment based on Public Hearing issues over a period of ten years.

Following are the existing and proposed production capacities:

Name of Units	Existing production capacity	Proposed expansion capacity	Total capacity after expansion
Induction Furnace (6 & 20 tons) & Casting Machine proposed Electric Arc Furnace (20 tons)	200 TPD Steel Billets	200 TPD Steel Billets	400 TPD Steel Billets
Steel Ingots	50 TPD	-	50 TPD
Rolling Mill for making Flats/Strips	110 TPD	-	110 TPD
Pipe Mill for making ERW Pipes	60 TPD	-	60 TPD
Pipe Mill for making GI Pipes	80 TPD	-	80 TPD
Rolling Mill for making TMT Bar/Wire Rod/Rebar/Structural Steel	-	Converted to 200 TPD Products	200 TPD

Punjab Pollution Control Board had sent the certified compliance report for the existing units vide letter no. 1693 dated 22.3.2013. The Committee noted that the compliance to the CTO conditions is satisfactory.

MS/CI scrap (346 TPD), sponge/pig iron (68 TPD), calcined lime and Silico – Manganese (11 TPD) are the raw materials that will be used which will be procured from the local market and transported to the plant site by trucks. Power requirement for the expansion project is 12.5 MW which will be met from Punjab State Power Corporation Limited.

Ambient air quality monitoring has been carried out at 8 locations during December 2011 to February 2012 and the data submitted indicated: PM₁₀ (78-94 µg/m³), PM_{2.5} (36-48 µg/m³), SO₂ (10.8-12.4 µg/m³) and NO_x (20.2-24.6 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs would be 0.5 µg/m³, 5.8 µg/m³ and 4.2 µg/m³ with respect to PM₁₀, SO₂ and NO_x respectively. To control air emissions Bag Filters and Chimney of adequate height will be provided. Secondary fugitive emission from EAF will be captured using Fume Extraction System and cleaned in bag house.

Total water requirement for the proposed expansion will be 20 KLD. Water will be source from ground water. Application for permission of ground water abstraction is reported to be under process with CGWA. The final approval of CGWA is yet to be obtained by the PAs. No waste water will be discharged outside the plant premises. Blow down water will be reused after adequate treatment.

The slag generated from EAF will be utilized for land filling and plinth filling. Green belt will be developed in about 33% of the total plant area. APCD dust, ETP Sludge, used CFL and other e-waste shall be stored in an impervious tank and sent to TSDF site for disposal. Used oil from D.G. Set will be sold to authorized recyclers.

The Committee deliberated on the issues raised during Public Hearing/Public Consultation conducted by Punjab Pollution Control Board on 30.5.2012 at village Ajnali, Mandi Gobindgarh under the Chairmanship of Shri Parveen Kumar Thind IAS, Addl. Deputy Commissioner, Fategarh Sahib. The issues raised during public hearing are repair of the approach road to the village, air pollution caused by the industry unit, pollution due to the truck movement etc which were addressed in the final EIA/EMP report.

3. After detailed deliberations, the Committee found the EIA/EMP report adequate and suggested to stipulate following specific conditions along with other environmental conditions while considering for accord of environmental clearance. The Committee asked the PAs to collect fresh AAQ data should be collected for a week and the data shall be submitted to the Ministry.

- i. The company shall install bag filters to control the particulate matter emissions below 50 mg/Nm³. Existing units should have emission limits within the stipulated limit of 100 mg/Nm³.
- ii. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be followed.
- iii. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB should be followed. For the existing unit the PM in the stack should be restricted to 100 mg/Nm³.
- iv. Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.
- v. Plan for rain water harvesting facilities shall be prepared and a copy shall be submitted to the Ministry's Regional Office at Chandigarh, SPCB and CPCB within 3 months of issue of environment clearance letter.

- vi. The total water requirement shall not exceed 20 m³/day. No effluent shall be discharged outside the plant premises and 'zero' discharge shall be adopted.
- vii. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy shall be submitted to the Ministry's Regional Office at Chandigarh, SPCB and CPCB within 3 months of issue of environment clearance letter.
- viii. As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- ix. Occupational health surveillance of the workers including regular analysis for respiratory and audiometric parameters should be done on a regular basis and records shall be maintained as per the Factories Act.
- x. Proper housekeeping should be maintained within the plant premises. Process machinery, exhaust and ventilation systems should be laid in accordance with Factories Act. Better housekeeping practices should be adopted for improvement of the environment within the work environment.
- xi. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted to the Ministry's Regional Office at Chandigarh. Implementation of such program should be ensured accordingly in a time bound manner.
- xii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

Terms of Reference

13.2.9 Proposed Iron Ore Pelletization plant (1.2 MTPA), Iron Ore Beneficiation Plant (3.0 MTPA) and Producer Gas Plant (2x 25000 Nm³/hr) at Village-Ghughra, Tehsil-Sihora, District-Jabalpur, Madhya Pradesh **by M/s. Gulf Ispat Limited - regarding ToR.**

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 References for the preparation of EIA/EMP report. The proposed integrated 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. Gulf Ispat Limited have proposed to set up 1.2 MTPA Iron Ore Pellet Plant, 3.0 MTPA Iron Ore Beneficiation plant and 2x25000 m³/ hr Producer Gas Plant at Village Ghughra, Tehsil: Sihora, District- Jabalpur, Madhya Pradesh. The land requirement for the proposed project is 32.696 ha (Private – 30.270 ha and Govt. – 2.426 ha). The latitude and longitude of the project site is 23° 29' 27.6" N to 23° 29' 45.5" N and 80° 11' 09.3" E to 80° 11' 46.5" respectively. No Forest land is involved. No National Park, Wildlife Sanctuary is exists within 10 km radius of the project site. Heran River is located at a distance of 1 km from the project site. Balkund Nadi and Barne Nadi is located at a distance of 0.5km and 9km distance from the project site. Dundi railway station is located at a distance of 6.5 km from

the project site. No court cases/litigation is pending against the project. Project cost is Rs. 650 Crores. Rs. 20 crores and Rs.200 lakhs per annum is earmarked towards the capital cost and recurring cost per annum towards the environmental pollution control measures.

The raw materials required are iron ore fines (30 LTPA), Coke Breeze (0.014 LTPA), limestone (0.014 LTPA) and bentonite (0.014 LTPA), FO/LDO (6000 KLtr.) and Coal (1.44 LTPA). The power requirement is 10 MW and will be met from MPPKVV Co. Ltd. , Jabalpur. The water requirement is 1500 KLD which will be met from Heran River and Ground Water.

Adequate control measures like installation of Dust Suppression System, Dust Extraction System, Bag Filters, ESP and stacks of adequate height at relevant points will be installed. There will be no discharge of Industrial Effluent (zero discharge plant). The domestic wastewater will be treated in sewage treatment plant. Tailings from Beneficiation unit will be Supply to cement plant, Brick Manufacturer and balance of tailings if any will be filled in abandoned mines. Fines collected in the de dusting system (pollution control equipments) will be recycled in the pellet plant.

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 green belt at least 10 m wide along the periphery on all sides, raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, 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 iron content, tailings, 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 30th 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/Nm³ 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 16th 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 development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
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 (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted.
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 4th 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 Madhya 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.

13.2.10 Greenfield Cement plant (Clinker – 2.50 MTPA; Cement -2.50 MTPA) along with Waste Heat Recovery Power Plant at Village Gamalapadu, Dachepalli Mandal, District Guntur, Andhra Pradesh by M/s My Home industries Limited - regarding ToR

The aforesaid proposal was considered by the Reconstituted Expert Appraisal Committee (Industry) in its 7th meeting as item no.7.5.7 held during 4-5th April 2013 for the grant of Terms of Reference (ToRs). The Committee sought the following additional information for reconsideration for the aforesaid proposal:

- i. Alternate sites for consideration for the proposed green field cement plant
- ii. Revised layout plan shall be submitted without disturbing the natural drainages/nallahs inside the project site
- iii. Separate boundary wall shall be made between the limestone mining site and cement plant site.

The proponent vide letter no. Nil dated 15.7.2013 submitted aforesaid additional information. The said proposal was placed before the EAC for consideration.

The proponent informed that sites located at 1 km distance from Dachepalli and another site located Gamalapadu Village, Guntur District, Andhra Pradesh was explored.

The site located at Gamalapadu Village, Guntur District, Andhra Pradesh was selected on the following grounds:-

- Land available in single stretch
- 500 m away from State Highway
- Rail connectivity for own private siding and no crossing of state highway.
- No habitation within the site
- No habitation within 0.5 km
- No forest land is involved

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 (≥ 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. My Home Industries have proposed to set up Greenfield cement plant (Clinker production: 2.5 MTPA and Cement production: 2.5 MTPA) along with Waste Heat Recovery Power Plant at Village Gamalapadu, Dachehalli Mandal, District Guntur, Andhra Pradesh. The land requirement for the project is 50 ha. 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. Krishna river and Naguleru Vagu is located at a distance of 5.3km and 2.3km respectively from the project site. Daida RF, Madinapadu RF and Saidulnam RF are exists within study area of the project site. The water requirement is 800 KLD which will be met from ground water and Naguleru Vagu. The power requirement is 35 MW which will be met from the grid. The raw materials required are limestone, iron ore, laterite/bauxite, gypsum, fly ash and coal. Limestone will be sourced from the captive Limestone Mine located at a distance of 0.6km from the plant site. Total cost of the project is Rs.1420 crores.

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 NO_x burners will be installed to reduce NO_x 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. 33 % of the plant area will be developed under greenbelt.

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 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 green belt at least 10 m wide along the periphery on all sides, raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, 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 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.).
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 SiO₂, Al₂O₃, MgO, MnO, K₂O, CaO, FeO, Fe₂O₃, P₂O₅, H₂O, CO₂.
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 process units 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 30th 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/Nm³ 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 16th 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 development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.

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 (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted.
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 4th 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.

13.2.11 Expansion of Asbestos Cement Sheets unit of Capacity from 58,000 to 94,000 TPA at Bonda Industrial Estate, Bonda Village No.1, Narengi, Parikheti GP, Chandrapur –CD Block, Kamrup district, Assam by M/s. Assam Roofing Limited - regarding ToR.

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft 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. Assam Roofing Limited have proposed to expand their asbestos cement sheet manufacturing unit from 58,000 TPA to 94,000 TPA at Bonda Industrial Estate, Bonda Village No.1, Narengi, Parikheti GP, Chandrapur –CD Block, Kamrup district, Assam. The land requirement is 16953.20 m². The existing plant obtained Environment Clearance from MoEF vide F.No.J-11011/564/2007-IA.II(I) dated 14.9.2007. No Forest land is involved. No National Park, Bird sanctuaries and biosphere reserve is exists within 10 km radius of the project site. Amchang wildlife sanctuary is located within the study area of the project site. Bonda village is located adjacent to the plant site. No court cases/litigation is pending against the project. Khanapara RF and Myllem RF are located within the 10km radius of the project site. Brahmaputra river is flowing at a distance of 3.2 km from the project site. Total cost of the expansion project is Rs.20.97 crores.

The raw materials required are cement (107 TPD), fly ash (78 TPD), asbestos fibre (21 TPD) and Pulp (2 TPD). The water requirement is 40 KLD and will be sourced from bore well.

The bag opening machine and milling machine will be connected with dust collector equipment. Emission in work place will be less than 0.1 fibre/cc. Automatic handling/opening of asbestos fiber bags will be provided. Entire process effluent will be resused/recycled in the manufacturing process. Domestic wastewater will be treated in the septic tank followed

by the soak pit. Entire solid waste generated including process, sheet cuttings, rejects, dust from bag filters will be recycled and reused in the process.

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

- 1 Executive Summary of the project.
- 2 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 duly authenticated by the Chief Wildlife Warden along with his recommendations or comments
- 3 Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife as the project site located within 10 Km radius of Amchang Wildlife Sanctuary.
- 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 / 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 A line diagram/flow sheet for the process and EMP
- 10 The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
- 11 Modern up-to-date Asbestos plant with automatic bag opening devices should be installed.
- 12 The safety measures adopted during import and transport of Asbestos from Canada or any other country should be included.
- 13 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.
- 14 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.
- 15 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.
- 16 Project site layout plan to scale using AutoCAD showing green belt at least 10 m wide along the periphery on all sides, raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, water bodies, rivers/drainage passing through the project site should be included.
- 17 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.
- 18 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.

- 19 Site-specific micro-meteorological data including inversion height and mixing height should be included
- 20 Details of the other industries located in 10 km radius should be included
- 21 One season base line data on air, water, soil & noise etc. should be included
- 22 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 Mesothelioma, Lung cancer and Asbestosis related problems in asbestos industries.
- 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_2 , Al_2O_3 , MgO , MnO , K_2O , CaO , FeO , Fe_2O_3 , P_2O_5 , H_2O , CO_2 .
- 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 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"
- 27 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.
- 28 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.
- 29 Sources of secondary emissions, its control and monitoring as per the CPCB guidelines and latest notification vide G.S.R. 414(E) dated 30th May, 2008 should be included.
 - 30 Chemical characterization of RSPM and incorporation of RSPM data. Location of one AAQMS in downwind direction.
 - 31 Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be included.
 - 32 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.
 - 33 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
 - 34 Ground water monitoring at minimum 8 locations should be conducted and data submitted
 - 35 Scheme for proper storage of asbestos fibres and disposal of solid/hazardous waste should be included.
 - 36 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.
 - 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 along with a Piper and Piper Duro-V diagram. Surface water data from river, rainfall, discharge rate, quantity, drainage and distance from project site should also 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 should be included.
 - 39 Ground water modeling 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 All samplings for water have to be done during the peak summer time (Sampling number, dates and standard deviation should be included.
 - 42 Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
 - 43 Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents should be included.
 - 44 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.

- 45 Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from asbestos bearing effluent should be included.
- 46 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.
- 47 All stock piles should be on top of a stable liner to avoid leaching of materials to ground water.
- 48 Action plan for development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
- 49 Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
- 50 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.
- 51 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.
- 52 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.
- 53 Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
- 54 Compliance to the recommendations mentioned in the CREP guidelines should be included.
- 55 An action plan on entire operation should be automatic and closed system for all operations for fibre handling and processing should be included.
- 56 Details of arrangement for measurement and monitoring of asbestos fibre (Phase contrast microscope) should be included.

- 57 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.
- 58 EMP should include the concept of waste-minimization, recycle/reuse/recovery techniques, Energy conservation, and natural resource conservation.
- 59 EMP should include a clear map for plantation/green belt.
- 60 Commitment that laboratory for monitoring asbestos fibres will be established at the site.
- 61 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.
- 62 At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted.
- 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 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 4th 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 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, after public consultation.

- 13.2.12 Proposed capacity expansion of Kraft paper (from 65 TPD to 115 TPD) from Agro-based residues raw material and optional use of coal in place of rice husk as fuel for 6 MW Captive power generation plant at 7th K.M. stone, Moradabad

**Road, Kashipur, District Udham Singh Nagar, Uttarakhand by M/s
Siddheshwari Paper Udyog Limited - regarding ToR**

The aforesaid proposal was considered by the Reconstituted Expert Appraisal Committee (Industry) in its 7th meeting as item no.7.2.10 held during 4-5th April 2013 for the grant of Terms of Reference (ToRs). The Committee sought the following additional information for reconsideration for the aforesaid proposal:

- i. Water balance chart of the existing project as well as expansion indicating raw water input, loss and effluent generation.
- ii. Water quality of raw intake water to be submitted. Wastewater characteristics of untreated and treated effluent.
- iii. Copy of Consent to establish and consent to operate along with point wise compliance report.
- iv. Details of show cause notices/directions issued by the SPCB/CPCB along with action taken report.
- v. Process scheme of the existing and proposed effluent treatment plant including techno-economic feasibility study of ETP.
- vi. Status of modification/upgradation in the existing ETP along with actual photographs
- vii. Status of chemical recovery unit.
- viii. Ash disposal action plan to be submitted.

The proponent vide letter no. SPUL/EIA/2013/02 and dated 22-04-2013 submitted aforesaid additional information. The additional information was resubmitted to MoEF on 14-06-2013 and 5-09-2013. As per the said information, the revoke letter was issued by CPCB on 17.7.2013 after the inspection of CPCB officials.

The project authorities along with their consultant (M/s. JM EnviroNet Pvt. Ltd, Gurgaon) gave a detailed presentation on salient features of the project and proposed environmental protection measures to be undertaken along with draft Terms of Reference for preparation of EIA/EMP Report. All the Pulp & Paper Units are listed at S.N. 5 (i) under Category "A" of the Schedule of EIA Notification, 2006 and appraised at the Central Level.

M/s. Siddheshwari Paper Udyog Limited have proposed to expand the production capacity of Kraft Paper (From 65 TPD to 115 TPD) at 7th K.M.Stone, Moradabad Road, Kashipur Tehsil, Udham Singh Nagar district, Uttarakhand. The existing plant got the Consent To Establish from Uttarakhand Environment Protection and Pollution Control Board vide Letter no 2394/ NOC/Siddheshwari Paper Udyog Ltd./2429 and dated 25-02-91. The total plant area is 9.27 ha. No additional land is required for expansion. The Dehla river is located at a distance of 1.5 km from the project site. No Forest land is involved. No National Park, Wildlife Sanctuary exists within 10 km radius of the project site. No court cases/litigation is pending against the project. The raw materials required are bagasse & wheat straw, Indian waste paper, caustic soda, Fortified Rosin, Alum etc. Total cost of the project is Rs. 475 Lacs. Rs. 110 lakhs and Rs.100 Lakhs is earmarked towards the capital cost and recurring cost per annum towards the environmental pollution control measures.

The fresh water consumption after the proposed expansion is 4600 KLPD sourced from ground water. The power requirement for the after proposed expansion is 82000 KWH which will be sourced from UPCL and own captive power generation. One D.G. sets of 500 KVA is proposed as a standby power. The rice husk and coal requirement after the proposed expansion will be 200 TPD and 140 TPD respectively.

To control the air emissions, cyclone and double stage wet scrubbing system will be provided to the proposed boilers.

The Committee noted that baseline data collected during Summer Season 2013 will be used for the preparation of EIA/EMP report and one month additional baseline data for December, 2013 will also be used for the preparation of EIA/EMP report. The Committee agreed to it.

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 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. 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.
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 green belt at least 10 m wide along the periphery on all sides, raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, 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. 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 SiO₂, Al₂O₃, MgO, MnO, K₂O, CaO, FeO, Fe₂O₃, P₂O₅, H₂O, CO₂.

17. MOU / contracts / assurances that regular/continuous supply of raw materials will be ensured for next 5-10 years (from non-forest sources).
18. A note on pulp washing system capable of handling wood pulp should be included.
19. Manufacturing process details for the existing and proposed plant should be included. Chapter on Pulping & Bleaching should include: no black liquor spillage in the area of pulp mill; no use of elemental chlorine for bleaching in mill; installation of hypo preparation plant; no use of potcher washing and use of counter current or horizontal belt washers. Chapter on Chemical Recovery should include: no spillage of foam in chemical recovery plant, no discharge of foul condensate generated from MEE directly to ETP; control of suspended particulate matter emissions from the stack of fluidized bed recovery boiler and ESP in lime kiln
20. Studies should be conducted and a chapter should be included to show that Soda pulping process can be employed for Eucalyptus/Casurina to produce low kappa (bleachable) grade of pulp.
21. Commitment that only elemental Chlorine-free technology will be used for the manufacture of paper and existing plant without chemical recovery plant will be abolished within 2 years of issue of environment clearance.
22. A commitment that no extra bleaching chemicals (more than being used now) will be employed and AOx will remain within limits as per CREP for used based mills.
23. 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.
24. A list of industries containing name and type in 10 km radius shall be incorporated.
25. 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".
26. 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.
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 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 30th 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 plants proposed for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm³ should be included.

- Cumulative impacts of existing as well as proposed expansion and Captive Power Plant 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 16th 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.
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 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 development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
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. Earthquake history and management plan should be submitted.
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. 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.
65. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted.
66. A note on identification and implementation of Carbon Credit project should be included.
67. Total capital cost and recurring cost/annum for environmental pollution control measures.
68. 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.
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.

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 4th 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 Uttarakhand Environment Protection and 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.

13.2.13 Proposed green field integrated cement plant (Clinker production: 1.5 MTPA, Cement production: 2.0 MTPA) at Villages - Padampur, Bada Hariharapur, Jagannathpur, Ramjeevapur, Tehsil –Gamgaria, Dist: Saraikela-Kharsawan, Jharkhand **by M/s Adhunik Power & Natural Resources Limited (APNRL) - regarding ToR.**

The project authorities and their consultant (M/s SENES Consultants India 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 Cement Plants (≥ 1.0 MTPA) are listed at S.No. 3(b) under Category 'A' of the schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s Adhunik Power & Natural Resources Limited have proposed to set up green field integrated cement plant (Clinker production: 1.5 MTPA, Cement production: 2.0 MTPA) at Villages - Padampur, Bada Hariharapur, Jagannathpur, Ramjeevapur, Tehsil –Gamgaria, Dist: Saraikela-Kharsawan, Jharkhand. The land requirement for the project is 65 acres. The site is adjacent to the APNRL's 540 MW TPP for which environment clearance was accorded by the Ministry vide letter no.J-13012/8/2009-IA.II(T) dated 9.5.2011. Out of the 65 acres, 24 acre land of power plant site has been procured and the rest of the land will be procured from private owners. The latitude and longitude of the project site is $22^{\circ} 48' 33''$ N to $22^{\circ} 49' 14''$ N and $86^{\circ} 02' 24.7''$ E to $86^{\circ} 03' 12.3''$ E respectively. No Forest land is involved. Dalma Wildlife Sanctuary Eco-sensitive area and Dalma Rugai Elephant Corridor is located at a distance of 3.8km and 8.8 km respectively from the project site. The water bodies located within the study area are Subarnarekha river (7km), Kharkai river (8km) and Sanjai river (5.5km). 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 $17^{\circ} 3' 43.18''$ N to $17^{\circ} 4' 32.15''$ N and $77^{\circ} 30' 1.68''$ E to $77^{\circ} 31' 6.15''$ E respectively. Total cost of the project is Rs.1000 crores.

The water requirement is 3000 KLD [Plant activity: 2700 KLD and Drinking and Sanitation: 300 KLD] which will be met from APNRL TPP water reservoir through pipeline. The raw materials required are limestone, iron ore, bauxite, gypsum, fly ash and coal. Limestone will be sourced from the Tonto block for which the PAs have applied for the mining lease.

To control air pollution, bag filters at conveyor transfer points and water sprinkling at dusty places will be done. ESP will be installed to keep particulate emission below 50 mg/Nm³.

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

1. Executive summary of the project
2. Location of national parks/wildlife sanctuary/Elephant Corridor/ Reserve Forests within 10 km. radius should specifically be mentioned. A map showing land use/land cover, reserved forests, wildlife sanctuaries, national parks, elephant

- corridor, tiger reserve etc in 10 km of the project site duly authenticated by the Chief Wildlife Warden along with his recommendations or comments
3. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife
 4. Photographs of the existing TPP site 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 / 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. Copies of coal linkage and limestone linkage documents
 10. A line diagram/flow sheet for the process and EMP
 11. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
 12. 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.
 13. 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.
 14. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates should also be included.
 15. 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.
 16. 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.
 17. Project site layout plan to scale using AutoCAD showing green belt at least 10 m wide along the periphery on all sides, raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, water bodies, rivers/drainage passing through the project site should be included.
 18. Details and classification of total land (identified and acquired) should be included.
 19. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
 20. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
 21. 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.
 22. A list of industries containing name and type in 10 km radius shall be incorporated.

23. Residential colony should be located in upwind direction.
24. 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".
25. 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.).
26. 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 SiO₂, Al₂O₃, MgO, MnO, K₂O, CaO, FeO, Fe₂O₃, P₂O₅, H₂O, CO₂.
27. 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.
28. 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.
29. Manufacturing process details for all the cement plant, captive power plant and mine should be included.
30. Possibility of installation of WHRB will be explored and details included
31. Mass balance for the raw material and products should be included.
32. Energy balance data for all the components should be incorporated.
33. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
34. 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.
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 30th May, 2008.
36. Vehicular pollution control and its management plan should be submitted.
37. 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.
38. 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.
39. 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.
40. 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.
41. 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/Nm³ should be included. Cumulative impacts of cement plant, Captive Power Plant and mines on the ambient air quality shall be assessed.
42. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be included.

43. 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.
44. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
45. One season data for gaseous emissions other than monsoon season is necessary.
46. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
47. 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.
48. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
49. Ground water modelling showing the pathways of the pollutants should be included
50. Column leachate study for all types of stockpiles or waste disposal sites, at 20 °C-50 °C should be conducted and included.
51. 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.
52. 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.
53. A note on the impact of drawl of water on the nearby River during lean season.

54. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
55. 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.
56. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
57. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
58. 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.
59. 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.
60. 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.
61. 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.
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 development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
64. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
65. 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.
66. 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.
67. Plan for the implementation of the recommendations made for the cement plant in the CREP guidelines must be prepared.
68. 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.
69. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted.
 70. A note on identification and implementation of Carbon Credit project should be included.
 71. Total capital cost and recurring cost/annum for environmental pollution control measures.
 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 with financial budget for complying with the commitments made.
 73. 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 4th 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 Jharkhand State 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.

- 13.2.14 Proposed expansion of integrated cement project [Clinker production from 4.80 MTPA to 7.30 MTPA, cement from 4.85 to 8.10 MTPA, captive power plant from 70 to 125 MW and WHRS from 12 to 21 MW] at village Amli, Tehsil Pindwara, District Sirohi, Rajasthan **by M/s Binani Cement Limited - regarding ToR.**

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

M/s. Binani Cement Limited (BCL) have proposed to expand their integrated cement project [Clinker production from 4.80 MTPA to 7.30 MTPA, cement from 4.85 to 8.10 MTPA, captive power plant from 70 to 125 MW and WHRS from 12 to 21 MW] at village Amli, Tehsil Pindwara, District Sirohi, Rajasthan. Environment Clearance for Clinker Production 4.8 MTPA has been obtained from MoEF, New Delhi vide letter no. J-11011/59/2010-IA II(I) dated 1.5.2010 and for 70 MW Captive Power Plant vide Letter No. J-13012/37/2007 IA. II (T) dated 7.6.2007. Total plant area is 230 ha which is already under possession of BCL. The proposed expansion will be done within the existing plant premises, thus no additional land will be acquired for the proposed expansion project. The longitude of the project site is $73^{\circ} 4' 36.77''$ E to $73^{\circ} 6' 4.82''$ E and latitude is $24^{\circ} 48' 57.66''$ to $24^{\circ} 49' 54.69''$ N 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. Amli village is located at a distance of 3km from the project site. Raw materials required for the proposed expansion of cement plant are Limestone, Silica Sand, Red Ochre, Gypsum & Fly Ash which will be procured from Captive Limestone Mines at Village Amli and Thandiberi; Iswal, Bhilwara, Akkasar Desli, Anandgarh, Nachna, RSMM, Barmer, Kutch, Suratgarh, Zawar Mines, Adani-Kach & Dariba respectively. Existing water requirement for the project is 2878 m³/day. Additional water requirement for the proposed expansion project will be 1500 m³/day, which will be sourced from Ground Water and CPP blow down. Total power requirement after proposed expansion project will be 108 MW which will be sourced from CPP, RSEB Grid and WHRS. Total cost of the project is Rs. 1087.75 Crore. Capital cost for Environmental Protection Measures is Rs. 108.75 Crore and Recurring Cost is Rs. 9.745 Crore/ annum.

The existing and proposed production capacities are as follows:

Units	Existing Capacity (Line I & Line II)	Proposed Expansion (Line III)	Total Capacity after Expansion
Clinker (MTPA)	4.8	2.5	7.3
Cement (MTPA)	4.85	3.25	8.1
Captive Thermal Power Plant (MW)	70 (2x25 & 1x20)	55	125 (2x25 , 1x20 & 1x55)
WHRS (MW)	12	9	21

The major sources of pollution in a cement plant are the stacks attached to the process units. All major sources of air pollution have been/will be provided with bag house,

bag filters & ESP to maintain particulate matter emissions within permissible limit. No major water, noise & soil pollution is envisaged from the project activity. Various mitigation measures are being undertaken to take care of the environment in respect of air, water, noise, soil & the green cover of the plant site & nearby villages. Same practices will be followed for proposed expansion project. "Zero discharge" is being/will be maintained for the Integrated Cement Project. Domestic waste water generated from Cement Plant/Colony is being/will be treated in the existing STP having capacity of 300m³/day. The treated water will be utilized for Greenbelt Development/Horticulture activities and in captive power plant. Rain water harvesting structures has been constructed.

No solid waste is being/will be generated in cement manufacturing process. Dust collected from various pollution control equipments is being/will be recycled back to the process. STP Sludge is being/will be utilized as manure for green belt development within the plant premises.

The Committee noted that baseline data collected during October – December 2013 will be used for the preparation of EIA/EMP report.

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 I 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/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 green belt at least 10 m wide along the periphery on all sides, raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, 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 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.).
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 SiO₂, Al₂O₃, MgO, MnO, K₂O, CaO, FeO, Fe₂O₃, P₂O₅, H₂O, CO₂.
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 30th 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 for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm³ should be included. Cumulative impacts of cement plant, Captive Power Plant and mines 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 16th 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.
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 development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
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 (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted.
- 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 4th 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 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 report including public hearing proceedings.

- 13.2.15 Expansion of integrated cement project [clinker production from 2.90 MTPA to 5.65 MTPA, cement production from 3.45 MTPA to 7.05 MTPA, coal based captive power plant from 25 MW to 60 MW and Waste Heat Recovery Boiler from 10 MW to 20 MW] at Village Mangrol, Tehsil-Nimbahera, District-Chittorgarh, Rajasthan **by M/s J.K. Cement Works – regarding ToR.**

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

M/s. J.K. Cement works have proposed to expand their integrated cement project [clinker production from 2.90 MTPA to 5.65 MTPA, cement production from 3.45 MTPA to 7.05 MTPA, coal based captive power plant from 25 MW to 60 MW and Waste Heat Recovery Boiler from 10 MW to 20 MW] at Village Mangrol, Tehsil-Nimbahera, District-Chittorgarh, Rajasthan. The existing project obtained environmental clearance from MoEF vide F.No.J-11011/1273/2007-IA.II(I) dated 20.3.2009. Total plant area is 149.42. The proposed expansion will be done within the existing plant premises, thus no additional land will be acquired for the proposed expansion project. 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. Mangrol city is located at a distance of 0.5 km from the project site. Raw materials required for the proposed expansion of cement plant are Limestone, Red Ochre, Laterite, Gypsum & Fly Ash, coal and petcoke. The limestone will be sourced from Mangrol, Murlia and Karunda. Existing water requirement for the project is 1625 m³/day. Additional water requirement for the proposed expansion project will be 1825 m³/day, which will be sourced from Ground Water and water reservoir in the Mangrol – Tilakhera mines and Nimbahera – Ahirpura mine. Total power requirement after proposed expansion project will be 67 MW which will be sourced from CPP and WHRB. Total cost of the project is Rs. 1979.46 Crore.

The existing and proposed production capacities are as follows:

Units	Existing Capacity (Unit I & II)	Proposed Expansion (Unit III)	Total Capacity after Expansion
Clinker (MTPA)	2.90	2.75	5.65
Cement (MTPA)	3.45	3.60	7.05
Captive Thermal Power Plant (MW)	25	35	60 (1x25 , 1x35)
WHRS (MW)	10	10	20

The pollution control equipment like Bag House will be provided for the kiln/raw mill. Installation of low NOx burners and stacks of adequate height will be provided. ESP will be provided for the proposed power plant. No solid waste will be generated from the cement plant. Ash generated from the CPP will be used in the 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 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 I 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/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 green belt at least 10 m wide along the periphery on all sides, raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, 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. Action Plan for the transportation of limestone by closed conveyors shall also 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 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.).
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_2 , Al_2O_3 , MgO , MnO , K_2O , CaO , FeO , Fe_2O_3 , P_2O_5 , H_2O , CO_2 .
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 30th 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 for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm³ should be included. Cumulative impacts of cement plant, Captive Power Plant and mines 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 16th 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.
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 development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
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 (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted.
- 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 4th 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 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 report including public hearing proceedings.

13.2.16 Expansion of Clinker Production (4.0 MTPA to 4.8 MTPA) at Khasra No. 59, 64, 70-72, 76-77, 79-80, 660, 662 village Amli, tehsil Pindwara, district Sirohi, Rajasthan by M/s Binani Cement Ltd. – regarding ToR for installation of standby coal mill

Environmental Clearance (EC) to the aforesaid proposal was granted by the Ministry vide F.No.J-11011/59/2010-IA.II(I) dated 1.5.2010. The proponent vide letter dated 24.6.2013 requested the Ministry to amend the environmental clearance by including installation of stand by coal mill. Ministry vide letter dated 14.8.2013 requested the proponent to submit a form I and pre-feasibility project report for consideration of fresh Terms of Reference (ToR) in accordance with the procedure stipulated in the EIA, Notification 2006 for setting up of the stand by coal mill in the cement plant. Accordingly, proponent submitted the form I and pre-feasibility project report. The proposal was placed before the EAC for consideration. The proponent also made a presentation before the Committee.

As per the presentation made by the proponent, the Committee noted that M/s. Binani Cement Limited (BCL) have proposed to install an stand by coal mil of 7 TPH capacity within their existing plant premises. The purpose of installation of stand by coal mill is to avoid hampering of cement production during emergency situation or maintenance of existing coal mill. The project cost for installation of stand by coal mill would be Rs.550 lakhs. Rs.50 lakhs and Rs.1.5 lakhs is earmarked as a capital cost and recurring cost per annum towards the environmental pollution control measures.

The proponent submitted that there will be no additional land requirement, no change in manufacturing process and production capacity, no additional water requirement and no pollution load due to the proposed installation of stand by coal mill of 7TPH capacity.

After detailed deliberations, the Committee recommended for the amendment in the EC dated 1.5.2010 for installation of standby coal mill of 7 TPH capacity subject to the environmental safeguards.

- 13.2.17 Expansion of existing pig iron manufacturing industry consisting of 262 m³ blast furnace, 33m² sinter plant and 6 MW blast furnace off gas power plant by installation of 0.3 MTPA steel, 0.32 MTPA Rolling Mill, 0.12 MTPA coke oven plant, 9MW coke oven off gas based power plant, Air separation system -120 TPD, producer gas plant – 15000 Nm³/hr oxygen plant and pulverized coal injection system – 10 TPH at Narayanadevanakere village, Hagaribommanahalli Taluk, Bellary district, Karnataka by **M/s. SLR Metaliks Limited - regarding TORs**

The project authorities along with their consultant (M/s Ultra-Tech Environment Consultancy & Laboratory, Thane) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA/EMP report. The proposed project activity is listed at S.No. 3(a) in metallurgical industries under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s. SLR Metaliks Limited have proposed to expand the existing pig iron manufacturing industry consisting of 262 m³ blast furnace, 33m² sinter plant and 6 MW blast furnace off gas power plant by installation of 0.3 MTPA steel, 0.32 MTPA Rolling Mill, 0.12 MTPA coke oven plant, 9MW coke oven off gas based power plant, Air separation system - 120 TPD, producer gas plant – 15000 Nm³/hr oxygen plant and pulverized coal injection system – 10 TPH at Narayanadevanakere village, Hagaribommanahalli Taluk, Bellary district, Karnataka. The existing plant has obtained environment clearance from the Ministry vide F. No. J-11011/766/2008-IA II (I) dated 30.8.2010. The land requirement for the proposed expansion is 190 acres. Out of the total land, 90 acres of land is already allotted by KIADB and another 100 acres is under acquisition through KIADB. No Forest land is involved. No national park/wild life sanctuary/ecologically sensitive area is located within 10 km radius. The location of the proposed site and its immediate surroundings is a barren land and moderately undulated with shrubs. Nearest village Lokappana hola is 2km, nearest town Hosapete is 25 km and nearest high way SH-25 is 6 km from the site. The water requirement is 3004.83 KLPD and will be sourced from Tungabhadra dam back water. Total power requirement will be 20 MW which will be sourced from CPP and KPTCL supply. 3x1250 KVA DG sets will be installed as a stand by power for emergency purpose. Total cost of the project is Rs.482 crores. Rs.3174 lakhs and Rs. 318 lakhs is earmarked as a capital cost and recurring cost per annum towards the environmental pollution control measures.

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

EXISTING UNITS		
1	Pig Iron Plant	262m ³ Blast Furnace
2	Sinter Plant	1x33 m ²
3	Captive Power Plant (BF gas Based)	6.0 MW

PROPOSED UNITS		
1	Steel Plant	0.3 MTPA
2	Rolling Mill	0.32 MTPA
3	Coke Oven Plant	0.12 MTPA
4	Captive Power Plant (Coke Oven Off Gas Based)	1 X 9.0 MW

5	Air Separation Plant	120 TPD
6	Producer gas plant	15000Nm ³ /Hr
7	Pulverized coal injection system	10 TPH
8	Allied Utilities/facilities	Capacities as required

Pig Iron/PI Scrap, Plant Return scrap, DRI, Fe-Alloys, Lime & Dolo, billets and coal are the raw materials that will be used.

Stack of adequate height will be provided. Dust suppression systems will be provided to control the fugitive emissions. The pellet plant, sinter plant, blast furnace and power plant will be provided with ESP. The solid wastes generated are – iron making slag, steel making slag, sludge, lime/dolime dusts and fly ash. Slag from steel melt shop will be sent to authorized processors. Scraps, cut ends from caster, rolling mill will be recycled to SMS. Coke and coal fines will be reused in coke oven plant/sinter plant

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

1. Executive summary of the project
2. Iron ore/Coal/limestone 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 use/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 green belt at least 10 m wide along the periphery on all sides, raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, 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 from the tribals, if tribal land has also to be acquired along with details of the compensation plan.
 20. Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department. .
 21. A list of industries containing name and type in 25 km radius should be incorporated.
 22. Residential colony should be located in upwind direction.
 23. 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".
 24. 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..
 25. 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 SiO₂, Al₂O₃, MgO, MnO, K₂O, CaO, FeO, Fe₂O₃, P₂O₅, H₂O, CO₂.
 26. 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.
 27. Action plan for excavation and muck disposal during construction phase.
 28. 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.
 29. Manufacturing process details for all the plants should be included.
 30. Mass balance for the raw material and products should be included.
 31. Energy balance data for all the components of steel plant including proposed power plant should be incorporated.
 32. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
 33. 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.
 34. 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.
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 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/Nm³.
 39. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be included.
 40. 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.
 41. A plan for the utilization of waste/fuel gases in the WHRB for generating power have to be set out.
 42. 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.
 43. One season data for gaseous emissions other than monsoon season is necessary.
 44. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008.
 45. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
 46. 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.
47. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
 48. Ground water modelling showing the pathways of the pollutants should be included
 49. Column leachate study for all types of stockpiles or waste disposal sites at 20°C-50°C should be conducted and included.
 50. 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.
 51. 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.
 52. A note on the impact of drawl of water on the nearby River during lean season.
 53. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
 54. 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.
 55. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
 56. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
 57. 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.
 58. Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from any other source should be included.
 59. 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.
 60. 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.
 61. 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.
 62. 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.
 63. A note on the treatment, storage and disposal of all type of slag should be included. Identification and details of land to be used for SMS slag disposal should be included. Details of secured land fill as per CPCB guidelines should also be included.
 64. 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.

65. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
66. Action plan for development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
67. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
68. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
69. 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.
70. 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.
71. 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.
72. 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.
73. 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.
74. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines must be prepared.
75. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted.

76. 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.
77. A note on identification and implementation of Carbon Credit project should be included.
78. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof 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 4th 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 State 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.

13.3.0 Any Other Items

- 13.3.1 Expansion of Induction Furnace (from 15,000 TPA to 33,000 TPA), Rolling Mill (from 30,000 TPA to 36,000 TPA) and setting up of Ferro Alloy (45,00 TPA) & Slag Crushing Plant (1,500 TPA) at Plant No. IVA/5(p), Bokaro Industrial Area, District Bokaro in Jharkhand by **M/s Hanuman Alloys Pvt. Limited - regarding extension of Validity of ToR.**

The Committee noted that the Project Authorities (PAs) vide letter no. Nil dated 17.11.2013 expressed their inability to attend the meeting due to some unavoidable circumstances and requested to consider the proposal in the next EAC meeting. The Committee decided that the proposal may be placed before the EAC in the next EAC meeting.

- 13.3.2 Proposed 2x9 MVA Ferro Alloy Plant for production of either or combination of High Carbon Ferro Chrome = 30,000 MTPA, Ferro Manganese = 40,000 MTPA, Silico Manganese = 30,000 MTPA, Ferro Silicon=14,000 MTPA Pig Iron = 46,000 MTPA at village Kanhupura, Teshil Kamakhyanagar, District Dhenkanal in Orissa by **M/s Satyanidhi Ferro Alloy Pvt. Limited - regarding extension of Validity of ToR.**

The Project Authorities (PAs) did not attend the meeting. The Committee recommended that the proposal may be placed before the EAC as and when requested by the project PAs.

- 13.3.3 Proposed 2x9 MVA Submerged Electrical Arc Furnace (Fe-Mn:35,175 TPA/ Si-Mn: 23,450 TPA/Fe-Si: 11,585 TPA) at Plot no. 2687 (P), Mouza-Ghutgoria, JL No. 24, P.S-Barjora, District-Bankura, West Bengal by **M/s Embee Ferro Alloy (p) Limited - regarding extension of Validity of ToR.**

Terms of Reference (ToRs) to the above proposal was accorded by MoEF vide letter no. J-11011/410/2011-IA II (I) dated 9.9.2011. The Project Authorities (PAs) vide letter No. Nil dated 15.7.2013 requested MoEF for extension of validity of ToR. The PP along with their consultant M/s. Grass Roots Research & Creation India (P) Limited also made a presentation before the Committee.

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

- QCI/NABET accreditation of M/s Techno Analytical EIA Consultant engaged by the Project Authorities was cancelled;
- QCI/NABET accredited consultant - M/s. Grass Roots Research & Creation India (P) Limited handling this project since 14.9.2012;
- Draft EIA report was submitted to the West Bengal Pollution Control Board on 22.12.2012;
- Panchayat Election Conducted by Election Commissioner in West Bengal Month of May 2013; and
- Public Hearing is now scheduled to be held on 04.12.2013 at the project site.

After detailed deliberations, the committee recommended for the extension of validity of TOR for a period of one year with effect from 8.9.2013.

- 13.3.4 Expansion of existing 1.75 MTPA Integrated Steel Plant situated at Village: Naharpali, Tehsil: Kharsai, District Raigarh in Chhattisgarh by **M/s Monnet Ispat Energy Limited – regarding amendment in ToR.**

Terms of Reference (ToRs) to the above proposal was accorded by MoEF vide letter no. J-11011/196/2007-IA II (I) dated 15.6.2012. Thereafter, Project Authorities (PAs) vide letter No. MIEL/JPL/HO/24 dated 30.8.2013 along with the revised Form I and Pre-feasibility Project Report requested MoEF for amendment in the ToR dated 15.6.2012 in respect of the plant capacity from 1.75 MTPA to 2.0 MTPA by addition of some new facilities.

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

Facilities proposed	As per the ToR issued on 15.6.2012	Amendment Proposed/ New Facilities	Remarks
Pellet plant	1.2 MTPA	1.2 MTPA	No change
Coal beneficiation plant	4 MTPA	2.0 MTPA	Reduced
Coke oven	1 MTPA	0.5 MTPA	Reduced
Power plant	100 MW	--	Removed
Lime & Dolomite plant	2x250 TPD & 1x250 TPD	2x250 TPD & 1x250 TPD	No change
Third Ladle Furnace in SMS	-	1x100 T	New Facility
SMS slag atomization unit	413,300 TPA	413,300 TPA	No change
SMS slag crushing plant	124,000 TPA	124,000 TPA	No change
Producer gas plant	1 x 50750 Nm ³ /h & 2 x 55000 Nm ³ /h	2 x 55000 Nm ³ /h	Reduced
SynGas Plant	-	1x58000 Nm ³ /h	New Facility
Gas based DRI Plant	-	0.5 MTPA	New Facility
Cement plant grinding unit	3 MTPA	3 MTPA	No change
Oxygen plant	1x300 TPD	1x300 TPD + 1x750 TPD	Increased
Wire Rod cum Rebar mill	-	0.5 MTPA	New Facility
Fly ash Brick Making Plant	-	50,000 bricks per day.	New Facility

Additionally, PAs informed that due to the aforesaid amendment the land requirement will be increased from 227.84 ha to 259.16 ha, water requirement from 2856 m³/hr to 3689 m³/hr, power requirement from 240 MW to 355 MW. Total cost of the proposed project will be Rs. 3,006 Crores.

The raw materials required for the various units of the project will be 0.263 MTPA hard coking coal, 0.263 MTPA soft coking coal, 0.131 MTPA non coking coal, 2.024 MTPA raw coal, 0.817 MTPA prime coal, 1.296 MTPA iron ore concentrate, 0.12 MTPA bentonite, 0.4651 MTPA of various grades of limestone & dolomite, 2 MTPA clinker, 0.15 MTPA Gypsum, 0.742 MTPA various slag, 0.682 MTPA fly ash, 0.7 MTPA Pellets, 0.5208 MTPA blooms and 0.657 MTPA washery reject. Various coals will come from Australia, South Africa, Indonesia, SECL & e-auction. Limestone will be imported from Middle East while other raw materials will be from various states of India such as Rajasthan, Orissa, Madhya Pradesh, etc.

Further, PAs informed that the baseline data collected during October – December, 2012 will be used for the preparation of EIA/EMP report.

After detailed deliberations, the Committee recommended for the amendment in the subject matter of the ToR dated 15.6.2012 as mentioned below:-

Subject matter of the ToR dated 15.6.2012 may be read as:-

Expansion of 1.75 MTPA Integrated Steel Plant to 2.0 MTPA at Village: Naharpali, Tehsil: Kharsia, District Raigarh, Chhattisgarh by M/s Monnet Ispat Energy Limited.

- 13.3.5 Expansion of Cement Plant (2.85 MTPA to 4.75 MTPA), Clinker Production (2.40 to 2.85 MTPA) and Captive Power Plant (55 to 70 MW) at Upar Wahi, Chandrapur, Maharashtra by **M/s Maratha Cement Works Limited (A unit of Gujarat Ambuja Cement Limited) – regarding amendment in the Environmental Clearance**

Environmental Clearance (EC) to the above proposal was accorded by MoEF vide letter no. J-11011/292/2006-IA II (I) dated 3.11.2006. The Project Authorities (PAs) vide letter No. MCW/EMD/02/2013/7507 dated 17.7.2013 requested the Ministry for amendment in the EC for change in fuel mix for the cement plant/captive power plant from Coal to Coal:Petcoke:Lignite.

After detailed deliberations, the Committee sought following information from the PAs for fresh consideration of the proposal:

- Project report for the proposed change in fuel mix for the cement plant/captive power plant from Coal to Coal:Petcoke:Lignite;
- Pollution load details including impact on air quality on Nickel (Ni) and Vanadium (Va) [air emissions, wastewater treatment and solid /hazardous waste generation] in tabular form [Original approved proposal Vis-a-Vis proposed fuel change proposal] along with its pollution mitigation measures; and
- Certified compliance report from Regional Office of MoEF at Bhopal for the existing unit

- 13.3.6 Proposed Iron Ore Pelletizing Plant along with Iron Ore Washery at Gidhali, Village Kusumkasa, Tehsil Balod, District Durg in Chhattisgarh by **M/s Godawari Power & Ispat Limited-regarding amendment in 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. Thereafter, Ministry vide letter dated 13.11.2013 extended the validity of the ToR for a period of one year with effect from 9.6.2013. The Project Authorities (PAs) vide letter No. GPIL/MOEF/13-14/300 dated 25.10.2013 requested MoEF for amendment in the ToR dated 10.6.2011.

The amendment sought by the PAs is as below:-

As per the ToR issued on 10.6.2011	Amendment Proposed
Iron Ore Pelletizing Plant – 1.20 MTPA Iron Ore Washery – 2.00 MTPA	<p>PAs will not pursue with the Iron Ore Pelletizing Plant.</p> <p>The Iron Ore Washery of 1.20 MTPA will be converted to the 1.0 MTPA Iron Ore Beneficiation Plant.</p>

The Committee noted that the stand alone iron ore beneficiation plant is listed at S.No. 2(b) under Mineral Beneficiation under “Category A” of the Schedule of EIA Notification 2006 and appraised by the EAC – Mining Sector.

After detailed deliberations, the Committee recommended the following:-

- i. Amendment in the subject matter of the ToR dated 10.6.2011 as mentioned below.

Subject matter of the ToR dated 10.6.2011 may be read as:-

Proposed 1.0 MTPA Iron Ore Beneficiation Plant at Gidhali, Village Kusumkasa, Tehsil Balod, District Durg in Chhattisgarh by **M/s Godawari Power & Ispat Limited**.

- ii. After the aforesaid amendment, the Committee asked the Member Secretary – Industry to refer the matter to I.A Division – Mining Sector and also advised the PAs to approach I.A Division – Mining Sector as the stand alone iron ore beneficiation plant are appraised by the EAC – Mining.

13.3.7 Expansion of Alumina Refinery from 1 MTPA to 6 MTPA and Captive power Plant of 75 MW to 285 MW at Lanjigarh, District Kalahandi in Orissa by M/s Vedanta Aluminium Limited – regarding revival of ToRs

The Terms of Reference (ToR) for the proposal cited above was accorded by the Ministry vide F.No.J-11011/406/2011-IA.II(I) dated 2.2.2012. Thereafter, Ministry vide letter dated 17.4.2012 asked State Govt. of Odisha to keep the ToRs in abeyance till the issue of free accessibility and Forest Conservation (FC) requirement for 28.943 ha of 'Gramya Jungle Jogya' land is resolved.

In this regard, the Project Authorities vide letter no. VAL/MK/13/126 dated 14.8.2013 submitted the compliance to the amnesty scheme dated 12.12.12 issued by the Ministry along with the information regarding the diversion of 26.123 ha. of "Gramya Jungle Jogya" land.

Additionally, PAs informed that the aforesaid proposal is under consideration with Project Monitoring Group (PMG). The matter was considered by the PMG in its meeting held on 31.10.2013 wherein MoEF was requested to place proposal before the EAC. Accordingly, the proposal was placed before the EAC for consideration.

After detailed deliberations, the Committee asked the PAs to circulate the documents concerned with the proposal cited above as most of the Committee members have not received the requisite documents. Further, EAC requested the Member Secretary – Industry to circulate a brief note for further consideration of the proposal.

19th NOVEMBER, 2013

13.4.0 Consideration of the Projects:

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

The project authorities and their consultant (B S Envi-Tech (P) Ltd, Hyderabad) 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 26th Meeting of the Expert Appraisal Committee (Industry) held during 17th–18th August, 2011 for preparation of EIA/EMP report. All cane juice/non-molasses based distillery (>30 KLD) are listed at S.N. 5(g) (ii) under category 'A' and appraised at Central level. Public hearing / consultation for project cited above was exempted by the EAC as per stage Section 7 (i), III Stage (3), Para (i)(b) of EIA Notification 2006 due to project being located in notified industrial area.

M/s SPY Agro Industries has proposed for expansion of Grain based Distillery (from 134 KLPD to 500 KLPD) and CPP (16.5 MW) at APIIC Industrial Estate, Plot No. 169 & 170, Village Udumulapur, MandalNandyal, District Kurnool, Andhra Pradesh. As per EIA report, the present land is occupied by the plant is 17.6 acres and an additional area of 9.8 acres which is own land of SPYAIL. However, during presentation, it was informed that the existing plant area is 43 acres and no additional land is required. Cost of expansion project is Rs. 250 Crore. Kunderu River is flowing at a distance of 0.7 Km. No wildlife sanctuaries, national parks, elephant/tiger reserves are located within 10 Km distance. Gani Reserve Forest is located at a distance of 8.9 Km. Following activities are proposed:

1. Expansion of Grain based Distillery Plant from 134 KLPD to 500 KLPD by installing 366 KLPD Grain based Distillery Plant with 12.5 % V/V Alcohol content.
2. Modernization of existing 134 KLPD Grian based Distillery Plant through process improvements to achieve 12.5 % v/v alcohol content.
3. Change of ETP Technology.
4. Installation of 16.5 MW of Power Co-Generation Palnt with 3x50 TPH AFBC boilers.

Grain (Jowar/maize/broken rice/tapioca tuber; 1240 TPD) from local market, Enzymes (2.0 TPD) from Canada, Imported Coal (473 TPD) from Indonesia and rice husk (270 TPD) from local source will be used as raw materials. Plant will be operated for 330 days.

Ambient air quality monitoring was carried out at 7 locations march to October – December, 2011 and submitted data indicates as PM_{2.5} (24.4–27.8ug/m³), PM₁₀ (39.9–44.8ug/m³), SO₂ (6.2 – 8.4ug/m³) and NO_x (8.6-10.2ug/m³). Predicted value of ground level concentration due to proposed expansion is PM₁₀ (<1 ug/m³), SO₂ (29.3ug/m³) and NO_x (19.9 ug/m³). The resultant concentrations are within the NAAQS. ESP will be provided coal/rice husk fired boiler (3 x 50 TPH) to emission less than 50 mg/Nm³. Fresh water requirement will be increased from 1878 m³/day to 5442 m³/day after expansion. Spent wash generation will be 3558 m³/day. Out of which , 1520 m³/day of spent wash will be recycled back to the process. Spentlees (5200 m³/day) will be recycled to process. Spent wash from grain based distillery will be decanted and thin slop will be concentrated in the Multi-effect evaporators (MEE). Concentrated thin slop will be mixed with settleable solids to form Distiller's Wet Grains with Soluble (DWGS). DWGS will be sent to dryer to form Distiller's Dry Grains with Soluble (DDGS). Condensate will be treated through RO and Treated effluent will be recycled in the process. Non process water will be treated and used for cooling tower blow down. DDGS will be sold as cattle feed. MEE rejects will be mixed with rice husk and used as fuel in the boiler. Fly ash from Coal will be sent to cement plant. Fly Ash from rice husk will be sent to land application.

The Committee also discussed the compliance status report on the conditions stipulated in the existing environmental clearance, which were monitored by the Ministry's regional office, Bangalore on August, 2013. It is reported that unit gaseous emissions from boiler are being controlled by installation of bagfilters and dispersed through stack height of about 47 m. The unit is zero discharge unit with scheme of Reverse Osmosis, evaporation and drying. Greenbelt has been developed in 14.30 acres of land. Regional Office pointed out that secondary ETP was not function upto the designed standards. The drainage system was is bad shape. It was advised to send half yearly compliance reports. The Committee desired that the project proponent shall submit Compliance report alongwith photographs on the observations made by the MoEF's Regional Office at Bangalore.

Greenbelt will be developed in 18.0 acres of land. Power requirement of 8 MW will be met from Cogeneration power plant.

After deliberations, the Committee desired following additional information:

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

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.

13.4.2 Resin (PF Resin 30 MTPM & MF Resin (100 MTPM) at Plot No. 9, Village Chandarda Kadi District Mehsana Gujarat by M/s Prabhu Creation Pvt. Ltd.- **regarding EC.**

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

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

The project authorities and their consultant (Ultra Tech Environmental Consultancy & Laboratory, Thane) 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 molasses based distilleries are listed at S.N. 5(g) (i) under category 'A' and appraised at Central level.

M/s Shree Basaveshwar Sugars Ltd. has proposed for setting up of Sugar (3500 TCD), Molasses based Distillery (50 KLD) & Cogeneration Power Plant (26 MW) at Sy. No.9/1, 9/3, 18/3, 19, 20, 22, 33, 34, 35, 36, 37/1, 37/2, 38 & 39 at Village Karjol, Taluka & District Bijapur, Karnataka. Total plot area is 122 ha. No forest land is involved. Total project cost is Rs. 406.00 Crores. Rs. 20 crores is earmarked toward pollution control measures. Nearest water bodies are Almatti dam (17.5 km), River Krishna (14 Km), Don River (10 Km), Kallari Halla (5.5 Km), Hire Halla (4 Km), Malgan Kere (5.0 Km) and Kun Don Halla (8.5 Km). No ecological sensitive area such as national parks and wildlife sanctuaries are located within 25 Km distance.

Distillery will be operated for 330 days. During season, the boiler will be operated mainly on bagasses available from captive source. During offseason the boilers will be operated on coal or agro-waste biomass such as sugarcane (35000 TPA) will be transported from Goa/Karwar Ports through covered truck.

Ambient air quality monitoring was carried out at 6 locations October –December, 2012 and submitted data indicates as PM₁₀ (26–45ug/m³), PM_{2.5} (19–34.1ug/m³), SO₂ (1.6 – 4.5ug/m³) and NO_x (3.1-5.3ug/m³). Predicted value of ground level concentration due to proposed expansion is PM₁₀ (1.46ug/m³), SO₂ (0.94ug/m³) and NO_x (13.7ug/m³). The resultant concentrations are within the NAAQS. ESP alongwith stack height of (80 m) will be provided to bagasse/agro waste/coal fired boiler (130TPH). Wet scrubber alongwith stack height (45 m) will be provided to boiler (18 TPH). However, the committee insisted for bagfilter instead of wet scrubber. Fresh water requirement from Krishna River/Almatti reservoir will be 1231 m³/day for cogen and sugar unit and 665 m³/day for distillery unit. The spent wash will be treated in biometanation process followed by concentration in MEE. Concentrated spent wash will be mixed with bagasse/biomass and then burnt as fuel in boiler. The plant effluents consisting of washings, lees water and cooling water purge will be treated in ETP. Bagasse will be used as fuel in boiler. Molasses will be used in distillery. Pressmud will be bio-composted and used as manure. Fly ash from coal will be sent for brick making. Fly ash from bagasse will be used soil conditioner by the farmers. Spent oil will be sent to authorized recycler/re-processors.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 25th May, 2013. The issues raised were regarding local employment, air pollution control equipment, action plan for greenbelt development etc. All the issues have been satisfactorily responded by the project proponent and incorporated in the final EIA/EMP report.

After deliberations, the Committee desired following additional information:

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

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.

13.4.4 Proposed Shohdol-Phulpur Pipeline Project (6 MMSCMD; 18" dia, 312 km) in Madhya Pradesh and Uttar Pradesh by M/s Reliance Gas Pipeline Ltd.- regarding EC.

The project authorities and their consultant (M/s Hubert Enviro Care System (P) Ltd, Chennai & Eco Chem Sales & Services, Surat) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 6th Meeting of the Expert Appraisal Committee (Industry) held during 5th-7th March, 2013 for preparation of EIA/EMP report. All oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/sanctuaries/coral reefs/ecologically sensitive areas including LNG Terminal are listed at S.N.6 (a) under category 'A' and appraised at Central level.

M/s Reliance Gas Pipeline Ltd. have proposed for Shohdol-Phulpur Pipeline Project (6 MMSCMD; 18" dia, 312 km) in Madhya Pradesh and Uttar Pradesh. To facilitate construction and maintenance of the pipeline, 20 m wide Right of Use (RoU) in land will be

acquired as per the provisions of Petroleum and Mineral Pipelines (Acquisition of Right of User in Land) Act, 1962. The pipeline ROU will cover an area of 561 ha. About 29.70 km of RoU is expected to be through forest land. A total of about 34 ha. land will be required for setting of facilities such as compressor stations, mainline valve stations and metering and regulating station. Mainline valves (MLV) will be installed at an average distance of 30 km along the pipeline. There will be total of 12 MLVs out of which 6 will be remotely operated from pipeline operations centre and balance 6 will be locally operated valves. One intermediate compressor station will be installed enroute the pipeline. The pipeline system shall also comprise of cathodic protection system, supervisory control and data acquisition (SCADA) system, dedicated optical fibre cable (OFC) based telecommunication system, leak detection system/pipeline application software, emergency shutdown system, flow measurement and control instrumentation, fire and gas detection system, fire protection system, control room, auxiliary building and associated facilities. Pipeline passes through 3 nos. of major river crossings (total 2 Kms), 12 nos. of road crossings, forest area (29.7 Kms) and agriculture (273 Km). Pipeline passes through Songhariyal sanctuary (0.9 Km). The State Board for Wildlife (SBWL) has concurred the proposal and recommended to National Board for Wildlife for further consideration. Cost of project is Rs. 1770 Crore.

Ambient air quality monitoring was carried out at 10 locations during March to June, 2013 and submitted data indicate ranges of concentration as PM₁₀ (112.8–158 ug/m³), PM_{2.5} (24.3–39ug/m³), SO₂ (7.3 – 10.1ug/m³) and NO_x (10-14ug/m³). Predicted value of ground level concentration due to proposed expansion is: SPM (2.9 ug/m³), SO₂ (0.115 ug/m³) and NO_x (0.351 ug/m³). Water requirement for MLVs and M & R during operation phase will be 7 m³/day, which will be met from ground water source. Pipeline will be laid underground, excavated soil will be reused for backfilling.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the MP Pollution Control Board on 07th August, 2013 for Rewa district. The issues raised were regarding measures for local employment, compensation against tree felling, route of pipeline, Impact on environment, leakage of gas etc. Public Hearing / Public Consultation meeting was conducted by the MP Pollution Control Board on 12th August, 2013 for Sidhi district. The issues raised were regarding local employment, land acquisition, construction of pipeline, disaster management, route of pipeline, etc. Public Hearing / Public Consultation meeting was conducted by the UP Pollution Control Board on 14th September, 2013 for Allahabad district. The issues raised were regarding ROU, benefits of project, pipeline laying period, compensation against excavation, Public Safety Insurance etc. Public Hearing / Public Consultation meeting was conducted by the UP Pollution Control Board on 23rd August, 2013 for Shahdol district. The issues raised were regarding nature of gas, pipeline accident, local employment, land compensation etc. All the issues have been satisfactorily responded by the project proponent and incorporated in the final EIA/EMP report.

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

- i. Prior clearance under the Wildlife (Protection) Act, 1972, shall be obtained from the Standing Committee of the National Board for Wildlife as the pipeline project passes through Songhariyal sanctuary.
- ii. Forest clearance for the forest land involved in the pipeline project shall be obtained.

- iii. The project authority i.e. M/s Reliance Gas Pipeline shall ensure restoration of the Right of Way to preconstruction level as soon as construction activity completed. To ensure prevention of soil erosion, backfilled areas should be properly compacted.
- iv. The design, material of construction, assembly, inspection, testing and safety aspects of operation and maintenance of pipeline and transporting the natural gas shall be governed by ASME/ANSI B 31.8/B31.4 and OISD standard 141.
- v. Annual safety audit shall be carried out for the initial three years by an independent agency and report submitted to this Ministry for ensuring the strict compliance of safety regulations on operation and maintenance.
- vi. The construction of pipeline particularly at the river and stream crossing shall be done during dry seasons to avoid disturbance of breeding seasons and soil erosion. The riverbed, embankments and / dykes shall be restored adequately after installation of crossings.
- vii. Pipeline wall thickness and minimum depth of burial at river crossings and casings at rails, major road crossings shall be in conformity with ANSI/ASME requirements.
- viii. The company shall follow horizontal drilling technique for laying of pipeline while passing through major rivers.
- ix. The project authorities shall install SCADA system with dedicated optical fiber based telecommunication link for safe operation of pipeline and Leak Detection System. Additional sectionalizing valves in the residential areas and sensitive location shall be provided to prevent the leaking of gas going to the atmosphere in the event of pipeline failure. Intelligent pigging facility shall be provided for the entire pipeline system for internal corrosion monitoring. Coating and impressed current cathodic protection system shall be provided to prevent external corrosion.
- x. The project authorities shall patrol and inspect the pipeline regularly for detection of faults as per OISD guidelines and continuous monitoring of pipeline operation by adopting non-destructive method(s) of testing as envisaged in the EMP. Pearson survey and continuous potential survey shall be carried out at regular intervals to ensure the adequacy of cathodic protection system.
- xi. All the recommendations mentioned in the risk assessment report shall be implemented.
- xii. All the issues raised during the public hearing/consultation meetings held on 07th August, 2013 for Rewa district, 12th August, 2013 for Sidhi district, 14th September, 2013 for Allahabad district and 23rd August, 2013 for Shahdol district shall be satisfactorily implemented.
- xiii. Necessary approvals from Chief Controller of Explosives must be obtained before commission of project. Requisite On-site and Off-site Disaster Management Plans shall be prepared and implemented. It is necessary that integrated DMP should be in place as the pipeline is passing through four Districts.
- xiv. The acoustic chambers/barriers should be provided for individual units wherever feasible in the compressor stations.
- xv. The workers camp should have arrangement for safe drinking water, hygienic kitchen and sanitation facilities. The wastewater should be properly treated before disposal.
- xvi. The company shall obtain all requisite clearances for fire safety and explosives and shall comply with the stipulation made by the respective authorities.
- xvii. Occupational health surveillance of worker shall be done on a regular basis and records maintained as per the Factory Act.

- xviii. The Company shall harvest surface as well as rainwater from the rooftops of the buildings proposed in the project and storm water drains to recharge the ground water and use the same water for the various activities of the project to conserve fresh water.
- xix. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted to the Ministry's Regional Office at Chandigarh. Implementation of such program should be ensured accordingly in a time bound manner.

13.4.5 Pesticides & Allied Agro Chemical Products Manufacturing Unit (750 TPM) Manufacturing Unit at Plot No.D-2/CH/41/A at Dahej-II, Industrial Estate, Village Vadadala Tehsil Vagra District Bharuch State Gujarat by M/s Shivalik Rasayan Ltd. regarding E.C

The project authorities and their consultant (Aqua Air Environmental Engineer Pvt. Ltd., Stay granted by Hon'ble High Court of Gujarat dated 11th November, 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, 2013 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 Shivalik Rasayan Ltd. have proposed for setting up of Pesticides & Allied Agro Chemical Products Manufacturing Unit (750 TPM) at Plot No.D-2/CH/41/A at Dahej-II, Industrial Estate, Village Vadadala, Tehsil Vagra, District Bhartuch, Gujarat. Total plot area is 50,000 m². Total cost of project is Rs. 60 Crore. Total green belt proposed is on the area of 16,520 sqm out which is 33% of the total area. Sea cost is 8 Km away from the project site. There is no national park/wildlife sanctuary/reserve forest within 10 Km distance. Following products will be manufactured:

S.N.	Products	Quantity (TPM)
1.	Dimethoate Technical	150
2.	Melathion Technical	350
3.	Acephate Technical	300
4.	Tebuconazole Technical	250
5.	Hexaconazole Technical	350
6.	Pendimthalin Technical	150
7.	Glyphosphate Technical	150
8.	Fipronel Technical	250
9.	Chlorpyriphos Technical	150
	Total	750 TPM (Any four be manufactured at time)

Ambient air quality monitoring was carried out at 7 locations October –December, 2012 and submitted data indicates as PM₁₀ (66–86.53ug/m³), PM_{2.5} (30ug/m³-59.17 ug/m³), SO₂ (17.8 – 27ug/m³) and NO_x (13.4-18.5ug/m³). Predicted value of ground level concentration due to proposed expansion is SPM (0.33ug/m³), SO₂ (0.5835ug/m³) and NO_x (0.209 ug/m³). The resultant concentrations are within the NAAQS. Bag filter along with stack height of 30 m will be provided to control particulate emissions. Caustic scrubber will be provide to control process emissions viz. HCl, Cl₂, P₂O₅, NH₃, CH₃Cl, HBr etc. Water requirement from GIDC water supply will be 150 m³/day. Industrial effluent generation will be

76 m³/day and treated in ETP. However, the Committee insisted for segregation of effluent based on high and low COD/TDS effluent streams. Treated effluent will be discharged into deep sea through GIDC effluent pipeline.

Power requirement from DGVCL will be 1500 KVA. DG set (2 x 500 KVA) will be installed. Coal (50 MTPD) will be consumed as fuel.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 23rd August, 2013. The issues raised during public hearing were regarding local employment, rain water harvesting, CSR, greenbelt etc. Public hearing issues have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

After deliberations, the Committee desired following additional information:

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

The 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.

13.4.6 Molasses based Distillery (30 KLPD) at Survey No.222, 223, 224, Village Babulgaon, Post Rakshi, TalukaShevgaon, District Ahmednagar, Maharashtra by M/s Gangamai Industries and Construction Limited – regarding EC.

The project authorities and their consultant (Equinox Environments (I) Pvt. Ltd., Kolhapur) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 32nd Meeting of the Expert Appraisal Committee (Industry) held during 16th -17th February, 2013 for preparation of EIA/EMP report. All molasses based distilleries are listed at S.N. 5(g) (i) under category 'A' and appraised at Central level.

M/s Gangamai Industries and Constructions Ltd. have proposed for setting up of molasses based Distillery (30 KL) at Survey No. 222, 223, 224, Village Najik Babulgaon, Post Rakshi, Taluka Shevgaon, District Ahmednagar, Maharashtra. Proposed distillery will be installed in the premises of existing Sugar (2500 MTPD) and Cogeneration Plant (12 MW). Total cost of project is Rs. 14.93 Crore. Total plot area is 67 acres (27.06 ha) out of greenbelt will be developed in 3.5 ha. No national park/wildlife sanctuary/biosphere reserve is located within 10 Km distance. Following products will be manufactured in distillery:

S.N.	Products	Capacity
1	Rectified Spirit	9,00 KLPM
2	Extra Neutral Alcohol	900 KLPM

3	Ethanol	360 KLPM
4	Fusel Oil	17 KLPA
5	Compost	14820 MT pre season
6	CO ₂ gas	690 MTPM

Ambient air quality monitoring was carried out at 8 locations March –May, 2013 and submitted data indicates as PM₁₀ (47.3–59.47ug/m³), PM_{2.5} (9.27–12.87ug/m³), SO₂ (7.93 – 14ug/m³) and NO_x (10-17.17ug/m³). Predicted value of ground level concentration due to proposed project is SO₂ (12ug/m³). The resultant concentrations are within the NAAQS. Stack height of 45 m will be provided to biogas/FO fired boiler (8 TPH). ESP alongwith stack height have been provided in cogeneration boilers (55 TPH; 30 TPH; 10 TPH). Total fresh water requirement from Jaykwadi Dam will be 310 m³/day. Spent wash generation will be 288 m³/day. Spent wash will be treated in bio-methanation followed by bio-composting. Yeast sludge will be composted. Used oil will be sent authorized recyclers/re-processors.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Maharashtra Pollution Control Board on 6th November, 2013 under the Chairmanship of Additional District Magistrate. The issues raised during public hearing were regarding impact of air pollution, wastewater generation, air pollution control equipments, greenbelt development, spent wash generation, water requirement, etc. Public hearing issues have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

After deliberations, the Committee desired following additional information:

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

The 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.

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

The project authorities and their consultant (AECOM Environment India) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 6th Meeting of the Expert Appraisal Committee (Industry) held during 5th March, 2013 – 7th March, 2013 for preparation of EIA/EMP report. All the projects related to offshore and onshore Oil and Gas exploration, development and production are listed in para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at central level.

M/s Cairn India Ltd. have proposed for drilling of Exploratory/Appraisal Wells (300) at RJ-ON-90/1 Block at District Barmer & Jalore, Rajasthan. Rajasthan block was awarded in 1995 is a joint venture of Cairn India Ltd. and ONGC with CIL as operator. The block area is 3111 Km². More than 450 wells have been drilled so far and have yielded 25 discoveries out

of which six have been developed/under development. Total project cost is Rs. USD 1418 million. No forest land is involved. The project area does not fall under notified forest area, national park/sanctuary and CRZ. Proposed wells have been divided into following five broad categories based on prognoses total depth:

S.N.	Maximum Depth	No. of Wells
1	<=1100 m	49
2	<=2400 m	165
3	<=3000 m	45
4	<=4400 m	31
5	<=6000 m	10

Ambient air quality monitoring was carried out at 30 locations Mid February – Mid May, 2013 and submitted data indicates as PM₁₀ (12–314ug/m³), SO₂ (2 – 15ug/m³) and NO_x (4.9-52.8ug/m³). Predicted value of ground level concentration due to proposed project is PM (1.36 ug/m³), SO₂ (0.85ug/m³) and NO_x (39 ug/m³). The resultant concentrations are within the NAAQS. Water based mud will be used for drilling in the initial sections of each well. Synthetic oil based mud is proposed to be used for drilling of deeper sections due to the geological conditions and operational requirement. Adequate height of stack will be provided to DG set. A flaring pit of adequate burner will be provided. 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 will be sold to authorized recyclers / re-processors.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meetings conducted by the Rajasthan State Pollution Control Board on 22nd August, 2013 for Jalore District and on 26th August, 2013 for Barmer District. The issues raised during public hearing were regarding CSR, medical mobile van, educational improvement programme, conservation of environment, tree plantation etc. Public hearing issues have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

The Committee also discussed the compliance status report dated 21.11.2012 on the conditions stipulated in the existing environmental clearance, which were monitored by the Ministry's regional office, Lucknow. It is reported that ambient air quality monitoring is carried out on a monthly basis as per NAAQES. The associated gas is being used as fuel gas for boiler and for heating requirements. The quantity of flare associated gas has reduced from 2.85 MMSCM (Oct-2011) to 2.19 MSCM (March-2012) thereby an overall reduction of 23%. CSR initiatives in Rajasthan focus around education, health and infrastructure development have been carried out. Compliance report found to be satisfactory.

After deliberations, the Committee desired following additional information:

- 1 Ambient air quality in respect of PM₁₀ and non-methane hydrocarbon to be rechecked.
- 2 Need based enterprises social responsibility considering 5 % of project cost for five year 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.

13.4.8 Coal Bed Methane (CBM) in Block, SP(NE)-CBM-2008/IV, Sohagpur CBM Block, Madhya Pradesh & Chhattisgarh 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 report. All the projects related to offshore and onshore Oil and Gas exploration, development and production are listed in para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at central level.

M/s Essar Oil Limited (E&P Division) have proposed for the Exploration and Test Production of Coal Bed Methane (CBM) in Block: SP(NE)-CBM-2008/IV, Sohagpur CBM Block, Madhya Pradesh and Chhattisgarh. Block area is 339 Km² (231 Km² falls in District Shahdol, Madhya Pradesh & 108 Km² in district Korea, Chhattisgarh. No national park/wildlife sanctuary/biosphere reserve are located within 10 Km distance. However, Debrigarh wildlife sanctuary is located at distance of 240 Km from the block. Forest land of 0.81 ha is involved. The contract between M/s Essar Oil Ltd. and GOI was signed for exploration and production of CBM for 339 km² in Block SP(NE)-CBM-2008-IV on 28th July, 2010 and have applied for PEL to Directorate of Geology and Mining, MP & Chhattisgarh on 23rd September, 2010 and 22nd September, 2010 respectively. Total cost of project is Rs. 1220.5 Crore. Following activities are planned:

Exploratory Core hole	25 wells in 25 sites
Test Wells	3 wells in 3 sites
Pilot wells	25 wells in 25 sites & each well site shall have 4 supporting wells (directional wells)
TOTAL NO. OF WELLS	153 Wells
Gas Gathering Stations	4 Nos
Main compressor stations	1 No
Inter connecting and transportation pipeline (gas & water)	~65 km.

Following are the block co-ordinates :

Ref Point	Latitude (N)			Longitude (E)		
A	23 ⁰	30'	00"	81 ⁰	44'	40"
B	23 ⁰	30'	25"	82 ⁰	04'	43"
C	23 ⁰	27'	46"	82 ⁰	04'	35"
D	23 ⁰	24'	42"	82 ⁰	04'	38"
E	23 ⁰	25'	00"	81 ⁰	44'	30"

Land requirement will be 0.5 acres per corehole, 1.5-2.0 acres per test/pilot well and 4-5 acres per GGS/MCS. Ambient air quality monitoring was carried out at 12 locations October–December, 2011 and submitted data indicates as PM₁₀ (53.8–71.6ug/m³), PM_{2.5} (17.9–28.8ug/m³), SO₂ (2.6 – 5.5ug/m³) and NO_x (7.5-11.8ug/m³). Predicted value of ground level concentration due to proposed project is PM (0.09468 ug/m³) and NO_x (3.148 ug/m³). The resultant concentrations are within the NAAQS. Stack (9 m) at well site and 30 m at GGS will be provided. Emissions will be generated in the form of PM, SO₂, NO_x, HC and Co. Unburnt HC from gas flaring will be generated

Total water requirement will be 25 m³/day for core hole drilling and 75m³/day for each test and pilot well. Water requirement will be met through approved local suppliers initially subsequently from the produced water, however, air drilling will be carried out to minimize water requirement. Formation water (50 m³/day/well) will be generated which will be treated through Reverse Osmosis and disposed/recycled. Formation system will be collected in a pit (10m x 10m x 1.25m) lined with HDPE. Wastewater may be released into nallah after meeting the CPCB/MoEF norms/ discharge standards. Domestic waste water will be treated in septic tank followed by soak pit. Committee emphasized that salt which generated from treatment plant for produced water, possibility of potential of use should be explored. Necessary R & D should be done. Monitoring of the land should be carried out for which water being used.

Drill cuttings (30 MT/core holes and 150 MT/ test or pilot well) will be generated and collected in specially designed pit (HDPE lined) and then treated and disposed in accordance with CPCB regulations specified for on-shore oil and gas industry. Waste / used (520 l/m) oil will be generated from core hole and test/pilot well and 10 used batteries will be sold to authorized recyclers / re-processors.

Enclosures and vibration isolator will be provided to control noise. Electricity (40 KVA DG set for surface facility; 125 KVA for drilling site, 180 KVA for GGS and 950 KVA for drilling / will be required. 1.5 KLD/well HSD will be used. Once CBM is produced, G.G. set will be replaced by 40 KVA for well site and 1330 KVA for GGS operations. CBM reservoir is a low pressure reservoir and possibilities of well kick due to high pressure are rare. Blow out Preventor (BOP) will be installed.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meetings conducted by the MPPollution Control Board on 14th March, 2013 for Shadole District and on 3rd July, 2013 for Koriya District. The issues raised during public hearing were regarding amount earmarked for preservation of environment, impact of project onland, education, employment, land compensation, land to be acquired for industrial purpose in tribal land, etc. Public hearing issues have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

After deliberations, the Committee desired following additional information:

- 1 Status of forest clearance. Stage-I forest clearance to be submitted.
- 2 Produced water treatment scheme alongwith influent and effluent characteristics to be submitted.
- 3 Enterprises social responsibility considering 5 % of project cost for five years to be submitted.
- 4 Clarification /reply on the issues raised in the representation made by Smt. Sulakshana Nandi.

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.

- 13.4.9 Sodium Cyanide & other Cyanide based products at plot no. 26-37, 54-57, 122, 143, Village Asnabad, Tehsil Olpad, District Surat, Gujarat **by M/s Hindusthan Chemicals Company (Formerly known as M/s Cyanide & Chemicals Company)- Regarding Environment Clearance.**

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

13.4.10 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 Environment Clearance.

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 10th Meeting of the Reconstituted Expert Appraisal Committee (Industry) held during **29th July, 2013 to 31st July, 2013** for preparation of EIA/EMP report. All the projects related to offshore and onshore Oil and Gas exploration, development and production are listed in para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at central level.

M/s 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. There are no coral reefs, marine water park, sanctuary and eco-sensitive areas located within 10 km radius. Cost of project is Rs. 3585 Crore. 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. Synthetic oil based mud will be used for the specific hole problems. Depth of wells will be varied from 3000 m to 6000 m. The quantity of drilling cuttings generated will be around 300-400 m³. Water requirement for

domestic and drilling will be 30 m³/day. The quantity of wastewater produced will be about 15 m³/day. Captive generator (4 Nos. of 1430 KVA) will be installed.

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

- i. Only high efficiency DG set with adequate stack height and modern emission control equipment and low sulphur clean diesel shall be used. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution.
- ii. Gas produced during testing shall be flared with appropriate flaring booms.
- iii. The flare system shall be designed as per good oil field practices and Oil Industry Safety Directorate (OISD) guidelines. The stack height shall be provided as per the regulatory requirements and emissions from stacks will meet the MOEF/CPCB guidelines.
- iv. Total water requirement shall not exceed 40 m³/day/well and prior permission shall be obtained from the Competent Authority for the drawl of water. Only water based mud system shall be used.
- v. Water based drilling mud shall be discharged to the sea after proper dilution as per E(P) Rules vide G.S.R 546(E) dated 30th August, 2005.
- vi. The Company shall ensure that there shall be no impact on flora fauna due to drilling of wells in the offshore sea. The company shall undertake conservation measures to protect the marine animals/biota in the region. The company shall monitor the petroleum hydrocarbons and heavy metals concentration in the marine fish species regularly and submit report to the Ministry.
- vii. Treated wastewater (produced water or formation water) shall comply with the marine disposal standards notified under the Environment (Protection) Act, 1986. Sewage treatment on board of the rig as per MARPOL regulation. Residual chlorine shall not exceed 1 mg/l before disposal.
- viii. The drill cutting (DC) wash water shall be treated to conform to limits notified under the Environment (Protection) Act, 1986, before disposal into sea. The treated effluent shall be monitored regularly.
- ix. All the guidelines shall be followed for the disposal of solid waste, drill cutting and drilling fluids for onshore and offshore drilling operation notified vide GSR.546(E) dated 30th August, 2005. Different types of wastes shall be kept segregated.
- x. High efficiency equipment shall be used to separate solids, hydrocarbons and water such as shale shakers with improved capacity to filter smaller solids, low shear pumps for use in produced water shall be employed.
- xi. Good book keeping practices shall be put in place to manage wastes such as waste tracking program i.e. identify where and when the waste generated, the type of waste and its volume, the disposal method and its location, and the personnel responsible for the waste management.

- xii. A waste minimisation plan shall be developed and followed through proper inventory management following best practices in drilling operations, good house keeping practices and optimised equipment maintenance schedules.
- xiii. Only essential rig personnel shall be on board the rig. Emergency Response Plan and health, safety and environment (HSE) system shall be installed. Geo- hazard and geotechnical studies shall be carried out to ensure safe drilling operations.
- xiv. All the hazardous waste generated at the rig/offshore facility shall be properly treated, transported to on shore and disposed of in accordance with the Hazardous Waste (Management, Handling and Transboundary Movement) Rules 2008. No waste oil shall be disposed off into sea. Waste/used oil shall be brought on-shore and sold to MoEF/CPCB authorized recyclers/re-processors only.
- xv. Requisite infrastructure facilities shall be provided near the offshore installations so that booms and skimmers/chemical dispersants could be deployed immediately in case of oil leakage from the installations. Efforts shall be made to curtail the oil slick within 500 meters of the installation and accordingly, action plan and facilities to check the oil slick within 500 meters shall be provided.
- xvi. Approval from DG Shipping under the Merchant Shipping Act prior to commencement of the drilling operations shall be obtained. At least 30 days prior to the commencement of drilling, the exact location shall be intimated to the Director General of Shipping and the Company shall abide by any direction he may issue regarding ensuring the safety of navigation in the area.
- xvii. The International 'Good Practices' adopted by the Petroleum Industry following International norms to safeguard the coastal and marine biodiversity shall be implemented by the company.
- xviii. The Company shall take necessary measures to reduce noise levels such as proper casing at the drill site and meet DG set norms notified by the MoEF. Height of all the stacks/vents shall be provided as per the CPCB guidelines.
- xix. The design, material of construction, assembly, inspection, testing and safety aspects of operation and maintenance of pipeline and transporting the natural gas/oil shall be governed by ASME/ANSI B 31.8/B31.4 and OISD standard 141.
- xx. The project proponent shall also comply with the environmental protection measures and safeguards recommended in the EIA /EMP/RA/NIO report.
- xxi. Full drawings and details of Blow Out Preventor to encounter well kick due to high formation presence, if encountered, shall be submitted to the Ministry within 3 months of the issue of environment clearance.
- xxii. On completion of activities, the well shall be either plugged and suspended (if the well evaluation indicates commercial quantities of hydrocarbon) or killed and permanently abandoned with mechanical plugs and well cap. If well is suspended, it shall be filled with a brine solution containing small quantities of inhibitors to protect the well. The position at the end of the activities shall be communicated in detail to the Ministry indicating the steps taken i.e. whether all the wells are plugged or abandoned and necessary precautions taken.

- xxiii. A brief report on environmental status & safety related information generated and measures taken as well as frequency of such reporting to the higher Authority shall be submitted to this Ministry and its respective Regional Office at Bhopal.
- xxiv. Petroleum and Natural Gas (Safety in Offshore Operations) Rules 2008 of OISD should be strictly adhered to.
- xxv. Recommendations mentioned in the Risk Assessment & Consequence Analysis and Disaster Management Plan shall be followed.
- xxvi. Adequate funds both recurring and non-recurring shall be earmarked to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government alongwith the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purposes.
- xxvii. An independent audit shall be done to ensure that the Environment Management Plan is in place in totality.

Terms of Reference

- 13.4.11 Expansion of Molasses based Distillery (from 35 KLPD to 65 KLPD) at Survey No.254, 255, 257, 258, 260, 264, 265, 271 (2), 272 (2), 273 (2), 284 (2), at Village Shreepur, Tehsil Malshiras, District Solapur, Maharashtra by M/s. Brima Sagar Maharashtra Distilleries Ltd – **regarding TOR**

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

M/s. Brima Sagar Maharashtra Distilleries Ltd have proposed for Expansion of Molasses based Distillery (from 35 KLPD to 65 KLPD) at Survey No.254, 255, 257, 258, 260, 264, 265, 271 (2), 272 (2), 273 (2), 284 (2), at Village Shreepur, Tehsil Malshiras, District Solapur, Maharashtra. Environment clearance was accorded by the MoEF vide their letter no.J-11011/68/2002-IA II (I) dated 14th May, 2013 for expansion of distillery from 22.5 KLPD to 35 KLPD. Total available land is 30.6 ha. out of which greenbelt will be developed in 10 ha. of land. Cost of expansion project is Rs. 20 Crore. The existing 35 KLPD distillery will be abandoned. It is proposed to establish 65 KLPD distillery based on multi pressure vacuum distillation, where fermentation will be carried out at higher brix concentration. No sensitive area such as wildlife sanctuaries and reserve forests are located within 10 km distance.

Net fresh water requirement from Nira Right Bank will be 715 m³/day. Spent wash will be treated through anaerobic treatment followed by MEE/RO and composting. Multicyclone alongwith stack height of 35 m will be provided to biogas fired boiler (10 TPH) and Multicyclone alongwith stack height of 30 m will be provided to biogas fired boiler (4 TPH). Fly ash from bagasse will be used in composting. Spent oil will be mixed with bagasse and burnt in boiler.

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

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. Detailed breakup of the land area along with latest photograph of the area.
4. Present land use based on satellite imagery.
5. Details of site and information related to environmental setting within 10 km radius of the project site.
6. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
7. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forest.
8. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the MPCB.
9. List of existing distillery units in the study area alongwith their capacity.
10. Number of working days of the sugar, distillery unit and CPP.
11. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
12. Manufacturing process details of distillery alongwith process flow chart.
13. Details of raw materials and source of raw materials i.e. molasses, bagasse etc. MOU from adjoining sugar mills for molasses & pressmud.
14. Sources and quantity of fuel (coal etc.) for the boiler. Measures to take care of SO₂ emission. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted, in case coal is used.
15. Action plan prepared by the SPCB to control ambient air quality as per NAAQES Standards for PM₁₀, PM_{2.5}, SO₂ and NO_x as per GSR 826(E) dated 16th November, 2009.
16. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM_{2.5}, PM₁₀, SO₂, CO, NO_x and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
17. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
18. An action plan to control and monitor secondary fugitive emissions from all the sources.
19. Details of boiler and its capacity. Details of the use of steam from the boiler.
20. Ground water quality around existing spent wash storage lagoon and the project area.
21. Details of water requirement, water balance chart for sugar, distillery and co-generation plant. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
22. Prior 'permission' from Competent Authority for the drawl of total fresh water. Details of source of water supply.
23. Hydro-geological study of the area for availability of ground water.
24. Proposed effluent treatment system for distillery and scheme for achieving 'zero' discharge.
25. Lagoon capacity for spent wash as well measures to be taken to control ground water contamination.
26. Details of solid waste management including management of boiler ash. Submit Ash management plan. MoU with cement plant for the use of fly ash.

27. Action plan for development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
28. List of flora and fauna in the study area.
29. Noise levels monitoring at five locations within the study area.
30. 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.
31. EMP should also include the concept of waste-minimization, recycle/reuse/ recover techniques, Energy conservation, and natural resource conservation.
32. Details of bagasse storage. Details of press mud requirement.
33. 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.
34. 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.
 - viii) Details of socio-economic welfare activities to be provided.
35. 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.
36. Action plan for post-project environmental monitoring.
- 37. 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.
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. 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.
40. 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 along with 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 QCI to the environmental consultant should 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.

13.4.12 Molasses Based Distillery (45KLDP) at Village Savargaon, Tahsil- Tujiapur, District Solapur Maharashtra by M/s Shri Ramgiri Sugars Ltd. – regarding TOR

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

13.4.13 Expansion of Specialty Chemicals Plant at Sy. No. 295, Village Lunej, TalukaKhambhat, District Anand, Gujarat by M/s Bromchem Lab. Pvt.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 the Synthetic Organic Chemicals Manufacturing Unit located outside the notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Bromchem Lab. Pvt.Ltd.have proposed for expansion of Specialty Chemicals Plant at Sy. No. 295, Village Lunej, TalukaKhambhat, District Anand, Gujarat.Existing plot area is 6981 m² and no additional land is required. Cost of project is Rs. 4.5 Crore.Following products will be manufactured :

SI.No.	Product	Existing Capacity (TPM)	Proposed Capacity (TPM)
1	Potassium chloride	400	400
2	Calcium chloride	Max.1 product	Max. 1 product
3	Barium chloride		
4	Zinc chloride		
5	Potassium bromate	100	100
6	Sodium bromate	Max.1 product	Max. 1 product

7	Potassium bromide	70	70
8	Sodium bromide	Max.1 product	Max. 1 product
9	Calcium bromide		
10	Ammonium bromide		
11	Sodium carbonate	100	100
12	Potassium carbonate	Max.1 product	Max. 1 product
13	Sodium phosphate	300	300
14	Potassium phosphate	Max.1 product	Max. 1 product
15	Dicalcium phosphate		
16	Tricalcium phosphate		
17	Sodium sulphate	Max.1 product	Max. 1 product
18	Potassium sulphate		
19	Copper sulphate		
20	Zinc sulphate		
21	Chloroacetyl chloride	-	80
22	Benzoyl chloride	-	310
23	Pivaloyl chloride	-	40
24	Propionyl chloride	-	80
25	2-chloropropionyl chloride	-	40
26	Butyryl chloride	-	40
27	Isobutyryl chloride	-	40
28	4-Chlorobenzoyl chloride	-	40
29	2-chlorobenzoyl chloride	-	40
30	Valeryl chloride	-	40
31	3-chloropropionyl chloride	-	40
32	4-chlorobutyryl chloride	-	40
33	4-methoxybenzoyl chloride	-	25
34	3-methoxybenzoyl chloride	-	25
35	3-chlorobenzoyl chloride	-	25
36	2,3-Dichlorobenzoyl chloride	-	25
37	2,4-Dichlorobenzoyl chloride	-	25
38	3,4-Dichlorobenzoyl chloride	-	25
39	3,5-Dichlorobenzoyl chloride	-	25
40	4-methylbenzoyl chloride	-	25
41	2-methylbenzoyl chloride	-	25
42	Isophthaloyl chloride	-	20
43	N-butyl chloride	-	20
44	Isobutyl chloride	-	20
45	N-Hexyl chloride	-	20
46	Propiophenone	-	20
47	#-chloropropiophenone	-	20
48	Benzophenone	-	20
49	4-chlorobenzophenone	-	20
50	2,4-dichloroacetophenone	-	20
51	Valarophenone	-	20
52	Trityl chloride	-	50
53	Acetanilide	-	20
54	Triethylamine hydrochloride	-	21
55	2,4,6-Trichloropyrimidine	-	20
Total		1170	2536

By-products

Sl.No.	Product	Existing capacity (t/month)	Proposed capacity (t/month)
1	HCl (30%)	-	872
2	Sodium Bisulfite	-	1772
3	Aluminium Chloride Solution	-	396

Cyclone separator followed by dust collector will be provided to agro waste/coal fired boiler/thermic fluid heater. Three stage scrubber will be provided to control process emissions viz. HCl and SO₂. Fresh water requirement from ground water source will be increased from 4 m³/day to 45 m³/day. Industrial effluent generation will be increased from 1.3 KLD to 8.8 KLD after expansion. Effluent will be treated in ETP comprises primary, secondary and tertiary treatment. Treated effluent will be reused for scrubber media or sent to CETP. ETP waste will be sent to TSDF. Fly ash will be sent to brick manufacturers. Distillation residue will be sent to co-processing in cement plant.

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. Copy of NOC/Consent to Establish for the existing unit.
8. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
9. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s).
10. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
11. 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 material required and source, mode of storage.
21. Manufacturing process details alongwith the chemical reactions and process flow chart.
22. Action plan for the transportation of raw material and products.

23. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
24. 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.
25. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM_{2.5}, PM₁₀, SO₂, NO_x, CO 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.
26. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
27. Name of all the solvents to be used in the process and details of solvent recovery system.
28. Design details of ETP alongwith RO plant need to installed if TDS in ground water is more than 3000 mg/l, 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 16th 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. Action plan for development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
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.

13.4.14 Setting up of Brown field Ammonium Phosphate Fertilizer Plant (0.55 MTPA) at Zinc Smelter Debari District Udaipur, Rajasthan by M/s Hindustan Zinc 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 Hindustan Zinc Ltd. have proposed for setting up of Ammonium Phosphate Fertilizer Plant (0.55 MTPA) at Zinc Smelter Debari District Udaipur, Rajasthan. There are no national parks/wildlife sanctuaries/bio-sphere reserves/tiger reserves. There are about 18 reserve forests in the buffer zone namely Bhainsra, Senkli, Baramagra, Kagutha, Segaries, Panwari, Kantia, Hora, Umara, Bagdara, Amarbir and Hinglasha. Total plot area is 10,00,500 m². Proposed plant required 350000 m² land area within the exiting premises. Proposed railway siding will constructed in area of 150000 m² outside plant premises. Cost of project is Rs. 1500 Crore. Following products will be manufactured :

S.N.	Activity	Capacity
1	Ammonium Phosphate Plant	1 x 550,000 TPA
2	Phosphoric Acid Plant	1 x 3, 00,000 TPA
3	Ammonium Fluoride	1 x 7500 TPA
	By products	
1	Hydro fluorosilic acid	8000 TPA

Pock phosphate (960000 TPA) from captive Maton Mine/ RSMM/Import, sulphuric acid (870000 TPA) from (inhouse smelter & sister unit, inhouse Phosphoric acid (300000 TPA), ammonia from import, fluorosilicic acid from inhouse and almunium hydroxide will be used as ra materials. Venturi gas scrubber, cyclone mist eliminators, bagfilters will be installed to control the meissions. Flare stack will be installed for ammonia. Total power requirement will be 20MW. DG set (2 x 2500 KVA) will be installed for emergency power back up. Water requirement from Udaisagar/mansivakal/ Udaipur City STP will be 6800 m³/day. During presentation, project proponent committed that water requirement will only be met from Udaipur City STP. Industrial effluent will be treated in ETP. Effluent from the fertilizer plant complex will be treated in ETP and recycled. No effluent will be discharged outside the plant premises. Phospho gypsum will be utilized in Cement Plant. Waste and used oil (150 TPA) will be sent to authorized recyclers. ETP sludge will be sent to TSDF.

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 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 Copy of NOC/Consent to Establish for the existing unit.
- 7 Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB. Copy of environmental clearance for phosphate rock mines.
- 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 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.
- 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 10 Km 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 Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department. .
- 13 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
- 14 Infrastructure facilities including power sources for the proposed project.
- 15 Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
- 16 Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests, National Highway etc.
- 17 Present land use based on satellite imagery for the study area of 10 km radius.
- 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 Manufacturing process details alongwith the chemical reactions and process flow chart.
- 21 Detailed list of raw material required and source, mode of storage and transportation.
- 22 Action plan for the transportation of raw materials and products.
18. Ambient air quality monitoring and stack emission data for the relevant parameters including PM₁₀, PM_{2.5}, SO₂, NO_x, CO, NH₃, HC (Methane and Non-methane) and VOCs for all the stacks for the existing fertilizer plant.
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. Ensure five stage scrubber to be installed to control fluoride emissions and HF emissions should be less than 25 mg/l. Continuous HF monitoring should be ensured.

22. Plant-wise air pollution control measures proposed for the control of emissions from all the sources particularly uncontrolled NO_x emission and method to control NO_x.
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 16th 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. Commitment to use treated sewage from Sewage Treatment Plant. .
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. Utilization of zypsum to be explored and action plant to be prepared. Detailed designed for Zypsum storage facility to be provided.
37. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
38. Standby storage tank for ammonia should not be more than 10,000 ton (i.e. 2 tanks of 5000 tons). In addition, one empty tank of 5000 tons should also be provided for emergency situations.
39. Risk assessment for transportation and storage for ammonia. Detailed safety system to transport ammonia from port to site. Disaster Management Plan.
40. Plan for the implementation of the recommendations made for the fertilizer plants in the CREP guidelines must be prepared and included.
41. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
42. Action plan for development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
43. 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.
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. 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. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
- 48. Corporate Environmental Responsibility**
 - (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
 - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
 - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
 - (d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
- 49. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
- 50. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
- 51. A tabular chart 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.

13.4.15 Expansion by adding Solvent and Acid Dyes Products at Plot No.191,P-2/P-1, ChhatralKadi Road, Village Karanagar, TalukaKadi, District Mehsana, Gujarat by M/s Arbuda Plastochem Pvt. Ltd.- **regarding ToRs**

The project authorities and consultant (BhagwatiEnviro care Pvt. 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 Synthetic Organic Chemical plants are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/sArbudaPlastochem Pvt. Ltd. have proposed for expansion by adding Solvent and Acid Dyes Products at Plot No.191,P-2/P-1, ChhatralKadi Road, Village Karanagar, TalukaKadi, District Mehsana, Gujarat. Total plot area is 4167 m². Cost of project is rs. 153.11 lakhs. No national park/wildlife sanctuary/reserve forest is located within 10 Km. Following products will be manufactured :

S.N.	Product	Existing quantity (MTPM)	Additional quantity (MTPM)	Total Quantity after Expansion (MTPM)
1	Solvent Yellow 33	2.0	20	22.0
2	Solvent Yellow 93	---		
3	Solvent Yellow 14	--	10	10.5
4	Solvent Yellow 18	0.25		
5	Solvent Yellow 43	--		
6	Solvent Yellow 72	0.25		
7	Solvent Yellow 163	--		
8	Solvent Yellow 24	--	10	10
9	Acid Yellow 3	--		
10	Acid Yellow 17	--	10	10
11	Acid Yellow 42	--		
12	Acid Yellow 49	--		
13	Acid Yellow 110	--	50	52.5
	Total	2.5		

Non IBR steam boiler, thermic fluid heater (2 Lakhs Kcal/Hr.) and hot air generator will be installed. Wood and gas will be used as fuel. Water requirement from ground water source will be 6.1 m³/day after expansion. In process ice will be used @ 3600 kgs/day. due to this process effluent quantity will be higher than the process water consumption. Industrial effluent will be treated in ETP. Treated effluent will be sent to CETP Kalol for further treatment. Distillation residue will be sent to CHWIF. ETP waste /evaporator residue and process waste/residue will be sent to TSDF.

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. 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 SO₂ 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 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 PM_{2.5}, PM₁₀, SO₂, NO_x, CO, 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. Emphasis should be on effective control of VOC and odour.
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. 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. Treated wastewater to meet the norms of CETP.
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. 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. Action plan for development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
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.
43. Details of occupational health surveillance programme.
44. Socio-economic development activities shall be in place.
45. Note on compliance to the recommendations mentioned in the CREP guidelines.
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 shall be provided.
47. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
48. Total capital cost and recurring cost/annum for environmental pollution control measures.

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. 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.
 52. 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.

13.4.16 Expansion of Chemical Fertilizer Manufacturing Unit at Village Sandal, Tehsil Badnawar, District Dhar, Madhya Pradesh by M/s Indra industries 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 chemical fertilizer plant except single super phosphate plant is listed at S.N. 5(a) under category 'A' and appraised at Central level under category 'A' and appraised at Central level.

M/s Indra industries Ltd. have proposed for expansion of Chemical Fertilizer Manufacturing Unit at Village Sandal, Tehsil Badnawar, District Dhar, Madhya Pradesh. Total plot area is 17750 m². Cost of project is Rs. 5 Crore. No forest land is involved. No court case /litigation is pending against the project. Bageri River is flowing at a distance of 1.29 Km. Following products will be manufactured :

S.N.	Products	Existing Quantity (MTPA)	Additional Proposed (MTPA)	Total after Expansion (MTPA)
1	SSP	45000	75000	12000
2	GSSP	--	45000 + 75000	120000
3	Zinc Sulphate	--	10 TPD	10 TPD

Three stage scrubber will be provided to SSP Unit to control air pollution control measures. Total water requirement for the proposed expansion will be 90 m³/day. Wastewater will be recycled back in the process. No effluent will be discharged outside the plant premises. Silica will be used in SSP as filler. Power requirement from MPEB will be 75 KW. Greenbelt will be developed in 33% of plant area.

After deliberations, the Committee prescribed the following TORs for the 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 MP Pollution Control Board.
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. A map indicating location of the project and distance from severely polluted area
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.
14. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
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 and list of solvents and its recovery plan.
17. Detailed list of raw materials required and source, mode of storage and transportation.
18. Manufacturing process details alongwith the chemical reactions and process flow chart of each products.
19. Action plan for the transportation of raw materials and products.

20. Ambient air quality monitoring at 6 locations within the study area of 10 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
21. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, PM_{2.5}, SO₂, NO_x, CO, NH₃, Fluoride, Benzene including VOCs should be collected. The monitoring stations should take into account the predominant wind direction, population zone and sensitive receptors including reserved forests. Data for surface and ground water and noise monitoring should also be included.
22. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits. Control of fluorine emissions at source.
23. Plant-wise air pollution control measures proposed for the control of emissions from all the sources particularly uncontrolled NO_x emission and method to control NO_x.
24. Details of water and air pollution and its mitigation plan.
25. Ensure five stage scrubber to be installed to control fluoride emissions and HF emissions should be less than 25 mg/l. Continuous HF monitoring should be ensured.
26. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
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 the proposed and expansion project. Water balance chart including water intake, effluent generated, recycled and reused and discharged is to be provided.
29. Reduce fresh water requirement. Methods adopted/to be adopted for the water conservation should be included.
30. Source and 'Permission' for the drawl of proposed water from the Competent authority.
31. Design details of the ETP and STP as well as air pollution control equipments (Bag filters/ wet scrubber etc.).
32. Action plan for Zero Discharge of effluent as proposed 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. Baseline data for fluoride levels in surface water, ground water, soil in and around plant site.
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 should be included.
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. Action plan for regular monitoring of worker and population for fluoride in the working area and population within 1 Km.
39. Details of captive landfill alongwith design details as per CPCB guidelines. Location of secured land fill/TSDF.
40. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
41. Action plan for development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.

42. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
43. Details of occupational health 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.
44. Details of occupational health surveillance programme.
45. Socio-economic development activities should be in place.
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. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
- 48. Corporate Environmental Responsibility**
 - (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
 - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
 - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
 - (d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
49. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
50. 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.
- (vii). 'Certificate of Accreditation' issued by the QCI to the environmental consultant should be included.

These 'TORs' should be considered for the preparation of EIA / EMP report for Expansion of Fertilizer Unit. in addition to all the relevant information as per the 'General Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The EIA/EMP as per TORs should be submitted to the Chairman, MP Pollution Control Board, (MPPCB) for public consultation. The MPPCB shall conduct the public hearing/public consultation as per the provisions of EIA notification, 2006.

- 13.4.17 Expansion of sugar plant (7200 TCD to 10000 TCD) and CPP (9.7 MW to 39.7 MW) at Village Khamaria Pandit, District Lakhimpur Kheri, U.P. by M/s. Gobind Sugar Mills 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.

- 13.4.18 Field Development for Setting up of Surface Facilities, Group Gathering Station (GSS), Development Drilling and Interconnecting Pipeline between wells for 'Kathaichari Field Development Block AA-ONN-2002/1 in Tripura by M/s Jubilant Energy – **regarding TOR**

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

M/s Jubilant Energy have proposed for Field Development for Setting up of Surface Facilities, Group Gathering Station (GSS), Development Drilling and Interconnecting Pipeline between wells for 'Kathaichari Field Development Block AA-ONN-2002/1 in Gomati and Belonia Districts, Tripura. Production sharing contract (PSC) was executed in February, 2004. PEL effective from April, 2004. Participating Interests are Jubilant 20 % (Operator) and GAIL (80 %). Current block area is 1260 Km². Environmental clearance was obtained in June, 2009 for exploratory /appraisal drilling of 15 Wells. 7 Wells have been drilled and Gas discoveries made in 4 wells. Now, project proponent informed that block area proposed for development is 249 Km². 12 development wells are proposed. Well locations are being finalized. Group Gathering Station & Interconnecting pipelines / flowlines among 12 wells are proposed. Forest land likely to be diverted, but alternatives in non forest area being worked out. International boundary (Bangladesh) is 4 Km away from the project site. No wildlife sanctuary /national park is located within 10 Km distance. Project area is falling under two Districts. Area per well required is 3 ha. Area required for GGS is 4 ha. Depth of well is 3500 m. GGS capacity is 26000 m³/hr. Water requirement during construction activity and drilling activity will be 20 m³/day and 75 m³/day respectively. Drill cuttings generation will be 750-850 m³/well. Waste drilling fluid will be 400-500 m³/well. Used oil generation will be 3 m³/well. Produced water generation from gas separation at GGS will be 7.75 m³ per hr.

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

1. A certified 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.
2. Executive summary of a project
3. Project description, project objectives and project benefits.
4. Site details within 1 km of the each proposed well, any habitation, any other installation/activity, flora and fauna, approachability to site, other activities including agriculture/land, satellite imagery for 10 km area.
5. Details of forest land involved in the proposed project. A copy of forest clearance letter, if applicable.
6. Permission from the State Forest Department regarding the impact of the proposed plant 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.
7. Distance from nearby critically/severely polluted area as per Notification dated 13th January, 2010, if applicable.
8. Does proposal involves rehabilitation and resettlement? If yes, details thereof.
9. Details of project cost.
10. Details of all the facilities including CGS, GGS, OCS, produced water treatment etc to be installed. If existing facilities, give details.
11. Environmental considerations in the selection of the drilling locations for which environmental clearance is being sought. Present any analysis suggested for minimizing the foot print giving details of drilling and development options considered.
12. Baseline data collection for air, water and soil for one season leaving the monsoon season in an area of 10 km radius with centre of Oil Field as its centre covering the area of all proposed drilling wells.
 - (i) Topography of the project site.
 - (ii) Ambient Air Quality monitoring at 8 locations for PM₁₀, SO₂, NO_x, VOCs, Methane and non-methane HC.
 - (iii) Soil sample analysis (physical and chemical properties) at the areas located at 5 locations.
 - (iv) Ground and surface water quality in the vicinity of the proposed wells site.
 - (v) Climatology and Meteorology including wind speed, wind direction, temperature rainfall relative humidity etc.
 - (vi) Measurement of Noise levels within 1 km radius of the proposed wells.
 - (vii) Vegetation and land use; Animal resources

13. Incremental GLC as a result of DG set operation.
14. Potential environmental impact envisages during various stages of project activities such as site activation, development, operation/ maintenance and decommissioning.
15. Actual source of water and 'Permission' for the drawl of water from the Competent Authority. Detailed water balance, waster water generation and discharge.
16. Noise abatement measures and measures to minimize disturbance due to light and visual intrusions in case coastally located.
17. Treatment and disposal of waste water generated during drilling process.
18. Treatment and Disposal of produced water.
19. Treatment and disposal of solid waste generation.
20. Disposal of spent oil and loose materials.
21. Storage of chemicals and diesel at site.
22. Commitment for the use of WBM only
23. Mud make up and mud and cutting disposal – all options considered should be listed with selective option.
24. Hazardous material usage, storage accounting and disposal.
25. Disposal of packaging waste from site.
26. Oil spill emergency plans in respect of recovery/ reclamation.
27. H₂S emissions control.
28. Produced oil handling and storage.
29. Details of scheme for oil collection system alongwith process flow diagram and its capacity.
30. Details of control of air, water and noise pollution in oil collection system.
31. Disposal of produced/formation water.
32. Whether any burn pits being utilized for well test operations.
33. Restoration and decommissioning plans which should include mud pits and wastage restoration also and documentation and monitoring of site recovery.
34. Measures to protect ground water and shallow aquifers from contamination.
35. Risk assessment and disaster management plan for independent reviews of well designed construction etc. for prevention of blow out.

36. Environmental management plan.
37. Documentary proof of membership of common disposal facilities, if any.
38. 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.
39. Total capital and recurring cost for environmental control measures.
40. A copy of Corporate Environment Policy of the Jubilant Energy 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.
41. Any litigation pending against the project and or any direction/order passed by any court of law against the project. If so details thereof.
42. 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.
- (vii). 'Certificate of Accreditation' issued by the QCI to the environmental consultant should be included.

These 'TORs' should be considered for the preparation of EIA / EMP report for Expansion of Fertilizer Unit. in addition to all the relevant information as per the 'General Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The EIA/EMP as per TORs should be submitted to the Chairman, Tripura Pollution Control Board, for public consultation district wise. The SPCB shall conduct the public hearing/public consultation as per the provisions of EIA notification, 2006.

- 13.419 Expansion cum Modernization of Sugar Unit (from 4800 TCD to 6000 TCD) and Cogeneration Power Plant (from 19 MW to 22 MW) at Village Shreepur, Tehsil Malshiras, District Solapur, Maharashtra by M/s Shree Pandurang Sahakari Sakhar Karkhana 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 Term of References for the preparation of EIA/EMP report. All thermal power plants (biomass or non-hazardous municipal solid waste as fuel) are listed at S.N. 1(d) under category 'A' and appraised at Central level. Sugar unit \geq 5000 TCD cane crushing is listed at 5 (J) under category 'B' and appraised at state level. Since project is integrated and capacity of the CPP is >15 MW (22 MW), the proposal will be appraised at Central level.

M/s Shree PandurangSahakariSakharKarkhana Ltd. have proposed for expansion cum modernization of Sugar Unit (from 4800 TCD to 6000 TCD) and Cogeneration Power Plant (from 19 MW to 22 MW) at Village Shreepur, Tehsil Malshiras, District Solapur, Maharashtra. This unit has obtained environmental clearance from Maharashtra SEIAA vide letter No. SEAC 2009/CR 500/TC2 dated 26th February, 2011. It is proposed to expand cogeneration capacity from 19 MW to 22 MW by using the existing 3 Mw Turbine. Unit has plot area of 25 ha. land. No additional land will be acquired. Out of which greenbelt will be developed in 8 ha. of land. Cost of expansion project is Rs. 6.5 Crore. Existing bagasse fired boiler capacity is 55 TPH. Additional bagasse fired boiler (55 TPH) will be installed. Bagfilter/ESP will be provided to control particulate emissions. Fresh Water requirement from Nira Right Bank Canal will be increased from 838 m³/day to 1005 m³/day after expansion. Effluent generation will be increased from 170 m³/day to 235 m³/day after expansion. Effluent will be treated in anerobic lagoon followed by aeration. Project proponent informed that they have obtained environmental clearance issued by the MoEF letter no J-11011/578/2008 dated 11th February, 2010 for Molasses based Distillery (45 KLPD). This project is also proposed in the same plant premises of sugar unit. Public hearing was conducted on 27th August, 2009.

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

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. Detailed breakup of the land area along with latest photograph of the area.
4. Present land use based on satellite imagery.
5. Details of site and information related to environmental setting within 10 km radius of the project site.
6. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
7. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forest.
8. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the MPCB.
9. List of industrial units in the study area alongwith their capacity.
10. Number of working days of the sugar unit and CPP.
11. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
12. Manufacturing process details of sugar plant and CPP alongwith process flow chart.
13. Details of raw materials and source of raw material.
14. Sources and quantity of fuel (coal etc.) for the boiler. Measures to take care of SO₂ emission. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted, in case coal is used.
15. Action plan prepared by the SPCB to control ambient air quality as per NAAQES Standards for PM₁₀, PM_{2.5}, SO₂ and NO_x as per GSR 826(E) dated 16th November, 2009.

16. 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, SO₂, NO_x and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
17. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
18. An action plan to control and monitor secondary fugitive emissions from all the sources.
19. Details of boiler and its capacity. Details of the use of steam from the boiler.
20. Ground water quality around existing spent wash storage lagoon and the project area.
21. Details of water requirement, water balance chart for Sugar, distillery and Co-generation plant. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
22. Prior 'permission' from Competent Authority for the drawl of total fresh water. Details of source of water supply.
23. Hydro-geological study of the area for availability of ground water.
24. Proposed effluent treatment system for sugar unit as well as CPP and scheme for achieving 'zero' discharge.
25. Lagoon capacity for sugar unit as well measures to be taken to control ground water contamination.
26. Details of solid waste management including management of boiler ash. Submit Ash management plan. MoU with cement plant for the use of fly ash.
27. Action plan for development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
28. List of flora and fauna in the study area.
29. Noise levels monitoring at five locations within the study area.
30. 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.
31. EMP should also include the concept of waste-minimization, recycle/reuse/ recover techniques, Energy conservation, and natural resource conservation.
32. Details of bagasse storage. Details of press mud requirement.
33. 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.
34. 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.
 - viii) Details of socio-economic welfare activities to be provided.

35. 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.
36. Action plan for post-project environmental monitoring.
- 37. 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.
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. 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 along with 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 QCI to the environmental consultant should 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 ii of EIA Notification 2006 as public hearing was conducted on 27th August, 2009. The final EIA/EMP report shall be submitted to the Ministry for obtaining environmental clearance.

13.4.20 Specialty Chemicals Plant at Plot no. D-2/CH-12,GIDC Industrial Estate, Village Dahej, Tehsil Vagara, District Bharuch, Gujarat by M/s Indofil Industries Ltd.- **regarding ToRs**

The project authorities and their consultant (M/s Team Labs and Consultants) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the

preparation of EIA/EMP. All units producing technical grade pesticides are listed at S.N. 5(b) under category 'A' and appraised at Central level.

M/s Indofil Industries Ltd. have proposed for setting up of Specialty Chemicals Plant at Plot no. D-2/CH-12, GIDC Industrial Estate, Village Dahej, Tehsil Vagara, District Bharuch, Gujarat. Plot area is 101900.75 m². Out of which greenbelt will be developed in 33330 m². Narmada River is flowing at a distance of 17 Km. Arabian Sea is 3 Km away from the project site. No national park/biosphere reserve/wildlife sanctuary etc is located within 10 Km. Following products will be manufactured:

Sr. No.	Name of the Proposed Products	Quantity (MTPA)
A	EBDC FUNGICIDES PRODUCTS	
1	Mancozeb & its Formulation 25000	25000
2	Maneb & its Formulation 500	500
3	Zineb & its Formulation 5000	5000
4	Propineb & its Formulation 5000	5000
A1	HERBICIDES	
1	Glyphosate Tech and its Intermediates Volume	30000
B	SPECIALITY CHEMICALS	
1	Solution Polymers	3634
2	Re-dispersible Powder	11571
3	Plastic Modifiers	20055
4	Acrylic Emulsions	2635
C1	SYNTHESIS TECHNICAL PRODUCTS	
1	Tricyclazole and / or its intermediates: HMBT	1000
2	Myclobutanil	135
3	Metalaxyl	125
4	Cymoxanil	300
5	Dodine	150
6	Hexaconazole	200
7	Propiconazole	300
8	Propargite	400
9	Difenturon	200
10	Tebuconazole	300

11	Difenconazole	200
12	Thifluzamide	200
13	Bispyribac	65
	Sub-total of above 13Products	3575
C2	Out of following 10 products, only 1 product shall be made at a time	
1	Thiamethoxam	225
2	Epoxyconazole	
3	Prothioconazole	
4	Fluazinam	
5	Azoxystrobin	
6	Pyraclostrobin	
7	Boscalid	
8	Cyazofamid	
9	Penconazole	
10	Cyproconazole	
C3	Out of following 5 products, only 1 product shall be made at a time	
1	Spirodiclofen	
2	Spiromesifen	200
3	Tolfenpyrod	
4	Clodinofof	
5	Pretilachlor	
	Total of (C1 + C2 +C3) products	3575 + 225 + 200 = 4000
D	AGRO FORMULATION	
1	Powder Formulation	32000
2	Liquid Formulation	10000
	OR	
1	Glyphosate Formulations	70000

List of By-products

Sr. No.	Name of the Proposed By-Products	Quantity (MTPM)	End use

1	Manganese Carbonate (MnCO ₃)	980	Sold to MnSO ₄ Manufacturer.
2	Sodium Sulphate (Na ₂ SO ₄)	1200	Collection, Storage and Sold to end users.
3	Spent Sulphuric Acid	2	Collection, Storage and Sold to end users.
4	Aq. Hydrochloric Acid rs. (Conc. 30%)	120	
5	Aq. Sodium Bromide (Conc.17%)	150	
6	Aq. Potassium Bromide (Conc.16% to 29%)	175	
7	Aq. Hydrobromic Acid (Conc. 30%)	50	
8	Formic Acid (conc. 50%)	100	
9	(Conc. 20% to 25 %)	25	
10	Aq. Sodium Sulphite	50	

Cyclone separated followed by bagfilter alongwith stacj height of 32 m will be provided to coal fired boiler (3x 8 TPH + 1 x 9 TPH). Scrubber will be provided to incinerator. Scrubber will be provided to control process emissions viz. HCl, HBr, Cl₂, SO₂, NH₃. Bag house filter will be provided to spray drier. Total fresh water requirement from GIDC water supply will be 1600 M³/day. Industrial effluent will be treated in ETP followed by RO and MEE. Treated effluent will be recycled/reused to achieve zero effluent discharge. Power requirement from Torrent Energy will be 7500 KVA. DG sets (3 x 1500 KVA) will be installed. Coal (100 MTPD) and gas (1000 SM³/hr) will be used as fuel. It was noted that gazette Notification for the industrial area was not submitted. Status of environmental clearance for Dahej-II Industrial Estate, Tehsil Vagrais not known.

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 Critically/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 16th 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 PM₁₀, PM_{2.5}, SO₂, NO_x, CO including VOCs and HC 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. Odour Management Plan.
27. Design details of ETP, incinerator, bagfilter followed by scrubber if any alongwith boiler, scrubbers/bag filters etc.
28. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16th September, 2009.
29. Permission from Competent Authority for the drawl of 1600 m³/day. Water balance chart including quantity of effluent generated recycled and reused and effluent discharge.
30. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
31. Zero discharge effluent concepts to be adopted.
32. 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).
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. Action plan for the disposal of fly ash generated from boiler shall be included.
34. Material safety data sheet to be submitted. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.

35. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
36. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
37. Toxic chemicals management plan.
38. Action plan for development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
39. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
40. Details of occupational health programme.
 - i) To which chemicals, workers are exposed directly or indirectly.
 - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - iii) What measures company have taken to keep these chemicals within PEL/TLV.
 - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - v) What are onsite and offsite emergency plan during chemical disaster.
 - vi) Liver function tests (LFT) during pre-placement and periodical examination.
 - vii) Details of occupational health surveillance programme.
41. Socio-economic development activities shall be in place.
42. Note on compliance to the recommendations mentioned in the CREP guidelines.
43. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
44. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
45. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 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 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.

20th NOVEMBER, 2013

Terms of Reference

13.4.21 Fertilizer & Petrochemical Manufacturing Unit at Plot No.3/4, Dahej-III Industrial area (GIDC), Village Vav&Kadodara, TalukaVagra, District Bharuch, Gujarat by M/s Gujarat State Fertilizers & Chemicals Limited – **regarding TOR**

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 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 Gujarat State Fertilizers & Chemicals Limited have proposed for setting up of Fertilizer & Petrochemical Manufacturing Unit at Plot No.3/4, Dahej-III Industrial area (GIDC), Village Vav&Kadodara, TalukaVagra, District Bharuch, Gujarat. Plot area is 2957481 m². Narmada River is flowing at a distance of 17 Km. Arabian Sea is 3 Km away from the project site. No national park/biosphere reserve/wildlife sanctuary is located within 10 Km distance. Following products will be manufactured:

S. N.	Products	Quantity
1	Ammonia	7,26,000 MTPA
2	Urea	10,06,500 MTPA
3	Melamine	40,000 MTPA
4	Caprolactam	1,00,000 MTPA
5	Sulphuric Acid	1,81,500 MTPA
6	Poly Methyl Methacrylate	50,000 MTPA
7	Captive Power Plant (CPP) – 60 MW	1 no.
	By-Product	
1	Ammonium Sulphate	2,31,000 MTPA
2	Nitric Acid	15,840 MTPA

Natural gas will be used as fuel. Scrubber will be provided to control process emissions. DCDA base sulphuric acid plant will be installed. Total water requirement from GIDC water supply will be 82492 m³/day. Industrial effluent generation will be 13024 m³/day. Treated effluent will be discharged into CETP for further treatment. However, the Committee insisted for recycling of treated water by installing RO. Swage will be treated in STP. ETP sludge will be sent to TSDF. Used oil will be sent to authorized recyclers. Sulphur muck will be sent to TSDF. Spent catalyst will be sent authorized recycler/re-processors.

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 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.
- 6 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 use/land-cover mapping of the area.
- 7 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.
- 8 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.
- 9 Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
- 10 Permission from the tribals, if tribal land has also to be acquired along with details of the compensation plan.
- 11 Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department. .
- 12 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
- 13 Infrastructure facilities including power sources for the proposed project.
- 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, National Highway etc.
- 16 Present land use based on satellite imagery for the study area of 10 km radius.
- 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. Ammonia storage should be minimum 5000 tons with empty tank of equal quantity.

- 21 A note on the long term strategy for the gas availability. Alternative, if the gas is not available.
- 22 Action plan for the transportation of raw materials and products.
- 23 Ambient air quality monitoring and stack emission data for the relevant parameters including PM₁₀, PM_{2.5}, SO₂, NO_x, CO, NH₃, HC (Methane and Non-methane) and VOCs for all the stacks for the existing fertilizer plant.
- 24 Data for surface and ground water, treated effluent quality data, noise pollution and solid waste management for the existing plant should also be included.
- 25 Air pollution control measures proposed for the effective control of gaseous emissions including methane & non-methane within permissible limits.
- 26 Plant-wise air pollution control measures proposed for the control of emissions from all the sources particularly uncontrolled NO_x emission and method to control NO_x.
- 27 Details of continuous monitoring system for Sulphuric acid plant.
- 28 Odour management plan for Benzene.
- 29 Name of all the solvents to be used in the process and details of solvent recovery system.
- 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 Details of water requirement for proposed project. Revised water balance chart for proposed project including water intake, effluent generated, recycled and reused and discharged is to be provided.
- 35 Action plan to reduce fresh water requirement. Methods adopted/to be adopted for the water conservation should be included.
- 36 Layout plan indicating surface water collection. Internal water supply arrangement to be submitted.
- 37 'Permission' for the drawl of proposed water requirement from the Competent Authority.
- 38 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.
- 39 Action plan for 'Zero' discharge of effluent should be included. RO system to be provided
- 40 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).
- 41 Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
- 42 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.
- 43 Risk Assessment & Disaster Management Plan
 - i. Identification of hazards
 - ii. Consequence Analysis
 - iii. Preventive measures.
 - iv. Risk assessment should also include leakages during storage, handling, transportation and proposed measures for risk reduction.
- 44 Toxic chemicals management plan.
- 45 Sulphur muck management plan. Measures to be taken to prevent leakage/seepage in the storage area of sulphur muck.

- 46 Plan for the implementation of the recommendations made for the fertilizer plants in the CREP guidelines must be prepared and included.
- 47 Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
- 48 Action plan for development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
- 49 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.
- 50 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.
- 51 Socio-economic development activities should be in place.
- 52 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.
- 53 EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
- 54 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.
- 55 Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
- 56 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.
- 57 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.

13.4.22 Manufacturing of Technical Grade Pesticides (60000 MTPA) at Village Babrala, District Sambhal, Uttar Pradesh by M/s Best Crop Science Pvt. Ltd. – regarding TOR

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

13.4.23 Greenfield Ammonia Urea Fertilizer Project (Ammonia 2200 MMTPA, Urea 3850 MMTPA) at village Khawasa, Tehsil Thandla, District Jhabua, Madhya Pradesh by M/s Paradeep Phosphates Limited – regarding Change in name of the company .

Project proponent informed that MoEF vide letter no. J-11011/200/2013- IA II (I) dated 7th November, 2013 has issued TOR to M/s Zuari Fertilizers and Chemicals Ltd. for preparation of EIA/EMP report for Greenfield Ammonia Urea Fertilizer Plant (1.35 Million Metric Tons of Urea) at Village Khawasa, Tehsil Thandla, District Jhabua, Madhya Pradesh. Now, they have requested to transfer the TOR in the name of M/s Paradeep Phosphates Ltd. from M/s Zuari Fertilizers and Chemicals Ltd. Committee informed the project proponent to submit following requisite document in the Ministry:

- i) A copy of Memorandum of Articles of Association of M/s Paradeep Phosphates Ltd.
- ii) NOC issued by M/s Zuari Fertilizers and Chemicals Ltd. for change in name.
- iii) Affidavit by the M/s Paradeep Phosphates Ltd including commitment to comply with the TOR conditions.

MoEF will process the case after receipt of the above requisite information without placing before the Committee.

13.4.24 Expansion of Caustic Soda Plant and Addition of Pesticide and Synthetic Organic Manufacturing Unit at Plot No. CH-1/CH-2, GIDC Estate, Dahej, Taluka Vagra District Bharuch State Gujarat by M/s Meghmani Finechem Ltd.- **regarding TOR**

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 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.

The Committee desired the status of compliance of the conditions stipulated in the environmental clearance for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests, Bhopal.

The proposal was deferred till the certified compliance report from MoEF, Regional Office is received. Project proponent has to submit revised form-1.

13.4.25 Sugar Unit (5000 TCD) and Cogeneration (30 MW) at Gut No.74, 75, 76, 77, 78, 79, 88, 109, 210 at Village Malwati, Taluka-Latur, District-Latur, Maharashtra by M/s Twentyone Sugar Ltd.- **regarding ToR**

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

M/s Twentyone Sugar Ltd. have proposed for setting up of Sugar Unit (5000 TCD) and Cogeneration (30 MW) at Gut No.74, 75, 76, 77, 78, 79, 88, 109, 210 at Village Malwati, Taluka-Latur, District-Latur, Maharashtra. Plot area is 49.75 acres of which greenbelt will be developed in 16.4 acres of land. Cost of project is Rs. 324 Crore. River Manjra is flowing at a distance of 2.1 Km. No national park/wildlife sanctuary is located within 10 Km distance. ESP along with stack height of 72 m will be provided to bagasse fired boiler. Fresh water requirement will be 696 m³/day. Effluent will be treated in ETP. Blowdown and condensate will be treated in UF followed by RO. Ash will be sent to brick manufacturers. Used/spent oil will be sent to authorized recyclers.

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

1. Executive summary of the project.
2. Detailed breakup of the land area along with latest photograph of the area.
3. Present land use based on satellite imagery.
4. Details of site and information related to environmental setting within 10 km radius of the project site.
5. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
6. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forest.

7. List of industrial units in the study area alongwith their capacity.
8. Number of working days of the sugar unit and CPP.
9. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
10. Manufacturing process details of sugar plant and CPP alongwith process flow chart.
11. Details of raw materials and source of raw material.
12. Sources and quantity of fuel (coal etc.) for the boiler. Measures to take care of SO₂ emission. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted, in case coal is used.
13. Action plan prepared by the SPCB to control ambient air quality as per NAAQES Standards for PM₁₀, PM_{2.5}, SO₂ and NO_x as per GSR 826(E) dated 16th November, 2009.
14. 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, SO₂, NO_x and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
15. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
16. An action plan to control and monitor secondary fugitive emissions from all the sources.
17. Details of boiler and its capacity. Details of the use of steam from the boiler.
18. Ground water quality around existing spent wash storage lagoon and the project area.
19. Details of water requirement, revised water balance chart for Sugar and Co-generation plant. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
20. Prior 'permission' from Competent Authority for the drawl of total fresh water. Details of source of water supply.
21. Hydro-geological study of the area for availability of ground water.
22. Proposed effluent treatment system for sugar unit as well as CPP and scheme for achieving 'zero' discharge.
23. Lagoon capacity for sugar unit as well measures to be taken to control ground water contamination.
24. Details of solid waste management including management of boiler ash. Submit Ash management plan. MoU with cement plant for the use of fly ash.
25. Action plan for development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
26. List of flora and fauna in the study area.
27. Noise levels monitoring at five locations within the study area.
28. 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.
29. EMP should also include the concept of waste-minimization, recycle/reuse/ recover techniques, Energy conservation, and natural resource conservation.
30. Details of bagasse storage. Details of press mud requirement.
31. 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.
32. 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.
 - viii) Details of socio-economic welfare activities to be provided.
33. 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.
34. Action plan for post-project environmental monitoring.
- 35. 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.
36. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
37. 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.
38. 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 along with 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 QCI to the environmental consultant should 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 Maharashtra 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.

13.4.26 Resin Manufacturing Unit (800 MT/month) at Plot No.65/P, Village Ankhol, TalukaKadi, District Mehsana, Gujarat by M/s Cedar Décor Pvt.Ltd. - **regarding TOR**

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.

The Committee noted that Unit is involved in manufacturing of resin without environmental clearance. Therefore, the project proposal involves violation of the Environment (Protection) Act, 1986 or Environment Impact Assessment (EIA) Notification, 2006 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.

13.4.27 Expansion of Sugar Mill (from 4800 TCD to 7500 TCD) and Co-Generation Power Plant (from 14.5 MW to 30 MW) and Addition of 60 KLPD Molasses based Distillery, at Village Asurle-Porle, Tehsil Panhala, District Kolhapaur, Maharashtra by M/s Shri Datta Sakhar Karkhana (M/s Dalmia Bharat Sugar) – **regarding TOR**

The project authorities and their consultant (M/s J M Environet (P) 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 report. All molasses based distillery are listed at S.N. 5(g) (i) under category 'A' and appraised at Central level.

M/s Shri Datta Sakhar Karkhana (M/s Dalmia Bharat Sugar) have proposed for Expansion of Sugar Mill (from 4800 TCD to 7500 TCD) and Co-Generation Power Plant (from 14.5 MW to 30 MW) and Addition of 60 KLPD Molasses based Distillery, at Village Asurle-Porle, Tehsil Panhala, District Kolhapaur, Maharashtra. Protected Forests (9 Nos.) are located within 10 Km distance. No national park/wildlife sanctuary/biosphere reserve/tiger reserve/ elephant reserve is located within 10 Km distance. Total plot area is 86 acres of which greenbelt will be developed in 28.5 acres of land. Cost of project is Rs. 190 Crores. No of working days of sugar mill, distillery and power plant will be 160 days, 270 days and 330 days respectively. During season, total fresh water requirement will be 1250 m³/day. During off season, total fresh water requirement will be 1024 m³/day. Spent wash will be treated in biomethanation followed by concentrated and bio-composting. Wastewater from Sugar will be treated in ETP. Press mud will be used for bio-composting. Ash will be used for brick manufacturing. ETP sludge will be used as manure.

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

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. Detailed breakup of the land area along with latest photograph of the area.
4. Present land use based on satellite imagery.
5. Details of site and information related to environmental setting within 10 km radius of the project site.
6. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
7. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forest.
8. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the MPCB.
9. List of existing distillery units in the study area alongwith their capacity.
10. Number of working days of the sugar, distillery unit and CPP.
11. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
12. Manufacturing process details of sugar plant, distillery and CPP alongwith process flow chart.
13. Details of raw materials and source of raw materials i.e. molasses, bagasse etc.
14. Sources and quantity of fuel (coal etc.) for the boiler. Measures to take care of SO₂ emission. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted, in case coal is used.
15. Action plan prepared by the SPCB to control ambient air quality as per NAAQES Standards for PM₁₀, PM_{2.5}, SO₂ and NO_x as per GSR 826(E) dated 16th November, 2009.
16. 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, SO₂, NO_x and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
17. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
18. An action plan to control and monitor secondary fugitive emissions from all the sources.
19. All the project roads including the road upto from distillery unit to biocompost area should be made pucca/tar road.
20. Details of boiler and its capacity. Details of the use of steam from the boiler.
21. Ground water quality around existing spent wash storage lagoon and the project area.
22. Details of water requirement, water balance chart for sugar, distillery and co-generation plant. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
23. Prior 'permission' from Competent Authority for the drawl of total fresh water. Details of source of water supply.
24. Hydro-geological study of the area for availability of ground water.
25. Proposed effluent treatment system for sugar unit and distillery as well as CPP and scheme for achieving 'zero' discharge.
26. Lagoon capacity for sugar unit and spent wash as well measures to be taken to control ground water contamination.

27. Details of solid waste management including management of boiler ash. Submit Ash management plan. MoU with cement plant for the use of fly ash.
28. Action plan for development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
29. List of flora and fauna in the study area.
30. Noise levels monitoring at five locations within the study area.
31. 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.
32. EMP should also include the concept of waste-minimization, recycle/reuse/ recover techniques, Energy conservation, and natural resource conservation.
33. Details of bagasse storage. Details of press mud requirement.
34. 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.
35. 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.
 - viii) Details of socio-economic welfare activities to be provided.
36. 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.
37. Action plan for post-project environmental monitoring.
- 38. 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.
39. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
40. 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.
41. 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 along with 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 QCI to the environmental consultant should 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.

13.4.28 Grain based Distillery (120 KLPD) along with Co-Generation Plant (3.5 MW) at Village Dhudhua, Tehsil Jandaha, District Vaishali, Bihar by M/s Globus Spirits Limited – regarding TOR

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

M/s Globus Spirits Limited have proposed for setting up of Grain based Distillery (120 KLPD) along with Co-Generation Plant (3.5 MW) at Village Dhudhua, Tehsil Jandaha, District Vaishali, Bihar. No national parks/biosphere reserves/wild life sanctuaries are located within 10 Km distance. Nearest water bodies are Beli Tal (2.5 Km), Baya River (3.5 Km), salah Chaur (4.5 Km), Hariya Cahur (5.2 Km), Ghaghra Nadi (6 Km). total plot area is 25 acres. Out of which greenbelt will be developed in 8.25 acre of land. Cost of project is Rs. 110 crore. Total no of working days of distillery is 330 days per annum. ESP/bagfilter will be provided to rice husk /coal fired boiler (35 TPH). Fresh water requirement from ground water source will be 1205 m³/day. Spent wash will be decanted. Thin slop will be concentrated. Concentrate will be mixed with wet cake to form DWGS. DWGS will be dried to form DDGS. The process condensate will be treated in ETP followed by UF & RO. Treated effluent will be recycled into process. Fly ash from coal will be used for brick manufacturing. DDGS will be used as cattle feed.

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

1. Executive summary of the project.

2. Justification of the project
3. Detailed break-up of the land area along with latest photograph of the area.
4. Present land use based on satellite imagery and details of land availability for the project along with supporting document.
5. Details of site and information related to environmental setting within 10 km radius of the project site.
6. A copy of lease deed or allotment letter, if land is already acquired.
7. Information regarding eco-sensitive areas such as national park/wildlife sanctuary/ biosphere reserves within 10 km radius of project area.
8. List of existing distillery units in the study area along with their capacity and sourcing of raw material.
9. Details of proposed products along with manufacturing capacity.
10. Number of working days of the distillery unit.
11. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
12. Details of raw materials, its source & availability of all raw materials including cereal grains requirement.
13. Sources and quantity of fuel (rice husk/coal etc.) for the boiler. Measures to take care of SO₂ emission. Stack height should be based on maximum sulphur content in the coal. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted.
14. Storage facility for raw materials, prepared alcohol, fuel and fly ash.
15. Action plan to control ambient air quality as per NAAQES Standards for PM₁₀, PM_{2.5}, SO₂ and NO_x as per GSR 826(E) dated 16th November, 2009.
16. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, PM_{2.5}, SO₂, NO_x and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
17. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
18. An action plan to control and monitor secondary fugitive emissions from all the sources.
19. Details of the use of steam from the boiler.
20. Ground water quality around proposed spent wash storage lagoon and the project area.
21. 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.
22. Fresh water requirement should be restricted upto 10 KI/KI of alcohol for grain based distillery
23. Permission of withdrawal of water from competent authority.
24. Proposed effluent treatment system for grain based distillery (spent wash and spent lees) along with utility wastewater including CPP and scheme for achieving zero discharge.
25. Capacity for spent wash holding tank and action plan to control ground water pollution.
26. Dryer shall be installed to dry DWGS.
27. Layout for storage of rice husk/biomass.
28. Details of solid waste management including management of boiler ash.
29. Action plan for development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
30. List of flora and fauna in the study area.

31. Noise levels monitoring at five locations within the study area.
32. 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.
33. EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
34. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
35. Alcohol storage and handling area fire fighting facility as per norms.
36. 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 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 of occupational health surveillance programme.
40. Details of socio-economic welfare activities.
41. 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.
42. Action plan for post-project environmental monitoring.
43. 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.
44. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
45. Total capital cost and recurring cost/annum for environmental pollution control measures.
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. 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 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 along with 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 QCI to the environmental consultant should be included.

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 State 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 MoEF 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.

13.4.29 Conversion of Catalytic Reforming Unit (CRU) to Isomerization Unit and Revamp of existing Naphtha Hydro Desulphurization Unit (NHDS) at Refinery Mahul, Survey No.234/482, Village Anik/Mahul, Town Mumbai Suburban, Maharashtra by M/s Bharat Petroleum Corporation Limited (BPCL) – regarding TOR

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

M/s Bharat Petroleum Corporation Limited (BPCL) have proposed for Conversion of Catalytic Reforming Unit (CRU) to Isomerization Unit and Revamp of existing Naphtha Hydro Desulphurization Unit (NHDS) at Refinery Mahul, Survey No.234/482, Village Anik/Mahul, Town Mumbai Suburban, Maharashtra. Mumbai Refinery is currently implementing CCR reformer project which includes a new Naptha Hydrotreating Unit. Consequently existing CRU and NHDS units at MR would be redundant. Conversion of CRU to isomerization will enable Mumbai Refinery to produce 100% BS IV MS (from 0.9 MMTPA post CCR to 2.3 MMTPA Post Isomerization). It is proposed to reuse maximum number of existing equipments (Recycle gas compressor, reactor, fired heaters, pumps, exchangers etc.). No additional land will be required. Cost of project is Rs. 250 Crore. LNG will be used as fuel. Electric requirement will be 2.1 MW. No additional water requirement. No effluent will be generated. Spent catalyst generation will be 91 MT in 10 years. Utility requirements of

Isomerization facilities are likely to be met by the existing utility network (steam, power, fuel and cooling water).

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

1. Executive summary of the project.
2. Project Description and Project Benefits.
3. Copy of environmental clearance accorded for all the existing projects alongwith point-wise compliance report.
4. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
5. Details of the total land and break-up of the land use for green belt and other uses.
6. List of products alongwith the production capacities.
7. Manufacturing process details alongwith the chemical reactions and process flow diagram for the proposed project.
8. Is there additional storage required for the proposed project, if yes details thereof.
9. Baseline data collection for air, water and soil for last one year.
10. Ambient air quality monitoring for PM_{2.5}, PM₁₀, SO₂, NO_x, (methane & non-methane HC) and VOCs. Data collected recently may be used in this report.
11. Existing status of stack emission, raw water requirement, treated effluent quantity & quality data, noise pollution and solid waste management in the existing units.
12. Status of stack emission, raw water requirement, treated effluent quantity & quality data, noise pollution and solid waste management after proposed project.
13. Details of Sulphur balance in the existing refinery unit.
14. Additional SO₂ emissions due to the proposed product mix.
15. A note on how SO₂ and NO_x will be controlled at the existing level leading to no increase in pollution load.
16. Unit-wise air pollution control devices to be installed. For the proposed units.
17. Source and permission of water supply.
18. Water balance chart for proposed project. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
19. Detailed solid waste generation, collection, segregation, its recycling and reuse, treatment and disposal.
20. Details of membership of TSDF for hazardous waste disposal.
21. Details of proposed preventive measures for leakages and accident.
22. Environmental Management Plan
23. Risk Assessment & Disaster Management Plan
 - a. Identification of hazards
 - b. Consequence Analysis
 - c. Risk assessment should also include leakages and location near to refinery & proposed measures for risk reduction.
24. Total capital cost and recurring cost/annum for environmental pollution control measures.
25. Environmental Monitoring programme.
26. 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 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.
- (vii). 'Certificate of Accreditation' issued by the QCI to the environmental consultant should be included.

These 'TORs' should be considered for the preparation of EIA / EMP report for Dimerization Unit in addition to all the relevant information as per the 'General Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The Committee exempted the public hearing under 7 (ii) of the EIA Notification, 2006 as there is no significant increase in pollution load.

13.4.30 Exploratory Drilling of Additional Two Wells in PEL Block L-II in Tanjavur District, Tamil Nadu by M/s Oil and Natural Gas Corporation Ltd. (ONGCL) – regarding TOR

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 Oil and Natural Gas Corporation Ltd. (ONGCL) have proposed for exploratory drilling of Additional Two Wells in PEL Block L-II in Tanjavur District, Tamil Nadu. Cost of project is Rs. 40 Crore. Depth of well will be 3800 m. Following is the coordinates of the block:

S.N.	Latitude	Longitude
1	10°27'13.13"	79°12'6.31"
2	10°35'56.659"	79°13'28.6479"

No wild life sanctuaries/eco-sensitive area exists within 10 Km distance. Water based mud will be used. Drilling wastewater generation will be 15-20 m³/day. Quantity of drilling waste residual mud will be 1200 m³. Quantity of cutting generation will be 500 m³ of wet drilling cuttings. Total water requirement will be 25 m³/day. DG sets will be installed to meet the power requirement.

Project proponent informed that in EAC held on 01.10.2013 TOR was accorded for 20 wells in L-II PEL block. 4 Wells of the TOR accorded fall in Tanjavur District. In the meantime Geology and Geophysical data of L-II block was reviewed with the reprocessed data with additional information. Thereafter additional two wells are planned in L-II Block in Tanjavur District. They have requested for allowing the public hearing of the present two wells alongwith earlier 4 wells. The Committee agreed to use existing data collected for 20 wells in L-II PEL block in this project.

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

15. Actual source of water and 'Permission' for the drawl of water from the Competent Authority. Detailed water balance, wastewater generation and discharge.
16. Noise abatement measures and measures to minimize disturbance due to light and visual intrusions in case coastally located.
17. Treatment and disposal of waste water.
18. Treatment and disposal of solid waste generation.
19. Disposal of spent oil and lube.
20. Storage of chemicals and diesel at site.
21. Commitment for the use of WBM only
22. Mud make up and mud and cutting disposal – all options considered should be listed with selective option.
23. Hazardous material usage, storage accounting and disposal.
24. Disposal of packaging waste from site.
25. Oil spill emergency plans in respect of recovery/ reclamation.
26. H₂S emissions control.
27. Produced oil handling and storage.
28. Details of scheme for oil collection system alongwith process flow diagram and its capacity.
29. Details of control of air, water and noise pollution in oil collection system.
30. Disposal of produced/formation water.
31. Whether any burn pits being utilized for well test operations.
32. Restoration and decommissioning plans which should include mud pits and wastage restoration also and documentation and monitoring of site recovery.
33. Measures to protect ground water and shallow aquifers from contamination.
34. Risk assessment and disaster management plan for independent reviews of well designed construction etc. for prevention of blow out.
35. Environmental management plan.
36. Documentary proof of membership of common disposal facilities, if any.
37. Details of environmental and safety related documentation within the company including documentation and proposed occupational health and safety Surveillance Safety Programme for all personnel at site. This should also include monitoring programme for the environmental.

38. Total capital and recurring cost for environmental control measures.
39. A copy of Corporate Environment Policy of the company as per the Ministry's O.M. No. J-11013/41/2006-IA.II(I) dated 26th April, 2011 available on the Ministry's website.
40. Any litigation pending against the project and or any direction/order passed by any court of law against the project. If so details thereof.
41. A tabular chart with index for point-wise compliance of above TORs.

The following general points 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 in Tanjavur District. 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.

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

The project authorities along with their consultant (M/s J M Environet Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of References for the preparation of EIA/EMP report. Grain based Distillery Units (<30 KLPD) are listed at S.N. 5(g) (ii) of Schedule of EIA Notification, 2006 as Category 'B' and have to be appraised at the State level. 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 Piccadily Sugar & Allied Industries Ltd. have proposed for setting up of Grain based Distillery (3 KLPD) at Plot 358, Sector 8, IMT Bawal Industrial Estate, Tehsil Bawal, District Rewari, Haryana. No national parks/biosphere reserves/wild life sanctuaries are located within 10 Km distance. Total plot area is 7875 m². Cost of project is Rs. 12.5 Crore. Total no of working days of distillery is 330 days per annum. Multicyclone followed by bagfilter will be provided to rice husk /coal fired boiler (1 TPH). Fresh water requirement from Haryana State Industrial & Infrastructure Development Corporation Ltd. will be 36 m³/day. Spent wash will be decanted. Thin slop will be concentrated. Concentrate will be mixed with

wet cake to form DWGS. DWGS will be dried to form DDGS. The process condensate will be treated in ETP followed by UF & RO. Treated effluent will be recycled into process. Fly ash from coal will be used for brick manufacturing. DDGS will be used as cattle feed. Power requirement from State Electricity Board will 225 MW. DG set (250 KVA) will be installed.

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

1. Executive summary of the project.
2. Justification of the project
3. Detailed break-up of the land area along with latest photograph of the area.
4. Present land use based on satellite imagery and details of land availability for the project along with supporting document.
5. Details of site and information related to environmental setting within 10 km radius of the project site.
6. A copy of lease deed or allotment letter, if land is already acquired.
7. A copy of Gazette Notification issued by the Govt. of Haryana indicating location of the project in notified GIDC should be included necessarily.
8. Information regarding eco-sensitive areas such as national park/wildlife sanctuary/ biosphere reserves within 10 km radius of project area.
9. List of existing distillery units in the study area along with their capacity and sourcing of raw material.
10. Details of proposed products along with manufacturing capacity.
11. Number of working days of the distillery unit.
12. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
13. Details of raw materials, its source & availability of all raw materials including cereal grains requirement.
14. Sources and quantity of fuel (rice husk/coal etc.) for the boiler. Measures to take care of SO₂ emission. Stack height should be based on maximum sulphur content in the coal. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted.
15. Storage facility for raw materials, prepared alcohol, fuel and fly ash.
16. Action plan to control ambient air quality as per NAAQES Standards for PM₁₀, PM_{2.5}, SO₂ and NO_x as per GSR 826(E) dated 16th November, 2009.
17. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, PM_{2.5}, SO₂, NO_x and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included. AAQ data for the month of December, 2013 may be submitted.
18. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
19. An action plan to control and monitor secondary fugitive emissions from all the sources.
20. Details of the use of steam from the boiler.
21. Ground water quality around proposed spent wash storage lagoon and the project area.
22. 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.
23. Fresh water requirement should be restricted upto 10 KI/KI of alcohol for grain based distillery

24. Permission of withdrawal of water from competent authority.
25. Proposed effluent treatment system for grain based distillery (spent wash and spent lees) along with utility wastewater including CPP and scheme for achieving zero discharge.
26. Capacity for spent wash holding tank and action plan to control ground water pollution.
27. Dryer shall be installed to dry DWGS.
28. Layout for storage of rice husk/biomass.
29. Details of solid waste management including management of boiler ash.
30. Action plan for development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
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.
37. Provision of Foam System for fire fighting to control fire from the alcohol storage tank.
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.
40. Details of occupational health surveillance programme.
41. Details of socio-economic welfare activities.
42. 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.
43. Action plan for post-project environmental monitoring.
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. 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.
46. Total capital cost and recurring cost/annum for environmental pollution control measures.
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.

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 along with 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 QCI to the environmental consultant should 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.

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

13.4.32 Exploratory Drilling in Six Fresh Locations in the Second Batch from Nineteen (19) possible Locations proposed in NELP – VI Block KG-ONN-2004/1 by M/s OIL India Ltd. – regarding TOR.

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

MoEF vide letter no. J-11011/618/2009-IA II (I) dated 9th August, 2009 has issued TOR for preparation of EIA/EMP report. EIA/EMP report was prepared by NEERI and submitted on 15.02.2011 followed by presentation before EAC on 29.04.2011. As per minimum work program (MWP), OIL as the operator is required to drill 12 wells in exploration phase-1 in the block for which 19 tentative locations were identified. The environmental clearance was granted on 11.07.2012 for six locations, which are free from forest land.

Now, **M/s OIL India Ltd. has proposed six more locations from original 19 locations for carrying out exploratory drilling. The details of six locations (in Godavari District of Andhra Pradesh) are as under:**

S.N.	Location	Coordinate		Distance from wildlife Sanctuary, Km	Distance from Sea Coast, Km	Distance from Forest (Km)
		X	Y			
1	8	617516	1842247	18	20	15
2	10	630402	1845623	12	11	10
3	11	631020	1853233	11	12	11
4	12	633192	1848988	11	13	12
5	15	625483	1845352	13	15	12
6	18	618723	1844758	17	21	16

Public hearing was already conducted on 19.01.2011. The Committee exempted the preparation of EIA/EMP report and public hearing under 7 (ii) of EIA Notification, 2006.

After detailed deliberations, the Committee found the additional information 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, SO2, NOX, 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 m³/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 Bangalore.
- 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 H₂S release including all necessary aspects from evacuation to resumption of normal operations. The workers should be provided with personal H₂S 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 Bangalore.
- 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 Bangalore.
- 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.

13.4.33 Molasses based Distillery (80 KLPD) and CPP (2.5 MW) at Village Sabitgarh, Post Karora, Tehsil Khurja in District Bulandshahar, UP by M/s Triveni Engineering & Industries 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 Term of References for the preparation of EIA/EMP report. All molasses based distilleries are listed at S.N. 5(g) (i) under category 'A' and appraised at Central level.

M/s Triveni Engineering & Industries Ltd. have proposed for setting up of Molasses based Distillery (80 KLPD) and CPP (2.5 MW) at Sabitgarh Village Post Karora, Tehsil Khurja in District Bulandshahar, UP. Total plot area is 30 acres of which greenbelt will be developed in 10 acres. Cost of project is Rs. 90 Crore. Bagasse/biogas/other biomass fired boiler (1 x 30 TPH) will be installed. DG sets (2x 500 KVA) will be installed. Fresh water requirement from ground water source will be 842 m³/day. Spent wash will be treated in biomethanation followed by MEE and biocomposting. Blowdown and DM plant effluent will be treated and used for land irrigation. Domestic effluent will be disposed off through septic tank followed by soak pit. No effluent will be discharged outside the plant premises. Fly ash will be used for landfilling low lying area as well as sold to farmer as manure. ETP sludge will be mixed with boiler ash and sold to farmer as manure.

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

1. Executive summary of the project.
2. Detailed breakup of the land area alongwith latest photograph of the area.
3. Present land use based on satellite imagery and details of land availability for the project alongwith supporting document.
4. Details of site and information related to environmental setting within 10 km radius of the project site.
5. A copy of lease deed or allotment letter, if land is already acquired.
6. Information regarding eco-sensitive areas such as national park/wildlife sanctuary/ biosphere reserves within 10 km radius of project area.
7. List of existing distillery units in the study area alongwith their capacity and sourcing of raw material.
8. Details of proposed products along with manufacturing capacity.
9. Number of working days of the distillery unit.
10. 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.
11. Details of raw materials, its source with availability of all raw materials.
12. Sources and quantity of fuel (rice husk/coal etc.) for the boiler. Measures to take care of SO₂ emission. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted.
13. Storage facility for raw materials, prepared alcohol, fuel and fly ash.
14. Action plan to control ambient air quality as per NAAQES Standards for PM₁₀, PM_{2.5}, SO₂ and NO_x as per GSR 826(E) dated 16th November, 2009.
15. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, PM_{2.5}, SO₂, NO_x and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.

16. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
17. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
18. Details of the use of steam from the boiler.
19. Ground water quality around proposed spent wash storage lagoon and the project area.
20. Geo-hydrological study of the impact zone should be undertaken.
21. 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.
22. Source of water supply and permission of withdrawal of water from Competent Authority.
23. Proposed effluent treatment system for molasses based distillery (spent wash and spent lees) as well as domestic sewage and scheme for achieving zero discharge.
24. Spent wash generation should not exceed 8 KL/KL of alcohol production. Details of the spent wash treatment for molasses based distillery based distillery.
25. Capacity for spent wash holding tank and action plan to control ground water pollution.
26. Layout for storage of bagasse/biomass/coal.
27. Details of solid waste management including management of boiler ash.
28. Action plan for development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
29. List of flora and fauna in the study area.
30. Noise levels monitoring at five locations within the study area.
31. 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.
32. EMP should also include the concept of waste-minimization, recycle/reuse/ recover techniques, Energy conservation, and natural resource conservation.
33. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
34. 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.
35. 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.
36. 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.
37. Details of socio-economic welfare activities.
38. 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.

39. All the project roads including the road upto from distillery unit to biocompost area should be made pucca/tar road. Action plan for post-project environmental monitoring.

40. 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.

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

42. 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.

43. 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.

13.4.34 Molasses based Distillery (80 KLPD) Unit (II) and CPP (3.0 MW) at BhikkiBilaspur Village, Tehsil Muzaffarnagar, District Muzaffarnagar, Uttar Pradesh by M/s Triveni Engineering & Industries 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 Term of References for the preparation of EIA/EMP report. All molasses based distilleries are listed at S.N. 5(g) (i) under category 'A' and appraised at Central level.

M/s Triveni Engineering & Industries Ltd. have proposed for setting up of Molasses based Distillery (80 KLPD) and CPP (3.0 MW) at BhikkiBilaspur Village, Tehsil Muzaffarnagar, District Muzaffarnagar, Uttar Pradesh. Existing distillery unit is located nearby the proposed distillery unit. Total plot area is 25 acres of which greenbelt will be developed in 8 acres of land. Cost of project is Rs. 103 Crore. River Kali is flowing at a distance of 7 Km. Bagasse/biogas/other biomass fired boiler (1 x 30 TPH) will be installed. DG sets (2x 500 KVA) will be installed. Fresh water requirement from ground water source will be 844 m³/day. Spent wash will be evaporated in MEE and concentrated spent wash will be burnt in the boiler. Blowdown and DM plant effluent will be treated and used for land irrigation. Domestic effluent will be disposed off through septic tank followed by soak pit. No effluent will be discharged outside the plant premises. Fly ash will be used for landfilling low lying area as well as sold to farmer as manure.

After deliberations, the Committee prescribed the following 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 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. 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 APPCB.
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. Information regarding eco-sensitive areas such as national park/wildlife sanctuary/ biosphere reserves within 10 km radius of project area.
11. List of existing distillery units in the study area alongwith their capacity and sourcing of raw material.
12. Details of proposed products along with manufacturing capacity.
13. Number of working days of the distillery unit.
14. 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.
15. Details of raw materials, its source with availability of all raw materials.
16. Sources and quantity of fuel (rice husk/coal etc.) for the boiler. Measures to take care of SO₂ emission. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted.

17. Storage facility for raw materials, prepared alcohol, fuel and fly ash.
18. Action plan to control ambient air quality as per NAAQES Standards for PM₁₀, PM_{2.5}, SO₂ and NO_x as per GSR 826(E) dated 16th November, 2009.
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, PM_{2.5}, SO₂, NO_x and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
20. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
21. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
22. Details of the use of steam from the boiler.
23. Ground water quality around proposed spent wash storage lagoon and the project area.
24. Geo-hydrological study of the impact zone should be undertaken.
25. 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.
26. Source of water supply and permission of withdrawal of water from Competent Authority.
27. Proposed effluent treatment system for molasses based distillery (spent wash and spent lees) as well as domestic sewage and scheme for achieving zero discharge.
28. Spent wash generation should not exceed 8 KL/KL of alcohol production. Details of the spent wash treatment for molasses based distillery based distillery.
29. Capacity for spent wash holding tank and action plan to control ground water pollution.
30. Layout for storage of bagasse/biomass/coal.
31. Details of solid waste management including management of boiler ash.
32. Action plan for development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
33. List of flora and fauna in the study area.
34. Noise levels monitoring at five locations within the study area.
35. 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.
36. EMP should also include the concept of waste-minimization, recycle/reuse/ recover techniques, Energy conservation, and natural resource conservation.
37. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
38. 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.
39. 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.
40. 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.
41. Details of socio-economic welfare activities.
 42. 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.
 43. All the project roads including the road upto from distillery unit to biocompost area should be made pucca/tar road. Action plan for post-project environmental monitoring.
 44. Action plan for post-project environmental monitoring.
 - 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 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.

13.5.0 Reconsideration

13.5.1 Expansion of existing Methanol Plant (100 TPD) and Formaldehyde Plant (100 TPD) by installing Methanol Plant (500 TPD), Acetic Acid Plant (200 TPD) and Captive Power Plant (5 MW) at Plot 4, Patta No.7, Dag No.60(kha), Plot-72B-03K-00LS at Village Namrup, Tehsil Naharkatia, District Dibrugarh, Assam by M/s Assam Petrochemicals Ltd. - EC reg.

Project proposal was considered in the 9th Reconstituted Expert Appraisal Committee (Industry) meeting held during 10th – 11th June, 2013 and the Committee desired following information:

- i. Correct the statement at page 8 of EIA report, wherein it is mentioned that no sensitive area/sanctuaries/national park is located. However, during the presentation, it was informed that Patkai Wild life Sanctuary is located at an aerial distance of 5 Km.
- ii. An authenticated map of the study area by the Chief Wildlife Warden, Government of Assam showing the distance between the boundary of project site and the Wildlife sanctuaries.
- ii. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden, Government of Assam for conservation of Schedule I fauna.
- iii. Compliance report by the Assam Pollution Control Board to the conditions stipulated in the NOC/Consent to Operate for the existing unit.
- iv. Efforts to be made to reduce the water requirement. Details of water conservation plan.
Total water consumption is 4800 m³/day. After optimization, total water consumption will be reduced to 3703 m³/day. The daily water requirement will be 2809 m³/day while 894 m³/day will be recycled for plant reuse after undergoing treatment.
- v. Details of Effluent Treatment Plant. Details of the purposes/activities for which treated effluent to be recycled/reused.
- vi. Details of ETP sludge to be checked.

Project proponent vide letter dated 10th September, 2013 has submitted above mentioned information.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meetings conducted by the Assam Pollution Control Board on 6th September, 2012. The issues raised during public hearing were regarding measures to be taken to control pollution, SO₂ and NO_x emissions, pipeline to be laid on agriculture field, ambient air quality monitoring, greenbelt development etc. Public hearing issues have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

After detailed deliberations, the Committee found the additional information adequate and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i) Environmental clearance is subject to their obtaining prior clearance from the Standing Committee of the National Board for Wildlife as applicable regarding Patkai Wild life Sanctuary. Grant of environmental clearance does not necessarily implies that wildlife clearance shall be granted to the project and that their proposals for wildlife clearance will be considered by the respective authorities on their merits and decision taken. No work at the site shall be started without prior permission. The investment made in the project, if any, based on environmental clearance so granted, in anticipation of the clearance from wildlife angle shall be entirely at the cost and risk of the project proponent and Ministry of Environment & Forests shall not be responsible in this regard in any manner” and all the recommendations shall be implemented in a time bound manner.
- ii) Adequate stack height shall be provided to gas turbine as per CPCB/ Assam State Pollution Control Board (ASPCB) guidelines to disperse gases emissions into the atmosphere. Low NOx burners shall be provided with on-line analyzers.
- iii) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.
- iv) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored.
- v) Total fresh water requirement from River Dilli should not exceed 2809 m³/day after expansion and prior permission should be obtained from the Competent Authority.
- vi) Industrial effluent generation shall not exceed 1443 m³/day. Industrial effluent shall be treated in ETP comprises primary, secondary and tertiary treatment facilities. RO rejects will be concentrated in MEE. Treated effluent (894 m³/day) shall be reused/recycled in process or horticulture purpose. Water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB.
- vii) No effluent shall be discharged outside the premises and ‘Zero’ effluent discharge shall be followed.
- viii) 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 SPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire fighting facilities in case of emergency.
- ix) As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- x) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

- xi) All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 6th September, 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 Shillong.
- xii) At least 5 % of the total cost of the project should be earmarked towards the Enterprises Social Commitment and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Shillong. Implementation of such program should be ensured accordingly in a time bound manner.

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

Project proposal was considered in the 10th Reconstituted Expert Appraisal Committee (Industry) meeting held during 29th – 31st July, 2013 and the Committee desired following 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 severe damage distance remains within the plant area. Revised layout to be submitted.

Project proponent vide letters dated 18th September, 2013 and 28th October, 2013 has submitted above mentioned information.

After detailed deliberations, the Committee found the additional information adequate and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i. National Emission Standards for Pesticide Manufacturing and Formulation Industry issued by the Ministry vide G.S.R. 46(E) dated 3rd February, 2006 and amended time to time shall be followed by the unit.
- ii. Multicyclone followed by bagfilter alongwith adequate stack height shall be provided to coal fired boiler to control particulate emissions.
- iii. Two stage water scrubber followed by alkali scrubber shall be provided to process vent to control SO₂, HCl, HBr and Cl₂ emissions. The scrubbed water should be sent to ETP for further treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. Scrubbers vent shall be provided with on-line detection and alarm system to indicate higher than permissible value of controlled parameters. At no time, the emission levels shall go beyond the prescribed standards. The system should be interlocked with the pollution control equipments so that in case of any

- increase in pollutants beyond permissible limits, plant should be automatically stopped.
- iv. In order to control odour, outlet of process vents should be connected to the incinerator.
 - v. Incinerator should be designed as per CPCB guidelines. SO₂, NO_x, HCl and CO emissions shall be monitored in the stack regularly.
 - vi. Chilled brine circulation system should be provided to condensate solvent vapors and reduce solvent losses. It should be ensured that solvent recovery should not be less than 95%.
 - vii. All necessary steps should be taken for monitoring of chlorine, HCl and HBr as well as VOCs in the proposed plant.
 - viii. A proper Leak Detection and Repair (LDAR) Program for pesticide industry shall be prepared and implemented as per the CPCB guidelines.
 - ix. Alarm for chlorine leakage if any in the liquid chlorine storage area is provided alongwith automatic start of the scrubbing system.
 - x. Total water requirement from GIDC water supply should not exceed 1383 m³/day and prior permission should be obtained from the Competent Authority.
 - xi. Industrial effluent generation should not exceed 904 m³/day. Effluent should be segregated into High COD, High TDS and low COD/TDS effluent streams. High COD effluent /mother liquor should be incinerated. High TDS effluent should be treated through stripper followed by MEE. Low COD/TDS effluent should be treated in ETP. Industrial effluent shall be treated in ETP and treated effluent shall be discharged to the GIDC Effluent drainage line after conforming the norms prescribed by GPCB. Cyanide effluent stream shall be segregated and treated. Water quality of treated effluent should meet the norms prescribed by CPCB/SPCB.
 - xii. 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.
 - xiii. The Company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans boundary movement) Rules, 2008 for management of hazardous wastes and prior permission from UPPCB should be obtained for disposal of solid / hazardous waste in the TSDF. The concerned company should undertake measures for fire fighting facilities in case of emergency.
 - xiv. As proposed, ETP sludge and incineration ash should be sent to TSDF site. High calorific value waste such as spent organic should be incinerated.
 - xv. Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

- xvi. The company should make the arrangement for protection of possible fire and explosion hazards during manufacturing process in material handling.
- xvii. As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xviii. All the commitments made during the Public Hearing / Public Consultation meeting held on 17th April, 2013 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xix. 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 Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.

13.5.3 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.

Project proposal was considered in the 10th Reconstituted Expert Appraisal Committee (Industry) meeting held during 29th – 31st July, 2013 and the Committee desired following 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.

Project proponent vide letter dated 14th September, 2013 has submitted above mentioned information.

After detailed deliberations, the Committee found the additional information adequate and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i. National Emission Standards for Pesticide Manufacturing and Formulation Industry issued by the Ministry vide G.S.R. 46(E) dated 3rd February, 2006 and amended time to time shall be followed by the unit.
- ii. Multicyclone followed by bagfilter alongwith adequate stack height shall be provided to coal fired boiler to control particulate emissions.
- iii. Two stage water scrubber followed by alkali scrubber shall be provided to process vent to control HCl and Cl₂ emissions. The scrubbed water should be sent to ETP for further treatment. Efficiency of scrubber shall be monitored regularly and maintained

- properly. Scrubbers vent shall be provided with on-line detection and alarm system to indicate higher than permissible value of controlled parameters. At no time, the emission levels shall go beyond the prescribed standards. The system should be interlocked with the pollution control equipments so that in case of any increase in pollutants beyond permissible limits, plant should be automatically stopped.
- iv. Chilled brine circulation system should be provided to condensate solvent vapors and reduce solvent losses. It should be ensured that solvent recovery should not be less than 95%.
 - v. All necessary steps should be taken for monitoring of chlorine, HCl as well as VOCs in the proposed plant.
 - vi. A proper Leak Detection and Repair (LDAR) Program for pesticide industry shall be prepared and implemented as per the CPCB guidelines.
 - vii. Alarm for chlorine leakage if any in the liquid chlorine storage area is provided alongwith automatic start of the scrubbing system.
 - viii. Total water requirement from ground water source should not exceed 25.8 m³/day and prior permission should be obtained from the CGWA.
 - ix. Industrial effluent generation should not exceed 15.4 m³/day. Effluent should be treated in ETP followed by Reverse Osmosis. Treated effluent shall be recycled/reused in the process/ cooling tower make up water. Cyanide effluent stream shall be segregated and treated.
 - x. No effluent shall be discharged outside the premises and 'Zero' effluent discharge shall be followed.
 - xi. The Company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans boundary movement) Rules, 2008 for management of hazardous wastes and prior permission from RSPCB should be obtained for disposal of solid / hazardous waste in the TSDF. The concerned company should undertake measures for fire fighting facilities in case of emergency.
 - xii. As proposed, ETP sludge should be sent to TSDF site. High calorific value waste such as spent organic should be incinerated.
 - xiii. Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
 - xiv. The company should make the arrangement for protection of possible fire and explosion hazards during manufacturing process in material handling.
 - xv. As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.

- xvi. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted to the Ministry's Regional Office at Lucknow. Implementation of such program should be ensured accordingly in a time bound manner.

13.5.4 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 amendment in EC.**

Project proposal was considered in the 10th Reconstituted Expert Appraisal Committee (Industry) meeting held during 29th – 31st July, 2013 and the Committee desired following 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 SO₂ 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 DDGS 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.

Project proponent vide letter dated 5th September, 2013 has submitted above mentioned information. The Committee noted that no additional land is required. In order to prevent the loss of steam is condensing, it has been proposed to enhance the distillery plant capacity from 60 KLPD to 70 KLPD. This will help in conserving resources i.e. coal by 15 TPD. No additional steam requirement. No increase in air emissions, no additional water requirement. No additional effluent generation and ETP of 60 KLPD will be adequate for 70 KLPD. Entire DDGS will be used as cattle feed/poultry feed. The 60 KLPD distillery plant is under advance stage of implementation. Therefore, the Committee exempted the proposal from EIA/EMP report preparation and public hearing under 7 (ii) of EIA Notification, 2006.

After detailed deliberations, the Committee found additional information satisfactory and recommended the proposal for amendment to the existing environmental clearance for expansion of Grain based Distillery (from 60 KLPD to 70 KLPD) with following specific conditions:

- i) Environment clearance accorded is for grain based distillery unit (70 KLPD) only and no molasses based distillery unit shall be operated without prior permission from the Ministry.

- ii) As proposed, existing utilities (boiler, cooling tower etc) shall be used and no additional utilities shall be installed.
- iii) Total fresh water requirement from ground water source for grain based distillery alongwith power generation shall not exceed 10 KL/KL of alcohol (i.e. 700 m³/day).
- iv) Spent wash generation grain based distillery shall not exceed 6 KI/KI of alcohol. Spent wash from grain based shall be treated through decanter and concentrated in multi-effect evaporator (MEE) to form DWGS to achieve zero discharge.
- v) DWGS shall be sold as cattle feed.

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

Project proposal was considered in the 10th Reconstituted Expert Appraisal Committee (Industry) meeting held during 29th – 31st July, 2013 and the Committee desired following 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 it 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.

Project proponent vide letter dated 9th September, 2013 has submitted above mentioned information.

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

- i) National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21st July, 2010 and amended time to time shall be followed by the unit.

- ii) Bagfilter alongwith stack of adequate height shall be provided to briquettes/wood fired boiler to control particulate emissions.
- iii) Scrubber shall be provided to control process emissions. The scrubbed water shall be sent to ETP for further treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. Scrubbers vent shall be provided with on-line detection and alarm system to indicate higher than permissible value of controlled parameters. At no time, the emission levels shall go beyond the prescribed standards. The system shall be interlocked with the pollution control equipments so that in case of any increase in pollutants beyond permissible limits, plant shall be automatically stopped. Stack monitoring shall be done regularly and report shall be submitted to Gujarat Pollution Control Board (GPCB) and the Ministry's regional office at Bhopal.
- iv) Total fresh water requirement from ground water source shall not exceed 176.5 m³/day and prior permission for drawl of water shall be obtained from the CGWA/SGWA.
- v) Total industrial wastewater generation shall not exceed 36.3 m³/day. Industrial effluent shall be treated in ETP followed by Reverse Osmosis. RO permeate shall be recycled/reused in the process. RO rejects shall be evaporated in MEE. No effluent shall be discharged outside the plant premises and Zero effluent discharge condition shall be maintained.
- vi) All the issues raised during the public hearing/consultation meeting held on 3rd April, 2013 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- vii) At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.
- viii) As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.

13.5.6 Bulk Drug & Intermediate Unit (1,500 TPA) at Sy. No. 212-228, Village Ippalapalli, MandalKesampet, District Mahaboobnagar, Andhra Pradesh by M/s MSN Laboratories Limited - Regarding Environment Clearance.

Project proposal was considered in the 10th Reconstituted Expert Appraisal Committee (Industry) meeting held during 29th – 31st July, 2013 and the Committee desired following information:

- i. Natural nallah should not be disturbed.
- ii. Hydro-geological study of the area to be incorporated.
- iii. MoU with the coal supplier alongwith coal characteristics to be submitted.
- iv. Impact on Reserved Forest due to air emissions.

- v. Comprehensive CSR plan considering 5 % of the total cost of the project.
- vi. Occupational hazard plan to be submitted.
- vii. Chemical emergency preparedness plan with cost component to be submitted.

Project proponent vide letter dated 28th September, 2013 has submitted above mentioned information.

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

- i) Multi-cyclone followed by bag filter should be provided to the coal fired boiler to control particulate emissions within permissible limit. The gaseous emissions should be dispersed through stack of adequate height as per CPCB/APPCB guidelines.
- ii) The levels of PM_{2.5}, PM₁₀, SO₂, NO_x, VOC, NH₃ and HCl should 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 SO₂. Two stage scrubber with chilled water media should be provided to process vents to control NH₃. 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 APPCB. Odour management plan should be implemented.
- v) Total fresh water requirement from ground water source should not exceed 415 m³/day and prior permission should be obtained from the CGWA/SGWA.
- vi) Trade effluent should 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 should 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 along with 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.
- xii) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- xiii) All the issues raised during the public hearing/consultation meeting held on 30th January, 2013 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xiv) At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.
- xv) As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.

13.5.7 Expansion of Pigment Unit (950 MTPM to 1875 MTPM) and By-products (1,370 MTPM) at Block No.429-432, Village Dhudhavad, District Vadodra Gujarat by M/s Asahi Singwan Colours Ltd.- **regarding E.C**

Project proposal was considered in the 31st Expert Appraisal Committee (Industry-2) meeting held during 12th – 13th January, 2012 and the Committee desired following information:

- i. Recommendation of the Gujarat Pollution Control Board (GPCB) in respect of above mentioned project located in Padra, Vadodra, Gujarat.
- ii. Compliance of Hon'ble Supreme Court order dated 7th May, 2004 wherein it is mentioned that "Government shall ensure release of water through overhead tanks as expeditiously as possible" or any other Court Order issued thereafter.

- iii. Commitment to install online TOC analyzer, pH meter and flowmeter to monitor the treated water quality before discharge.
- iv. Quantitative risk assessment (QRA) report to be done covering all storage of hazardous chemicals. The risk assessment report should cover transportation, unloading and handling of the all hazardous chemicals to be used.
- v. Occupational health status of the workers in the existing unit.
- vi. Action plan for reduction of Ammonical Nitrogen below 50 mg/Nm³.

Project proponent vide letter dated 27th May, 2013 has submitted above mentioned information. GPCB vide letter no. GPCB/CCA-VRD-683(4)/ID 21641/141373 dated 22nd March, 2013 recommended the proposal without increase in the capacity of Cooper Phthalocyanine Blue Crude Production (Additional 150 MT capacity of CPC blue is not recommended while other expanded capacities and new capacities are recommended. Treated effluent (1174 m³/day) shall be discharged to ECP channel.

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

- i) As recommended by GPCB, no expansion shall be carried out for Cooper Phthalocyanine Blue Crude Production.
- ii) Multi-cyclone followed by bag filter should be provided to the coal/lignite fired boiler/thermic fluid heater to control particulate emissions within permissible limit. The gaseous emissions should be dispersed through stack of adequate height as per CPCB/GPCB guidelines.
- iii) The levels of PM₁₀, SO₂, NO_x, CO, HCl and VOC should be monitored in ambient air.
- iv) Two stage chilled water/caustic scrubber should be provided to process vents to control Cl₂. Two stage scrubber with caustic lye media solution should be provided to process vents to control SO₂. Two stage scrubber with chilled water media should be provided to process vents to control NH₃. 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.
- v) 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.
- vi) Odour control plan to be implemented.
- vii) Total fresh water requirement from ground water source should not exceed 2105 m³/day and prior permission should be obtained from the concerned Authority
- viii) Total effluent generation should not exceed 1174 m³/day. Effluent shall be treated in ETP followed by RO. Treated effluent shall be discharged to ECP Channel after conforming to the standards prescribed for the effluent discharge and obtaining permission from the GPCB. No process effluent should be discharged in and around the project site.

- ix) Treated industrial effluent shall be passed through guard pond. The guard pond shall have online pH, TOC analyser and flowmeter and data shall be online transmitted to the GPCB website.
- x) The company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from APPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire-fighting facilities in case of emergency.
- xi) All the recommendations made in the risk assessment report should be satisfactorily implemented.
- xii) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- xiii) All the issues raised during the public hearing/consultation meeting held on 14th October, 2011 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xiv) At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.
- xv) As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.

13.5.8 Grain/Molasses based Distillery (660 KLPD) with Co-generation Power Plant (20 MW) at Village Devadi, District Bhojpur, Bihar by M/s Bihar Distillers & Bottlers (P) Ltd.- regarding EC.

Project proposal was considered in the 9th Expert Appraisal Committee (Industry-2) meeting held during 10th – 11th June, 2013 and the Committee desired following information:

- i. Whether coal will be used or not.
- ii. Action plan for handling fly ash.
- iii. CSR plan to be submitted.
- iv. Fresh layout map incorporating all the units to be submitted.
- v. Availability of grain/molasses to be checked.
- vi. HC value to be checked.
- vii. Impact due to transportation
- viii. Explore the possibility of surface water.
- ix. Clearance from Central Ground Water to be furnished.
- x. Details of rain water harvesting to be submitted.
- xi. Water balance chart to be corrected.

Project proponent vide letter dated 19th August, 2013 has submitted above mentioned information.

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

- i. Distillery (660 KLPD) unit shall be based on Molasses / Grain only and production of the plant shall never exceed the maximum capacity defined i.e. 660 KLPD.
- ii. Bagfilter alongwith stack of adequate height should be provided to rice husk/biogas fired boiler to control particulate emission within 50 mg/Nm³.
- iii. Pucca approach road to project site should be constructed prior to commencing construction activity of the main distillery so as to avoid fugitive emissions.
- iv. Total fresh water requirement from ground water source should not exceed 6520 m³/day for distillery and cogeneration unit and prior permission should be obtained from Central Ground Water/State Ground Water Authority.
- v. Water consumption should be reduced by adopting 3 R's (reduce, reuse and recycle) concept in the process.
- vi. Spent wash generation from molasses and grain based distillery shall not exceed 8 KI/KI of alcohol and 6 KI/KI of alcohol respectively. The spent wash from molasses based distillery shall be treated through bio-methanation followed by evaporation in Multi-effect evaporator and burnt in boiler to achieve 'Zero' effluent discharge. No effluent shall be discharged outside the premises and 'Zero' discharge shall be maintained. Spent wash from grain based distillery shall be treated through decanter and concentrated in multi-effect evaporator (MEE) to form DWGS. DWGS shall be dried to form DDGS. Spent wash shall be stored in impervious pucca lagoons with proper lining with HDPE and shall be kept in proper condition to prevent ground water pollution. The storage of spent wash shall not exceed 5 days capacity.
- vii. No effluent from distillery and co-generation power plant should be discharged outside the premises and Zero discharge should be adopted.
- viii. Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area should be set up. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to SPCB and this Ministry. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and total dissolved solids should be monitored.
- ix. No storage of wet cake should be done at site. An additional dryer should be installed so that at any time wet cake is not sold then wet cake should be converted into dry cake by operating additional dryer.
- x. Rice husk storage should be done in such a way that it does not get air borne or fly around due to wind.
- xi. Boiler 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.

- xii. Occupational health surveillance programme should be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre should be strengthened and the regular medical test records of each employee should be maintained separately.
- xiii. Dedicated parking facility for loading and unloading of material should be provided in the factory premises. Unit should develop and implement good traffic management system for their incoming and outgoing vehicles to avoid congestion on the public road.
- xiv. As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xv. All the commitment made regarding issues raised during the public hearing/consultation meeting held on 12th January, 2013 shall be satisfactorily implemented.
- xvi.** *At least 5 % of the total cost of the project (i.e. Rs 250 Crore) should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program should be ensured accordingly in a time bound manner.*

13.5.9 Sugarcane Juice/Molasses based Distillery Unit (100 KLPD; RS/ENA/Ethanol) at Village Kolundampattu, Tehsil Thandampattu, District Tiruvannamalai, Tamil Nadu by **M/s Bannari Amman Sugars Ltd. – regarding EC.**

Project proposal was considered in the 17th Expert Appraisal Committee (Industry-2) meeting held during 22nd– 23rd December, 2010 and the Committee desired following information:

- i. Increase in emission load due to incineration.
- ii. Ash disposal method to be adopted from the boiler.
- iii. Air pollution control system proposed.
- iv. Water balance cycle.
- v. Solid waste disposal
- vi. Lagoon for 5 days spent wash storage capacity.

Project proponent vide letter dated 26th June, 2013 has submitted above mentioned information. Project proponent vide letter dated 14th June, 2013 has also informed the reasons for delay in submission of the project. They informed that they have collected the required data and studied the increase in emission load due to incineration, water balance chart for the proposed distillery which consumed considerable time.

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

- i) Distillery unit shall be based on Sugarcane Juice/Molasses based only and no Grain based distillery unit shall be operated.
- ii) Bagfilter alongwith stack of adequate height shall be provided to coal/biomass fired boilers to control particulate emissions within 50 mg/Nm³.
- iii) Total fresh water requirement from Pennai River shall not exceed 1157 m³/day and prior permission shall be obtained from the Competent Authority.
- iv) Spent wash generation from molasses based distillery shall not exceed 8 KI/KI of alcohol. The spent wash from molasses based distillery shall be concentrated in Multi-effect evaporator followed by incineration in incineration boiler to achieve 'Zero' discharge. Evaporator Condensate shall be treated anaerobic/aerobic treatment plant followed by RO and Treated effluent shall be recycled/reused in process. No effluent shall be discharged outside the premises and 'Zero' discharge shall be maintained.
- v) Spent wash shall be stored in impervious pucca lagoons with proper lining with HDPE and shall be kept in proper condition to prevent ground water pollution. The storage of spent wash shall not exceed 5 days capacity.
- vi) As proposed, no effluent from distillery and co-generation power plant shall be discharged outside the plant premises and Zero discharge shall be adopted. Water consumption shall be reduced by adopting 3 R's (reduce, reuse and recycle) concept in the process.
- vii) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- viii) Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area and compost yard shall be set up. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to SPCB and this Ministry. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and total dissolved solids should be monitored. Sampling and trend analysis monitoring must be made on monthly basis and report submitted to the Ministry's Regional Office at Lucknow and RSPCB.
- ix) Bagasse/biomass storage shall be done in such a way that it does not get air borne or fly around due to wind.
- x) Boiler ash shall be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust shall be avoided. Bagasse ash and coal ash shall be stored separately.
- xi) Fire fighting system shall be as per the norms and cover all areas where alcohol is produced, handled and stored. Provision of foam system for fire fighting shall be made to control fire from the alcohol storage tank. DMP should be implemented.
- xii) Occupational health surveillance programme shall be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre shall be

strengthened and the regular medical test records of each employee shall be maintained separately.

- xiii) Dedicated parking facility for loading and unloading of materials shall be provided in the factory premises. Unit shall develop and implement good traffic management system for their incoming and outgoing vehicles to avoid congestion on the public road.
- xiv) As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xv) All the commitments made during the Public Hearing / Public Consultation meeting held on 29th January, 2009 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xvi) *At least 5 % of the total cost of the project (i.e. Rs 250 Crore) should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program should be ensured accordingly in a time bound manner.*

13.6.0 Any other

- 13.6.1 DeenDayal Development Project (KG-OSN-2001/3 Block NELP-III) regarding setting up of offshore well Head platform in KG Basin, offshore to onshore sub-sea pipeline, Onshore Gas Terminal (OGP), Condensate Storage Unit (CSU) at Mallavaram, Andhra Pradesh with landfall point at Avipolam Hamlet of Yanam in Pudcherry by **M/s Gujarat State Petroleum Corporation Ltd. – extension of validity of EC.**

MoEF vide letter no. J-11011/415/2007-IA –II dated 8th September, 2008 has issued environmental clearance for the above mentioned project.

Now, project proponent vide letter no. GSPC/QHSE/KG-Dev./EC/2013-108 dated 15th August, 2013 has requested for extension of validity of EC for five more years as the construction works are still under progress and thirteen development wells are yet to be drilled.

After detailed deliberations, the committee recommended for the extension of validity of EC for a period of five years with effect from 8.09.2013.

- 13.6.3 Bulk Drug Manufacturing Unit (15 MTPM) at Sy.No.888, 889 & 901, Village Jangampalli, Tehsil Bhikunoor, District Nizamabad, Andhra Pradesh by **M/s VijayaSai Laboratories Pvt. Ltd. – amendment in EC**

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

13.6.4 Expansion of Explosive Manufacturing Unit at Sy.No.270, 271, 272, 273, 323, 325, 326, 327, 333, 334, 335, 395, 309, 340, Village Talegaon, Tehsil Ashti, District Wardha, Maharashtra by **M/s CDET Explosive Industries Pvt.Ltd. – extension of validity of TOR.**

MoEF vide letter no. J-11011/379/2010-IA –II dated 23rd November, 2010 has issued TOR for the above mentioned project.

Now, project proponent vide letter no. CDET/AKR/EC/13-14/336A dated 10th August, 2013 has requested for extension of validity of TOR for one more year as EIA/EMP report could not be completed in time and still in progress.

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. Executive summary of the project
2. Justification of the project.
3. Project location and plant layout.
4. Promoters and their back ground.
5. Regulatory framework
6. A map indicating location of the project and distance from severely polluted area
7. Infrastructure facilities including power sources.
8. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
9. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
10. Present land use based on satellite imagery for the study area of 10 km radius.
11. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
12. Details of the total land and break-up of the land use for green belt and other uses.
13. List of products alongwith the production capacities.
14. Detailed list of raw material required and source, mode of storage and transportation.
15. Manufacturing process details alongwith the chemical reactions and process flow chart.
16. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
17. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 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, SO₂, NO_x including HC and VOCs should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
19. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
20. Name of all the solvents to be used in the process and details of solvent recovery system.
21. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
22. Details of water and air pollution and its mitigation plan
23. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.

24. An action plan to control and monitor secondary fugitive emissions from all the sources.
25. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
26. Source and permission for the drawl of water from the competent authority. Water balance chart including quantity of effluent generated recycled and reused and discharged. Efforts shall be made to reduce ground water drawl.
27. Action plan for 'Zero' discharge of effluent should be included.
28. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
29. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste.
30. Action plan for the management of fly ash generated from boiler should be included. Tie-up or agreement with brick manufacturer to be provided.
31. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
32. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will 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. Material Safety Data Sheet for all the Chemicals are being used/will be used. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
36. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
37. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
38. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
39. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
40. Details of occupational health programme.
 - i) To which chemicals, workers are exposed directly or indirectly.
 - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - iii) What measures company have taken to keep these chemicals within PEL/TLV.
 - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - v) What are onsite and offsite emergency plan during chemical disaster.
 - vi) Liver function tests (LFT) during pre-placement and periodical examination.
 - vii) Details of occupational health surveillance programme.
41. Socio-economic development activities should be in place.
42. Note on compliance to the recommendations mentioned in the CREP guidelines.
43. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
44. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.

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

The 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.

13.6.5 Bulk Drugs & Intermediates Unit (3250 TPA) and Captive Power Plant (3 MW) at Sy.No.14/4A & B, 18 to 24, at Village Maruvada, MandalRanasthalam, District Srikakulam, Andhra Pradesh by **M/s Covalent Laboratories Private Limited - changes in the TOR and extension of validity of TOR.**

MoEF vide letter no. J-11011/182/2011-IA –II dated 2nd September, 2011 has issued TOR for the above mentioned project.

Now, project proponent vide letter no. CLPL-II/EAC/TOR/June/13 dated 6th June, 2013 has requested for amendment in TOR by inserting “treated effluent is proposed to send for marine disposal after meeting the norms of APPCB and on obtaining NOC from APPCB and recommendation of SCZMA”.

Now, project proponent vide letter no. dated 13th July, 2013 has requested for extension of validity of TOR for one more year as draft EIA report to be submitted 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 2.09.2014. The Committee also recommended for amendment in TOR with zero discharge for process effluent and marine disposal for non –process units after meeting the norms of APPCB and on obtaining NOC from APPCB and recommendation of SCZMA.

LIST OF PARTICIPANTS

Expert Appraisal Committee (Industry) :			
1.	Shri M. Raman	Chairman	P
2.	Shri R.K. Garg	Vice-Chairman	P
3.	Prof. R.C. Gupta	Member	A
4.	Dr. Prem Shankar Dubey	Member	P
5.	Dr. R.M. Mathur	Member	P
6.	Dr. S. K. Dave	Member	P
7.	Dr. B.Sengupta	Member	P
8.	Shri Rajat Roy Choudhary	Member	P
9.	Dr. S.D. Attri	Member	P
10.	Dr. Antony Gnanamuthu	Member	P
11.	Prof. C. S. Dubey	Member	P
12.	Shri Niranjana Raghunath Raje	Member	P
13.	Dr. K K Garg	Member Secretary	

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