

**MINUTES OF 21ST RECONSTITUTED EXPERT APPRAISAL COMMITTEE (INDUSTRY) HELD DURING
30TH JULY 2014 TO 1ST AUGUST 2014**

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

21.1 Opening Remarks of the Vice -Chairman

At the outset, Vice -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.

21.2 Confirmation of the Minutes of the 20th Reconstituted Expert Appraisal Committee (Industry) held during 23-24th June 2014

The minutes of the 20th Reconstituted Expert Appraisal Committee (Industry) meeting held during 23-24th June 2014 were confirmed subject to the following corrections:

(1) 20.2 Confirmation of Minutes:

No.	Agenda No.: 19.9.12	For	Read
5	Public Hearing & Annexure-7	After detailed deliberation, the Committee recommended the TOR at Annexure-6 for preparation of EIA –EMP report along with Public Hearing at Viramgam only.	After detailed deliberation, the Committee recommended the TOR at Annexure-11 (Pipeline) for preparation of EIA–EMP report along with Public Hearing at Viramgam only.

(2) Agenda Item 20.6.7: 1st Para:

Instead of the words “from 2x300 TPD + 3x100 TPD to 3x300 TPD”, read “from 3x300 TPD to 2x300 TPD + 3x100” TPD.

30th July 2014

21.3 Environmental Clearance

21.3.1 Proposed expansion of existing steel plant from 1.0 MTPA to 3.5 MTPA Integrated Steel Plant of M/s Mideast Integrated Steels Ltd. at Kalinganagar Industrial Complex, Tehsil – Danagadi, District Jajpur, Odisha (EC)

1. M/s Mideast Integrated Steels Limited (**herein after Project Proponent –PP**) and their EIA-EMP consultant M/s Visiontek Consultancy Services Private Limited - Bhubaneswar 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 27th meeting of the Expert Appraisal Committee (Industry) held on 26-27th August 2011 for preparation of EIA-EMP report. The TOR was awarded by MoEF vide F.No. J-11011/376/2011-IA.II(I) dated 9.9.2011 for preparation of EIA-EMP report. PP submitted the final EIA-EMP report vide letter dated 23.8.2013 after conducting Public Hearing for grant of Environmental Clearance. Ministry vide letter dated 18.11.2013 informed the PP to submit the revalidated final EIA-EMP report through the sector specific QCI accredited consultant along with the certified compliance report from Regional Office of the Ministry for the existing environmental clearances. PP vide letter dated 27.2.2014 submitted the revalidated EIA-EMP report along with the certified compliance report. The proposal was placed before the EAC for consideration. The proposed project activity is listed at S.No. 3(a) in primary metallurgical industry under Category ‘A’ of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

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:

An environmental clearance for 0.5 MT capacity Integrated Mini Steel Plant of the PP was granted at Jajpur, Odisha vide letter no. J-11011/3/94-IA II (I) dated 15.6.1995. Environmental clearance for the expansion of 0.5 MTPA to 1.0 MTPA Integrated Steel Plant was accorded vide letter no. J-11011/18/95-IA-II dated 11.6.1998. M/s Mideast Integrated Steel Limited have proposed to expand its existing steel plant from 1 MTPA to 3.5 MTPA at Kalingnagar Industrial Complex, Tehsil – Danagadi, District - Jajpur, Odisha. Proposed expansion project will be set up over an area of 377.56 acres within the existing plant premises of 584.68 acres. The longitude and latitude of the project site is 86°01'54.26" to 86°03'14.28"E and 20°58'03.82" to 20°59'6.01"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. Khurunti village is located at a distance of 1km from the project site. River Brahmani flows at a distance of 9 km from the project site. Baranga RF exists at a distance of 6km from the project site. Total cost of the project is Rs. 9491.00 Crores. Rs. 646.3 crores and Rs. 98 crores are earmarked for the capital cost and recurring cost per annum towards the environmental pollution control measures. Rs. 475 crores is earmarked towards the Enterprise Social Commitment related activities based on Public Hearing issues.

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

S. N.	Description	Existing	Proposed expansion	Post Expansion
1	Coke oven (Recovery Type)	--	1.5MTPA	1.5 MTPA
2	Sinter plant*	0.68 MTPA	2.7 MTPA	3.38 MTPA
3	Blast furnace	1.0 MTPA	1.94 MTPA	2.94 MTPA
4	SMS			
	EAF (Billets)	--	0.75 MTPA	0.75 MTPA
	BOF (slab)	--	1.10 MTPA	1.10 MTPA
	BOF (Billets)	--	1.62 MTPA	1.62 MTPA
5	Rolling Mill			
	(a) Rebar Mill	--	0.8 MTPA	0.8 MTPA
	(b) Wire rod mill	--	0.75 MTPA	0.75 MTPA
6	Lime Kiln	--	2x500 + 1x 225 TPD	1225 TPD
7	Oxygen Plant	--	2000 TPD	2000 TPD
8	Waste gas based Power plant	2x4.5 MW	2x25 MW	59 MW
*Charged/to be charged to Blast Furnace				

RO-Bhubaneswar has sent the certified compliance report on the status of compliance for the existing unit vide letter no.101-120/EPE dated 27.5.2013. The Committee noted that the as per the report furnished, compliance to the EC conditions were being met.

The raw materials required are imported hard coal (1,226,900 TPA), imported semi-soft coal (660,600 TPA), PCI coal (4,46,000 TPA), iron ore (792,300 TPA), iron ore fines (2688300 TPA), DRI (470,510 TPA), limestone (378,300 TPA), pyroxenite (221,700 TPA), pellet (1,263,800 TPA), Quartzite (40920 TPA), limestone (644,000 TPA) and dolomite (142,700 TPA). Iron ore will be sourced from the mines at Roida and Malangtoli. Coal will be imported. The ash and sulphur content in the imported coal would be 9.7% and 0.6% respectively. The ash and sulphur content in the PCI coal would be 9.5% and 0.6% respectively. The Committee asked the PP to submit the coal linkage document for the imported coal and PCI coal. The power requirement after the proposed expansion would be 295 MW which will be met from the CPP and balance from Duburi substation SEB grid located at 7km distance from the project site. 2.5 MTPA raw material and products will be transported through road. 11.65 MTPA raw

material and products will be transported through rail. 1.26 MTPA raw material will be transported through belt conveyor.

Ambient air quality monitoring has been carried out at 8 locations during December 2013 – February 2014 and the data submitted indicated: PM₁₀ (53.9µg/m³ to 79.4µg/m³), PM_{2.5} (28.3 to 53.75µg/m³), SO₂ (8.2 to 20.3µg/m³) and NO_x (12.3 to 23.7 µg/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs would be 2.4 µg/m³, 1.2µg/m³ and 4.1µg/m³ with respect to PM₁₀, SO₂ and NO_x respectively. Hot Gas from BF will be treated in GCP before discharging to atmosphere. To control air emission in the plant, bag house, bag filters will be installed. The material handling section would be provided with dust suppression (DS) by water sprinkling at the stockyards and multiple dust extraction (DE)s. Good housekeeping practices will be adopted to control the fugitive emissions.

The estimated total water requirement for the project is 3040m³/hr which shall abstracted via infiltration bore wells on the bed of River Brahmani near Jokadia weir at a distance of 17 km from the plant. The unit has obtained permission from Odisha Industrial Infrastructure Development Corporation (IDCO) dated 18.12.2013 for the water drawl. No industrial waste water will be generated in the Plant. Treated water shall be used for dust suppression, slag quenching & GCP. Waste water from RWTP is/will be discharged in slurry form and same will be used for dust suppression and horticulture after passing through drying beds. Granulated B.F slag, sinter dust, coke fines from the stock house and CDQ dust will be re used in Sinter plant. STP Sludge will be utilized as manure for green belt development within the plant premises. Out of the total plant area (i.e. 377.56 acres), 33% will be developed under green belt / plantation in a scientific manner around the plant boundary, roadside, office buildings and stretches of open land.

Public Hearing/Public Consultation was conducted by Odisha State Pollution Control Board on 12.04.2013 under the chairmanship of Shri Anil Kumar Samal, Collector & District Magistrate, Jajpur at Dhanagadi Bhawan, Danagadi. The issues raised during public hearing include 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. Rs. 475 crores is earmarked towards the Enterprise Social Commitment related activities based on Public Hearing issues.

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

- i. Iron ore linkage document and the status of environmental clearances of the iron ore mines;
- ii. Coal linkage documents;
- iii. Technical details of the coke oven plant effluent and coal tar utilization plan;
- iv. Exit velocity of the stack to be rechecked;
- v. AAQ modelling shall be redone and the report shall be submitted;
- vi. Water consumption and the wastewater management plan as per the CREP guidelines shall be submitted;
- vii. Surface water/ ground water quality shall be monitored for one month period and the report shall be submitted;
- viii. Action plan for the storage and the disposal of SMS slag;
- ix. Rehabilitation colony details;
- x. Action plan for five years to address the issues raised during Public Hearing;
- xi. Socio-economic survey shall be carried out through an reputed institute and the report shall be submitted;
- xii. Occupational health and safety management plan;
- xiii. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and village wise action plan with financial and physical breakup/details shall be prepared over a period of ten years and shall be submitted;
- xiv. Risk assessment and disaster management plan; and
- xv. Status of employment to the land losers.

21.3.2 Expansion of existing plant (120 TPA High Tension Insulator, 50 TPA Low Tension Insulator, 588 TPA Sponge Iron) with proposed 0.1 MTPA Integrated Steel Plant through Tunnel Kiln of **M/s Mayur Electro Ceramics Pvt. Ltd.** at Jaypur, PO Pratapgarh, Tehsil Kusumi, District Mayurbhanj in Orissa (EC)

1. M/s Mayur Electro Ceramics Pvt. Ltd. (*herein after Project Proponent –PP*) and their EIA-EMP consultant M/s Visiontek Consultancy Services Private Limited - Bhubaneswar 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 32nd meeting of the Expert Appraisal Committee (Industry) held on 27-28th January 2012 for preparation of EIA-EMP report. The TOR was awarded by MoEF vide F.No. J-11011/08/2012-IA.II(I) dated 14.2.2012 for preparation of EIA-EMP report. PP submitted the final EIA-EMP report vide letter no. nil dated 10.2.2014 after conducting Public Hearing for grant of Environmental Clearance. The proposed project activity is listed at S.No. 3(a) in primary metallurgical industry under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

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 Mayur Electro Ceramics Pvt. Ltd. have proposed to expand their existing unit [1440 TPA High Tension Insulator, 600 TPA low tension insulator, 7056 TPA Sponge Iron and producer gas plant of 1250 Nm³/hr] by setting up of 0.1 MTPA Integrated Steel Plant at Jaypur, PO- Pratapgarh, Tehsil- Kusumi, District- Mayurbhanj, State- Odisha. The existing unit had obtained CTE prior to the EIA Notification 2006 dated 14.09.2006, hence the existing unit is not covered under the purview of EIA Notification 2006. The existing sponge iron plant got Consent to Establish and Consent to Operate from the Odisha Pollution Control Board on 26.12.2003 and 2.8.2007 respectively. The other existing units are not covered under the purview of the EIA Notification 2006. Proposed expansion will be set up over an area of 23.49 acres within the existing plant premises of 30.49 acres of industrial land. The longitude and latitude of the project site is 86° 10'41"E -86° 10'56" East and 22° 12' 18"- 22° 12' 34" North respectively. The total land of 30.49 acres has been allotted to the PP for industrial purpose. No Forest land is involved. No Defence Installation, Biosphere Reserve, National Park/Wild Life Sanctuary, Ecologically Sensitive Area is located within 10 km radius of the project site. River Kadkhai flows at a distance of 3.7km from the project site. Badra RF is located at a distance of 6.5 km from the project site. No court case/litigation is pending against the proposed project. Total cost of the project is Rs. 77.50 crores. Rs. 480 lakhs and Rs. 95.99 lakhs are earmarked for the capital cost and recurring cost per annum towards the environmental pollution control measures. Rs. 401 lakhs is earmarked towards the Enterprise Social Commitment (CSR activities) based on Public Hearing issues over a period of five years.

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

Sl. No.	Unit	Existing Capacity in TPA	Proposed Expansion in TPA	Total Capacity in TPA
1.	High Tension Electrical Insulators	1440	---	1440
2.	Low Tension Electrical Insulators	600	---	600
3.	Sponge Iron Plant through tunnel Kiln	7056	---	7056
4.	High Grade Pure Iron Nuggets (HGPI) Tunnel Kiln Plant	---	1,00,000 (4x25000 each)	1,00,000
5.	SMS & Continuous Casting	---	1,00,000 (2x15T/heat IF & CCM)	1,00,000
6.	Producer Gas Plant	1250 Nm ³ /hr	13500 Nm ³ /hr (3 X 4500 Nm ³ /hr)	14750 Nm ³ /hr

OPCB had sent the certified compliance report for the existing unit vide letter dated 29.5.2014. The Committee noted that as per the report furnished, compliance to the consent conditions were being met.

The raw materials required are iron ore fines (1,50,000 TPA), anthracite coal (9000 TPA), bituminous coal (1,20,000 TPA), limestone (7500 TPA), bentonite (900 TPA), HGPIIN (1,00,000 TPA), steel scrap (24000 TPA) and Si-Mn (1000 TPA). Power requirement is 11 MW which will be sourced from OPTCL at Ashanabani Grid Sub- station.

Ambient air quality monitoring has been carried out at 8 locations during November 2013 – January 2014 and the data submitted indicated: PM₁₀ (68.9 to 78.9µg/m³), PM_{2.5} (47.6 to 54.2µg/m³), SO₂ (9.4to 12.1µg/m³) and NO_x (13.7 to 19.2µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs would be 0.86547µg/m³, 6.25173µg/m³ and 3.53133 µg/m³ with respect to PM₁₀, SO₂ and NO_x respectively. The SMS and the HGPIIN Plant will be equipped with bag filter arrangement with 99.9% efficiency. To control air emission in the plant, bag house, bag filters will be installed. Water sprinklers will be installed at raw material stockyards and dry fog system will be installed at material transfer points. Good housekeeping practices will be adopted to control the fugitive emissions.

The water requirement for the project would be 190m³/day which will be met from Kadkhai river located at a distance of 3.7 Km from project site. No industrial waste water will be generated in the Plant. Domestic waste water generated from 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.

Ash from the HGPIIN tunnel kiln plant (17500 TPA) will be utilized for manufacturing bricks & unburnt coal will be utilized for coal briquette for domestic purpose. Ash from Producer Gas Plant will be sent to Ash Silo & it will be supplied to brick manufacturer. Tar from PGP will be fired in tunnel kiln. SMS Slag will be used for internal road making & filling of low lying area. STP Sludge will be utilized as manure for green belt development within the plant premises. Out of the total plant area (i.e. 23.49), 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.

Public Hearing/Public Consultation was conducted by Odisha State Pollution Control Board on 5.1.2013 under the chairmanship of Sri Surath Chandra Mallick, OAS(S) ADM, Baripada, Mayurbhanj at Grampanchayat Headquarter at Jaipur, P.O-Pratapgarh, Tahsil-Kusumi, Dist-Mayurbhanj. 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. Rs. 401 Lacs is earmarked towards the Enterprise Social Commitment (CSR activities) based on Public Hearing issues over a period of five years.

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

- i. Measures shall be taken to reduce PM levels in the work environment.
- ii. Continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), bag house, bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm³ and installing energy efficient technology.
- iii. The National Ambient Air Quality Monitoring Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- iv. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
- v. 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.

- vi. Total fresh water requirement shall not exceed 190m³/day, which will be met from River Kadkhai. Prior permission shall be obtained from the Competent Authority for water drawl from river Kadkhai. 'Zero' effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises.
- vii. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent.
- viii. Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB.
- ix. A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal.
- x. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 and 2009. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding shall be submitted to the Ministry's Regional Office at Bhubaneswar.
- xi. A Risk and Disaster Management Plan (including Earth quake and Seismic hazard) shall be prepared and a copy submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xii. As proposed, green belt shall be developed in at least 33 % of the project area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xiii. All the commitments made to the public during Public Hearing/public consultation meeting held on 5.1.2013 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 earlier Public Hearing Issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village Panchayat and District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office at Bhubaneswar.
- xv. The Company shall submit within three months their policy towards Corporate Environment Responsibility which shall inter-alia address (i) Standard operating process/procedure to being into focus any infringement/deviation/ violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non-compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.
- xvi. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

21.3.3 Modernization of Green Sand Foundry of **M/s Brakes India Limited**, Foundry Division Unit1, Pandiyanellore Village, Walajapet Taluk, Vellore District, Tamil Nadu (**EC**)

1. M/s Brakes India Limited (**herein after Project Proponent –PP**) and their EIA-EMP consultant M/s ABC Techno Labs - Chennai gave a detailed presentation on the salient features of the project and proposed

environmental protection measures to be undertaken as per the Terms of Reference (ToRs) awarded during the 6th meeting of the Expert Appraisal Committee (Industry) held on 5-7th March 2013 for preparation of EIA-EMP report. The TOR was awarded by MoEF vide F.No. J-11011/355/2012-IA.II(I) dated 18.4.2013 for preparation of EIA-EMP report. PP submitted the final EIA-EMP report vide letter dated 10.1.2014 after conducting Public Hearing for grant of Environmental Clearance. The proposed project activity is listed at S.No. 3(a) under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

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 Brakes India Limited has proposed to modernize the existing sand foundry at Pandianellore village, Walaja Taluka, Vellore District, Tamil Nadu. Total land requirement is 19.22 ha which is already available within the existing plant premises. No additional land is required for the proposed modernization. The longitude and latitude of the project site is 79°25'43.35"E and 13°06'13.57"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. The water bodies existing in the study area are include – 0.2 km, Nandi river – 4.7km and Kallar river – 7 km. Total cost of the project is Rs. 29 crores. Rs. 3.47 crores and Rs. 3.20 crores are earmarked for the capital cost and recurring cost per annum towards the environmental pollution control measures. Rs. 1.79 crores is earmarked towards the Enterprise Social Commitment (CSR activities) based on Public Hearing issues over a period of five years.

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

S. N.	Name of product	Production Capacity (MT/Annum)		
		Existing capacity	Proposed Additional	After Modernization
1.	Permanent mould grey iron casting	12000	-	12000
2.	Sand foundry S.G. Iron castings	35700	7980	43680
3.	Sand foundry grey iron castings	3180	4020	7200

Environment Clearances for the existing unit was accorded vide letter no. J-11012/25/1997-IA II (I) dated 13.11.1997 and letter no.J-11011/65/2001-IA.II(I) dated 3.4.2002. RO-Bangalore has sent the certified compliance report for the existing unit vide letter no.EP/12.1/127&236/TN dated 1.1.2013. The Committee noted that the as per the report furnished, compliance to the EC conditions were being met.

The raw materials required are Foundry returns (5265 TPM), borings (658 TPM), steel scrap (3205 TPM), Ferro-silicon-magnesium (80 TPM), Ferro silicon (35 TPM), Copper scrap (10 TPM), Carboniser (193 TPM) and pig iron (133 TPM). Existing power supply will be upgraded from 33 KV to 110 KV. Power demand will be increased from 19800 KVA to 27800 KVA.

Ambient air quality monitoring has been carried out at 8 locations during March – May 2013 and the data submitted indicated: PM₁₀ (30µg/m³ to 62µg/m³), PM_{2.5} (19 to 38µg/m³), SO₂ (5 to 10.3µg/m³) and NO_x (9.1 to 17.8µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs would be 0.8µg/m³, 0.005µg/m³ and 1.3µg/m³ with respect to PM₁₀, SO₂ and NO_x respectively. To control air emissions, dust and fume Extraction System with efficiency more than 99% will be installed. Electrical furnace fume extraction system will be installed with on line stack monitoring system. Good housekeeping practices will be adopted to control the fugitive emissions.

The additional water requirement for the project would be 30.18 KLD which shall be abstracted from the bore well. No effluent will be generated in the Plant. Return sand from sand plant will be used for stabilized mud block

making and concrete manufacturing. Out of the total plant area, 33% will be developed under green belt / plantation in a scientific manner around the plant boundary, roadside, office buildings and stretches of open land.

Public Hearing/Public Consultation was conducted by Tamil Nadu State Pollution Control Board on 12.12.2013 under the chairmanship of Project Officer, DRDA –Vellore (Equivalent to the rank of Additional Collector) at the project site. The issues raised during public hearing are plantation of more trees, disposal of wastewater, solid waste management and employment opportunities etc. Rs. 1.79 crores is earmarked towards the Enterprise Social Commitment related activities based on Public Hearing issues.

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

- i. Measures shall be taken to reduce PM levels in the ambient air of work environment.
- ii. Continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), bag house, bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm³ and installing energy efficient technology.
- iii. The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- iv. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
- v. 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.
- vi. Total fresh water requirement for the proposed modernization shall not exceed 30.8 KLD which will be met from borewell. Prior permission shall be obtained from the Competent Authority for water drawl from borewell. 'Zero' effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises.
- vii. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent.
- viii. Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office at Chennai, SPCB and CPCB.
- ix. A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal.
- x. A Risk and Disaster Management Plan shall be prepared and a copy submitted to the Ministry's Regional Office at Chennai, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xi. As proposed, green belt shall be developed in at least 33 % of the project area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xii. All the commitments made to the public during Public Hearing/public consultation meeting held on 12.12.2013 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.

- xiii. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on earlier Public Hearing Issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Chennai. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village Panchayat and District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office at Chennai.
- xiv. The Company shall submit within three months their policy towards Corporate Environment Responsibility which shall inter-alia address (i) Standard operating process/procedure to bring into focus any infringement/deviation/ violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non-compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.
- xv. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

20.3.4 Pelletisation Unit (0.6 MTPA) and Producer Gas Plant (8500m³/hr) of **M/s Simhadri Pellets India Ltd.** at village Sreerampuram, Mandal L.Kota, Dist. Vizianagaram, Andhra Pradesh (EC)

1. M/s Simhadri Pellets India Limited (**herein after Project Proponent –PP**) and their EIA-EMP consultant M/s Pioneer Enviro Laboratories and Consultants Private Limited – Hyderabad 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 5th meeting of the Expert Appraisal Committee (Industry) held on 31st January 2013 - 1st February 2013 for preparation of EIA-EMP report. The TOR was awarded by MoEF vide F.No. J-11011/311/2012-IA.II(I) dated 22.3.2013 for preparation of EIA-EMP report. PP submitted the final EIA-EMP report vide letter dated 21.4.2014 after conducting Public Hearing for grant of Environmental Clearance. The proposed project activity is listed at S.No. 3(a) under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

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 Simhadri Pellets India Limited has proposed to establish 0.6 MTPA Pelletization unit along with Producer gas plant (8500 m³/hr) at Sreerampuarum Village, L.Kota Mandal, Vizianagaram District, Andhra Pradesh. The land requirement for the 0.6 mTPA Pelletization unit along with Producer gas plant is 25.6 acres and land has been taken on lease from M/s. Steel Exchange India Limited. Survey no. of the proposed 25.6 acres of lease area are 98-2 (P), 99 (P), 100-1, 100-2 (P), 100-3, 100-4, 101-1, 101-2, 101-3, 101-4, 101-5, 101-6, 101-7, 101-8, 102-10 (P), 102-11, 102-12 (P), 103-2 (P), 103-5, 103-6 (P), 103-11 (P), 103-12 (P), 107-8 (P), 107-11, 107-12, 107-13, 108-1, 108-2, 147-1 (P). 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. Sreerampuram village is the nearest habitation to the project site. Advanapalem R F is situated at a distance of 8.8 Kms from the Project site in SE direction. The proposed investment for 0.6 MTPA Pelletization unit along with Producer gas plant is Rs. 339.76 crores. The capital cost and recurring cost towards Environmental Protection Measures will be Rs 7.8 crores and Rs 70 lakhs /annum respectively. Rs. 12 crores is earmarked towards the Enterprise Social Commitment (CSR activities) based on Public Hearing issues over a period of five years.

The capacity of the proposed project activity has been tabulated below:

S.No	Facility	Product	Capacity
1.	Pelletization unit	Pellets	0.6 MTPA
2.	Coal gasifier unit	Producer gas	8500 m ³ /hr

The raw materials required are iron ore fines (2010 TPD), imported coal (65 TPD), limestone (27 TPD), bentonite (21 TPD), furnace oil (27 KL), HSD (2 KL) and coal for gasifier (50 TPD). Major raw materials & product will be transported by Rail through railway siding existing up to the site. All trucks used for transportation will be “Environmentally Compliant”

Ambient air quality monitoring has been carried out at 10 locations during March – May 2013 and the data submitted indicated: PM₁₀ (26.4µg/m³ to 52.1µg/m³), PM_{2.5} (15.7 to 31.2µg/m³), SO₂ (6.9 to 15.3µg/m³) and NO_x (7.5 to 20.1µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs would be 1.8 µg/m³, 2.4µg/m³ and 2.1µg/m³ with respect to PM₁₀, SO₂ and NO_x respectively. The flue gases from the Pelletization unit will be cleaned in Electro Static Precipitator and will be emitted into the atmosphere through a stack of adequate height. The gases from the Producer gas will be cleaned in Cyclone separator and Electric detarrer to remove the tar. The clean gas will be sent to Pelletisation unit and finally discharged into the atmosphere through stack attached to Pelletisation unit. Fugitive dust generated from Raw Material Handling, Bentonite Grinding, Lime and Coal Grinding and Bentonite Transfer points will be collected using suction ducts and cleaned in Bag Houses. Dust collected from the bentonite and lime stone systems and other systems will be returned to their respective storage bins. Collected dust from ESP's and Bag Filters will be reused.

The water requirement for the Pelletisation unit along with producer gas unit will be 955 KLD which includes make up water for pellet unit (840 KLD), Make up water for coal gassifier (15 KLD), greenbelt development (90 KLD) and Domestic purpose (10 KLD). The water will be supplied by the Greater Visakhapatnam Municipal Corporation. There will not be any waste water generation from the Pelletisation unit and Producer gas unit as Closed circuit cooling system will be adopted. Only source of waste water generation will be sanitary waste water (8 KLD) which will be treated in septic tank followed soak pit.

Public Hearing/Public Consultation was conducted by Andhra Pradesh Pollution Control Board on 20.2.2014 under the chairmanship of ADM - Vizianagram at the project site. The issues raised during public hearing are dust problems, pollution control problems, air pollution and exploitation of ground water etc which were addressed in the EIA-EMP report.

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

- i. Measures shall be taken to reduce PM levels in the ambient air of work environment.
- ii. Continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), bag house, bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm³ and installing energy efficient technology.
- iii. The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- iv. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
- v. 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.

- vi. Total fresh water requirement for the proposed modernization shall not exceed 955 KLD. Prior permission shall be obtained from the Competent Authority for water drawl. 'Zero' effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises.
 - vii. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent.
 - viii. Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office at Chennai, SPCB and CPCB.
 - ix. A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal.
 - x. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 and 2009. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding shall be submitted to the Ministry's Regional Office at Chennai.
 - xi. A Risk and Disaster Management Plan shall be prepared and a copy submitted to the Ministry's Regional Office at Chennai, SPCB and CPCB within 3 months of issue of environment clearance letter.
 - xii. As proposed, green belt shall be developed in at least 33 % of the project area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
 - xiii. All the commitments made to the public during Public Hearing/public consultation meeting held on 20.2.2014 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
 - xiv. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on earlier Public Hearing Issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Chennai. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village Panchayat and District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office at Chennai.
 - xv. The Company shall submit within three months their policy towards Corporate Environment Responsibility which shall inter-alia address (i) Standard operating process/procedure to being into focus any infringement/deviation/ violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non-compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.
 - xvi. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- 20.3.5 Expansion of Sponge Iron Plant to Steel Plant (0.1 MTPA) and Captive Power Plant (16MW) of **M/s Chintpurni Steel Pvt. Limited** at village Indra & Jarba, Mandu, District Hazaribagh, Jharkhand (EC)
1. M/s Chintpurni Steel Pvt. Limited (*herein after Project Proponent –PP*) and their EIA-EMP consultant M/s Visiontek Consultancy Services Private Limited - Bhubaneshwar 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 13th meeting of the Expert Appraisal Committee (Industry) held on 26-28th August 2010 for preparation of EIA-EMP report. The TOR was awarded by MoEF vide F.No. J-11011/300/2010-IA.II(I) dated 15.9.2010 for preparation of EIA-EMP report. PP submitted the final EIA-EMP report vide letter dated 15.11.2011 after conducting Public Hearing for grant of Environmental Clearance. The proposed project activity is listed at S.No. 3(a) in primary metallurgical industry under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

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 Chintpurni Steel Private Limited have proposed to expand the existing Sponge Iron Plant (0.1MTPA) to Steel Plant (0.1 MTPA) and Captive Power Plant (16MW) at Village Indra & Jarba, Tehsil- Mandu, District - Hazaribagh, Jharkhand. The existing sponge iron plant got Consent to Establish from the Jharkhand Pollution Control Board on 17.3.2005. The unit had obtained CTE prior to the EIA Notification 2006 dated 14.09.2006, hence the existing unit is not covered under the purview of EIA Notification 2006. Proposed project will be set up over an area of 27.5 acres which is within the already available within the existing premises of 37 acres. The longitude and latitude of the project site is at 85°27'53.9"E and 23°49'29.9"N respectively. No Forest land is involved. No Defence 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. Indra village is located at a distance of 0.5 Km from the project site. Total cost of the project is Rs. 130 crores. Rs. 7 crores and Rs. 1.4 crores/Annum is earmarked for the capital cost and recurring cost per annum towards the environmental pollution control measures. Rs. 6.50 crores is earmarked towards the Enterprise Social Commitment (CSR activities) based on Public Hearing issues over a period of five years.

The capacity of the existing and the proposed project activity has been tabulated below:

Particulars	Product	Existing	Proposed	Total Project Particulars
DRI	Sponge Iron	2 × 100TPD (60,000 TPA)	2 × 100TPD (60,000 TPA)	4 × 100TPD (1,20,000 TPA)
IF with CCM	MS Ingots/Billets	-	2 × 6 T + 2 × 12T (1,00,000 TPA)	2 × 6 T + 2 × 12T (1,00,000 TPA)
Rolling Mill	Rolled Products	-	300TPD (97,000 TPA)	300TPD (97,000 TPA)
Ferro Alloys	Silico Manganese	-	1 × 9 MVA (13,500 TPA)	1 × 9 MVA (13,500 TPA)
CPP	Power	-	16 MW (4x 10 TPH WHRB + 1x 40 TPH AFBC)	16MW (4x 10 TPH WHRB + 1x 40 TPH AFBC)

JSPCB had sent the certified compliance report for the existing unit vide letter dated 21.12.2013. The Committee noted that the as per the report furnished, compliance to the consent conditions were being met.

The raw materials required are DRI (1,92,000 TPA), coal (1,15,000 TPA), limestone (12,600 TPA), sponge iron (1,20,000 TPA), coal & coal fines for CPP (30,500 TPA), coal & coal fines for CPP (24,000 TPA), quartzite (4750 TPA), coke (8100 TPA) electrode paste (700 TPA). Power requirement is 22 MW. Out of the 22 MW, 16MW will be generated from its own Captive Power Plant and rest 6MW will be sourced from JSEB.

Ambient air quality monitoring has been carried out at 8 locations during October 2010– December 2010 and March 2013 to May 2013 and the data submitted indicated: PM₁₀ (31.21µg/m³ to 42.18µg/m³), PM_{2.5} (11.33 to 17.25µg/m³), SO₂ (9.51 to 11.69µg/m³) and NO_x (14.53 to 19.24µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs would be 0.41565µg/m³, 1.74511µg/m³ and 0.25131µg/m³ with respect to PM₁₀, SO₂ and NO_x respectively. Hot Gas from BF will be treated in GCP before discharging to atmosphere. Separate swiveling hoods will be installed for fume extraction and dust laden gases will be passed through spark arrestor, bag filter for cleanup of particulate matter to a concentration below 100mg/Nm³ before

release to the atmosphere through the stack will be installed at Induction furnace -Gas cleaning Plant. To control air emission in the plant, bag house, bag filters will be installed. The material handling section would be provided with dust suppression (DS) by water sprinkling at the stockyards and multiple dust extraction (DE) s. Good housekeeping practices will be adopted to control the fugitive emissions.

Total water requirement is 1396m³/day which will be met from Ground Water & Surface Water. The unit has obtained permission from Minor Irrigation Division, Ramgarh for water drawl.No industrial waste water will be generated in the Plant. Treated water is/shall be used for dust suppression, slag quenching & GCP. Waste water from RWTP is/shall be discharged in slurry form and same shall be used for dust suppression and horticulture after passing through drying beds.

Char from DRI kilns will be used in-house for power generation. Ash from the CPP will be sold to the cement plant. Slag from IF will be sold to the metal recovery units. Mill scale from the rolling mill will be used in the IF. Slag from the Ferro Alloy plant will be used in low land filling and road construction. Out of the total plant area (i.e. 37.0 acre), 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.

Public Hearing/Public Consultation was conducted by Jharkhand State Pollution Control Board on 14.07.2011 under the chairmanship of Sri Ram Tiwari, Director, National Programme (equivalent to the Additional Collector) at Hazaribagh. The issues raised during public hearing are proper compensation of land, development work in nearby villages, employment to the locals, plantation & maintenance of trees, facilities for higher education & health, water conservation, road development, more plantation, employment facilities etc which are addressed in the final EIA-EMP report. Rs. 6.50 Crores is earmarked towards the Enterprise Social Commitment (CSR activities) based on Public Hearing issues over a period of five years.

3. After detailed deliberations the Committee sought following additional information for further consideration of the proposal:-
 - i. Revised layout plan;
 - ii. AAQ modelling shall be redone and the report; and
 - iii. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and village wise action plan with financial and physical breakup/details shall be prepared over a period of ten years.

The Committee requested the PP to circulate the aforesaid information to the Committee members and the proposal shall be further considered by the EAC.

21.3.6 Greenfield Integrated Cement Project (Clinker 2.2 MTPA, Cement 3.3 MTPA) along with installation of Captive Power Plant (30 MW), WHRB (5 MW), and DG Set (6 MW) of **M/s UltraTech Cement Ltd.** at vill. Tunkara & Balara, Tehsil Jaitaran, Dist. Pali, Rajasthan (EC)

1. M/s UltraTech Cement Limited (**herein after Project Proponent –PP**) and their EIA-EMP consultant M/s JM 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 32nd meeting of the Expert Appraisal Committee (Industry) held on 27-28th January 2012 for preparation of EIA-EMP report. The TOR was awarded by MoEF vide F.No. J-11011/569/2011-IA.II(I) dated 14.2.2012 for preparation of EIA-EMP report. PP submitted the final EIA-EMP report vide letter dated 20.4.2013 after conducting Public Hearing for grant of Environmental Clearance. Proposal was considered in the 9th EAC meeting held during 10-11th June 2013 wherein the PP expressed their inability to attend the meeting due to some unavoidable circumstances. The Committee decided to consider the proposal as and when requested by the project proponent. PP vide letter dated 21.6.2014 submitted again the EIA-EMP report and requested to consider the proposal for grant of environmental clearance. The proposed project activity is listed at S.No. 3(b) under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

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

M/s UltraTech Cement Limited have proposed to set up an Integrated Cement Project (Clinker- 2.2 MTPA; Cement- 3.3 MTPA) along with installation of Captive Power Plant (30 MW), WHRB (5 MW) and DG Sets (6 MW) at villages Tunkra & Balara, Tehsil Jaitaran, District Pali (Rajasthan). The total land required for the proposed project is 151.222 Ha. Greenbelt will be developed in 49.9 ha (33% of the total project area). Proposed project site does not fall within the critically polluted area. The longitude and latitude of the project site is $74^{\circ}05'8.68''$ to $74^{\circ}06'6.24''$ E and $26^{\circ}14'59.58''$ to $26^{\circ}15'57.10''$ 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. No Reserved Forest etc. exists within 10 km radius of the project site. 3 Protected Forests falls within 10 km radius at a distance of approx. 7.2 in NNW direction, 4.0 in WSW direction & 1.0 km in SSW direction from the proposed project site. Lilri River (seasonal) ~2.2 km in SE direction and Sukri River (seasonal) ~ 7.5 km in SE direction are exists in the study area. Total cost of the project is Rs. 2100 Crores. Capital cost for Environmental Protection Measures is Rs. 50 Crores and Recurring Cost is Rs. 1.0 Crores/annum. Rs. 105 crores is earmarked towards the Enterprise Social Commitment (CSR activities) based on Public Hearing issues over a period of ten years.

The capacity of proposed project activity has been tabulated below:

S. N.	UNIT	Proposed Capacity
1.	Clinker (MTPA)	2.2
2.	Cement (MTPA)	3.3
3.	CPP (MW)	30
4.	WHRB (MW)	5
5.	D.G. Set (MW)	6

Raw materials required for the proposed cement plant are Limestone which will be procured from Captive Limestone mine near the plant site; laterite/Iron Ore & Red ochre will be procured from the Chittorgarh & Bhilwara District of Rajasthan; Gypsum will be procured from Nagaur & Bikaner district of Rajasthan & Fly ash will be procured from the CPP, Govt. Thermal Power Plant at Kota & Suratgarh in Rajasthan. Imported Coal/Indian Coal/ Pet Coke will be used as fuel in both Cement Plant and Captive Power Plant which will be sourced from South Africa/Indonesia; SECL; IOCL refinery at Panipat & Reliance refinery at Jamnagar. Environmental clearance for the Limestone Mine (ML area: 755.10 ha & 3.3 MTPA production capacity) was accorded by the Ministry vide letter no. J-11015/281/2011-IA.II (M) dated 2.1.2014. Application for the coal linkage is with SECL. Total Power requirement for the proposed Integrated Cement Project is 35 MW which will be sourced from CPP (30 MW), WHRB (5 MW) Grid Power from JVVNL & DG Set (6 MW for power back- up).

Baseline study (Cumulative for Plant and Mine) was conducted during Summer Season - March to May, 2012. The concentration for all the 14 AAQM stations for PM_{10} ranges between 48.79 to $86.13\mu\text{g}/\text{m}^3$, $PM_{2.5}$ ranges between 18.22 to $33.97\mu\text{g}/\text{m}^3$, SO_2 ranges between 5.93 to $9.37\mu\text{g}/\text{m}^3$ and NO_2 ranges between 8.37 to $20.66\mu\text{g}/\text{m}^3$. The maximum incremental GLCs due to the Proposed Integrated Cement Project for PM are $4.17\mu\text{g}/\text{m}^3$ (including $4.16\mu\text{g}/\text{m}^3$ incremental concentration due to proposed Cement Plant & CPP and $2.0\mu\text{g}/\text{m}^3$ due to Proposed Limestone Mine). Max. GLC for SO_2 due to Cement Plant and CPP is found to be $5.55\mu\text{g}/\text{m}^3$ within plant site and max. GLC for NO_2 due to Cement Plant and CPP is found to be $4.02\mu\text{g}/\text{m}^3$ within plant site. 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 is 3000 KLD which will be sourced from ground water & captive mine sump water (after development of pits). Application for obtaining permission for the withdrawal of ground water has

been submitted to CGWA and the same is under process. No industrial waste water will be generated in the Cement Plant. Domestic waste water generated from Cement Plant/Colony will be treated in the STP and treated water will be utilized for Greenbelt Development. Rain water harvesting structures will be constructed.

No solid wastes will be generated in cement manufacturing process. Dust collected from various pollution control equipments will be recycled back in 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. 151.222 ha), 33% (49.9 ha) will be developed under green belt / plantation in a scientific manner in and around the plant & colony premises. A total of Rs. 105 crores will be spent for CSR activities.

Public Hearing/Public Consultation was conducted by Rajasthan Pollution Control Board on 27.2.2013 under the chairmanship of ADM – Pali. The issues raised during public hearing are employment opportunities, compensation for land, arrangement of basic requirements like health, education, medical, drinking water and infrastructure facilities for local people is the responsibility of Industry management, etc which have been incorporated in the EIA-EMP report.

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

- i. Continuous stack monitoring facilities to monitor gaseous emissions from the process stacks shall be provided. After expansion, limit of PM shall be controlled within 50 mg/Nm³ by installing adequate air pollution control system. Electrostatic precipitators to clinker cooler, bag house to raw mill/kiln and bag filters to coal mill and cement mill. Low NO_x burners should be provided to control NO_x emissions. Regular calibration of the instruments must be ensured.
- ii. Proper and full utilisation of gases generated from the kiln in waste heat recovery boiler (WHRB) and a feasibility report shall be implemented a part of the Integrated Project.
- iii. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- iv. Secondary fugitive emissions shall be controlled and shall be within the prescribed limits and regularly monitored. Guidelines / Code of Practice issued by the CPCB in this regard should be followed.
- v. Arsenic and Mercury shall be monitored periodically in emissions, ambient air and water.
- vi. The coal yard shall be lined and covered.
- vii. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash should be transported in the closed containers only and shall not be overloaded. The company shall have separate truck parking area. Vehicular emissions should be regularly monitored.
- viii. Total fresh water requirement after the proposed expansion of the cement and captive power plant shall not exceed 3000 m³/day which will be sourced from the will be sourced from ground water & captive mine sump water (after development of pits). A five year water management plan should be made so as to achieve reduction in ground water withdrawal.
- ix. Efforts shall be made to further reduce water consumption by using air cooled condensers. All the treated wastewater shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge should be adopted.

- x. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- xi. Regular monitoring of influent and effluent surface, sub-surface and ground water should be ensured and treated wastewater should meet the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act, 1986 whichever are more stringent. Leachate study for the effluent generated and analysis should also be regularly carried out and report submitted to the Ministry's Regional Office at Lucknow, SPCB and CPCB.
- xii. All the bag filter dust, raw mill dust, coal dust, clinker dust and cement dust from pollution control devices should be recycled and reused in the process and used for cement manufacturing. Spent oil and batteries shall be sold to authorized recyclers /reprocessors only.
- xiii. All the fly ash shall be utilized as per Fly ash Notification, 1999 subsequently amended in 2003 and 2008. Efforts should be made to use fly ash maximum in making Pozzolona Portland Cement (PPC).
- xiv. A detailed study on chemical composition of coal used particularly heavy metal and radio activity contents shall be carried out through a reputed institute and report shall be submitted to Regional Office of the Ministry at Lucknow. Only after ascertaining its radioactive level shall fly ash be supplied for utilization in cement manufacturing.
- xv. Efforts shall be made to use low-grade lime, more fly ash and solid waste in the cement manufacturing.
- xvi. An effort shall be made to use of high calorific value hazardous waste in the cement kiln and necessary provision should be made accordingly.
- 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 recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants should be implemented.
- xix. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 27.2.2013 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Lucknow.
- xx. 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
- xxi. Risk and Disaster Management Plan along with the mitigation measures should be prepared and a copy submitted to the Ministry's Regional Office at Lucknow, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xxii. To educate the workers, all the work places where dust may cause a hazard shall be clearly indicated as a dust exposure area through the use of display signs which identifies the hazard and the associated health effects.
- xxiii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, Safe drinking water, medical health

care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

21.3.7 Proposed Integrated Cement Plant with a Capacity of 3.5 MTPA, WHRB with a Power Generation capacity of 8 MW and CPP with a capacity of 2x50 MW of **M/s Chettinad Cement Corp. Ltd.**, at vill. Pedagarlapadu & Kesanupalli, Manadl Dachepalli, Dist. Guntur, A.P. **(EC)**

1. M/s Chettinad Cement Corporation Ltd (**herein after Project Proponent –PP**) and their EIA-EMP consultant M/s Pioneer Enviro Laboratories & Consultants Private Limited - Hyderabad 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 28th meeting of the Expert Appraisal Committee (Industry) held on 26-27th September 2011 for preparation of EIA-EMP report. The TOR was awarded by MoEF vide F.No. J-11011/421/2011-IA.II(I) dated 13.10.2011 for preparation of EIA-EMP report. Thereafter, Ministry vide letter dated 12.11.2013 extended the validity of the ToR one year with effect from 12.10.2013. PP submitted the final EIA-EMP report vide letter dated 21.4.2014 after conducting Public Hearing for grant of Environmental Clearance. The proposed project activity is listed at S.No. 3(b) under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

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

M/s Chettinad Cement Corporation Ltd has proposed to establish an Integrated Cement Plant with Waste Heat Recovery Boiler and Captive Power Plant at Pedagarlapadu & Kesanupalli Villages, Dachepalli Mandal, Guntur District, Andhra Pradesh. The land requirement for the Cement Plant & Captive Power Plant is 115.74 ha and around 80 % of the land has been acquired. The land requirement for the colony is 15.78 ha. The total land requirement is 132.52 ha (325 acres). The longitude and latitude of the project site is 79°44'52.4"E and 16°32'45.0" 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. Peddagarlapadu village is located at a distance of 1km from the project site. The water bodies exist in the study area are: Naguleru Vagu (a streamlet) at 2.3 Kms, Kesanupalli Major Canal at 2.0 Kms, Tangeda Major Canal at 0.2 Km, Nadikudi Major Canal at 5.9 Kms, Ramapuram Major Canal at 8.1 Kms, Akurajupalli Major Canal at 9.5 Kms, Dachepalli Major Canal at 5.7 Kms and Nagarjuna sagar Right bank canal at 9.2 Kms. Further, seasonal nallah is passing through the colony area and seasonal nallah is passing at distance of 0.5 Kms. from the plant boundary. The proposed investment for Cement & Captive Power Plant will be Rs. 1100 Crores. The capital cost and recurring cost towards Environmental Protection Measures will be Rs 40 crores and Rs 1.2 crores /annum respectively. Rs. 55 Crores is earmarked towards the Enterprise Social Commitment (CSR activities) based on Public Hearing issues.

The capacity of proposed project activity has been tabulated below:

S. N	Facility	Capacity
1.	Cement Plant for manufacturing (Ordinary Portland Cement, Portland Pozzolana Cement & Portland Slag Cement)	3.5 million tons per annum
2.	Generation of Power through Waste Heat Recovery Boiler from Waste Hot Gases of Kiln	8 MW
3.	Captive Power Plant for generation of Power through FBC technology	2 x 50 MW

Raw materials required for the proposed cement plant are Limestone (5.32 MTPA), iron ore (0.27 MTPA), bauxite (0.27 MTPA), gypsum (0.18 MTPA), fly ash (1.05 MTPA), slag (0.70 MTPA), coal for clinker (imported – 0.480 MTPA; Indian - 0.779 MTPA; Indian + imported: 0.542 MTPA) and coal for CPP (imported – 0.533 MTPA; Indian - 0.866 MTPA; Indian + imported: 0.603 MTPA). Limestone will be sourced from the captive mines. PP is yet to obtain the environmental clearance from the Ministry for the limestone mining. Coal will be imported from South

Africa/Indonesia. Domestic coal will be sourced from SCCL. As per the MoU submitted, the ash and sulphur content in the imported coal would be 12% and 0.6-1.0% respectively. Power requirement will be met from the CPP.

Ambient air quality monitoring has been carried out at 8 locations during October 2013– December 2013 and the data submitted indicated: PM₁₀ (30.40µg/m³ to 47.60µg/m³), PM_{2.5} (14.40 to 28.10µg/m³), SO₂ (6.6 to 16.80µg/m³) and NO_x (6.8 to 18.40µg/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs would be 3.0 µg/m³, 7.20µg/m³ and 2.8µg/m³ with respect to PM₁₀, SO₂ and NO_x respectively. Crushing plant will be provided in the plant with enclosure. Electrostatic Precipitators (ESP) will be provided to Cooler & FBC boilers and Stacks of adequate height and Bag houses and Stacks/Vents will be provided to Raw Mill Kiln, Coal Mill, Cement Mill and Bag Filters will be provided for Primary and Secondary Crushers, Silos, Conveyor Transfer Points. All conveyors will be covered with GI sheets. All internal roads will be asphalted to prevent fugitive emissions due to vehicular movement. Water Sprinkling will be ensured at Coal Yard.

Total water requirement for the cement plant is 2000 KLD which will be met from Ground Water & River Krishna. The permission for the ground water & surface water drawl is yet to be obtained by the PP. CT Blow Down, Boiler Blow Down, DM Plant/ RO Rejects, Waste Water from Workshop, Service Water, Sanitary Waste Water from Plant & Colony will be the sources of Waste Water. Total effluent generation will be 659 KLD and out of which trade effluent will be 409 KLD and sanitary waste water from Plant & Colony will be 250 KLD. The trade and domestic effluents will be treated in ETP & STP respectively to comply with CPCB/APPCB norms and the treated effluents will be utilized for greenbelt development, dust suppression and for ash conditioning.

Fly ash will be used in the cement plant. Bottom ash will be used for the as bed material for boiler, for laying roads, for brick making, etc. Solid wastes from STP will be used as manure for Green Belt. The Municipal Wastes from Township will be handled as per MSW Rules and Regulations. Waste oil generated from the proposed Cement & CPP will be 44 kl per annum and will be stored in covered HDPE drums in a designated area and same will be given to APPCB/CPCB authorized agencies. 43.41 Ha of greenbelt will be developed within the Plant & Colony premises as per CPCB norms (33%) in consultation with local DFO as per CPCB norms.

Public Hearing/Public Consultation was conducted by Andhra Pradesh Pollution Control Board on 5.3.2014 under the chairmanship of ADM – Guntur District. The issues raised during public hearing are pollution issues, employment to the local people, construction of junior college, use of imported coal for the proposed project and formation of village committees etc which were addressed in the EIA-EMP report.

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

- i. Continuous stack monitoring facilities to monitor gaseous emissions from the process stacks shall be provided. After expansion, limit of PM shall be controlled within 50 mg/Nm³ by installing adequate air pollution control system. Electrostatic precipitators to clinker cooler, bag house to raw mill/kiln and bag filters to coal mill and cement mill. Low NO_x burners should be provided to control NO_x emissions. Regular calibration of the instruments must be ensured.
- ii. Proper and full utilization of gases generated from the kiln in waste heat recovery boiler (WHRB) and a feasibility report shall be prepared and implemented a part of the Integrated project.
- iii. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- iv. Secondary fugitive emissions shall be controlled and shall be within the prescribed limits and regularly monitored. Guidelines / Code of Practice issued by the CPCB in this regard should be followed.
- v. Arsenic and Mercury shall be monitored periodically in emissions, ambient air and water.
- vi. The coal yard shall be lined and covered.

- vii. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash should be transported in the closed containers only and shall not be overloaded. The company shall have separate truck parking area. Vehicular emissions should be regularly monitored.
- viii. Total fresh water requirement after the proposed expansion of the cement and captive power plant shall not exceed 2000 m³/day which will be sourced from the w Ground Water & River Krishna. Prior permission shall be obtained from the Competent Authority for water drawl. A five year water management plan should be made so as to achieve reduction in ground water withdrawal.
- ix. Efforts shall be made to further reduce water consumption by using air cooled condensers. All the treated wastewater shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge should be adopted.
- x. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- xi. Regular monitoring of influent and effluent surface, sub-surface and ground water should be ensured and treated wastewater should meet the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act, 1986 whichever are more stringent. Leachate study for the effluent generated and analysis should also be regularly carried out and report submitted to the Ministry's Regional Office at Chennai, SPCB and CPCB.
- xii. All the bag filter dust, raw mill dust, coal dust, clinker dust and cement dust from pollution control devices should be recycled and reused in the process and used for cement manufacturing. Spent oil and batteries shall be sold to authorized recyclers / reprocessors only.
- xiii. All the fly ash shall be utilized as per Fly ash Notification, 1999 subsequently amended in 2003 and 2008. Efforts should be made to use fly ash maximum in making Pozzolona Portland Cement (PPC).
- xiv. A detailed study on chemical composition of coal used particularly heavy metal and radio activity contents shall be carried out through a reputed institute and report shall be submitted to Regional Office of the Ministry at Chennai. Only after ascertaining its radioactive level shall fly ash be supplied for utilization in cement manufacturing.
- xv. Efforts shall be made to use low-grade lime, more fly ash and solid waste in the cement manufacturing.
- xvi. An effort shall be made to use of high calorific value hazardous waste in the cement kiln and necessary provision should be made accordingly.
- 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 recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants should be implemented.
- xix. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 5.3.2014 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Chennai.

- xx. 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 Chennai. Implementation of such program should be ensured accordingly in a time bound manner
- xxi. Risk and Disaster Management Plan along with the mitigation measures should be prepared and a copy submitted to the Ministry's Regional Office at Chennai, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xxii. To educate the workers, all the work places where dust may cause a hazard shall be clearly indicated as a dust exposure area through the use of display signs which identifies the hazard and the associated health effects.
- xxiii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

21.4 Further consideration Cases

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

1. The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 15th meeting held during 19-20th December 2013 for the grant of Environment Clearance. As per the minutes of the meeting, the Committee sought following additional information from the proponent for reconsideration:
 - i. Stage I Forest Clearance obtained for the Bunda Coal Mine;
 - ii. Quantum of generation of coal and iron ore from coal & iron ore mines and the projects they will cater to;
 - iii. Details of use of coal washery rejects;
 - iv. Approval obtained for using water from river Kharkai;
 - v. Action plan for the transportation of raw materials/finished goods by rail; and
 - vi. Details of Environmental Clearance obtained for the Coal Washery Iron ore linkage documents along with the status of environmental clearance for the iron ore mines;
 - vii. Firm coal linkage document along with the status of environmental clearance for the coal mines;
 - viii. Socio-economic survey and R&R action plan;
 - ix. Note on land holding details;
 - x. Action plan for the transportation of incoming raw materials and outgoing finished products;
 - xi. Status of water intake approval;
 - xii. At least 2 % of the net retain profit shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and village wise action plan with financial and physical break-up/details shall be prepared over a period of ten years and shall be submitted; and
 - xiii. Point wise compliance to the findings as reported by the RO-Bhubaneshwar along with the fresh site inspection report of RO- Bhubaneshwar.
2. PP vide letter dated 10.4.2014 and 27.6.2014 furnished the aforesaid additional information to the Ministry. The proposal was placed before the EAC for reconsideration. PP and their EIA consultant – M/s CTRAN Consulting Limited, Bhubaneshwar made a presentation before the Committee.
3. The Committee noted that stage I FC for the Bundu coal mine is pending with the PCCF (Nodal). Iron ore will be sourced from M/s Ghatkuri Iron ore mines, Jharkhand for which EC has been accorded vide letter no.J-11015/57/2010-IA.II(M) dated 22.5.2013. Further, iron ore will also be sourced from M/s Jajang iron ore mine for which EC has been accorded vide letter no.J-11015/136/2005-IA.II(M) dated 14.6.2005. Coal washery rejects will be disposed in de-coaled area of proposed Bundu coal mine by mixing with backfill material. The water required

for the Plant shall be sourced from Kharkai River. The State Government has permitted withdrawal of 5000 m³/day from river Kharkai. Action plan for transportation of raw materials and finished products have been submitted. No coal washery has been established in the plant premises. Coal will be sourced from Bundu coal block. Regional Office of MOEF at Bhubaneswar had sent the status of compliance to the non-compliance of the EC conditions as referred at point no xiii) of para 1 vide letter dated 28.1.2014. The Committee noted that as per the report furnished and compliance status presented by the PP, compliance to the EC conditions were being met.

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

- i. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), and bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm³ by installing energy efficient technology.
- ii. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- iii. In-plant control measures like bag filters, de-dusting and dust suppression system shall be provided to control fugitive emissions from all the vulnerable sources. Dust extraction and suppression system shall be provided at all the transfer points, coal handling plant and coke sorting plant of coke oven plant. Bag filters shall be provided to hoods and dust collectors to coal and coke handling to control dust emissions. Water sprinkling system shall be provided to control secondary fugitive dust emissions generated during screening, loading, unloading, handling and storage of raw materials etc.
- iv. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
- v. Multi stage scrubber, cyclone and bag filters etc. to control particulate emissions within the prescribed limits from coke oven shall be provided. Carbon mono-oxide (CO) shall also be monitored along with other parameters and standards notified under Environment (Protection) Act shall be followed. The reports shall be submitted to the Ministry's Regional Office at the Bhubaneswar, CPCB and SPCB.
- vi. Hot gases from the DRI kiln shall be passed through Dust Settling Chamber (DSC) to remove coarse solids and After Burning Chamber (ABC) to burn CO completely and used in Waste Heat Recovery Boiler (WHRB). The gas then shall be cleaned in ESP before dispersion out into the atmosphere through ID fan and stack. ESP shall be installed to control the particulate emissions from the WHRB.
- vii. Total make up water requirement after the proposed expansion shall not exceed 1483 m³/ hr. The water consumption shall not exceed as per the standard prescribed for the sponge iron plants and steel plants.
- viii. Efforts shall further be made to use maximum water from the rain water harvesting sources. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources. Use of air cooled condensers shall be explored and closed circuit cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly.
- ix. All the effluent shall be treated and used for dust suppression and green belt development. No effluent shall be discharged and 'zero' discharge shall be adopted. Domestic wastewater will be treated in the Sewage Treatment Plant.
- x. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described

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

- xi. In case source of coal supply is to be changed at a later stage (now proposed coal from Bundu Coal block, Jharkhand) the project proponent shall intimate the Ministry well in advance along with necessary requisite documents for its concurrence for allowing the change.
- xii. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xiii. All the blast furnace (BF) slag shall be granulated and provided to cement manufacturers for further utilization. Flue dust from pellet plant, sinter plant, DRI and SMS and sludge from BF shall be re-used in sinter plant. Coke breeze from coke oven plant shall be used in sinter and pellet plant. SMS slag shall be given for metal recovery or properly utilized. All the other solid waste including broken refractory mass shall be properly disposed off in environment-friendly manner.
- xiv. A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal.
- xv. Coal and coke fines shall be recycled and reused in the process. The waste oil shall be properly disposed of as per the Hazardous Waste (Management, Handling, Handling and Transboundary Movement) Rules, 2008.
- xvi. As proposed, green belt shall be developed in 33 % of plant area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xvii. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants shall be implemented.
- xviii. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program shall be ensured accordingly in a time bound manner.
- xix. The Company shall submit within three months their policy towards Corporate Environment Responsibility which shall inter-alia address (i) Standard operating process/ procedure to being into focus any infringement/deviation/violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.
- xx. All the commitments made to the public during the Public Hearing /Public Consultation meeting held on 4.9.2013 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bhubaneswar.
- xxi. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

21.5 Terms of Reference (TOR) Cases

21.5.1 Setting up of Magnesium Recycling Technology Development & Demonstration Facility (MRTDDF) [Magnesium – 260 kg/day and Chlorine – 760 kg/day] of **M/s Department of Atomic Energy (A Unit of Nuclear Fuel Complex, Hyderabad)**, at Zirconium Complex, village Pazhayakayal, Tehsil Srivaikuntam, Dist. Tuticorin, Tamil Nadu (TOR)

1. The Project Proponent (PP) gave a detailed presentation on the salient features of project and proposed environmental protection measures to be undertaken along with draft Terms of Reference for preparation of EIA-EMP Report. The proposed Magnesium Recycling Technology Development & Demonstration Facility (MRTDDF) is a secondary non-ferrous metallurgical industry. However, since the Zirconium metal is a primary non-ferrous metallurgical industry and the proposed facility will be a part of zirconium sponge production facility, the proposed activity is listed at S.No. 3(a) under Category 'A' of the schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MOEF.

2. M/s. Department of Atomic Energy (A Unit of Nuclear Fuel Complex, Hyderabad) have proposed to set up a Magnesium Recycling Technology Development & Demonstration Facility (MRTDDF) [Magnesium – 260 kg/day and Chlorine – 760 kg/day] at Zirconium Complex, village Pazhayakayal, Tehsil Srivaikuntam, District Tuticorin, Tamil Nadu for the R&D purpose. This facility will exist only for a period of 18 months. The existing zirconium sponge production facility obtained environmental clearance from MoEF vide F.No.J-14011/2/1990-IA.I dated 29.10.1991 and further EC amendment letter was granted on 7.10.2004. The area requirement for the proposed MRTDDF is 4550 m² (1.12 acres) and it will be located within the existing premises of zirconium complex of 1240 acres. MRTDDF is a recycle facility, recycling 1023 kg/day of low value MgCl₂ to high value Mg and chlorine [Magnesium – 260 kg/day and Chlorine – 760 kg/day]. This will bring zirconium production to a near zero solid discharge process. There is no National Park, Bird sanctuaries and biosphere reserve exists within 10 km radius of the project site. No Forest land is involved. The water requirement is 50 KLD. Power requirement is 1.5 MVA. Tuticorin railway station is located at a distance of 18km from the project site. Total cost of the project is Rs. 32.40 crores.

3. Proposed units under MRTDDF are summarised as below:-

- i. 8KA Electrolytic cell – 2 No's
- ii. 125 KW Salt bath type melting Furnaces – 2 No's
- iii. Vacuum ladle with furnace for magnesium – 1 No
- iv. 125 kW Electric resistance Mg Casting furnace – 1 No
- v. Chlorine liquefaction system
- vi. Tail gas scrubbing system (NaOH as scrubbing media)
- vii. HCl scrubbing system
- viii. Cooling Tower – 1 No
- ix. Dehumidifier system (MgCl₂ storage / handling area)
- x. Field instrumentation and PLC system
- xi. 250 kVA DG set (Emergency Power supply)

4. To control the air emissions, the tail gas from chlorine liquefaction unit will be discharged to the atmosphere through existing stack after scrubbing with NaOH. Chlorine emission through the stack will be monitored regularly to ensure emissions < 15 mg/m³. Zero discharge policy will be adopted and there will be no effluents to public domain. Tail gas treatment facility generates hypo which can be sold off/used internally. 10% HCl generated during scrubbing of gases from melting furnaces will be used for neutralization in water treatment plant. 40 Kg/day of non toxic salt mixture (chlorides of Mg/K/Na). Optimization will be made to reduce sludge by incorporating bottom-heating system in the Cell. Recycling of the same will be explored as the part of project.

5. After detailed deliberations, the Committee asked the PP to submit the details regarding the chlorine handling system and baseline environment chlorine data monitored for one month period for the records of the Ministry. Further, the Committee however noted that aforesaid proposal does not require environmental

clearance as the proposed MRTDDF is being set up only for R&D purpose and will function for a period of 18 months only. Thereafter, for upscaling the R&D Project, the DAE may apply for an EC afresh.

21.5.2 Cement Plant Unit-II (2.5 MTPA) with Clinker Production Capacity (2.5 MTPA) of **M/s Sree Jayajothi Cements Ltd. (Subsidiary of My Home Industries)** at village Yanakandla, Mandal Banaganapalle, Dist. Kurnool, A.P. (TOR)

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

2. M/s Sree Jayajothi Cements Ltd. (Subsidiary of My Home Industries) have proposed to expand their existing cement plant capacity (clinker – 1.8 MTPA, cement – 3.2 MTPA) by installation of unit II (clinker – 2.5 MTPA, cement – 2.5 MTPA) at village Yanakandla, Mandal Banaganapalle, Dist. Kurnool, A.P. The existing cement plant was accorded Environmental Clearance by the Ministry vide letter No. J-11011/450/2007-IA.II (I) dated 24.3.2008. Total land required for the proposed project is 67.58 ha which is already available within the existing plant premises. No additional land is required for the proposed expansion. There is no National Park, Bird sanctuaries and biosphere reserve exists within 10 km radius of the project site. No Forest land is involved. Nearest river is Jurreru flowing at distance of 4.1 km from the project site. Yennkondla Forest is located at a distance of 0.6 km – W from the project site. The reserve forests existing in the study area include Rangapuram RF – 2.2 km – W and Ramavaram RF – 5.2 km – SSW. Raw materials required for the proposed project will be Limestone (3.375 MTPA), bauxite/laterite (0.375 MTPA), Gypsum (0.10 MTPA) & Fly ash (0.440 MTPA) which will be procured from Captive Mine and purchased from local markets. Around 600 m³/day of water will be required for the proposed project which will be sourced from existing mine Pit and ground water. Total power requirement for proposed project will be 35 MW which will be sourced from APCPDCL. Total cost of the project is Rs. 630 crores.

3. The major sources of pollution in a cement plant will be stacks attached to the process units. All major sources of air pollution will be provided with bag house, bag filters & ESP to maintain particulate matter emissions within permissible limit. No major water, noise & soil pollution is envisaged from the project activity. Various mitigation measures will be undertaken to take care of the environment in respect of air, water, noise, soil & the green cover of the project site & nearby villages. No waste water will be generated from cement manufacturing process, as it is based on dry process technology. Waste water generated from CPP will be recycled back to the process and used for dust suppression after proper neutralization. Dust collected from various pollution control equipments will be recycled back to the process.

4. After detailed deliberations, the Committee prescribed following specific TORs for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at **Annexure I read with additional TORs at Annexure-3:**

- i. P.H. shall be conducted by the Andhra Pradesh Pollution Control Board.

21.5.3 Expansion of existing plant [Billets – 472 TPD; Structural TMT Bars – 1000 TPD] by installation of sponge iron (1000 TPD), Pellet plant (1500 TPD), MS Ingots/Billets (1000 TPD), structural TMT bar (1000 TPD) along with power generation (50 MW) of **M/s Omsairam Steels & Alloys Pvt Ltd.**, at plot F-1,2,3,8,9,10, Addl. MIDC Area, Ph.II and adjacent Gut No. 46 & 63, at village Daregaon, tehsil Jalna, Dist. Jalna, Maharashtra (TOR)

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

21.5.4 Proposed expansion of Asbestos Cement Sheet Plant from 197,000 TPA to 300,000 TPA of **M/s HIL Limited (previously Hyderabad Industries Ltd)**, at plot no. 289, IDA Kondapally village, Mandal Ibrahimpatnam, Dist. Krishna, A.P. (TOR)

1. The PP gave a detailed presentation on salient features of the project and proposed environmental protection measures to be undertaken along with draft Terms of Reference for preparation of EIA-EMP Report. The proposed activity is listed at S.No. 4(c) under Category 'A' of the schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MOEF.

2. M/s HIL Limited (previously Hyderabad Industries Ltd) have proposed to expand their Asbestos Cement Sheet Plant from 197,000 TPA to 300,000 TPA at plot no. 289, IDA Kondapally village, Mandal Ibrahimpatnam, Dist. Krishna, A.P. The land required for the proposed project is 13.89 acres. There is no National Park, Bird sanctuaries and biosphere reserve exists within 10 km radius of the project site. No Forest land is involved. The water bodies exist in the study area are Krishna river – 10 km (S) and Budameru river – 4 km (E). Raw materials required are cement (124.16 TPD), fly ash (76.22 TPD), chrysotile asbestos fibres (22.58 TPD) and pulp (2.82 TPD). Around 200 m³/day of water will be required for the proposed project which will be sourced from existing borewells. Total cost of the project is Rs. 12.5 crores.

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

- i. P.H. shall be conducted by the Andhra Pradesh Pollution Control Board.
- ii. Modern up-to-date Asbestos plant with automatic bag opening devices should be installed.
- iii. The safety measures adopted during import and transport of Asbestos from Canada or any other country should be included.
- iv. 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:
 - a. 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.
 - b. 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.
 - c. Health Management Plan for Mesothelium, Lung cancer and Asbestosis related problems in asbestos industries.
- v. 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.
- vi. An action plan on entire operation should be automatic and closed system for all operations for fibre handling and processing should be included.
- vii. Details of arrangement for measurement and monitoring of asbestos fibre (Phase contrast microscope) should be included.
- viii. Commitment that laboratory for monitoring asbestos fibres will be established at the site.

21.5.5 Proposed expansion of cement plant by installation of line II (Clinker – 1.6 MTPA; Cement – 2.6 MTPA & D.G. Set - 2.5 MW) of **M/s Lafarge India Pvt. Ltd** at vill. Bhavaliya & Mangrol, Tehsil Nimbahera, Dist. Chittorgarh, Rajasthan (**TOR**)

1. The PP along with their EIA-EMP consultant (M/s J.M. EnviroNet Private Limited - 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. The proposed activity is listed at S.No. 3(b) under Category 'A' of the schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MOEF.

2. M/s Lafarge India Pvt. Ltd. is having an existing Integrated Cement Plant with Clinker production capacity (1.6 MTPA), Cement (2.6 MTPA) & D.G. Set (1.5 MW) at Village-Bhavaliya & Mangrol, Tehsil- Nimbahera, District-

Chittorgarh (Rajasthan). Environmental Clearance for the Integrated Cement Plant-Cement 1.6 MTPA, Clinker 1.6 MTPA, Captive Power Plant 25 MW & D.G. Set 5 MW & Arniya Joshi Limestone Mine 2.6 MTPA has been obtained from MoEF, New Delhi vide letter no. J-11011/1097/2007-IA II (I) Dated 23.12.2008 & for Cement Plant (2.6 MTPA) has been obtained from MoEF, New Delhi vide Letter No. J-11011/113/2011-IA II (I) Dated 19.6.2012. The company has now proposed for Expansion of Cement Plant by Installation of Line-II (Clinker 1.6 MTPA, Cement 2.6 MTPA & D.G. Set 2.5 MW) within the existing plant premises at Village-Bhawaliya & Mangrol, Tehsil- Nimbahera, District-Chittorgarh (Rajasthan). Total Plant area is 182.87 ha which is already under possession of LIPL. The proposed expansion will be done within the existing plant premises, thus no additional land will be acquired for the proposed expansion project. There is no National Park, Bird sanctuaries and biosphere reserve exists within 10 km radius of the project site. No Forest land is involved. Raw materials required for the proposed project will be Limestone (5.2 MTPA), Red ochre (0.112 MTPA), gypsum (0.264 MTPA) and fly ash (1.65 MTPA). Around 3580m³/day of water will be required for the proposed project which will be sourced from mine Pit and ground water. Total power requirement for proposed project will be 80 MW which will be sourced from state grid and D.G. set. Total cost of the project is Rs. 1500 crores. An amount of Rs. 100 crores and Rs. 70 lakhs per annum is earmarked towards the environmental pollution control measures (capital and revenue).

3. The existing and the proposed product details are as below:

Units	Existing Capacity (Line I)	Proposed Capacity (Line II)	Total Production after expansion
Clinker (MTPA)	1.6	1.6	3.2
Cement (MTPA)	2.6	2.6	5.2
D.G. Set (MW) (Standby)	1.5	2.5	4.0

4. After detailed deliberations, the Committee prescribed following specific TORs for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at **Annexure I read with additional TORs at Annexure-3:**

i. P.H. shall be conducted by the Rajasthan Pollution Control Board.

21.5.6 Proposal for expansion of Integrated Cement Plant (Clinker from 3 to 4.8 MTPA, Cement – 5.2 MTPA, 30 mw Waste Heat Recovery Plant & 25 MW CPP) of **M/s Shree Cement Ltd** at village Khapradih, tehsil – Simga, Dist. Balodabazar-Bhatapara, Chhattisgarh **(TOR)**

The Committee deferred the consideration of the proposal cited above as the PP is yet to commission the existing project for which EC was accorded by the Ministry vide letter no.J-11011/235/2008-IA.II(I) dated 7.3.2011 and 1.6.2011. The Committee decided to consider the proposal after the commissioning of the at least one unit of the cement and clinker unit.

21.5.7 Proposed integrated steel plant consisting of 2x500 TPD sponge iron plants, 2 MTPA coal washery, 0.6 MTPA iron ore beneficiation plant, 0.6 MTPA steel making (Fast melt/ITMK3/Ind.Fur)+ Arc furnace+ long products, 25 MW WHRB, 15 MW AFBC biomass based power plants of **M/s Vandana Global Limited** at village Bannadik & Nagpura, Tehsil Bilaspur, district Bilaspur C.G. **(TOR)**

1. The Committee deferred the consideration of the aforesaid proposal as the proposal lacks in several technical aspects. After detailed deliberations, the Committee sought the following information from the proponent for fresh consideration of the proposal:-

i. Revised Form I and pre-feasibility project report

2. Further, the Committee requested the proponent to depute a senior officer concerned with the proposal cited above who could explain the salient features of the project and also respond to the queries/suggestions which Committee may ask during the discussion.

21.5.8 Proposed expansion by installation of 1 MTPA Steel Plant, 40 MW (2x20 MW) Proposal for installation of steel Plant based on waste heat Recovery, 40 MW coal based captive power plant & 500 TPD Air Separation Plant in the existing ferro alloy plant of **M/s The Sandur Manganese & Iron Ores Ltd.** at Hanumanhalli village, Danapur Mandal, Hospet Taluk, Bellary District, Karnataka **(TOR)**

1. The PP along with their EIA-EMP 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 References for the preparation of EIA-EMP report. The proposed project activity is listed at S.No. 3(a) under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

2. M/s The Sandur Manganese & Iron Ores Ltd. have proposed to expand the existing ferro ally plant (Three submerged arc furnaces with a total capacity of 55 MVA, Sintering plant of 1.5 MT, Manganese Ore Beneficiation Plant 2 t/hr input and 32 MW Coal based Captive Power Plant) by installation of 1 MTPA steel plant at Hanumanhalli village, Danapur Mandal, Hospet Taluk, Bellary District, Karnataka comprising of following units:-

- i. 140 m² Sinter Plant,
- ii. 0.60 MTPA Coke oven plant [One By Product Recovery - Stamp Charge Type Coke Oven battery of 4.3m height, 78 ovens in two blocks (39 ovens in each block) with wet quenching of coke & matching by product recovery facilities]
- iii. 550 cum Blast Furnaces (02 Nos.)
- iv. 600 TPD Pig Casting Machine
- v. Steel Melt Shop (BOF) comprising 2 Nos. 60 tons LD Converters with matching 2 Nos. ladle furnaces & one 2 x 4 strand billet Caster
- vi. A two strand wire rod mill
- vii. 40 MW (2 x 20 MW) Power Plant based on waste Heat Recovery
- viii. 40 MW Coal based power plant
- ix. 500 TPD Air Separation Plant (ASP)

The land requirement for the proposed expansion is 1293 acres out of which 155.49 acres is owned by the PP and balance lands are under the process of procurement. This land is adjoining to South and South East of their existing Ferro Alloy Plant complex. 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. Backwater of Tungabhadra Reservoir is located at a distance of 1.8 km – W from the project site. The reserved forests existing in the study area are Gunda RF – Adjacent, Sandur RF – 7 km - E Ramgad RF – 3.1 km - SE and Hospet RF – 3.6 km – NE. Raw materials required are iron ore fines, iron ore, coal, limestone, etc. The water requirement after the proposed project is 16440 KLD which will be supplied by the Tungabhadra Reservoir. The power requirement is 92 MW which will be met from CPP and Karnataka Power Transmission Corporation Limited. Total cost of the proposed project is Rs. 5300 crores.

3. After detailed deliberations, the Committee prescribed following specific TORs for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at **Annexure I read with additional TORs at Annexure-2:**

- i. P.H. shall be conducted by the Karnataka Pollution Control Board as per the generic TOR.

21.5.9 Proposed expansion of Induction Furnace and Rolling Mill for manufacturing MS Billets/ Ingots – 288 TPD & TMT Bars/Rounds/Squares – 200 TPD in the existing plant premises of **M/s Mahrishi Alloys Pvt. Ltd.** at village Moda, Mandal Parigi, Dist. Ananthapur, A.P. **(TOR)**

1. The PP along with their EIA-EMP consultant: M/s Pioneer Enviro – Hyderabad gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of References for the preparation of EIA-EMP report. The proposed project activity is listed at S.No. 3(a) under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

2. M/s Mahrishi Alloys Pvt. Ltd. have proposed to expand the existing induction furnace and rolling mill Sy. No. 313/2 at Moda Village, Parigi Mandal, Ananthapur District, Andhra Pradesh. The existing plant obtained environmental clearance from MoEF vide letter no.J-11011/505/2008-IA.II(I) dated 10.11.2008 for expansion of billets /ingots from 28000 TPA TO 84000 TPA. Total 13.155 Acres of land is in the possession of the management. The proposed expansion will be taken up in the existing plant premises only no additional land envisaged for the proposed expansion project. Raw materials required are sponge iron, ferro alloys, MS billets/ingots and coal. 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 water requirement after the proposed project is 65 KLD which will be met from ground water. Total cost of the proposed project is Rs. 38 crores.

3. The plant configuration and production capacities details are as below:-

S.N	UNITS	PRODUCT	EXISTING PLANT EC/CFE /CFO OBTAINED	PROPOSED EXPANSION	UNITS PROPOSED TO BE DROPPED FROM EXISTING EC	AFTER EXPANSION
1.	Induction Furnace, with C.C.M and LRF	M.S. Billets/Ingots	231 TPD (3 X3.2 TPH) Obtained EC/CFE for 231 TPD and CFO for 154 TPD (2 x 3.2 TPH)	288 TPD (2 X 6 TPH)	154 TPD (2 X 3.2 TPH)	365 TPD (1 X 3.2 & 2 X 6 TPH)
2.	Rolling Mill	TMT bars/Rounds/ Squares	50 TPD	200 TPD	50 TPD	200 TPD

3. After detailed deliberations, the Committee prescribed following specific TORs for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at **Annexure I read with additional TORs at Annexure-2:**

ii. P.H. shall be conducted by the Andhra Pradesh Pollution Control Board.

21.5.10 Proposed expansion of existing steel Plant by installation of additional Electric Arc Furnace, Concast Billet and Rolling Mill with Captive Power Plant of 120 MW of **M/s Kamachi Sponge and Power Corp. Ltd.** at village Papankuppam, taluk Gummidipoondi, District Thiruvallur, T.N. **(TOR)**

1. The PP along with their EIA-EMP consultant: M/s Vimta Labs – Hyderabad gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of References for the preparation of EIA-EMP report. The proposed project activity is listed at S.No. 3(a) under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

2. M/s Kamachi Sponge and Power Corp. Ltd. have proposed to expand the existing steel Plant by installation of additional Electric Arc Furnace, Concast Billet and Rolling Mill with Captive Power Plant of 120 MW at village Papankuppam, taluk Gummidipoondi, District Thiruvallur, T.N. The existing plant obtained environmental clearance from MoEF vide letter no.J-11011/419/2008-IA.II(I) dated 19.10.2009. Total plant area – 35.81 ha (88.5 acres). The proposed expansion will be within the existing plant premises itself, thus no additional land will be acquired for the proposed expansion. The water bodies exists in the study area are Chittoornatham pond – 3.4 km, West, Poovalambedu pond – 5.3 km, SW, Pulicat lake – 6.5 km, NNE, Arani river – 7.0 km, South and Pallavada lake – 8.5 km, NW. Pulicat lake bird sanctuary is located at a distance of 6.5 km, NNE from the project site. The reserved forests exists in the study area are Puliur forest – 4.5 km SW, Periyapuliyur forest – 5.9 km SW, Pallavakam Reserved Forest – 6.0 km WSW, Thervoy R.F. – 7.6 km SW, Siruvada forest – 9.4 km, WSW and Palem forest – 14.1 km, WNW. No Forest land is involved. No court cases/litigation is pending against the project. The water requirement after the proposed project is 2067 KLD which will be met from bore wells. Total cost of the proposed project is Rs. 1330 crores.

3. The plant configuration and production capacities details are as below:

Products	Existing (TPA)	Proposed (TPA)	Upon Expansion (TPA)
Rolled products	2,00,000	3,00,000	5,00,000
Intermediate product – Billets	2,05,000	3,07,500	5,12,500
Sponge iron	1,20,000	--	1,20,000
Power Plant – WHRB	10 MW	--	10 MW
Power plant – CFBC	2 x 35 MW	1 x 120 MW	2 x 35 MW & 1 x 120 MW

4. After detailed deliberations, the Committee prescribed following specific TORs for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at **Annexure I read with additional TORs at Annexure-2:**

- i. P.H. shall be conducted by the Tamil Nadu Pollution Control Board.

21.5.11 Proposal for expansion of Integrated steel plant and power plant of **M/s Sunflag Iron & Steel Co. Ltd.** at village Eklari, taluka Mohadi, Dist. Bhandara, Maharashtra **(TOR)**

1. The PP gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of References for the preparation of EIA-EMP report. The proposed project activity is listed at S.No. 3(a) under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

2. M/s Sunflag Iron & Steel Co. Limited have proposed to expand the Integrated steel plant and power plant at village Eklari, taluka Mohadi, Dist. Bhandara, Maharashtra. The existing plant obtained environmental clearance from MoEF vide letter no.J-11011/355/2005-IA.II(I) dated 21.2.2006. The proposed expansion will be taken up in the existing plant premises of 200 ha and no additional land envisaged for the proposed expansion project. 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 water requirement after the proposed project is 8000 KLD which will be met from River Wainganga. Total cost of the proposed project is Rs. 1510 crores.

3. The plant configuration and production capacities details are as below:-

S.N.	Products	Existing Capacity	Proposed Capacity	Total Production After Expansion Project
1.	Direct Reduced Iron	0.28 Million TPA	0.72 Million TPA (3 x 350 TPD & 3 x 500 TPD Kilns)	1.0 Million TPA
2.	Pig Iron/Hot Metal	0.25 Million TPA (0.3 Million TPA MBF)	0.35 TPA (0.30 Million TPA MBF + 0.05 Million TPA capacity utilisation)	0.60 Million TPA
3.	Ingots/ Billets	0.525 Million TPA (1 x 50/60 TPH EAF & 75 TPH AOD)	0.5 Million TPA (2 x 25 TPH IF & 1 x 50 TPH EAF)	1.025 Million TPA
4.	Rolled Steel Products	0.5 Million TPA	0.5 Million TPA	1.0 Million TPA
5.	Sinter	0.25 Million TPA (0.48 Million TPA Sinter Plant)	0.60 Million TPA (0.40 Million TPA Sinter Plant + 0.20 Million TPA existing capacity utilization)	0.85 Million TPA

S.N.	Products	Existing Capacity	Proposed Capacity	Total Production After Expansion Project
6.	Electricity	30 MW (CPP)	60 MW (4 x 15 MW CPP)	90 MW
7.	Coke	--	0.25 Million TPA (Coke Oven Plant)	0.25 Million TPA
8.	Oxygen Plant	15000 TPA	--	15000 TPA
9.	Oxygen / Nitrogen/ Argon Plant	45000 TPA	---	45000 TPA

3. After detailed deliberations, the Committee prescribed following specific TORs for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at **Annexure I read with additional TORs at Annexure-2:**

- i. P.H. shall be conducted by the Maharashtra Pollution Control Board.

21.5.12 Proposed enhancement of Clinker Production Capacity from 2 to 2.50 MTPA and change in product Mix from 4.8 MTPA (1.1 MTPA OPC & 3.7 MTPA of PSC) to 4.8 MTPA (OPC/PSC/GGBS) of **M/s JSW Cement Ltd.**, at village Bilakalagudur, Mandal Gadivelula, Dist. Kurnool. A.P. (TOR)

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

2. M/s JSW Cement Ltd have proposed to expand their Clinker Production Capacity from 2 to 2.50 MTPA and change in product Mix from 4.8 MTPA (1.1 MTPA OPC & 3.7 MTPA of PSC) to 4.8 MTPA (OPC/PSC/GGBS) at village Bilakalagudur, Mandal Gadivelula, Dist. Kurnool. A.P. The existing cement plant was accorded Environmental Clearance by the Ministry vide letter No. J-11011/889/2007-IA.II (I) dated 25.8.2008 and vide letter No. J-11011/159/2010-IA.II (I) dated 13.5.2011. Total land required for the proposed project is 263.05 ha which is already available within the existing plant premises. No additional land is required for the proposed expansion. There is no National Park, Bird sanctuaries and biosphere reserve exists within 10 km radius of the project site. No Forest land is involved. Raw materials required for the proposed project will be Limestone (3.675 MTPA), aluminous laterite (0.193 MTPA), flue dust (0.077 MTPA) and the imported coal. Around 4500 m³/day of water will be required for the proposed project. Total power requirement for proposed project will be 40 MW. Total cost of the project is Rs. 630 crores.

3. The existing and the proposed product details are as below:

Projects	Present Capacity	Proposed Expansion	Capacity After Expansion
Clinker Production (MTPA)	2.0	0.50	2.50
Cement Production (MTPA)	4.80 (1.10 OPC + 3.70 PSC)	Nil	4.80 (PSC+ OPC+GGBS)*
CPP (MW)	36 (18 x 2)**	-	36 (18 x 2)
Captive Limestone mining (MTPA)	7.0	Nil	7.0

4. After detailed deliberations, the Committee prescribed following specific TORs for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at **Annexure I read with additional TORs at Annexure-3:**

- i. P.H. shall be conducted by the Andhra Pradesh Pollution Control Board.

21.5.13 Proposed expansion steel plant (Hot metal – 0.7 MTPA and Rolled product – 0.3 MTPA) to 1.4 MTPA crude steel of **M/s Kalyani Steels** at village Ginigera, tehsil Koppal, Dist. Koppal, Karnataka (TOR)

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

21.5.14 Proposal for replacement of DRI by Hot Metal for Steel making to achieve the capacity of 9.6 MTPA (phasing out of HBI/DRI modules I –IV) of **M/s Essar Steel India Ltd.**, at survey no. 353,354,179/P at Hazira Notified industrial area, village Hazira, tehsil Choryasi, district Surat, Gujarat (TOR)

1. The PP along with their EIA-EMP consultant : M/s En-vision Enviro Engineers Private Limited - Surat gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of References for the preparation of EIA-EMP report. The proposed project activity is listed at S.No. 3(a) under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

2. M/s Essar Steel India Ltd have proposed to for replace the DRI by Hot Metal for Steel making to achieve the capacity of 9.6 MTPA (phasing out of HBI/DRI modules I –IV) at survey no. 353,354,179/P at Hazira Notified industrial area, village Hazira, tehsil Choryasi, district Surat, Gujarat. The land requirement for the proposed modernization is 68.183 ha. Out of the said land, 41.163 ha available in existing complex and 27.02 ha forest land applied for diversion for raw material storage yard. No National Park, Wildlife Sanctuary exists within 10 km radius of the project site. No court cases/litigation is pending against the project. River Tapi is located at a distance of 0.5km from the project site. Gulf of Khambat is located at a distance of 3km from the project site. The water requirement after the proposed modernization is is 1645m³/hr which will be met from River Tapi. Power requirement is 149 MW. Total cost of the proposed project is Rs. 6270 crores. Rs. 700 crores and Rs.100 crores per annum is earmarked for the capital and recurring cost toward the environmental pollution control measures.

3. The plant configuration and production capacities details due to the proposed modernisation are as below:

S.N.	PRODUCTION UNIT	UNIT	CAPACITY		
			EXISTING	PROPOSED	TOTAL
1.	HBI Plant (Mod. I to VI)	MTPA	6.98	-3.6	3.38
2.	Blast Furnace		2.04	3	5.04
3.	Sinter Plant		1.48	7	8.48
4.	Coke Oven (Recovery Type)		1.2	1.35	2.55
5.	Air Separation	Nm ³ /hr			
	- Oxygen Gaseous		3,60,544	64,200	4,24,744
	- Oxygen liquid		2,950	500	3,450
	- Nitrogen		1,19,944	25,700	1,45,644
	- Argon		3,470	1,500	4,970

PP requested the Committee to consider the baseline data collected during December 2013 – February 2014 for the preparation of EIA-EMP report.

4. After detailed deliberations, the Committee prescribed following specific TORs for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at **Annexure I read with additional TORs at Annexure-2:**

- i. P.H. shall be conducted by the Gujarat Pollution Control Board.

21.5.15 Proposed capacity enhancement of writing and printing paper grades of paper from 90 TPD to 140 TPD of **M/s Naini Papers Ltd.**, at 7th K.M. Stone, Moradabad Road, Kashipur, Dist. Udham Singh Nagar, Uttarakhand (TOR)

1. The PP along with their consultant – M/s J.M.EnviroNet Private Limited - 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. The proposed project activity is listed at S.N. 5 (i) under Category “A” of the Schedule of EIA Notification, 2006 and appraised at the Central Level.

2. M/s Naini Papers Limited have proposed to expand the production capacity of writing and printing grades of paper from 90 TPD to 140 TPD at 7th K.M.Stone, Moradabad Road, Kashipur Tehsil, Udham Singh Nagar district, Uttarakhand. The existing plant got environmental clearance from MoEF vide letter no.J-11011/360/2008-IA.II(I) dated 17.3.2009. The proposed expansion will be carried out within the existing land of 48.5 acres. Dehla river is located at a distance of 2.7 km from the project site. Dhandi nallah is located at a distance of 0.2km from the project site. No Forest land is involved. No National Park, Wildlife Sanctuary is exists within 10 km radius of the project site. No court cases/litigation is pending against the project. The raw materials required are bagasse & wheat straw, imported wood pulp, hydrogen peroxide and lime, etc. Water requirement is 7595 KLD which will be met from the ground water. Power requirement is 137200 KWH. Total cost of the project is Rs. 6.65 crores. Rs. 3.28 crores and Rs.13.96 lakhs is earmarked towards the capital cost and recurring cost per annum towards the environmental pollution control measures.

3. After detailed deliberations, the Committee prescribed following specific TORs for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at **Annexure I read with additional TORs at Annexure-4:**

i. P.H shall be conducted by the Uttarakhand Pollution Control Board.

21.5.16 Proposed Tanney Unit of **M/s Tasmiya Tannery Udyog** at village Mussa Sher Nagar, Janshat Road, Muzzafarnagar, U.P. (TOR)

The Committee deferred the consideration of the proposal cited above as the PP has informed during the meeting that they have already established a Tannery unit without obtaining the prior environmental clearance from the Ministry.

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

21.5.17 Proposed expansion of existing steel plant by installation of induction furnace of 1x12 MT and 1x7 MT(stand by) of **M/s Sunvik Steels Private Limited** at survey no. 59-72, Jodievarahalli village, tehsil Kallambella Hobli, taluk Sira, district Tumkur, Karnataka (ToR) –

1. The PP gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of References for the preparation of EIA-EMP report. The proposed project activity is listed at S.No. 3(a) under category ‘A’ of the Schedule of EIA Notification, 2006 and appraised at the Central level.

2. M/s. Sunvik Steels Private Limited have proposed to expand the existing steel plant by installation of induction furnace of 1x12 MT and 1x7 MT(stand by) at survey no. 59-72, Jodievarahalli village, tehsil Kallambella Hobli, taluk Sira, district Tumkur, Karnataka. The existing plant obtained environmental clearance from MoEF vide letter no.J-11011/959/2008-IA.II(I) dated 10.6.2009 for setting up of Sponge Iron Plant 90,000 TPA (3X100 TPD); Captive Power Plant (10 MW), WHRB : 3 x 11 TPH, FBC : 1 x 35 TPH, induction Furnace -36,000 MTPA (12 MT) and Rolling Mill – 100 TPD (12 MT).The proposed expansion will be taken up in the existing plant premises of 49.5 acres and no additional land envisaged for the proposed expansion project. Raw materials required are sponge iron, pig iron/cast iron and steel scraps. 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. Kappenahalli village is located at a distance of 0.5km from the project site. The water requirement after the proposed project is 455 KLD which will be met from bore well and rain water harvesting pond. Power requirement is 14450 KW which will be met from BESCOM. Total cost of the proposed project is Rs. 2 crores.

3. After detailed deliberations, the Committee prescribed following specific TORs for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at **Annexure I read with additional TORs at Annexure-2:**

- i. P.H. shall be conducted by the Karnataka Pollution Control Board.

21.6 Any Other Items

21.6.1 Proposal for additional 30 coke ovens and 4 MW Waste Heat Recovery Boiler, Non-coke Recovery Coke oven Plant and Waste Heat Recovery Power Plant of **M/s Ennore Coke Ltd.**, at Alichak, P.O. Khachanchak, Haldia, dist. East Midnapore, W.B. (**Amendment in EC**)

1. The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 14th meeting held during 19-20th December 2013. As per the minutes of the meeting, the Committee sought following additional information from the project proponent for reconsideration:-

- i. Undertaking from proponent stating that they will be complying with the emissions standards of Coke Oven Plants;
- ii. Certified compliance report from Regional Office of MoEF at Bhubaneshwar for the existing unit;
- 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; and
- iv. Environment Statement submitted to the West Bengal Pollution Control Board

2. PP vide letter dated 12.3.2014 furnished the aforesaid additional information to the Ministry. The proposal was placed before the EAC for reconsideration. PP and their EIA consultant – M/s Environ India - Kolkata made a presentation before the Committee.

3. The Committee noted that as per the report (No.102-498/EPE) of the RO-Bhubaneshwar dated 1.4.2014 following non-compliance has been reported:-

- i. After October 2013, monitoring of stack emission has not been carried out.
- ii. Monitoring of stack emission of WHRB plant is not being carried out regularly
- iii. Monitoring of air quality is not being carried out in and around the plant.
- iv. The capacity of rainwater harvesting structures should be designed based on the rainfall of the local IMD stations of last 20 years rainfall data. Rain water so collected should be utilized for sprinkling, plantation and dust suppression at transfer points of coal
- v. Monitoring of fugitive emissions is not being carried out at the critical areas of the plant
- vi. Implementation and monitoring of Environment Management Plan should be carried out as proposed in the EIA report
- vii. Project should submit six monthly compliance report to the Regional Office

4. After detailed deliberations, the Committee deferred the consideration of the proposal and asked the PP to initiate necessary actions for the effective compliance of the aforesaid findings as reported by the RO-Bhubaneshwar. The Committee recommended that fresh site inspection shall be undertaken by the RO-Bhubaneshwar and the inspection report shall be sent to the Ministry for further consideration of the proposal.

21.6.2 (A) Expansion of IISCO Steel Plant (ISP) (0.55 MTPA to 2.50 MTPA), Rebuilding of Coke Oven Battery No. 10 and setting up of a Captive Power Plant (87.5 MW) and other facilities of **M/s Steel Authority of India**, at Burnpur, Asansol, West Bengal (**Amendment in EC**)

1. Environmental Clearance to the aforesaid proposal was accorded vide F.No.J-11011/348/2005-IA.II(I) dated 7.8.2007. Thereafter, Ministry vide letter dated 14.11.2013 extended the validity of the EC dated 7.8.2007 for a period of five years with effect from 6.8.2012 subject to the environmental safeguards.

2. PP vide letter dated 9.6.2014 sought for the minor changes in the EC which was accorded on 7.8.2007. PP made a presentation before the Committee. The changes sought by the PP are as summarised as below:

SN	Facilities	As per the EC Granted	EC amendment proposed	Remarks
1	Crude Steel	2.5 mtpa	2.5 mtpa	No change
2	Finished Steel	2.28 mtpa	2.30 mtpa	No change in input. Increase in output due to better yield
3	Existing Heavy Structural Mill	To increase production to 150,000 TPA	Phased out (Production stopped from 01.04.2014)	Obsolete Energy intensive unit phased out. (Commissioned - 1939)
4	Existing Merchant and Rod Mill	To increase production to 180,000 TPA	Phased out (Production stopped from 01.04.2014)	Obsolete Energy intensive unit phased out. (Commissioned - 1960)
5	Existing Light Structural Mill	To increase production to 100,000 TPA	Phased out (Production stopped from 01.04.2014)	Obsolete Energy intensive unit phased out. (Commissioned - 1939)
6	New Heavy Section Mill	A new mill of capacity 600,000 TPA	New Universal Section Mill to produce 850000 TPA	Capacity of phased out unit have been built in without increasing total input. Output increases due to better yield.
7	New Wire and Rod Mill	A new mill of capacity 1,250,000 TPA producing both Wire and Bars	Wire Rod Mill: 550000 TPA Bar Mill: 900000 TPA	Capacity of phased out unit have been built in without increasing total input. Output increases due to better yield.
8	Existing Oxygen Plant	Oxygen Plant of 1x50 TPD	Phased out (Production stopped from 21.12.2008)	Obsolete Energy intensive unit phased out.
9	New Oxygen Plant	Oxygen Plant of capacity 2x750 TPD on BOO basis	Oxygen Plant of capacity 2x750 TPD by SAIL-ISP	No change in capacity. Change in ownership
10	Gross Coke Production	1.5517 mtpa	1.5517 mtpa	No Change
	A) Existing Coke Ovens	Rebuild Battery No. 10 Coke oven Battery No.8 (half Battery operation as per EIA)	Rebuild Battery No. 10 Coke Oven Battery No. 8 (full Battery operation)	No change in production
	B) New Coke Ovens	New Battery No. 11 (7 m tall Battery with Coke Dry Quenching)	New Battery No. 11 (7 m tall Battery with Coke Dry Quenching)	No Change

It was submitted by the PP that the proposed changes will lead to overall improvement in quality of products, environmental performance, yields and energy efficiency. The total Crude steel production shall be within 2.5 MTPA as per the EC granted.

3. After detailed deliberations, the Committee stated that the PP must provide specific details with respect to the following:

- (i) Extent of changes in pollution load due to the proposed changes in configuration.
- (ii) Changes in input characteristics of the products
- (iii) Changes in effluents characteristics
- (iv) Solid waste generation details
- (v) Fuel and power consumption details

The Committee sought for the aforesaid information for further consideration of the matter.

21.6.2 (B) Expansion-cum-modernization of Durgapur Steel Plant (2.088 MTPA to 3.50 MTPA) along with Captive Power Plant 40 MW at Faridpur, Burdwan, Durgapur, West Bengal by M/s Steel Authority India Limited – regarding amendment in Environment Clearance for minor changes in Coke Ovens

1. The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 12th meeting held during 30th September 2013 to 1st October 2013 and 16th meeting held during 20-21st February 2014. As per the minutes of the meeting, the Committee requested the proponent to initiate necessary action for the effective compliance of the aforesaid findings as reported by the RO- Bhubaneswar. The Committee recommended that fresh site inspection shall be undertaken by the RO- Bhubaneswar thereafter and the inspection report sent by the RO Bhubaneswar to the Ministry for further consideration of the proposal. The Committee also sought a specific clarification whether the project involves expansion in production.

2. PP vide letter dated 26.5.2014 furnished the aforesaid additional information to the Ministry. RO – Bhubaneswar sent the fresh site inspection report to the Ministry. The proposal was placed before the EAC for reconsideration. PP made a presentation before the Committee.

3. The Committee noted that as per the report furnished by the RO-Bhubaneswar, the PP has initiated necessary actions to comply with the findings of the Regional Office.

4. After detailed deliberations, the Committee recommended for the amendment in the EC dated 10.9.2007 for minor changes in the coke oven as mentioned in the EAC meeting referred at para 1 above subject to the environmental safeguards.

21.6.3 Setting up of an Integrated Titanium Dioxide Pigment & Titanium Sponge Plant of M/s Saraf Agencies Pvt. Ltd. at SEZ Chhatrapur, Dist. Ganjam, Orissa (Further consideration of Extension of validity of EC)

1. The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 17th meeting held during 18-19th March 2014. As per the minutes of the meeting, the Committee sought the following point-wise additional information for further consideration of the proposal:

- i. Detailed Note on the proposed Chinese technology to be used for the production of various Titanium products;
- ii. Difference between the Russian technology and Chinese technology; vis-à-vis raw materials (type and quantity), power and water consumption, pollution load, hazard potential of raw materials, products and waste products, risks involved, etc along with specific pollution mitigation measures.
- iii. MoUs executed for the supply of requisite raw materials.

2. PP vide letter dated 5.2.2014 furnished the aforesaid additional information to the Ministry. The proposal was placed before the EAC for reconsideration. PP made a presentation before the Committee.

3. The Committee noted that as per the information submitted by the PP, the technology is changing from Russian to the Chinese. The Committee noted that the EC was accorded to the proponent on 16.10.2008 was specifically based on the Russian Technology to be implemented in technical collaboration with the State Research Development & Design Institute for Rare Metal Industry and Russian Research Institute, FGUP GIREDMET, Moscow.

4. After detailed deliberations, the Committee recommended that the validity of the EC dated 16.10.2008 cannot be extended as the proposal involves change in technology. The Committee requested the PP to submit Form I and pre-feasibility project report for consideration of fresh ToR in accordance with the procedure stipulated in the EIA, Notification 2006.

21.6.4 Revival and Mill Development Plan to produce 46800 TPA Printing & Writing Paper and 36200 TPA Newsprint Paper by renovation of existing Paper Machines #1 & #2 and 12.27 MW Captive Power Plant along with Installation of new 300 TPD De-inking Plant and 9 MW Captive Power Plant of **M/s NEPA Limited** (A Govt. of India undertaking) at Neapanagar, District Burhanpur, Madhya Pradesh (**TOR**) (**Consideration of PP's letters dated 01.07.2014, 02.07.2014 and 16.07.2014**)

1. The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 19th meeting held during 23-24th June 2014 for grant of Terms of Reference. As per the minutes of the meeting, the Committee had recommended for the grant of ToR by considering that proposal cited above as Category "A" of the Schedule of EIA Notification, 2006 and appraised at the Central Level.

2. Meanwhile, PP vide letters dated 1.7.2014, 2.7.2014 and 16.7.2014 informed that their plant operations does not require pulping & bleaching but requires de-inking & bleaching for producing recycled fiber pulp. Further, PP sought for the amendment in the ToR conditions as recommended by the EAC.

3. Ministry vide notification dated 25.6.2014 amended the schedule of the EIA Notification 2006, pertaining to the pulp and paper industry which is reproduced as below:-

Project or Activity		Category with threshold limit		Conditions if any
		A	B	
"5(I)	Pulp and paper industry	Pulp manufacturing and Pulp and paper manufacturing industry except from waste paper.	Pulp manufacturing from waste paper and paper manufacturing from waste paper pulp and other ready pulp	General condition shall apply Note: Paper manufacturing from waste paper pulp and ready pulp without deinking, bleaching and colouring it exempt."

4. The aforesaid request of the PP and the amended Notification was placed before the EAC in its 21st meeting held during 30th July – 1st August 2014 for consideration. The Committee noted that the plant operations of M/s NEPA Limited involves only de-inking & bleaching for producing recycled fibre pulp and there is no manufacture of wood pulp.

5. As per the information submitted by the PP and the aforesaid amendment notification, the Committee noted that proposal of M/s NEPA Limited is listed at S.N. 5(I) under category 'B' and has to be appraised by the SEIAA/SEAC concerned. Member Secretary – Industry Sector apprised the Committee that SEIAA/SEAC for Madhya Pradesh was constituted by MOEF&CC on 30.6.2014 in accordance with the provisions of the EIA Notification, 2006.

6. After detailed deliberations, the Committee recommended that aforesaid proposal along with the project file concerned be transferred to the SEIAA/SEAC – Madhya Pradesh for taking appropriate action.

21.6.5 Steel Plant (5,00,000 TPA, MBF & SMS) of **M/s Rashmi Metaliks Ltd.** at Shyamraipur, Gokulpur, Kharagpur, Paschim Medinipur, West Bengal (**Request for extension of EC validity**)

1. Environmental Clearance (EC) to the above proposal was accorded by MOEF vide letter no. J-11011/227/2007-IA II (I) dated 12.6.2008. The Project Proponent (PP) vide letter dated 12.4.2013 along with the updated Form I requested MOEF for extension of validity of EC. PP made a presentation before the Committee.

2. As per the EC, following are the proposed product details:-

Unit	Capacity	Product	Production (TPA)
Existing Units :			
MBF	1 x 215 m ²	Hot metal	1,80,000
Sinter Plant	2 x 25 m ²	Sinter	2,50,000
Pig Casting Machine	600 TPD	Pig Iron	6,00,000

Proposed Units :

MBF	1 x 320 m ²	Hot metal	3,00,000
Sinter Plant	70 m ²	Sinter	8,40,000
DRI Kilns	10 x 100 TPD, 3x350 TPD	Sponge Iron	6,00,000
SMS	4x40T EAF & LF	Steel Billet	5,00,000
Oxygen Plant	60 TPD	Oxygen	-
Lime Calcination Plant	1200 TPD	Calcined lime	-

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

- Out of 6 proposed units as referred above, PP commissioned 2 major units. Construction of remaining units was delayed due to Maoist problem in this Jangal Mahal area of West Bengal and poor market sentiments.

4. After detailed deliberations, the Committee recommended for the extension of validity of EC by a period of five years with effect from 11.6.2013 subject to environmental safeguards.

21.6.6 Integrated Steel Plant (2.0 MTPA), Cement Plant.(1.4 MTPA) and Captive Power Plant (230 MW) of **M/s B.M.M Ispat Ltd** at Village Danapur, Taluk Hospet, District Bellary, Karnataka (**regarding amendment in EC dated 18.5.2010 in respect of production capacities – Letter dated 23.06.2014**)

The proposal was considered in the Meetings of EAC held in May 2013 and on 23rd-24th June 2014, wherein the EAC after deliberations had sought the following specific details with respect to the following:

- Extent of changes in pollution load due to the proposed changes in configuration.
- Changes in input characteristics of the products
- Changes in effluents
- Solid waste generation.
- Fuel Consumption

The Committee also desired to know the status of implementation of the present project for which EC was granted on 18.05.2010 for further consideration of the matter. A response was received vide PP's letter dated 23.06.2014, which was considered. PP made a presentation on the following:

(A) Extent of changes in pollution load due to the proposed changes in configuration.

S.N.	Parameter	As per EC approval dated 18.05.2010	After configuration		Remarks
			As per presentation in May 2013	As per Presentaion in June 2014	
AIR EMISSIONS					
1.	PM	483.6kg/h	443kg/h	443kg/h	Reduction in emission load from EC approval
2.	SO ₂	1111kg/h	988kg/h	988kg/h	
3.	NO _x	552.34kg/h	432kg/h	432kg/h	
EFFLUENTS					
4.	Effluents	600m ³ /h	262m ³ /h	324m ³ /h	Reduction in total effluents discharged

(B) The details of feed (input) characteristics:

S.N.	Parameter	As per EC approval dated 18.05.2010	After configuration	As per presentation dated 23 rd June 2014	Remarks
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1.	Feed Material to BF	70% Sinter, 12% Pellet, 18% Ore	70% Sinter, 12% Pellet, 18% Ore	80% Sinter, 12% pellet, 8% ore	Utilization of more metturgical waste generated in the Plant
2.	Energy Balance	With non-recovery coke oven, requirement of LSHS, furnace oil for RHF, kilns, pellet plant	With recovery coke oven, coke oven gas together with BF gas replaces the fuel requirements in RHF, kiln	In addition, producer gas plant supplements fuel oil as & when reqd. in pellet	-
3.	Power generation	230MW	230MW	230MW	Fuel non envisaged and dolocahr (generated as waste from DRI kiln)
4.	Land	1429ha	1143.13ha	1143.13ha	Reduction in avilablity of land
5.	Foot prints	236ha	222.2ha	222.2ha	Reduction because of reconfiguration of coke oven & rolling Mill
6.	Water	3881m3/h	3413m3/h	3414m3/h	Recycling of water by adoption of appropriate technologies.

(C) Details of Effluent Characteristics and Quantum of Discharge

S.N.	Unit	As per EC approval dated 18.05.2010	Present water req.	Type of Use	Type of wastewater discharge	Anticipated quality of wastewater generation	Effluent (m3/h)	
							Earlier generation	Present Generation
1.	Rolling Mill	833	430	Indirect cooling of rotating equipment	Blow down from water recirculation circuit	Mainly SS (discharge)	115	7
2.	Coke oven and by-product plant)	133	250	Used for cooling/separation of by-products	Effluent from coke oven by-product plant treated in BOD Plant	Oil & Grease, ammonia, cyanides, thiocyanates & phenols (partly used in green belt dev. and partly recycled for dust suppression)	13	75m3/h will be treated in BOD plant for reuse
3.	Power Plant	1150	90	Cooling	Blow down	Mainly SS	320	24
4.	Other Units	1765	2644	-	-	-	152	154
TOTAL		3881	3414				600	323

(D) Details of Solid Waste Disposal

S.N.	Description of Units	As per granted EC on 18.05.2010	After Reconfiguration		Remarks (probable reuse)
			As per presentation in May 2013 to EAC	As per today's presentation	
Coke Oven					
1.	Coke Breeze	432 TPD	465	465	In coke oven/Sinter Plant
2.	Dust	8 TPD	31	31	Power Plant/Coke Oven
Power Plant					
3.	Ash-Flyash	316	50tph Boiler -543	50tph Boiler -543	Cement/brick making
4.	Bottom Ash	72	Clinker -210	Clinker -210	Road construction
5.	Flyash & Clinker	-	74	74	Cemnt & Brick amking

Final Mill	Product-Rolling				
6.	Scrap	211	103	103	Within Steel Plant
7.	Scale & Muck	211	8.5	8.5	Sinter Plant
8.	Oil & Grease	0.3	0.3	0.3	Sold to authorised vendor
9.	Refractories	200 (T/yr)	200 T/Y	200T/Y	Landfill

(E) **Fuel Requirement**

S.N.	Description	As per EC granted on 18.05.2010	As per presentation dated 13.05.2013	As per presentation dated 23.06.2014	Remarks
1.	Pellet Plant	0.048 MTPA No coking coal	0.048 MTPA No coking coal	0.041 MTPA No coking coal	
2.	DRI Plant	0.48 MTPA Non-coking	0.48 MTPA Non-coking	0.48 MTPA Non-coking	No change
3.	Sinter Plant	0.14 MTPA coke breeze	0.19 MTPA coke breeze	MTPA coke breeze	
4.	Blast Plant	BF gas	BF gas + Co gas	BF gas + Co gas	Co Gas available from recovery coke batteries
5.	Rolling Mill	60,000 KL/Y Low Sulphur + Heavy stock oil (LSHS)	LSHS oil is replaced by mix of Co+ BF Gas	LSHS oil is replaced by mix of Co+ BF Gas	
6.	Calcium Units	30KL/Y LSHS oil	LSHS is replaced by mix of Co & BF Gas	LSHS is replaced by mix of Co & BF gas	
7.	Power Plant	Non-coking coal for 140 MW 0.28 MT/Y	0.28 MT/Y Non-coking coal + in-house generated dolochar for 170MW	0.29 MT/Y Non-coking coal + in-house generated dolochar for 170MW	Including requirements for 50T/h boiler

It was stated that the change in configuration is being sought as there is good market for Bars & sections than flat products. The change to recovery-type coke oven, meets the energy requirement of downstream facilities for an Integrated Steel Plant in a more economical manner. There is a market for coke oven by-products. The proposed changes are:

- Rolling Mills: In place of HR and wire rod mill, Bar and section Mills are envisaged.
- Coke oven: 0.8 MTPA to 1MTPA (from non-recovery to Recovery type)
- Sinter Plant: from 2.5 MTPA to 3MTPA
- Blast Furnace from 1.70MTPA to 1.80MTPA
- Steel Making: EAF & BOF (2.30 MTPA) to EAF (2.40 MTPA)
- The proposed downstream changes are:
- CCM: 2.2 MTPA to 2.3 MTPA of which Billet caster: 1.1 to 1.17 MTPA, Slab caster: 1.1 to Bloom-cum-beam caster: 1.16 MTPA, Calcining Plant: 1080 to 1400 TPD
- Pellet Plant fuel changed from FO firing to coal gas firing.

Power Plant capacity though remains unchanged (230 MW), the configuration will change as given below:

- 2x70MW = 140 MW (CFBC) coal based power plant.
- 1x30MW FBC Boiler
- Waste Heat Recovery Boilers will generate about 40MW as against 90 MW envisaged earlier.
- 8MW will be generated from BF TRT.
- 12MW will be generated from CDQ
- One additional coal fired boiler (50TPH) being planned to meet the process steam requirement of blast furnace, vacuum degasifier and oxygen plant.

The PP informed that they have commissioned the following units of the ISP:

- Beneficiation Plant to feed material to 1.2 MTPA Pellet Plant
- 1.2MTPA Pellet plant

2 DRI Kilns
2x70MW Power Plant with ACC based on coal fired CFBC Boiler
Associated auxillary facilities to make these untis functional.

A total of Rs 2993 crores have been invested as of June 2014.

The Committee after detailed deliberations, noted that the there is a change in configuration in a number of units of the Integrated Steel Plant and several new sections/units are also being introduced in the ISP for which appraisal of their impacts have not been carried out. The proposed amendment is being sought after 4 years, during which the environmental profile of the area would have presumably changed. After deliberations, the Committee decided that an EIA-EMP Report would be required to assess the impacts of the changes proposed and cannot be introduced in the EC letter as an amendment. The Committee however noted that there is no change in land requirement for the aforesaid project and the water requirement would reduce with appropriate recycling measures. The EAC requested that a Form-I be submitted providing the aforesaid details and as described in the minutes of the EAC meeting of June 2014. The EAC prescribed the following specific TORs in addition to the generic TOR enclosed at **Annexure I (with the exception of P.H.) read with additional TORs at Annexure-2** for undertaking detailed EIA-EMP study:

- 1 Assessing the impacts in terms og changes in plant and process configuration
2. One season baseline environmental status as per the generic TOR.

The aforesaid TORs would be granted upon submission of Form-I and PFR, however as the proposal has already been considered, the application for TOR on the aforesaid changes will nto require to be considered by EAC.

The Committee further decided that no amendment to the EC dated 18.05.2010 would be considered either for expansion of the aforesaid units or for reintroduction of the dropped units, which have been deleted by the PP in the revised proposal and any further changes/modifications/expansion to the project would require obtaining fresh TORs and an EC afresh as per provisons of the EIA Notification 2006.

21.6.7 Proposed 1.5 MTPA Clinker Grinding Unit of **M/s Modern Building Material Pvt. Ltd.** at Melamaruthur Village, Ottapidarm Taluk, Tuticorin District, Tamil Nadu Distt. Tuticorin, T.N. **(Request for amendment of TOR)**

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

21.6.8 Expansion of Sponge Iron Plant (1,20,000 TPA) by Installation of Pig Iron Plant (1,81, 500 TPA), Induction Furnace (Steel Billets, 2,50, 000 TPA), and CPP (WHRB 10 MW & AFBC, 22 MW) of **M/s Shri Ganesh Metalliks** ai village Chadrihaiharpur, Kuarmunda, Dist. Sundergarg, Orissa **(Amendment sought to EC dated 03.06.2009 for change in configuration)**

1. Environmental Clearance (EC) to the above proposal was accorded by MOEF vide letter no. J-11011/766/2007-IA II (I) dated 3.6.2009. The Project Proponent (PP) vide letter dated 23.1.2014 sought for the amendment in the EC dated 3.6.2009. PP made a presentation before the Committee.

2. As per the EC, following are the proposed product details:

Mini Blast Furnace (250 cum)	181500 TPA of Pig Iron
Induction Furnaces (3 x 8 T + 4 x 10 T)	2,60,000 liquid steel (LS)
Ladle furnace (2 x 20 T)	Refining of LS
Billet caster (2 x 3 strands)	Rated capacity of 2,50,000 TPA
Captive Power Plant	32 MW
1. WHRB	10 MW
2. AFBC	22 MW

3. PP proposed to change the configuration of Induction Furnace from 3x8 T and 4x10 T to 2x15 T and 2x17 T keeping the total capacity unchanged.

4. After detailed deliberations, the Committee recommended for the amendment in the EC dated 3.6.2009 for changes in configuration of the induction furnace as mentioned above subject to the environmental safeguards.

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

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

21.6.10 Expansion of cement plant (1.8 MTPA to 2.4 MTPA) of **M/s Century Cement** at P.O.Baikunth, District Raipur, Chhattisgarh (**regarding amendment in EC for including clinker capacity**)

1. Environmental Clearance (EC) to the above proposal was accorded by MOEF vide letter no. J-11011/404/2007-IA II (I) dated 28.9.2007. The Project Proponent (PP) vide letter dated 7.5.2014 sought for the amendment in the EC dated 28.9.2007 for mentioning the clinker production i.e. 16.7 LTPA which was mentioned in the EIA-EMP report submitted at the time of EC appraisal. PP made a presentation before the Committee.

2. It was submitted by the PP that as per the chapter 2.5 of REIA report under table 2.1, the clinker production capacity is mentioned as 16.7 lac tonnes. In the EC accorded on 28.9.2007, the clinker production details have not been mentioned. The mentioning of clinker production capacity is a pre-requisite for the supply of coal by SECL.

3. After detailed deliberations, the Committee recommended for the amendment in the EC dated 28.9.2007 for mentioning the clinker production i.e. 16.7 LTPA subject to the environmental safeguards.

21.6.11 Expansion of Sponge Iron Plant into Integrated Mini Steel plant (0.21 MTPA) along with WHRB (14 MW) and Captive Power plant (25 MW) at Village Chaliyama, Tehsil Rajnagar, District Saraikela Kharsawan, West Singhbhum, Jharkhand by **M/s Rungta Mines Limited – Extension of Validity of Environment Clearance.**

1. The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 14th meeting held during 19-20th December 2013. As per the minutes of the meeting, the Committee sought the following point-wise additional information for further consideration of the proposal:

- i. Seeking the reasons for non-completion of certain manufacturing activities;
- ii. Expected time frame by which the balance facilities would be completed;
- iii. Addressing the issues of non compliances as reported by the Regional Office of this Ministry at Bhubaneswar;
- iv. Expected data of financial closure

2. PP vide letter dated 12.2.2014 furnished the aforesaid additional information to the Ministry. RO-Bhubaneswar sent the compliance report vide letter no.103-419/13/EPE dated 28.1.2014. The proposal was placed before the EAC for reconsideration. PP made a presentation before the Committee.

3. The Committee noted that as per the report furnished by the PP and RO-Bhubaneswar, the PP has taken necessary actions to comply with the findings of the Regional Office.

4. After detailed deliberations, the Committee recommended for the extension of validity of EC by a period of five years with effect from 3.11.2013 subject to environmental safeguards.

21.6.12 Installation of Reheating Furnace for the steel processing unit of **M/s Prime Gold – SAIL JVC Limited** located at Billowa, Dabra, District Gwalior, Madhya Pradesh (**Applicability of EIA Notification**)

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

21.6.13 Change of fuel (use of Pet Coke instead of coal) at Galgal Cement Works (Unit-II) of **M/s ACC Ltd** at P.O. Barmana, Dist. Bilaspur, H.P. (Amendment to EC dated 27.12.2005)

1. Environmental Clearance (EC) to the above proposal was accorded by MOEF vide letter no. J-11011/308/2005-IA II (I) dated 27.12.2005. The Project Proponent (PP) vide letter dated 4.6.2014 sought for the amendment in the EC dated 27.12.2005 for use of Pet Coke instead of coal. PP made a presentation before the Committee.

2. The amendment sought by the PP is as below:

PP proposed to use pet coke in Galgal unit-II as much as possible in place of coal. Further, a Pet coke Mill of 20TPH capacity with Bag Filter will be installed. Total project cost is Rs.65 crores. Rs. 175 lakhs is earmarked towards the environmental pollution control measures.

The raw material requirement due to the aforesaid amendment is as below:

Raw Material	As per EC obtained	Change due to Amendment in the EC
Limestone	7260	No Change in the limestone requirement as there is no increment in the cement / clinker production.
Coal for Clinker	910	There will be substantial reduction in coal quantity in proportionate due to use of high calorific pet Coke.
Pet coke	Nil	Pet coke would be used to the maximum extent possible in place of coal depending upon it's availability. Approx. Max quantity of pet coke usage would be 525 TPD.
Gypsum	510	No Change. Quantity remains same as per the EC.
Fly ash, TPD	1900	Positive impact. Fly ash absorption would substantially improve from 1900 TPD to 2800 TPD (approx).
Land requirement (unit I&II), ha	29.18 HA Total: 287.69	No Change.
Manpower requirement	766	No Change.
Water Requirement (m ³ /day)	978	No Change.
Power requirement (MVA)	30.4	Overall power requirement of the plant will remains within approved capacity.

3. The emission levels due to the proposed amendment is as below:-

S.No	Parameter	EC Obtained	EC Amendment Requested
		With 100 % Coal	With 100 % Petcoke
1	Particulate emission (50 mg/Nm ³)	24.84	24.55
2	Sulphur Di-oxide emission (15 mg/Nm ³)	7.45	7.33
3	Nox emission (900 mg/Nm ³)	447.1	442.51
4	Heavy Metals - Vanadium as V @ 1 ug/Nm ³	0.000468	0.000468
5	Volatile Organic Carbon/Total Hydro Carbon as C @ 1.73 mg C/m ³	1.206	1.188

4. After detailed deliberations, the Committee agreed to the aforesaid request for change of fuel. The Committee however noted that as per the EC accorded on 27.12.2005 the existing and the proposed project site is surrounded by the wild life sanctuaries viz. Govind Sagar Wild Life sanctuary, Darlaghat (Piplughat) Wild Life Sanctuary, Maithan Wild Life Sanctuary and Bandi Wild Life Sanctuary. The Committee sought the following details from the PP for further processing of the issue:

- i. Map showing the distance between the project site and the wild life sanctuaries as referred above; and
- ii. Status of wild life clearance obtained for the existing unit

21.7 Consideration of TORs

21.7.1 Development of Offshore MB Platform and Infield Pipeline Project (WGS84 UTM Projection) of **M/s Panna-Mukta-Tapti Joint Venture** of M/s ONGC-RIL-BG Exploration and Production of India Ltd. (BGEPIIL), located in offshore area of West Coast in Arabian Sea near Mumbai (**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 Reference for the 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 Panna-Mukta-Tapti Joint Venture of M/s ONGC-RIL-BG Exploration and Production of India Ltd. (BGEPIIL) has proposed for Development of Offshore MB Platform and Infield Pipeline Project (WGS84 UTM Projection) in offshore area of West Coast in Arabian Sea near Mumbai. PP has made following justification for the proposed project:

- (i) Recovery of additional reserves from the Mukta field through drilling at MB.
- (ii) To bring MA wells back into production in a late life of this project is important from "Operability and Profit" point of view.
- (iii) Production from the proposed platform will not affect the production handling capacity at the main platform.

Following are the project configuration:

- (i) MB, a new nine slot normally unmanned installation approximately 25 km west of the Panna Processing Platform (PPA).
- (ii) 14" production pipeline and 5" lift gas pipe line linking MA to MB. (5.2 KM)
- (iii) 14" production pipeline and 5" lift gas pipeline linking MB to PPA (20.5 Km).
- (iv) Modifications on PPA platform including new launchers and receivers, piping and instrumentation.
- (v) Modifications on MA to allow production of MA fluids via MB.

(vi) Drilling of six production wells from MB.

During meeting, PP confirmed distance the project from the shore is more than 30 Km. Offshore development activity will include produce water, which will be treated onboard and excess discharge into sea. Residual water /synthetic based mud will be treated onboard and reused while the rejected solids will be collected washed and discharged as per MoEF guidelines. Rejected drilling mud drill cuttings shall be disposed off in the sea as they are inert washed, washings will be collected and recirculated for making drill mud composition, cuttings will be collected and brought to the onshore for disposal. Drill cuttings will be generated around 350 T per well. Spent lube will be collected, stored, transported through offshore support vessels (OSVs) to shore base and disposed as per the MoEF guidelines and in compliance to the Hazardous Waste (Handling & Management) Rules, 2008. Fire, blowout oil spill contingency plans will be developed before commencement of operations for all the risks envisaged in the drilling operations.

PP informed that MoEF vide letter no J-11011/26/96-IA II (I) dated 26.06.1996 has granted EC to M/s Enron OIL and Gas India Ltd for enhanced development at Tapi, Mukta/Panna Oil Fields. Further, MoEF vide letter no J-11011/155/2004-IA II (I) dated 27.12.2004 has granted EC to M/s B.G. Exploration and Production India Ltd. (BGEPIL) for expansion plan at Panna Offshore Oil and Gas field in Arabian Sea in West Coast. MoEF vide letter no J-11011/725/2007-IA II (I) dated 21.10.2008 has granted EC to M/s B.G. Exploration and Production India Ltd. (BGEPIL) for oil and gas exploration in Panna-Mukta and Tapti fields at SWP and PK location Arabian Sea West Coast of India.

The Committee recommended the following additional TORs in addition to Generic TOR at Annexure-9

- i) Risk assessment study and safety issues to be undertaken.
- ii) Certified Compliance report to existing environmental conditions from the Regional Office.
- iii) Cost of project to be incorporated.
- iv) Committee exempted the public hearing as project is located in offshore and it is beyond 12 nautical miles.

21.7.2 Proposal for Drilling two wells and setting up of EPS of **M/s Gujarat State Petroleum Corporation Ltd. (GSPC)** in CB-ONN-2002/03 sanand Miroli Block, Dist. Mehsana, Gujarat (**TOR**)

The project proponent gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) 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 Gujarat State Petroleum Corporation Ltd. (GSPC) has proposed fordrilling of two wells and setting up of EPS in CB-ONN-2002/03 sanandMiroli Block, Dist. Mehsana, Gujarat. In order to increase the commercial production of the block, GSPC is planning for carrying out below activities in the SanandMiroli block (Part A i.e. CB-ONN-2002/3):

- i) Drilling of two wells : Proposed 1 and Proposed 2
Subsequent on the basis of technical and commercial feasibility, (a) Setting up of EPS either at proposed drilling site or b) hook up them to SE # 3/SE#4 EPS.
- ii) Setting up of Early Production System at Well Site SE # 3/SE #4 with
a. Connection of well SE # 2 to SE # 3 /SE#4 EPS through underground 4 inch pipeline (270 m).
Total plot area will be 20599.30 m².
- iii) Setting up of Early Production System at well site SE # 8 with
a. Connection of well SE # 8 A1 to SE # 8 EPS through underground 4- inch pipeline (1062 m).
Total plot area will be 20939.10 m².
- iv) Setting up of Early production Syystem at Well site SE # 10.
Total plot area will be 20939.10 m².

ii

EPS location SE # 8 falls within 10 km of Thol Bird Sanctuary. DG sets (2x 662.5 KVA) will be installed during drilling period. During production period, DG set (125 KVA) will be installed. Flare stack will be installed during production

period. Water consumption during drilling will be 40m³/day while water consumption during production phase will be 9m³/day. During drilling, wastewater generation will be 12.5m³/day. During production wastewater generation will be varied from 26m³/day to 71m³/day, which is mostly as produced water. During drilling, effluent will be collected in HDPE line pit at site for evaporation. Wastewater from production activities will be sent to authorised Common Effluent Treatment Facility. Drill cuttings will be sent to TSDF facility.

The Committee recommended the following additional TORs in addition to Generic TORs at Annexure-6:

- i) Cost of project to be incorporated.
- ii) Produced water management plan to be provided.
- iii) DG set having acoustic enclosure alongwith proper stack height to be used.
- iv) PH

21.7.3 Proposal for modification of existing Tarapur EPS and connection of additional wells to the same EPS to enhance the production of M/s Gujarat State Petroleum Corporation Ltd. (GSPC) in CB-ON-2 Tarapur Block, Dist. Anand, Gujarat (TOR)

The project proponent gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) 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 Gujarat State Petroleum Corporation Ltd. (GSPC) has proposed for modification of existing Tarapur EPS and connection of additional wells to the same EPS to enhance the production in CB-ON-2 Village Milarampura, Tarapur Block, District Anand, Gujarat. Existing plot area is 24618.08m². Connection of additional 12 wells to the EPS, the expected to increase the production is as given below:

Sl. No.	Detail	Existing (m ³ /day)	Additional (m ³ /day)	Total (m ³ /day)
1	Crude Oil	10	202	212
2	Natural Gas	10800	59550	70350

They informed that Environmental Clearance was obtained from drilling of 9 wells and setting up of EPS in Tarapur Block vide letter no J-11011/216/2009 IA II (I) dated 16.06.2009. After modification wells connected to EPS will be 15 nos. Separators (4 nos.) with liquid handling capacity (1500 BOPD & Gas handling capacity 2000 m³/hr.) will be installed. Storage tanks will be 9 Nos. of 45 m³ etc. DG set (63.5 KVA) will be used only in case power failure. Water consumption will be increased from 1 m³/day to 9.0 m³/day. Produced water generation will be increased from 0.5 m³/day to 50 m³/day after modification. Produced water generated will be collected in wastewater pit (200 m³) will either disposed through mobile ETP or sent through approved water tankers to authorized EPT.

Committee recommended the following additional TOR in addition to Generic TOR at Annexure-6:

- i) Cost of project to be incorporated.
- ii) Certified compliance report to the existing environmental conditions.
- iii) TOR + PH

21.7.4 Proposed DahejNagothane Ethane Pipeline (485 km) Project (1.25 MMTPA) of M/s Reliance Gas Pipeline Ltd. (wholly owned subsidiary of M/s Reliance Industries Ltd.) through Gujarat-Maharashtra (TOR)

The project proponent gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) 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. (wholly owned subsidiary of M/s Reliance Industries Ltd.) has proposed for Dahej Nagothane Ethane Pipeline (485 km) Project (1.25 MMTPA) through Gujarat-Maharashtra. Reliance Industries Limited (RIL) operates Gas Crackers at its petrochemical complexes located in western India and plans to use Ethane as feedstock. The liquid Ethane from RIL's Dahej Manufacturing Division (DMD) is proposed to be transported to RIL Nagothane Manufacturing Division (NMD) in Maharashtra and RIL-Hazira Manufacturing Division (HMD) in Gujarat, by laying a dedicated pipeline, hereinafter named as Dahej Nagothane Ethane Pipeline (DNEPL). The pipeline is designed to transport upto 1.25 MMTPA of Ethane. Except for approximately 87 Km, the entire pipeline is proposed to be laid in the already acquired Right to User (ROU) of RGTIL's. For the new 87 Km, 18 m wide ROU will be acquired under the provisions of Petroleum and Minerals, Pipelines (Acquisition of Right of User in Land) Act, 1962. One pumping station is proposed to be located at RIL DMD. Preliminary Coordinates of major facilities are given below:

S.N.	Particulars	Longitude	Latitude
1	Dispatch Station (DMD)	72°34'20.5" E	21°41'24.4" N
2	Delivery Station (NMD Termination Pint)	72°06'32.1" E	18°33'59.8" N
3	Delivery Station (HMD Termination Point)	72°40'51.0" E	21°10'5.0" N

Permanent land requirement is 29 Ha [for Mainline Valve Stations (MLVs) and Intermediate Pigging Stations (IPSs)]. Pump Station and M&R Stations will be located within existing plants. Total permanent land requirement is only 2.6 % of the total RoU for the project i.e. approximately 1100 Ha. Cost of project is Rs 1,428 crores. The pipeline traverses 9 water bodies under tidal influence. Horizontal Directional Drilling (HDD) or an equivalent method shall be used for laying the pipeline across these water bodies. Forest land for re-diversion is 35.295 ha. Forest land for fresh diversion is 7.05 ha. Forest clearance is involved in this project. Clearance from Competent Authority for project passing through Dahanu ESA is being applied. In addition, a Karnala Bird sanctuary also exists. The project is proposed to avoid all the villages falling in Western Ghats. The proposed pipeline will be crossing six rivers in Gujarat and two (02) rivers in Maharashtra which are under tidal influence. CRZ delineation survey has been completed. Total water requirement during construction phase will be 437m³/day. During operation phase, water requirement will be 13m³/day.

The Committee recommended the following TORs for preparation of EIA-EMP report along with Public hearing:

1. Justification of the project
2. Route map indicating project location
3. Details of land to be acquired. Details of projects vis-à-vis ESAs and approvals thereof.
4. Project location along with map of 1 km area (500 meters on either side of the pipeline from centerline) and site details providing various industries, surface water bodies, forests etc.
5. Analysis of alternative sites and Technology.
6. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
7. Recommendation of SCZMA /CRZ clearance for the proposed pipeline.
8. Present land use based on satellite imagery for the study area of 10 km radius.
9. Details of applications filed for forest clearance to be obtained for the project for the forest land involved in the project along with details of the compensatory afforestation.
10. Process Description along with Process Flow Diagram.
11. Details of water consumption and source of water supply, waste water generation, treatment and effluent disposal.
12. Detailed solid & Hazardous waste generation, collection, segregation, its recycling and reuse, treatment and disposal.
13. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
14. Site-specific micro-meteorological data for temperature, relative humidity, hourly wind speed and direction and rainfall for one season at one location.

15. At total of 30 locations, ambient air quality monitoring within the study area of 500 m along the pipeline route and around the pumping station and delivery station for PM10, SO₂, NO_x, CO, HC, VOC for one season (Non Monsoon) taking into account the pre-dominant wind direction at the representative locations covering population zone and sensitive receptors including reserved forests.
16. Determination of atmospheric inversion level and assessment of ground level concentration of pollutants. Air quality modelling for proposed project.
17. At about 10 locations, water monitoring will be conducted including surface & ground water for one season (Non Monsoon)
18. At 15 locations, Soil sample analysis within the study area for one season (Non Monsoon).
19. At 30 locations, noise Monitoring will be taken up for one season (Non Monsoon)
20. Demography & socio-economics of the study area.
21. Ecological features (terrestrial & Aquatic) of the study area for one season (Non Monsoon)
22. Assessment of impact on air, water, soil, solid/hazardous waste and noise levels.
23. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
24. Details of proposed preventive measures for leakages and accident.
25. Risk assessment including Hazard identification, Consequence Analysis, Risk Assessment and preparation of Disaster Management Plan as per Regulations.
26. Corrosion Management of Pipeline
27. Details of proper restoration of land after laying the pipelines.
28. Details of proposed Occupational Health Surveillance program for the employees and other labour
29. Detailed Environment management Plan (EMP) with specific reference to Energy conservation and natural resource conservation, details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure will be provided.
30. Public hearing to be conducted in 6 districts through which the pipeline passes. Pointwise comments/reply to the issues raised during Public Hearing / Public Consultation

21.7.5 Proposal for Expansion project in the existing LPG Import – Export Terminal with existing storage capacity 31500MT of **M/s Indian Oil Petronas** at Village Kasberia, Mouza Bardhanyaghata, District East Midnapur, West Bengal (**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 LPG storage capacity plants are listed at S.N. 6(b) under Category 'B' should have been appraised by the SEIAA/SEAC at the State but has been appraised at the Central level due to location of CPA (Haldia) at 3 Km.

M/s Indian Oil Petronas has proposed for expansion project in the existing LPG Import – Export Terminal with existing storage capacity 31500MT at Village Kasberia, Mouza Bardhanyaghata, District East Midnapur, West Bengal. LPG terminal is engaged primarily in receipt, storage and filling of tank trucks for distribution of essential petroleum products in the region. There is no reserve forest, protected forest, national parks and sanctuary within the 10 km of the project site. The total land is leased out by Haldia Port Trust and is under possession of IPPL. All infrastructure facilities of the existing terminal will be used for the project. The LPG terminal mainly has facilities for storage & handling of LPG. The process involved receiving of products through tanker, product storage is done in refrigerated state in the storage tanks and mounded bullets; product heated to 15°C prior to blending, mercaptan dosing and transfer to loading station. Dispatch of products through tank lorries to various industries and LPG bottling plant. The proposed project is an expansion project in the existing LPG Import /Export Terminal with the existing storage capacity 31500 MT. After installation of 3 bullet of aggregate capacity of 5400 MT total storage capacity will increase.

No additional land required for the proposed expansion. The existing terminal has enough space to accommodate the expansion. The existing water requirement is 150 m³/day. The water requirement is met through water supply

of Haldia Development Authority. No additional water requirement is envisaged for the proposed expansion. For the existing project power is received from WBSEDCL. The power requirement will remain the same after the proposed expansion. LPG terminal is engaged primarily in receipt, storage and filling of tank trucks for distribution of essential petroleum products in the region. Stack height as per CPCB requirement will be provided to DG set. Wastewater management philosophy is based on "Minimum Discharge" concept. Oily effluent is diverted to Oil Water Separator (OWS). Treated wastewater from OWS after testing is used for green development. Separate storm water drainage system is provided at the facility. Used oil, grease and empty drum will be disposed off through register vendors as per Hazardous Waste Rules. Acoustic enclosure will be provided to the noise generating equipment. MoEF vide letter no J-11011/24/2007 IA II (I) dated 22nd August, 2001 has issued environment clearance to M/s IOCL for LNG Import/Export Facilities.

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

1. Executive summary of the project.
2. Project Description and Project Benefits.
3. Land use details of the site based on satellite imagery.
4. Process details and design details of all the tanks with animated model.
5. Proposal for safety buffer zone (250 m) around the proposed site with map.
6. A list of industries within 10 km radius of the project.
7. List of villages and population within 5 Km.
8. Location of national parks and wild life sanctuary/reserve forests within 10 km radius.
9. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding Reserve forests, if any.
10. A copy of 'Environment Clearance'/'Consent to Operate' accorded by the Ministry/ State Board for the existing plant along with point-wise compliance report.
11. Layout plan with provision of trucks parking area. Earmarking of area for parking of Lorries at a remote location to avoid congestion.
12. Details of the storage as well as filled & empty LPG cylinder and technical specifications with safety aspects & standards
13. Land use along with maps & cropping pattern, vegetation, ecology, flora & fauna
14. Demography & socio-economics of the area.
15. Baseline data collection for air, water and soil for:
 - i. Ambient air quality monitoring for PM₁₀, SO₂ and NO_x.
 - ii. Background levels of hydrocarbons (methane & non-methane HC) and VOCs.
 - iii. Soil sample analysis.
 - iv. Base line underground and surface water quality in the vicinity of project.
 - v. Climatology & meteorology including wind speed, wind direction, temperature, rainfall etc.
 - vi. Measurement of noise levels
16. Ambient air quality monitoring for PM₁₀, SO₂ and NO_x.
17. Background levels of hydrocarbons (methane & non-methane HC) and VOCs.
18. Soil sample analysis.
19. Base line underground and surface water quality in the vicinity of project.
20. Climatology & meteorology including wind speed, wind direction, temperature, rainfall etc.
21. Measurement of noise levels
22. Details of water consumption and source of water supply, waste water generation, treatment and utilization of treated water generated from the facilities and effluent disposal and measures for release of effluent in case of fire.
23. Storm water system should have provision to prevent any unintended oil in the drain to flow out with storm water. Details of oil water separator.
24. Detailed solid waste generation, collection, segregation, its recycling and reuse, treatment and disposal.
25. Assessment of impact on air, water, soil, solid/hazardous waste and noise levels.
26. Monitoring and measures to be taken to control mercapton odour.
27. Details of proposed preventive measures for leakages and accident.
28. Adequate width of approach road to avoid congestion and to have safe exit in emergencies.

29. Type of seismic zone.
30. Environmental Management Plan
31. Risk Assessment & Disaster Management Plan
 1. Identification of hazards
 2. Consequence Analysis
 3. Preventive measures.
 4. Risk assessment should also include leakages during storage, handling, transportation and proposed measures for risk reduction.
 5. Fire and explosion hazard.
 6. Risk assessment as per OISD 144.
32. Interlocking shut down device (ISD) should be connected to automatic shutdown & auto operation fire hydrant network.
33. Action plan for fire fighting facility as per OISD 117 norms.
34. Details of proposed Occupational Health Surveillance program for the employees and other labour.
35. Environmental Monitoring programme.
36. Plan for either removal of existing storage or making them mounded after the new storages are installed/commissioning.
37. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
38. A tabular chart indicating point-wise compliance of the TOR.
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.

21.7.6 Sugar Unit (5000 TCD) along with CPP (25 MW) of **M/s Bhima Sahakari Karkhana Ltd.** at Plot No. 207 & 209, Village Takali-Sikander, Tehsil Mohol, District Solapur, Maharashtra (TOR)

M/s Bhima Sahakari Karkhana Ltd. has proposed for setting up of Sugar Unit (5000 TCD) along with CPP (25 MW) at Plot No. 207 & 209, Village Takali-Sikander, Tehsil Mohol, District Solapur, Maharashtra. As per EIA Notification, 2006, sugar industry (> 5000 TCD) is a category 'B' project falls under 5 (j) of the schedule. As per amendment notification dated 25.06.2014, the TPP based on biomass fuel \geq 15 MW capacity is categorized as category 'B' project. Therefore, proposal shall be appraised by SEIAA, Maharashtra. The Committee recommended transfer the above said proposal to SEIAA, Maharashtra.

21.7.7 New Molasses based distillery of 30 KLPD of **M/s Udagiri Sugar and Power Ltd.** at Sangli, Maharashtra (TOR)

The proposal was considered in the EAC meeting held in June 2014.

21.7.8 Expansion of grain/molasses based Distillery (from 120 KLPD to 140 KLPD) of **M/s Radico NV Distilleries Maharashtra Ltd.**, at Plot No. D 192 – 195, Five Star Industrial Area (MIDC), Shendra, Tehsil and District Aurangabad, Maharashtra (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 Radico NV Distilleries Maharashtra Ltd. has proposed for expansion of grain/molasses based Distillery (from 120 KLPD to 140 KLPD) at Plot No. D 192 – 195, Five Star Industrial Area (MIDC), Shendra, Tehsil and District Aurangabad, Maharashtra. PP has obtained environment clearance vide MoEF letter no J-11011/441/2006 IA II (I) dated 8th June, 2007 for setting up of 120 KLPD distiller. Plot area is 93 acres of which greenbelt will be developed

in 30.7 acres. It is reported that no national park/ wildlife sanctuary/ biosphere reserves are located within 10 Km distance. Few patches of Reserve forests existing with 10 km distance. Sukhna River and Dudhana River are flowing with 10 Km distance. Cost of expansion project is rs. 15 Crore. Rs. 3.5 Crore and Rs. 35 Lakhs per annum are earmarked towards capital cost and recurring cost per annum for pollution control measures. Distillery will be operated for 300 days. Fresh water requirement for molasses based distillery will be increased from 1200 m³/day to 1230 m³/day after expansion. Fresh water requirement for grain based distillery will be increased from 1190 m³/day to 1221 m³/day after expansion. Spent wash after anaerobic treatment in the bio-methanation plant is treated in MEE. After evaporation the net effluent generation will be 193m³/day. The condensate from MEE is further treated in process condensate treatment plant and reused in the process. RO is kept as standby treatment facility. Total 16 acres bio-composting yard consisting of 14 acres open composting and two acres of covered composting yard already exists. PP informed that:

- i) The capacity expansion proposal is about 17 % only from 120 KLPD operation to 140 KLPD by adopting improved fermentation.
- ii) Process improvement in fermentation to achieve higher alcohol concentration and higher efficiency.
- iii) Installation of additional re-boiler for reducing effective volume from 10 L/L to 8.5 L/L.
- iv) No increase in steam consumption. Therefore no additional boiler and fuel consumption.
- v) The project is based on “Zero Effluent Discharge”.
- vi) No additional land is required for the proposed expansion project as the proposed expansion will be done within the existing premises.
- vii) Fresh water requirement for per KL of alcohol produced has been reduced to about 9 KL/KL.

The Committee recommended the following additional TORs in addition to Generic TOR at Annexure-7:

- (i) One month data of groundwater sample in and around the composting yard.
- (ii) Water consumption in the various processes
- (iii) Water balance – grain based and Molalsses based.
- (iv) Treatment options, processes for garin based and molasses based.
- v) Details of existing project – composting yard, env. measures such as lining of lagoon, etc.
- vi) Certified compliance report

The Committee exempted the public hearing as per 7 (ii) of EIA Notification, 2006 in view of what is stated above. Public hearing for existing unit was held on 7.03.2007.

21.7.9 Expansion of Sugar Unit (from 3500 TCD to 5500 TCD), Molasses based Distillery (30 KLPD to 45 KLPD) and Cogeneration Power Plant (from 14 MW to 30 MW) of **M/s Mula SSK Ltd.**, at Post Sonai, TalukaNewasa, District Ahmednagar, Maharashtra (TOR)

The project authorities and their consultant (Ultra-Tech) 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 Mula SSK Ltd. has proposed for expansion of Sugar Unit (from 3500 TCD to 5500 TCD), Molasses based Distillery (30 KLPD to 45 KLPD) and Cogeneration Power Plant (from 14 MW to 30 MW) at Post Sonai, TalukaNewasa, District Ahmednagar, Maharashtra. Land in possession is 113 ha. Cost of project is Rs. 105 crores. It is reported that no national park/ wildlife sanctuary/ coral formation reserve is located within 10 km distance. River Mula is flowing at a distance of 17 Km. Fooling products will be manufactured:

S.N.	Unit	Existing	Additional	Total after Expansion
1	Distillery	30 KLD	15 KLD	45 KLD
2	Sugar	3500 TCD	2000 TCD	55000 TCD
3	Co-generation Power Plant	16	14	30 MW

Distillery will be operated for 270 days. Fresh water requirement will be 1074m³/day. Effluent generation from sugar and Cogen. plant will be 680m³/day and treated in ETP. Spent wash generation 345 m³/day and treated in bio-methanation plant followed by MEE. Concentrated spent wash will be bio-composted.

The Committee recommended the following additional TORs, in addition to Generic TOR at Annexure-7:

- i. Established in 1992. Copy of CTE to be provided.
- ii. PH
- iii. Certified report of CTO to be provided.

21.7.10 Expansion of Sugar Plant(from 4000 to 7000 TCD) and Installation of New Co-generation plant (28 MW) of **M/s Rajarambapu Patil Sahakari Sakhar Karkhana Ltd.** at Village Sakharale, Tehsil Walwa, DistrictSangali, Maharashtra **(TOR)**

The project authorities and their consultant (SD Engineering Services Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP report. All the Sugar Industries are listed at S.N. 1(d) under Category 'B' and appraised at the state level. However, molasses based distillery is located within the plant premises, which is listed at S.N. 5(g) (i) under category 'A' and appraised at Central level. Therefore, considering project in integrated in nature, the said proposal is treated as category 'A' project and appraised at Central Level.

M/s Rajarambapu Patil Sahakari Sakhar Karkhana Ltd. has proposed for expansion of Sugar Plant (from 4000 to 7000 TCD) and Installation of New Co-generation plant (28 MW) at Village Sakharale, Tehsil Walwa, DistrictSangali, Maharashtra. Existing sugar unit was established in 1970. Existing Distillery (75 KLPD) unit was established in 1980. Total plot area is 225 acres. Cost of project is Rs. 223.46 crores. It is reported that no national park/sanctuary is located within 10Km distance. Nearest river is River Krishna flowing at a distance of 3.25 Km. Plant will be operated for 160 days. Capacity of boiler is 140 TPH. Fuel will be used as bagasse. Fresh water requirement will be 1080 m³/day. Effluent generation will be 368m³/day and treated in ETP. Waste/residue containing oil will be reused in boiler as fuel. Sludge will be used as manure. Greenbelt will be developed in 70 acres land.

The Committee recommended the following additional TORs, in addition to Generic TOR at Annexure-7:

- i. Distillery established in 1980. Copy of CTE to be provided.
- ii. Cumulative impact of sugar, distillery and cogen will be assessed.
- iii. PH
- iv. Certified report of CTO to be provided.

21.7.11 Expansion of Sugar Plant (from 3500 to 6500 TCD), Molasses based Distillery Unit (45 KLPD to 90 KLPD)andInstallation of Cogeneration Power Plant (18 MW) of **M/s Daund Sugars Ltd.** at Village Alegaon, Tehsil Daund, District Pune, Maharashtra **(TOR)**

The project authorities and their consultant (Ultra- Tech) 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 distillery are listed at S.N. 5(g) (i) under category 'A' and appraised at Central level.

M/s Daund Sugars Ltd. has proposed for expansion of Sugar Plant (from 3500 to 6500 TCD), Molasses based Distillery Unit (45 KLPD to 90 KLPD) and Installation of Cogeneration Power Plant (18 MW) at Village Alegaon, Tehsil Daund, District Pune, Maharashtra. Land is possession is 61.91 ha. It is reported that no national park/ wild life sanctuary/ biosphere reserve within 10 Km distance. River Bhima is flowing at a distance of 3.5 Km. ESP along with adequate stack height will be provided to bagasse fired boiler (100 TPH + 1x 20 TPH + 1x 40 TPH)). Spentwash generation will be 700m³/day and evaporated in MEE. Concentrated spent wash will incinerated in incineration boiler. PP confirmed that entire spent wash treatment will be switch over to evaporation followed by incineration.

Total industrial water requirement is 1419 m³/day and water available from recycle is 781m³/day. Spent oil will be sent to authorized recyclers. Existing EC for the molasses based distillery (45 KLPD) was obtained vide MoEF letter no J-11011/249/2009-IA II (I) dated 20th November, 2009.

The Committee recommended the following additional TORs, in addition to Generic TOR at Annexure-7:

- i. PH
- ii. Certified report of CTO to be provided.

21.7.12 Sugar unit (5000 TCD) along with Cogen Power Plant (24 MW) and Distillery (45 KLPD) of **M/s Shri Ramgiri Sugars Ltd.** at Village Savargaon, Tehsil Tuljapur, District Osmanabad, Maharashtra by Ramgiri Sugar (TOR)

The proposal was already considered in 19th EAC (I) meeting held during 28th-30th May 2014 at Item No. 19.6.1.

31st JULY 2014

21.8 Consideration of EC cases

21.8.1 Bulk Drugs & Intermediate Unit (2431 TPA) and CPP (3 MW) of **M/s Covalent Laboratories** at Sy No. 14/4A & B, 18 to 24 at Village Maruvada, Mandal Ranasthalam, Dist. Srikakulam, A.P.(**EC**)

The project authorities and their consultant (KKB Envirocare Consultants Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 25th Meeting of the Reconstituted Expert Appraisal Committee (Industry) held during 28th-30th July, 2011 for preparation of EIA-EMP report. Tor validity was extended for one more year vide Letter no. J-11011/182/2011-IA II (I) dated 23rd May, 2011. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Covalent Laboratories Private Limited has proposed for setting up of Bulk Drugs & Intermediates Unit (2431 TPA) and Captive Power Plant (2x3 MW) at Sy. No. 14/4A&B, 18 to 24, at Village Maruvada, Mandal Ranasthalam, District Srikakulam, Andhra Pradesh. Total plot area is 19.22 ha. (47.5 acres) of which, greenbelt will developed in 6.59ha. Total cost of the project is Rs. 220 crores. Rs. 40 crores and Rs.20 crores are earmarked towards capital cost and recurring cost/annum for environmental protection measures. It is reported that no national parks/wildlife sanctuary is locate within 10 km distance. One reserve forest (RF) exists viz., Kumili Reserve Forest (8 Km). It is proposed to manufacture 24 out of 64 bulk drugs & their intermediates on campaign basis with a production capacity of 2431 TPA.

The following products will be manufactured:

S. N.	Product Name	Quantity (TPA)	Therapeutic Category
I. CEPHALOSPORINS			
1	CefditorenPivoxil	50.4	Antibiotic
2	CeptametPivoxil	10.2	
3	Cefoperazone Sodium	15.0	
4	CefcapenePivoxil	10.2	
5	Ceftiofur Hydrochloride	5.4	
6	Citicoline Sodium	5.4	
7	Ceftizoxime Sodium	5.4	
8	Piperacillin	40.2	
9	Tazobactam	30.0	
10	Cephalothin Sodium	40.2	
11	Cefoxitin Sodium	20.4	
12	CephaloniumSulfate	45.0	
13	Ceftibuten	20.4	

14	CefpodoximeProxetil	120.0	
15	Cefuroxime Axetil	240.0	
16	CefiximeTrihydrate	252.0	
17	Cefdinir	60.0	
18	Cefprozil Monohydrate	40.2	
19	CefepimeDihydrochloride Monohydrate	15.0	
20	Cefuroxime Sodium	36.0	
21	Cefazolin Sodium	15.0	
22	Aztreonam	10.2	
23	Cefotaxime Sodium	50.4	
24	Ceftriaxone Sodium	40.2	
25	CefpiromeSulfate	15.0	
26	CeftazidimePentahydrate	15.0	
I. PENAMS			
27	Meropenem	100.2	
28	Imipenem	50.4	
29	Cilastain Sodium	50.4	
30	Ertapenem Sodium	10.2	
31	Doripenem Monohydrate	10.2	
32	Biopenem	10.2	
33	Faropenem Sodium	10.2	Antibiotic
II. ONCOLOGY			
34	Carboplatin	40.2	
35	Cisplatin	30.0	
36	Daunpprubicin Hydrochloride	20.4	
37	Idarubicin Hydrochloride	20.4	
38	Vinblastine	20.4	
39	Vincristine	20.4	
40	Navelbine	10.2	
41	Paclitaxel	10.2	
42	Docetaxel	10.2	
43	ErlotinibHydrichloride	20.4	Antineoplastic
III. ANTIVIRALS			
44	AdefovirDipivoxil	150.0	
45	Entecavir	150.0	
46	Famciclovir	120.0	
47	Ganciclovir	150.0	
48	Oseltamivir	50.4	
49	Valecyclovir Hydrochloride	80.4	
50	Valganciclovir Hydrochloride	100.2	
51	Zanamivir	100.2	
52	Nevirapine	100.2	
53	Stavudine	100.2	Antiviral
IV. Citalopram Hydrobromide			
54	Citalopram Hydrobromide	20.4	Antidepressant
V. NON ANTIBIOTICS			
55	AripiprazoleSulfate	100.2	
56	Duloxetine Hydrochloride	60.0	
57	Eszopiclone	50.4	
58	Modafinil	50.4	
59	Naratriptan Hydrochloride	60.0	
60	Tadalafil	60.0	
61	Donepezil Hydrochloride Monohydrate	75.0	Antipsychotic

62	Amitriptyline Hydrochloride	50.4	
63	Carprofen	50.4	
64	Fenoprofen Calcium	25.2	
	Total Productions capacity on various combination (i.e, any 24 products at a point of time)	2430.6 (~2431)	
	Captive coal based Power Plant	3 MW	

Ambient air quality monitoring was carried out at 6 locations during December, 2011 to February, 2012 and submitted data indicates as PM₁₀ (30.8–68.9 ug/m³), PM_{2.5} (8.8–17.2ug/m³), SO₂ (5 – 13.7 ug/m³) and NO_x (7.5-20.5ug/m³). Predicted value of ground level concentration due to proposed project is PM₁₀ (0.43 ug/m³), SO₂ (9.8ug/m³) and NO_x (2.96ug/m³). The resultant concentrations are within the NAAQS. ESP along with stack height of 30 m will be provided to coal fired (30 TPH). Multi cyclone dust collector followed by bagfilter will be provided to coal fired boiler (2 x 10 TPH). Dual scrubber with caustic lye solution will be provided to control HCl emissions. Scrubber with water /dilute HCl will be provided to control NH₃ emissions. Scrubber using caustic lye solution will be provided to control HF emissions. Scrubber using lye solution will be provided to control Cl₂, H₂S, SO₂ and HBr emissions. During reaction and distillation, primary condenser will be provided with CT/Chilled water and secondary condenser will be provided with chilled brine of -10 OC. Vent condenser with chilled water circulation will be provided to storage tanks & receiver tank. Water requirement will be 1443m³/day. Out of which, 938 m³/day water will be met from ground water source and remaining 505m³/day water will be met from treated effluent/recycled water. Industrial effluent generation will be 884m³/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Condensate will be treated in ETP followed by RO and treated effluent will be recycled/reused as boiler make up water. Low TDS/COD effluent stream will be treated in effluent treatment plant (ETP) followed by bio assay tank and guard pond. Treated effluent will be discharged to marine. HTDS (Utilities) will be treated and discharge into marine after meeting the standards prescribed by the SPCB. Ash from boiler will be sold to brick manufacturers. Evaporator salts, inorganic residue and ETP sludge will be sent to TSDF. Solvent will be sent to recycler. Catalyst, waste oil and used batteries will be sent to authorised recyclers. Rain water harvesting tanks are proposed in the project site for collecting the storm for reuse thereby reduces the fresh water requirement. DG sets (3 x 1010 KVA) will be installed. PP has submitted the recommendations of AP CZMA for marine disposal of treated effluent through dedicated pipeline to Bay of Bengal and the Committee deliberated upon recommendations. PP has also submitted CTE order no. 329/PCB/CFE/RO-VZM/HO/2014 dated 01.03.2014 issued by APPCB, whereby they have issued NOC for establishment of marine outfall.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the AP Pollution Control Board on 18th September, 2013 under the Chairmanship of Additional District Magistrate. The issues raised during Public Hearing were regarding pollution from other unit, ground water table, pollution control measures, fly ash management, employment opportunities, discharge of treated effluent etc. PP informed that pollution control measures such as installation of ESP in CPP, scrubber/flame arrestor /vents for process emissions control, greenbelt development etc will be provided with total capital budget of Rs. 40 crores towards environmental pollution control measures and Rs. 20 crores per annum towards the recurring cost. For CSR, Rs 11 crores are earmarked for various activities as mentioned in the EIA report. Regarding fly ash, pp informed that possibility for sending fly ash to cement plant will be explored and implemented. Rain water harvesting will be carried out in the surrounding villages and also considered in the CSR activities. For effluent treatment, effluent will be segregated and treated as per APPCB guidelines.

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

- i) Examine possibility of disposal of effluents through a marine outfall and if so, CRZ clearance for the marine disposal of the treated effluents (2- stream: effluents and for CPP) shall be obtained.

- ii) ESP along with stack of adequate height shall be provided to coal fired (30 TPH) and Multicyclone dust collector followed by bag filter shall be provided to the boiler (2 x 10 TPH) to control particulate emissions within permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/APPCB guidelines.
- iii) The levels of PM₁₀, SO₂, NO_x, VOC, NH₃, Cl₂, H₂S, HBr and HCl shall be monitored in ambient air.
- iv) Two stage chilled water/caustic scrubber shall be provided to process vents to control HCl. Two stage scrubber with caustic lye media solution shall be provided to process vents to control SO₂, H₂S, Cl₂ and HBr. Two stage scrubber with chilled water media shall be provided to process vents to control NH₃. Dual scrubber with caustic lye solution will be provided to control HCl emissions. Scrubber with water /dilute HCl will be provided to control NH₃ emissions. Scrubber using caustic lye solution will be provided to control HF emissions. Scrubber using lye solution will be provided to control Cl₂, H₂S, SO₂ and HBr emissions. The scrubbing media shall be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. At no time, the emission levels shall go beyond the prescribed standards.
- v) Total fresh water requirement from ground water source shall not exceed 938m³/day and prior permission shall be obtained from the CGWA/SGWA.
- vi) Industrial wastewater shall be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream shall be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Condensate shall be treated in ETP followed by RO and treated effluent will be recycled/reused as boiler make up water. Low TDS/COD effluent stream will be treated in effluent treatment plant (ETP) followed by bio assay tank and guard pond. Treated effluent will be discharged to marine. HTDS (Utilities) will be treated and discharge into the Marine after conforming the norms prescribed by SPCB.
- vii) Treated effluent shall be passed through guard pond. Online continuous pH meter, TOC analyzer and flow meter shall be installed to monitor the treated water quality.
- viii) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.
- ix) As proposed, process organic residue and spent carbon shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF. The ash from boiler shall be sold to brick manufacturers/cement industry.
- x) The company shall obtain Authorisation for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from APPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. Measures shall be taken for fire-fighting facilities in case of emergency.
- xi) Fly ash shall be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust shall be avoided.
- xii) Solvent management shall be as follows :
 - Reactor shall be connected to chilled brine condenser system
 - Reactor and solvent handling pump shall have mechanical seals to prevent leakages.
 - The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery

- Solvents shall be stored in a separate space specified with all safety measures.
 - Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.
 - Entire plant where solvents are used shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.
- xiii) All the commitment made regarding issues raised during the Public Hearing/ consultation meeting held on 18th September, 2013 shall be satisfactorily implemented.
- xiv) At least 5 % of the total cost of the project shall be earmarked towards the Enterprise social responsibility based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner.
- xv) As proposed, green belt over 33 % of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.

21.8.2 Grain based Distillery Plant (120 KLPD) along with Cogeneration Power Plant (5 MW) of **M/s RJC Agros Ltd.** at Sy. Nos. 195 & 200, Village Rekulakunta, Tehsil Bukkarayasamudram, District Anantpur, Andhra Pradesh. (EC)

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

M/s RJC Agros Ltd. has proposed for setting up of based Distillery Plant (120 KLPD) along with Cogeneration Power Plant (5 MW) at Sy. Nos. 195 & 200, village Rekulakunta, Tehsil Bukkarayasamudram, District Anantpur, Andhra Pradesh. Total plot area is 20.92 acres of which greenbelt will be developed in 7.0 acres. Total cost of project is Rs. 145.4 crorec. Rs. 20 crorec and Rs. 2.2 crorec per annum are earmarked towards capital cost and recurring cost per annum. Mid penner south canal, is flowing at a distance of 1.8 Km. Durgam RF is situated at a distance of 8.0 Km. It is reported that no eco-sensitive area as national park/wild life sanctuary/biosphere reserves are located within 10 Km. Following will be manufactured:

S.N.	Products	Quantity
1	Rectified Spirit (RS) /Extra Neutral Alcohol (ENA)/ Ethanol (Fuel ethanol or Anhydrous alcohol (AA)/ Industrial Alcohol	120 KLPD
2	Electricity for captive consumption	5 MW
3	CO2 (by-product)	93 TPD

Ambient air quality monitoring was carried out at 8 locations March – May, 2013 and submitted data indicates as PM10 (24.2–41.4 ug/m3), SO₂ (6.4 – 14.8 ug/m3) and NO_x (6.5-18.5 ug/m3). Predicted value of ground level concentration due to proposed project is PM10 (0.3ug/m3), SO₂ (2.5ug/m3) and NO_x (1.6 ug/m3). The resultant concentrations are within the NAAQS. Bagfilter will be provided to coal fired boiler to control particulate emissions. Raw water requirement from ground water source and canal will be 995 m³/day. Spentwash generation will be 464 m³/day. Spent wash from grain based will be treated through decanter and concentrated in multi-effect evaporator (MEE) to form Distiller's Wet Grains with Soluble (DWGS). DWGS will be dried in the dryer to form Distiller's Dry Grains with Soluble (DDGS). Condensate will be treated in UASB reactor with MBBR technology and reused in the process. Cooling tower blow down will be treated in high rate solid contact clarifier and then sent to filter feed tank alongwith biological treated effluent for further treatment to ultrafiltration system followed by RO

plant. No effluent will be discharged outside the plant premises. DDGS will be sold as cattle feed/fish / prawn feed. ETP sludge will be used as manure. Flyash will be sent to brick manufacturing unit/cement plant.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Andhra Pradesh Pollution Control Board on 20th February, 2014. The issues raised were regarding postponement of public hearing due to 4 marriages in their village, pollution control measures, employment etc.

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

- i. Distillery unit shall be based on Grain based only and no Molasses based distillery unit shall be operated. The unit will use bagasse if available.
- ii. Bag filter alongwith stack of adequate height shall be provided to bagasse /coal fired boiler to control particulate emission within 50mg/Nm³.
- iii. Pucca approach road to project site shall be constructed prior to commencing construction activity of the main distillery so as to avoid fugitive emissions.
- iv. Total fresh water requirement from from ground water source and canal shall not exceed 995m³/dayfor distillery and cogeneration unit and prior permission shall be obtained from the Competent Authority.
- v. Water consumption shall be reduced by adopting 3 R's (reduce, reuse and recycle) concept in the process.
- vi. Spent wash generation shall not exceed 6 Kl/Kl of alcohol. Spent wash shall be treated through decanter and concentrated in multi-effect evaporator (MEE) to form DWGS. DWGS will be sent to dryer to form DDGS. Spentlees, effluent from utilities and cogeneration unit shall be treated in effluent treatment plant (ETP) and water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB and recycle/reuse.
- vii. As proposed no spent wash storage lagoon will be provided.
- viii. No effluent from distillery and co-generation power plant shall be discharged outside the premises and Zero discharge shall be adopted.
- ix. Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area shall be set up. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to SPCB and this Ministry. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and total dissolved solids shall be monitored.
- x. No storage of wet cake shall be done at site. An additional dryer shall be installed so that at any time wet cake is not sold then wet cake shall be converted into dry cake by operating additional dryer.
- xi. Coal storage shall be done in such a way that it does not get air borne or fly around due to wind.
- xii. Fly ash shall be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust shall be avoided.

- xiii. Occupational health surveillance programme shall be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre shall be strengthened and the regular medical test records of each employee shall be maintained separately.
- xiv. Dedicated parking facility for loading and unloading of material shall be provided in the factory premises. Unit shall develop and implement good traffic management system for their incoming and outgoing vehicles to avoid congestion on the public road.
- xv. As proposed, green belt over 33 % of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xvi. All the commitment made regarding issues raised during the Public Hearing/consultation meeting held on 20th February, 2014 shall be satisfactorily implemented.
- xvii. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise social responsibility based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.
- xviii. The Company shall submit within three months their policy towards Corporate Environment Responsibility which shall inter-alia address (i) Standard operating process/procedure to bring into focus any infringement/deviation/violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.

21.8.3 Bulk Drugs/Drugs Intermediates (6 MTPM) of **M/s Malwin Pharma Pvt. Ltd.**, located at Plot No. 20, S.N.-52, Rajkot-Gondal NH-8H, Hadamtala Industrial Area, TalukaKotdaSangani, District Rajkot, Gujarat (**EC**)

The project authorities and their consultant (San Envirotech 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 33rd Meeting of the Reconstituted Expert Appraisal Committee (Industry) held during 21st-22nd March, 2012 for preparation of EIA-EMP report. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Malwin Pharma Pvt. Ltd. has proposed for setting up of Bulk Drugs/Drugs Intermediates (6 MTPM) located at Plot No. 20, S.N.-52, Rajkot-Gondal NH-8H, Hadamtala Industrial Area, TalukaKotdaSangani, District Rajkot, Gujarat. Total plot area is 15903.91 m². It is reported that no national park wild life sanctuary or reserve forest is located within 10 km radius. Total cost of the project is Rs. 2.3 Crores. Following products will be manufactured:

S.N.	Products	Production Capacity (TPM)
1	2-Acetyl Thiophene	6.0 MTPM i.e. 72.0 MTPA
2	2-Acetyl Benzo (b) thiophene	
3	Intermediate of Nebivolo Hydrochloride	
4	Camphor Sulfonyl Chloride	
5	Ethyl 2- Oxo- 4- Phenyl Butyrate	
6	Ormeloxifen HCL	

7	Benzaldehyde-2,5-Disulfonic Acid Sodium Salt (ISB)	
8	Edaravone	
9	3-Methoxy Thiophenol	

Cyclone will be provided to agro fuel fired boiler. Stack height will be provided to LDO fired thermic fluid heater and small boiler. Two stage chilled water/caustic scrubber will be provided to process vents to control HCl. Two stage scrubber with caustic lye media solution will be provided to process vents to control SO₂. Total water requirement will be 15.1m³/day. Out of which, 10.1m³/day will be sourced from fresh water and 5.0 m³/day condensate water. Effluent generation will be 5.7m³/day and treated in Effluent treatment plant. Treated effluent will be sent to evaporator. Condensate will be reused for gardening purpose within premises. No effluent will be discharge outside the plant premises. ETP sludge and evaporation salt will be sent to TSDF. Distillation residue for next batch and excess will be disposed to CHWIF for incineration. Used /spent oil will be reused within plant premises for lubrication and excess will be sold to registered recyclers. Spent carbon will be disposed to CHWIF for incineration. Spent acid will be collected, storage and reused in the process or sold to the actual users.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 14th June, 2013. The issues raised were regarding benefit to be provided to local students pursuing study in the field of pharmaceutical; water pollution by the other nearby units; etc.

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

- i) Multicyclone dust collector followed by bag filter shall be provided to control particulate emissions within permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/GPCB guidelines.
- ii) The levels of PM₁₀, SO₂, NO_x, VOC, SO₂ and HCl shall be monitored in ambient air.
- iii) Two stage chilled water/caustic scrubber shall be provided to process vents to control HCl. Two stage scrubber with caustic lye media solution shall be provided to process vents to control SO₂. The scrubbing media shall be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. At no time, the emission levels shall go beyond the prescribed standards.
- iv) Total fresh water requirement from ground water source shall not exceed 10.1m³/day and prior permission shall be obtained from the CGWA/SGWA.
- v) Total industrial effluent generation shall not exceed 5.7m³/day. Effluent shall be treated in ETP. Treated effluent will be sent to evaporator. Condensate will be reused for gardening purpose within premises. No effluent will be discharge outside the plant premises.
- vi) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.
- vii) As proposed, process organic residue and spent carbon shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF. The ash from boiler shall be sold to brick manufacturers/cement industry.
- viii) The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from GPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. Measures shall be taken for fire-fighting facilities in case of emergency.

- ix) Fly ash shall be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust shall be avoided.
- x) Solvent management shall be as follows :
- Reactor shall be connected to chilled brine condenser system
 - Reactor and solvent handling pump shall have mechanical seals to prevent leakages.
 - The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
 - Solvents shall be stored in a separate space specified with all safety measures.
 - Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.
 - Entire plant where solvents are used shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.
- xi) All the commitment made regarding issues raised during the Public Hearing/ consultation meeting held on 14th June, 2013 shall be satisfactorily implemented.
- xii) At least 5 % of the total cost of the project shall be earmarked towards the Enterprise social responsibility based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.
- xiii) As proposed, green belt over 33 % of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.

21.8.4 Expansion of Pesticide Unit (Aluminum Phosphide 2400 to 6000 MT/Y, Zinc Phosphide (600 to 2400 MT/Y) and adding new Ammonium Carbamate (1600 MT/year) of **M/s Excel Crop Care Ltd.** at Sy. No. 190/1, 205-209 & 194, Village Gajod, Tehsil Bhuj, District Kutch, Gujarat (EC)

The project authorities and their consultant (Envision Enviro Engineers Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 36th Meeting of the Reconstituted Expert Appraisal Committee (Industry) held during 11th – 12th June, 2012 for preparation of EIA-EMP report. All the Pesticides plants are listed at S.N. 5(b) under Category 'A' and appraised at the Central level.

M/s Excel Crop Care Limited has proposed for Expansion of Pesticide Unit (Aluminum Phosphide 2400 to 6000 MT/Y, Zinc Phosphide (600 to 2400 MT/Y) and manufacturing of additional Ammonium Carbamate (1600 MT/year) at Survey No.19/1, 205-209 & 194, village Gajod, Tehsil Bhuj District Kutch, Gujarat. Total project area is 4,49,510 m². It is reported that no forest land/National Park/Protected forest/ Biosphere/ Wild life sanctuary etc. is located within 10 km distance. Total cost of project is Rs.28.05 crore. Rs. 94 lakhs and Rs.50 lakh/annum are earmarked toward capital cost and recurring cost. Two rivers namely Nagmati and Kayalo are flowing at a distance of 5.5 km. and 4.7 km. respectively. Mundra sea port is at a distance of 25 km. in south-east direction. Following products will be manufactured:

S.N.	Name of Products	Production Capacity (MT/Year)		
		Existing	Proposed	Total
A. Technical				
1	Aluminium Phosphide	2400	3600	6000
2	Zinc Phosphide	600	1800	2400
3	Ammonium Carbamate (Synthetic Organic Chemical, Under 5(f) category)	-	1600	1600

B. Solid Formulation				
1	Aluminium Phosphide		8000	- 8000
2	Zinc Phosphide		- 3000	. 3000
3	Sulfur WDG #	3000	4000	10000
4	Sulfur WP#	3000		
5	Imidacloprid	660	1340	2000
6	Tebuconazole WDG #	600	-	600
7	Ammonium Glyphosate (Excel Mera 71%)	1500	-	1500
8	Azoxystorbing	-	500	500
9	Acetamiprid	-	300	300
10	Copper Hydroxide	-	2400	2400
11	Endosulfan (50 %) WDG #	2400	-	2400 0
C. Liquid Formulation (SC, EC, SL)				
1	Sulfur	-	500	500
2	Imidacloprid#	60	40	100
3	Paclbutrazole	-	250	250
D. Bio – Product Formulation				
1	Seedcel (sea Weed Concentrate) #	60	760	1000
2	Sea Weed SL #	180		
3	PaecilomycesLilacinus	-	6000	6000
4	Pseudomonas Fluorescens			
5	TrichodermaHarzianum			
6	TrichdermaVirdie			
7	VarticilliumChlamydosperium			
E. Soil Micro Nutrients Formulations				
1	Sulfur based Formulations	-	5000	5000
2	Water Soluble Fertilizer (Brand Name – Jivin)	-	500	500
F. Combi – Formulations				
1	Glyphosate +2,4 – D IPA Salt WG #	1200	-	1200
2	Glyphosate +2,4 – D Ammonia Salt SG #	1200	-	1200
3	Sulfur + Tebuconazole	-	1200	1200
4	Sulfur + Fenpiroxymate	-	1200	1200
5	Azoxistrobin + Tebuconazole (WG) -	1200	--	1200
6	Azoxistrobin + Tebuconazole (SC) -	1200	--	1200
G. By – Products				
1	Phosphoric Acid	631.2	946.8	1578
2	Calcium Phosphate	48	- 48	0

Ambient air quality monitoring was carried out at 8 locations October – December, 2013 and submitted data indicates as PM10 (64–88ug/m3), SO2 (12 – 29ug/m3) and NOx (20-38ug/m3). Predicted value of ground level concentration due to proposed expansion is PM (1.2ug/m³), SO₂ (1.88ug/m³), NOx (1.16ug/m³), P2O5 (0.14 ug/m³) and NH₃ (0.19 ug/m³). The resultant concentrations are within the NAAQS. Stack height of 26 m has been provided to the FO/LDO fired boiler. Cyclone separator with adequate height of stack has been provided to lignite/ coal /biomass fired boiler (10 lac Kcal /hr). Two water and one alkali scrubber provided in series along with stack height of 30 m have been provided to Aluminium Phosphide unit. Water scrubber followed by ventury scrubber have been provided to Zinc phosphide unit. Water scrubber will be provided to ammonium carbamate unit to control process emissions. Fresh water requirement from Gujarat Water Infrastructure water supply will be increased from 81.4m³/day to 171.4m³/day after expansion. Effluent generation will be increased from 44.1m³/day to 94.5 m³/day after expansion. Effluent will be treated in ETP. The Committee suggested that treated effluent should be further treated through RO and reused /recycled for cooling tower/boiler make up water in order to reduce the fresh water requirement. ETP sludge/ waste containing pesticide, spent charcoal/waste charcoal will be sent to TSDF.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 3rd September, 2013. The issues raised were regarding

benefit to be provided to local students pursuing study in the field of pharmaceutical; CSR activities, proposed activities to be carried out, impact of pesticide on human health etc.

Environmental Clearance for existing project was accorded by MoEF vide letter No.F.J-11011/15/2002-IA II(I) dated 23rd August, 2002. The Committee also discussed the compliance status report dated 12th June, 2014 on the conditions stipulated in the existing environmental clearance, which were monitored by the Ministry's regional office, Bhopal. It is reported that the gaseous emissions including SO₂, NO_x, SPM and P₂O₅ from various units and utilities have been monitored on monthly basis by MoEF and GPCB recognized laboratories. Analytical data do not show any anomaly. Although sensors for detection of phosphine vapours at five locations in the work zone area have been installed and daily monitoring was carried out. But online monitoring sensors were not installed as per the condition. PP has committed that online monitoring system will be installed within six months. Scrubber has been provided to control process emissions. Impervious layer was provided to ETP sludge storage area. Effluent generation was observed to be 62.6m³/day and treated in ETP. It is reported that development of greenbelt along boundary walls is yet to be carried out. Accordingly PP has submitted a plan to put 17500 saplings along the boundary wall to strengthen greenbelt. The Committee was satisfied with the response of the PP.

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

- i. 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. Stack height shall be provided to the FO/LDO fired boiler.
- iii. Scrubber will be provided to control process emissions viz. P₂O₅ and NH₃. 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 1 VOCs in the plant.
- vi. A proper Leak Detection and Repair (LDAR) Program for pesticide industry shall be prepared and implemented as per the CPCB guidelines.
- vii. Total water requirement from Gujarat Water Infrastructure water supply should not exceed 171.4m³/day and prior permission should be obtained from the Competent Authority.
- viii. Industrial effluent generation should not exceed 94.5m³/day. Effluent should be treated in ETP followed by RO. Treated effluent shall be reused/recycled for make up water in utilities to reduce the fresh water requirement. Water quality of treated effluent should meet the norms prescribed by CPCB/SPCB.
- 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 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.
- x. As proposed, ETP sludge and inorganic waste should be sent to TSDF site. High calorific value waste such as spent organic should be incinerated.
- xi. All the commitment made regarding issues raised during the public hearing/ consultation meeting held on 3rd September, 2013 shall be satisfactorily implemented.
- xii. At least 5% of the total cost of the project should be earmarked towards the Enterprise social responsibility 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.
- 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. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise social responsibility based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner.
 - xvi. As proposed, green belt over 33 % of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.

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

Project proposal was considered in the 18th Expert Appraisal Committee (Industry) meeting held during 28th-30th April, 2014 and the Committee desired following information:

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

Project proponent vide letter dated 18th June, 2014 has submitted the above mentioned information. During meeting PP informed that ESR budget has been earmarked to Rs. 33.35 Crore for five years and same has been confirmed vide Letter no. MHN/HSE/EC-DS/204-15 dated 01.08.2014.

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

- i. Ambient air quality should be monitored at the nearest human settlements as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for PM₁₀, PM_{2.5}, SO₂, NO_x, CO, CH₄, HC, Non-methane HC etc.
- ii. Mercury should be analyzed in air, water and drill cuttings twice during drilling period.
- iii. Approach road should be made pucca to mitigate generation of suspended dust.
- iv. 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.
- v. Total water requirement should not exceed 20m³/day/well and prior permission should be obtained from the concerned agency.
- vi. 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.
- vii. 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 Bhopal.
 - viii. Produced water shall be treated in ETP. Treated effluent will be injected back by closed pipeline into the effluent disposal well below 1000 m from GL as per recommended code of practice.
 - ix. Good sanitation facility should be provided at the drilling site. Domestic sewage should be disposed off through septic tank/ soak pit.
 - x. 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.
 - xi. 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.
 - xii. 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.
 - xiii. 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.
 - xiv. The Company should carry out long term subsidence study by collecting base line data before initiating drilling operation till the project lasts. The data so collected should be submitted six monthly to the Ministry and its Regional Office at Bhopal.
 - xv. 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.
 - xvi. Emergency Response Plan (ERP) should be based on the guidelines prepared by OISD, DGMS and Govt. of India.
 - xvii. 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.
 - xviii. Occupational health surveillance of the workers should be carried out as per the prevailing Acts and Rules.
 - xix. 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.

- xx. Restoration of the project site should be carried out satisfactorily and report should be sent to the Ministry's Regional Office at Bhopal.
- xxi. 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 Bhopal.
- xxii. All the commitments made to the public during public hearing/public consultation meeting held on 30th October, 2012 for Kheda district and 2nd November, 2012 for Ahmedabad district shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xxiii. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing Issues, locals need 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.
- xxiv. Company should have own Environment Management Cell having qualified persons with proper background.
- xxv. 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.

21.9 Further Consideration Cases

- 21.9.1 Speciality Chemicals (Tri Chlorolsocyanurate 1000MT/M, Sodium DichlorolsocyanurateDihydrate 400T/M) of **M/s Trion Chemicals Pvt. Ltd.** at Sy. No. 382, Village Neja, Taluka& District Khambhat, Gujarat (EC)

Project proposal was considered in the 10th 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 Revised material balance data to be submitted.
- 3 Details of safe chlorine storage and handling system to be submitted.
- 4 Note on Cl₂ leakage and preparedness.
- 5 Details of national park/wildlife sanctuary /reserved forest within 10 Km distance

Project proponent vide letter dated 20th March, 2014 has submitted the above mentioned information.

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

- i) The levels of PM₁₀, SO₂, NO_x, VOC and HCl shall be monitored in ambient air.
- ii) Scrubber will be provided to control process emissions. The scrubbing media shall be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. At no time, the emission levels shall go beyond the prescribed standards.
- iii) Total fresh water requirement from ground water source shall not exceed 43m³/day and prior permission shall be obtained from the CGWA/SGWA.
- iv) Total industrial effluent generation shall not exceed 263m³/day. Effluent shall be treated in ETP. Treated effluent will be sent to evaporator. Treated effluent will be recycled/reused in the cooling tower make up. No effluent will be discharge outside the plant premises.

- v) Alarm for chlorine leakage if any in the liquid chlorine storage area shall be provided alongwith automatic start of the scrubbing system.
- vi) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.
- vii) The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from GPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. Measures shall be taken for fire-fighting facilities in case of emergency.
- viii) Solvent management shall be as follows :
 - Reactor shall be connected to chilled brine condenser system
 - Reactor and solvent handling pump shall have mechanical seals to prevent leakages.
 - The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
 - Solvents shall be stored in a separate space specified with all safety measures.
 - Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.
 - Entire plant where solvents are used shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.
- ix) All the commitment made regarding issues raised during the Public Hearing/ consultation meeting held on 5th March, 2012 shall be satisfactorily implemented.
- x) At least 5 % of the total cost of the project shall be earmarked towards the Enterprise social responsibility based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.
- xi) As proposed, green belt over 33 % of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.

21.9.2 Proposed Manufacture of Agrochemicals Products of **M/s Indofil Industries Ltd.** located at Plot No. Z-12/1 (SEZ-Part-1), Dahez SEZ, Bharuch, Gujarat (EC)

Project proposal was considered in the 17th Expert Appraisal Committee (Industry) meeting held during 18th-19th March, 2014 and the Committee desired following information:

- 1 Certified compliance report of environmental condition stipulated in the ECs granted to group company.
- 2 Toxic management plan to be submitted.
- 3 Commitment to install standby Bromine storage tank and dedicated incinerator for vapour/waste gases coming out after treatment as well as solid waste/liquid waste.
- 4 Risk assessment & Disaster Preparedness & Management Plan should be prepared.
- 5 The proposal was deferred till the desired information is submitted. The above information shall be provided with the uploading of minutes on the website.

Project proponent vide letter dated 19th April, 2014 has submitted the above mentioned information. However, certified compliance report of environmental condition stipulated in the ECs granted to group company was not submitted.

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

21.9.3 Expansion of Molasses based Distillery (from 75 KLPD to 150 KLPD) of **M/s Uttam Sugar Mills Ltd.** at Village Barkatpur, Tehsil Najibabad, District Bijnore, Uttar Pradesh. **(TOR)**

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

M/s Uttam Sugar Mills Ltd. has proposed for expansion of Molasses based Distillery (from 75 KLPD to 150 KLPD) at Village Barkatpur, Tehsil Najibabad, District Bijnore, Uttar Pradesh. Uttam Sugar Mill has commenced its operations from October 4, 1993 with the name Associated Sugar Mills. Environmental Clearance for the existing distillery was granted vide MoEf letter no. J-11011/428/2006-IA II (I) dated 22nd September, 2008. It is reported that no national parks/wildlife sanctuaries/biosphere reserves/ reserved/protected forest are located within 10 km. Malan River is flowing at a distance of 1.5 km while Ganga River is flowing at a distance of 6 Km. Total plot area is 50 acres of which greenbelt will be developed in 16.5 acres of land. Cost of expansion project is Rs. 100 Crore. Rs. 25 Crore and Rs. 5 Crore per annum are earmarked towards capital cost and recurring cost per annum for pollution control measures. Distillery will be operated for 270 days in a year. Cyclone type wet scrubber has been provided to the existing rice husk /bagasse/biogas fired boiler (35 TPH). Cyclone type wet scrubber will be provided to rice husk/bagasse/biogas fired boiler (fresh water requirement will be increased from 726 m³/day to 1452 m³/day after expansion. Spentwash will be treated in bio-methanation plant followed by evaporation in MEE and bio-composting with press mud to achieve zero discharge. Ash from the boiler will be sold to brick manufacturers. Yeast sludge, digesters sludge & boiler ash will be mixed with pressmud & finally disposed as bio-manure. Electric power requirement will be increased from 1.5 to 3.2 MW and sourced from the existing sugar unit and proposed 3.2 MW turbine.

The Committee recommended the following additional TOR read with generic TOR at Annexure-7:

- (i) Bagfilter to be provided to boiler to control particulate emissions.
- (ii) PH
- (iii) Certified compliance report.

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

Project proposal was considered in the 18th Expert Appraisal Committee (Industry) meeting held during 28th-30th April, 2014 and the Committee desired following information:

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

Project proponent vide letter dated 20th June, 2014 has submitted the above mentioned information. After detailed deliberations, the Committee on the basis of documents furnished and presentation made recommended the project for environmental clearance and stipulated the following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i. M/s BURL shall comply with new standards/norms for Oil Refinery Industry notified under the Environment (Protection) Rules, 1986 vide G.S.R. 186(E) dated 18th March, 2008.
- ii. Continuous on-line stack monitoring for SO₂, NO_x and CO of all the stacks shall be carried out. Low Nox burners shall be installed.
- iii. Lime injection to be provided in pet coke fired boiler to control SO₂ emissions.
- iv. Fugitive emissions of HC from product storage tank yards etc. must be regularly monitored Sensors for detecting HC leakage shall be provided at strategic locations. Leak Detection and Repair programme shall be implemented to control HC/VOC emissions.
- v. SO₂ emissions after expansion from the plant shall not exceed 29.25 TPD.
- vi. As proposed, record of sulphur balance shall be maintained at the Refinery as part of the environmental data on regular basis. The basic component of sulphur balance include sulphur input through feed (sulphur content in crude oil), sulphur output from Refinery through products, by-product (elemental sulphur), atmospheric emissions etc.
- vii. Total raw water requirement from Betwa River shall not exceed 6.26 MGD. Industrial effluent shall be treated in the effluent treatment plant. Treated effluent shall be recycled/reused recycled as make up for the raw water cooling tower. Domestic sewage shall be treated in sewage treatment plant (STP).
- viii. As proposed, no effluent shall be discharged outside the Plant premises and Zero discharge concept shall be followed.
- ix. As proposed BURL shall developed Rain water harvesting pond in an area of 6 acres.
- x. Oil catchers/oil traps shall be provided at all possible locations in rain/ storm water drainage system inside the factory premises.
- xi. The membership of common TSDF shall be obtained for the disposal of hazardous waste. Copy of authorization or membership of TSDF shall be submitted to Ministry's Regional Office at Bhopal. Chemical/inorganic sludge shall be sent to treatment storage disposal facility (TSDF) for hazardous waste. Spent catalyst shall be sent to authorised recyclers/re-processors.
- xii. Green belt shall be developed at least in 255 ha area in and around the plant premises to mitigate the effects of fugitive emissions all around the plant as per the CPCB guidelines in consultation with DFO. Thick greenbelt with suitable plant species shall be developed around unit. Selection of plant species shall be as per the CPCB guidelines.
- xiii. All the commitment made regarding issues raised during the Public Hearing/ consultation meeting held on 19th February, 2014 shall be satisfactorily implemented.
- xiv. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise social responsibility based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and

submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.

21.9.5 Single Super Phosphate (Powder & Granular, 1500 MTPD), N_2SiF_6 , 130 MTPD), NPK Fertilizer (Powder & Granular, 500 MTPD), LABASA (500 MTPD), Benzene Sulphonyl Chloride (20 MTPD), Sulphone (1.26 MTPD) of **M/s BodalAgrotech Ltd.** located at Sy. No. 525, 532, 554-556, 560, 561/1, Village Dudhwada, Tehsil Padra, District Vadodara, Gujarat (**EC**)

Proposal was considered in the 15th EAC meeting held during 29th-30th January, 2014 and the Committee recommended the project proposal subject to submission of following addl. Information:

“After detailed deliberations, the Committee desired that monitoring of CO and HC will be rechecked and details furnished to Ministry for record. The EAC observed that levels of TDS was high and stated that although it has been informed that Govt. of Gujarat is supplying drinking water, if need be, PP can supply through RO Plant. The Committee recommended that water use from water harvesting structures should used to an extent to reduce dependency on groundwater (except in lean season when 1054 m³/d will be used from groundwater). The Committee desired that a detailed CSR plan along with villages-wise details and activities-wise details along with capital and revenue costs for life of the project shall be prepared and furnished for record of the Ministry.”

PP vide letter dated 24.04.2014 has submitted addl. Information. However, PP has kept only Rs.7.5 Lakhs for ESR, which is very low than 5% of total investment. HC and CO monitoring data found to be incorrect. The Committee also recommended that the Laboratory namely Pollucon may be delisted from MoEF for providing incorrect monitoring data.

After deliberations, the Committee desired the following additional information:

- (i) Revised ESR plan.
- (ii) HC + CO data to be re-analysed and re-submitted

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

21.9.6 Expansion of Mini Refining Plant (55,000 KLPA to 1,20,000 KLPA) of **M/s Kandla Energy and Chemicals Limited** at village Devaliya Taluka Anjar, District Kachchh Gujarat (**EC**)

Proposal was recommended for EC by the EAC in its 7th EAC meeting held during 4th-5th April, 2013. PP engaged in manufacturing of fractional distillation having products like C9, C10 series in their existing unit. But PP did not obtain EC for the existing unit.

Now, PP has referred a copy of letter issued from MoEF to one of the Company having similar existing project activities like M/s Kandl, which mentioned that such project activities does not come under the purview of EIA Notification, 2006.

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

- i Bagfilter along with adequate stack height should be provided to coal fired thermic fluid heater to control particulate emissions.
- ii VOCs detectors shall be installed in the work zone. When monitoring results indicate that the levels above the permissible limits, effective measures shall be taken immediately.

- iii All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.
- iv The levels of PM₁₀, SO₂, NO_x, VOC and HC (Methane and Non-methane) in ambient air shall be monitored and displayed at a convenient location near the main gate of the company and at important public places.
- v Total fresh water requirement from Narmada River water supply shall not exceed 16.5m³/day and prior permission shall be obtained from the competent authority and a copy submitted to the Ministry's Regional Office at Bhopal. No ground water shall be used.
- vi Total industrial wastewater generation should not exceed 2.3m³/day. Industrial effluent should be treated in ETP. Treated effluent shall be reused for horticulture purpose within factory premises after achieving desired water quality for various purposes.
- vii No effluent shall be discharge outside the factory premises and zero effluent discharge concept shall be adopted.
- viii The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from TNPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. Measures shall be taken for fire fighting facilities in case of emergency.
- ix Proper spillage control management plan should be prepared and implemented.
- x Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- xi The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per norms.
- xii Fire hydrant system shall be provided alongwith fire monitor and flame detection system in the process as well as storage areas.
- xiii Greenbelt shall be developed in 12.5 acres out of total land 60 acres.
- xiv All the commitments made to the public during public hearing/public consultation meeting held on 8th May, 2012 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xv At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on earlier Public Hearing Issues, locals need 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.

21.9.7 Molasses based Distillery Unit (30 KLPD) of **M/s ShreenathMhaskobaSakharKarkhana Ltd** at vill. Shreenatnagar Patethan, Tehsil – Dauand, Dist. Pune, Maharashtra (EC)

The proposal was considered in the 15th EAC meeting held during 29th-30th January, 2014 and the Committee recommended the project proposal subject to submission of following addl. Information:

“The Committee sought a detailed CSR Plan for life of the project with village-wise details which includes details of skill development/vocational training as part of CSR shall be furnished for record of Ministry. “

PP vide letter dated 06.07.2014 has submitted addl. Information. After detailed deliberations, the Committee recommended the project for environmental clearance and stipulated following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i) Distillery unit shall be based on Molasses based only and no Grain based distillery unit shall be operated.
- ii) Bagfilter along with stack of adequate height shall be provided to coal/biomass fired boilers to control particulate emissions within 50 mg/Nm³.
- iii) Total fresh water requirement from River Bima shall not exceed 300m³/day and prior permission shall be obtained from the Competent Authority.
- iv) Spent wash generation from molasses based distillery shall not exceed 8 Kl/Kl of alcohol. The spent wash from molasses based distillery shall be treated through biometnation process. Treated spent wash will be evaporated in MEE and concentrated spent wash will be biocomposted with pressmudto achieve 'Zero' discharge. Evaporator Condensate shall be treated and recycled/reused in process. No effluent shall be discharged outside the premises and 'Zero' discharge shall be maintained.
- v) Spent wash shall be stored in impervious pucca lagoons with proper lining with HDPE and shall be kept in proper condition to prevent ground water pollution. The storage of spent wash shall not exceed 5 days capacity.
- vi) As proposed, no effluent from distillery and co-generation power plant shall be discharged outside the plant premises and Zero discharge shall be adopted. Water consumption shall be reduced by adopting 3 R's (reduce, reuse and recycle) concept in the process.
- vii) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- viii) Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area and compost yard shall be set up. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to SPCB and this Ministry. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and total dissolved solids shall be monitored. Sampling and trend analysis monitoring must be made on monthly basis and report submitted to the Ministry's Regional Office at Bhopal and MPCB.
- ix) Bagasse/biomass storage shall be done in such a way that it does not get air borne or fly around due to wind.
- x) Boiler ash shall be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust shall be avoided. Bagasse ash and coal ash shall be stored separately.
- xi) Fire fighting system shall be as per the norms and cover all areas where alcohol is produced, handled and stored. Provision of foam system for fire fighting shall be made to control fire from the alcohol storage tank. DMP shall be implemented.
- xii) Occupational health surveillence programme shall be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre shall be strengthened and the regular medical test records of each employee shall be maintained separately.
- xiii) Dedicated parking facility for loading and unloading of materials shall be provided in the factory premises. Unit shall develop and implement good traffic management system for their incoming and outgoing vehicles to avoid congestion on the public road.

- xiv) As proposed, green belt over 33 % of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xv) All the commitments made during the Public Hearing/Public Consultation meeting held on 2nd July, 2013 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xvi) At least 5 % of the total cost of the project shall be earmarked towards *the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted* to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.

21.9.8 Proposed Phase-II Fertilizer project of 2530 MTPA, Ammonia 4430 MTPA, Urea with 67 MW CPP of **M/s Matix Fertilizers and Chemicals** at Panagarh, MouzaKotachandipir, J.L. No. 29 & Pondali, JL No. 77, Panagarh, Dist. Burdwan, W.B. (EC)

Project proposal was considered in the 9th Expert Appraisal Committee (Industry) meeting held during 10th-11th June, 2014 and the Committee desired following information:

- (i) Copy of permission of fresh water drawl from river.
- (ii) Gas linkage for the proposed expansion project.
- (iii) Cross check the ambient air quality data by collecting one month data.
- (iv) Methane and non-methane data to be cross checked.
- (v) Impact due to increased transportation to be incorporated.
- (vi) Details of railway siding for wagon loading to be shown in the map.
- (vii) Greenbelt plan for the existing unit and after expansion.
- (viii) Details of quantity of effluent generation and its water quality.
- (ix) Dilution study in respect of important parameters of water quality for enhanced effluent discharge to be conducted.

Project proponent vide letter dated 25th April, 2014 has submitted the above mentioned information. MFCL has informed that they have obtained principle expression of interest from Essar Energy Ltd. for the supply of required CBM equivalent to 84000 mmbtu/per day from thei Raniganj and Rajmahal CBM blocks. After detailed deliberations, the Committee recommended the project for environmental clearance and recommended the following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- (i) All the conditions stipulated in environmental clearance J-11011/440/2009-IA (II) dated 22nd April, 2010 accorded for the existing projects shall be implemented.
- (ii) The gaseous emissions (SO₂, NO_x, NH₃, HC and Urea dust) and particulate matter from various process units shall conform to the norms prescribed by the CPCB/SPCB from time to time. At no time, the emission levels shall go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Stack emissions shall be monitored regularly.
- (iii) Adequate stack height shall be provided to Ammonia plant reformer, Heat recovery steam generator (HRSG), NG/ RLNG fired gas turbine and Prilling Tower. Low NO_x burners shall be provided to control NO_x emissions.
- (iv) In Urea Plant, particulate emissions shall not exceed 50mg/Nm³. Monitoring of Prilling Tower shall be carried out as per CPCB guidelines.

- (v) Ambient air quality data shall be collected as per NAAQES standards notified by the Ministry vide G.S.R. No. 826(E) dated 16th September, 2009. The levels of PM₁₀ (Urea dust), SO₂, NO_x, Ammonia, Ozone and HC shall be monitored in the ambient air and displayed at a convenient location near the main gate of the company and at important public places. The company shall upload the results of monitored data on its website and shall update the same periodically. It shall simultaneously be sent to the Regional office of MOEF, the respective Zonal office of CPCB and the WB State Pollution Control Board (WBSPCB).
- (vi) In plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fugitive emissions shall be controlled by providing closed storage, closed handling & conveyance of chemicals/materials, multi cyclone separator and water sprinkling system. Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emissions should conform to the limits stipulated by the WBPCB.
- (vii) Fresh water requirement from River Damodar should not exceed 66240m³/day after expansion and prior permission shall be obtained from concerned Authority and a copy submitted to the Ministry's Regional Office at Bhubaneswar.
- (viii) Industrial wastewater shall be treated in the ETP. As proposed, Urea plant process condensate shall be treated in a deep hydrolyser followed by stripping. Ammonia plant process condensate (APC) shall be stripped with steam followed by activated carbon and demineralization. Treated condensate shall be recycled/reused in the process. Utilities wastewater shall be treated in the ETP and treated effluent shall be recycled/ reused. Treated effluent shall also be monitored for the parameters namely ammonical nitrogen, Nitrate, Fluoride, pH etc.
- (ix) The effluent generation from the cooling tower, oily water and DM plant effluent shall not exceed 432m³/hr after expansion. All the effluents after treatment shall be routed through a properly lined guard pond/holding pond for equalization and final control. In the guard pond/holding pond, automatic monitoring system for flow, and relevant pollutants (i.e. pH, ammonical nitrogen, nitrate nitrogen etc) shall be provided with high level alarm system.
- (x) The treated effluent shall be discharged into the River Damodar after conforming to the standards prescribed for the effluent discharge and after obtaining permission from the WBSPCB. No process effluent shall be discharged in and around the project site. Sewage shall be treated in STP and treated water shall be recycled/reused within factory premises to achieve zero discharge except rainy season.
- (xi) Regular monitoring of ground water by installing peizometric wells around the guard pond and sludge disposal sites shall periodically be done and report submitted to the Bhubaneshwar Regional Office of the Ministry, CPCB and SPCB.
- (xii) The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes. Measures shall be taken for fire fighting facilities in case of emergency.
- (xiii) Spent catalysts and used oil shall be sold to authorised recyclers/re-processors only.
- (xiv) The company shall strictly follow all the recommendations mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP).
- (xv) As proposed, most of the raw materials shall be transported through RAIL.
- (xvi) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

- (xvii) As proposed, green belt over 33 % of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- (xviii) All the commitments made during the Public Hearing/Public Consultation meeting held on 2nd July, 2013 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- (xix) At least 5 % of the total cost of the project shall be earmarked towards *the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted* to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.
- (xx) Remote operated valve placed on NH₃ line to avoid leakage/equipment check should be performed to ensure that remote operated valve (ROV) is all time is functional.

21.9.9 Distillery (30 KLPD), Co-generation Power Plant (22 MW) and Sugar (3500 TCD) Manufacturing Unit of **M/s SarSenaptiSantajiGhorpade Sugar Factory Ltd.** at Gut No. 454, 456, 457, 460 from 462 to 465, 467 and 470, Village Belewadi-Kalamma, Tehsil Kagal, District Kolhapur, Maharashtra (EC)

The project proponent and their consultant (MitconConsultancy and Engineering Services Ltd., Pune) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 2nd Meeting of the Expert Appraisal Committee (Industry) held during 29th – 31st October for preparation of EIA-EMP report. All the molasses based Distillery Units are listed at S.N. 5(g) under Category 'A' and appraised at the Central level.

M/s SarSenaptiSantajiGhorpade Sugar Factory Ltd. has proposed for setting up of Distillery (30 KLPD), Co-generation Power Plant (22 MW) and Sugar (3500 TCD) Manufacturing Unit at Gut No. 454, 456, 457, 460 from 462 to 465, 467 and 470, Village Belewadi-Kalamma, Tehsil Kagal, District Kolhapur, Maharashtra. Total plot area is 82 acres of which greenbelt will be developed in 27 acres. Total cost of project is Rs. 259 Crore. Chikutra Dam is located at a distance of 8 Km. It is reported that no eco-sensitive area such as national park/wildlife sanctuary/ biosphere reserves within 10 km distance. Distillery will be operated for 300 days. Cogeneration power plant will be operated for 330 days (160 days - season & 170 days -off season) and Sugar will be manufactured for 160 days. Rs. 24.720 Crore and Rs. 77 Lakhs per annum are earmarked towards capital cost and recurring cost per annum for pollution control measures.

Ambient air quality monitoring was carried out at 6 locations January, 2013 – March, 2013 and submitted data indicates as PM10 (10.3–19.1ug/m³), PM2.5 (4.5–10.2ug/m³), SO₂ (9.28 – 19.3ug/m³) and Nox (13.8-23.2ug/m³). Predicted value of ground level concentration due to proposed project is PM10 (0.015ug/m³), SO₂ (1.39ug/m³) and Nox (0.59ug/m³). The resultant concentrations are within the NAAQS.

ESP will be provided to bagasse fired boiler (120 TPH). Total fresh water requirement for distillery will be 260 m³/day and for cogeneration will be 1280, which will be met from Chikutra Dam. PP has informed that water permission for drawl of water has been obtained. Spent wash will be evaporated in MEE and concentrated spent wash will be incinerated alongwith coal to achieve zero discharge. Bagasse ash will be used as fertilizer due to high potash content. Press mud will be sent to farmer. Spent wash fired boiler ash will be sent to brick manufacturers.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Karnataka State Pollution Control Board on 25th November, 2013 under the Chairmanship of Addl. District Magistrate. The issues raised during Public Hearing were regarding source of water supply,

permission for Chikotra dam water lifting, wastewater treatment, anticipation of water pollution, income for CSR etc. Issues raised during Public Hearing have been incorporated in the final EIA-EMP report.

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

- i) Distillery unit shall be based on Molasses based only and no Grain based distillery unit shall be operated.
- ii) ESP along with stack of adequate height shall be provided to biomass fired boilers to control particulate emissions within 50 mg/Nm³.
- iii) Total fresh water requirement from Chikutra Dam shall not exceed 260m³/day for distillery and 1280m³/day for cogeneration and prior permission shall be obtained from the Competent Authority.
- iv) Spent wash generation from molasses based distillery shall not exceed 8 Kl/Kl of alcohol. The spent wash from molasses based distillery shall be evaporated in MEE and concentrated spent wash will be incinerated in incineration boiler to achieve 'Zero' discharge. Evaporator Condensate shall be treated and recycled/reused in process. No effluent shall be discharged outside the premises and 'Zero' discharge shall be maintained.
- v) Spent wash shall be stored in impervious pucca lagoons with proper lining with HDPE and shall be kept in proper condition to prevent ground water pollution. The storage of spent wash shall not exceed 5 days capacity.
- vi) As proposed, no effluent from distillery and co-generation power plant shall be discharged outside the plant premises and Zero discharge shall be adopted. Water consumption shall be reduced by adopting 3 R's (reduce, reuse and recycle) concept in the process.
- vii) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- viii) Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area and compost yard shall be set up. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to SPCB and this Ministry. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and total dissolved solids shall be monitored. Sampling and trend analysis monitoring must be made on monthly basis and report submitted to the Ministry's Regional Office at Bhopal and MPCB.
- ix) Bagasse/biomass storage shall be done in such a way that it does not get air borne or fly around due to wind.
- x) Boiler ash shall be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust shall be avoided. Bagasse ash and coal ash shall be stored separately.
- xi) Fire fighting system shall be as per the norms and cover all areas where alcohol is produced, handled and stored. Provision of foam system for fire fighting shall be made to control fire from the alcohol storage tank. DMP shall be implemented.
- xii) Occupational health surveillance programme shall be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre shall be strengthened and the regular medical test records of each employee shall be maintained separately.

- xiii) Dedicated parking facility for loading and unloading of materials shall be provided in the factory premises. Unit shall develop and implement good traffic management system for their incoming and outgoing vehicles to avoid congestion on the public road.
- xiv) As proposed, green belt over 33 % of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xv) All the commitments made during the Public Hearing/Public Consultation meeting held on 25th November, 2013 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xvi) At least 5 % of the total cost of the project shall be earmarked towards *the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.*

21.9.10 Development Drilling of 40 wells of M/s ONGC in KG Basin in East Godavari and Krishna Districts, AP (EC)

The project proponent and their consultant (ONGC) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 34th Meeting of the Expert Appraisal Committee (Industry) held during 13th – 14th April, 2012 for preparation of EIA-EMP report. All the projects related to offshore and onshore Oil and Gas exploration, development and production are listed in para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at central level.

M/s Oil and Natural Gas Corporation Limited (ONGCL) has proposed for the Development Drilling of 40 wells onshore at East Godavari, West Godavari and Krishna District, Andhra Pradesh. However, PP has submitted public hearing reports for West Godavari District and Krishna District each. Total wells to be drilled in the both districts are 18 wells. PP agreed to drop the proposal for drilling of 22 wells in the East Godavari District as no public hearing was conducted due to some unavoidable reasons. The Committee suggested that separate proposal for 22 wells shall be submitted to the Ministry for environmental clearance.

ONGC's development activities are confined to two on-land PML blocks, viz., West Godavari and Godavari Onland, in the Krishna Godavari Basin, Andhra Pradesh. These two PML blocks spread over in 3 districts viz., East Godavari, West Godavari and Krishna Districts of Andhra Pradesh. Under the present proposal EC is sought in respect of 40 locations out of which 5 locations are of West Godavari PML Block in Krishna District and 35 locations are of Godavari Onland PML Block. Out of these 35 locations, 13 locations are falling in West Godavari District and 22 locations are falling in East Godavari District of A.P. The operational areas in KG Basin On-land cover 3454.32 sq.km. Area required for drilling will be approx. 5-6 acres for each location. Cost of project is Rs. 18 x 11 crores. PP confirmed that no involvement of forest land. It is reported that no national park/ wildlife sanctuary/ eco-sensitive area is located within 10 Km. PP informed that during the production stage, oil and gas will be transferred through the existing facilities for GCS/GGS/EP. Following are the details of the wells:

S. No	Field / No. of wells (Anticipated Locations)/Name/ Target Depth(m)	District	PML Block	Village (No. of wells)	Mandal
1	Mandapeta / 8/3100	East Godavari	Godavari Onland	Alamuru (3)	Alamuru
				Mandapeta (5)	Mandapeta

2	Kesavadasupalem / 1/ 1800	East Godavari	Godavari Onland	Kesavadasupalem (1)	Sakhinetipalli
3	Kesanapalli west / 5/ 2500	East Godavari	Godavari Onland	Kesanapalli (5)	Malkipuram
4	Kammapalem / 7/ 2700	East Godavari	Godavari Onland	Kammapalem (7) Hamlet of Sivakodu	Razole
5	Vygreswaram / 1/ 4000	East Godavari	Godavari Onland	Vygreswaram (1)	Ambajipeta
6	Penugonda / 10/3350	West Godavari	Godavari Onland	Eleti Padu (2)	Iragavaram
				Chinnamvaripalem (8)	Penugonda
7	Lakshmaneswaram / LSDA/2500	West Godavari	Godavari Onland	Lakshmaneswaram (1)	Narsapur
8	Penugonda / PGDA/3350	West Godavari	Godavari Onland	Pittala Vemavaram (1)	Peravalli
9	Penugonda / PGDB/3350	West Godavari	Godavari Onland	Siddantham (1)	Penugonda
10	Kaikaluru / 3/2500	Krishna	West Godavari	Kaikaluru (3)	Kaikaluru
11	Lingala / 1/2500	Krishna	West Godavari	Pedda Kamanapudi (1)	Mudinepalli
12	Nandigama/ 1 /4100	Krishna	West Godavari	Munjuluru (1)	Bantumilli
Total = 40 wells					

The PP informed the Committee that ambient air quality monitoring was carried out at 11 locations during October, 2012 – December, 2012 and submitted data indicates PM₁₀ (33-67 ug/m³), PM_{2.5} (11-28 ug/m³), SO₂ (4-8.4 ug/m³) and NO_x (5- 12ug/m³). Air emissions from D.G. sets will be dispersed by providing adequate stack height. Fresh water requirement from surface water source will be 25m³/day. Water based mud (WBM) will be used.

Total wastewater generation will be around 15m³/day. Drill cutting (DC) will be separated from water based mud (WBM) and washed properly and unusable drilling fluids (DF) will be disposed off in well designed lined pit with impervious liner for solar drying. Disposal of drill cuttings and drill mud will be carried out in accordance with the GSR 546 (E) dated 30th August, 2005. Used oil will be sent to authorised recyclers. HSD (250 LPH) will be used as fuel in rig and D.G. sets during drilling period. DG sets will be installed. Blow out prevention techniques will be part of drilling rig unit. Blow out preventers (BOP) will be installed to control fluid from the formation gushing to the surface. In the event the well is unsuccessful, the well bore will be cement plugged.

The Committee deliberated upon the issues raised during the Public Hearing/Public Consultation meeting conducted by the AP Pollution Control Board on 8th January, 2014 for Krishna District. The Committee deliberated upon the issues raised during the Public Hearing/Public Consultation meeting conducted by the AP Pollution Control Board on 13th March, 2014 for West Godavari District. The issues raised were regarding subsidence, saline water intrusion, ground water table, CSR, etc. The issues raised were regarding subsidence, saline water intrusion, ground water table, CSR, etc, which have been incorporated in the final EIA-EMP report.

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

- i. As proposed, Environmental clearance is recommended for 18 development wells to be drilled in West Godavari District and Krishna District.
- ii. Ambient air quality shall be monitored near the closest human settlements as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for PM₁₀, PM_{2.5}, SO₂, NO_x, CO, methane & Non-methane HC etc.
- iii. Mercury shall also be analyzed in air, water and drill cuttings twice during drilling period.
- iv. Approach road shall be made pucca to minimize generation of suspended dust.
- v. The company shall make the arrangement for control of noise from the drilling activity. Acoustic enclosure shall be provided to DG sets and proper stack height shall be provided as per CPCB guidelines.
- vi. Total water requirement shall not exceed 25m³/day and prior permission shall be obtained from the concerned agency.
- vii. The company shall construct the garland drain all around the drilling site to prevent runoff of any oil containing waste into the nearby water bodies. Separate drainage system shall be created for oil contaminated and non-oil contaminated. Effluent shall be properly treated and treated wastewater shall conform to CPCB standards.
- viii. Drilling wastewater including drill cuttings wash water shall be collected in disposal pit lined with HDPE lining evaporated or treated and shall comply with the notified standards for on-shore disposal. The membership of common TSDF shall be obtained for the disposal of drill cuttings and hazardous waste. Otherwise, secured land fill shall be created at the site as per the design approved by the CPCB and obtain authorization from the SPCB. Copy of authorization or membership of TSDF shall be submitted to Ministry's Regional Office at Bhubaneswar.
- ix. Good sanitation facility shall be provided at the drilling site. Domestic sewage shall be disposed off through septic tank/ soak pit.

- x. Oil spillage prevention scheme shall be prepared. In case of oil spillage/contamination, action plan shall be prepared to clean the site by adopting proven technology. The recyclable waste (oily sludge) and spent oil shall be disposed of to the authorized recyclers.
- xi. The company shall comply with the guidelines for disposal of solid waste, drill cutting and drilling fluids for onshore drilling operation notified vide GSR.546(E) dated 30th August, 2005.
- xii. The Company shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. Possibility of using ground flare shall be explored. At the place of ground flaring, the overhead flaring stack with knockout drums shall be installed to minimize gaseous emissions during operation.
- xiii. The company shall develop a contingency plan for H₂S release including all necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal H₂S detectors in locations of high risk of exposure along with self containing breathing apparatus.
- xiv. On completion of drilling, the company have to plug the drilled wells safely and obtain certificate from environment safety angle from the concerned authority.
- xv. Blow Out Preventer (BOP) system shall be installed to prevent well blowouts during drilling operations. BOP measures during drilling shall focus on maintaining well bore hydrostatic pressure by proper pre-well planning and drilling fluid logging etc.
- xvi. Emergency Response Plan (ERP) shall be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- xvii. The company shall take measures after completion of drilling process by well plugging and secured enclosures, decommissioning of rig upon abandonment of the well and drilling site shall be restored to the original condition. In the event that no economic quantity of hydrocarbon is found a full abandonment plan shall be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations.
- xviii. Abandoned well inventory and remediation plan shall be submitted within six months from the date of issue of letter.
- xix. Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.
- xx. Restoration of the project site shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office at Bhubaneswar.
- xxi. Oil content in the drill cuttings shall be monitored by some Authorized agency and report shall be sent to the Ministry's Regional Office at Bhubaneswar.
- xxii. Under Enterprise Social Commitment (ESC), sufficient budgetary provision shall be made for health improvement, education, water and electricity supply etc. in and around the project.
- xxiii. An audit shall be done to ensure that the Environment Management Plan is implemented in totality and report shall be submitted to the Ministry's Regional Office.
- xxiv. 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.

- xxv. All personnel including those of contractors shall be trained and made fully aware of the hazards, risks and controls in place.
- xxvi. Company shall have own Environment Management Cell having qualified persons with proper background.
- xxvii. Company shall prepare operating manual in respect of all activities. It shall cover all safety & environment related issues and system. Measures to be taken for protection. One set of environmental manual shall be made available at the drilling site/ project site. Awareness shall be created at each level of the management. All the schedules and results of environmental monitoring shall be available at the project site office.
- xxviii. All the commitments made during the Public Hearing/Public Consultation meeting held for both Districts shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xxix. At least 5 % of the total cost of the project shall be earmarked towards *the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted* to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.

21.10 Consideration of TORs

21.10.1 Expansion of Chlor-Alkali Plant (from 171,000 to 342,000 MTPA) of Caustic Soda/Year and Coal based CPP (from 61 MW to 122 MW) of **M/s Shriram Alkali & Chemicals (A unit of DCM Shriram Ltd.)** at Plot No. 749, GIDC Estate, Jhagadia, District Bharuch, Gujarat (**TOR**)

The project authorities and their consultant (Kadam Environmental Consultants) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP. All units producing Chlor Alkali industry are listed at S.N. 4(d) under category 'B' and appraised at State level. However, applicability of general condition as the project falls within 10 kms of CPA area Ankleshwar GIDC", the proposal is treated as Category 'A' project.

M/s Shriram Alkali & Chemicals (A unit of DCM Shriram Ltd.) has proposed for Expansion of Chlor-Alkali Plant (from 171,000 to 342,000 MTPA) of Caustic Soda/Year and Coal based CPP (from 61 MW to 122 MW) at Plot No. 749, GIDC Estate, Jhagadia, District Bharuch, Gujarat. Plot area is 46.7 ha. No additional land acquisition since project is being proposed in existing premises. Cost of project is Rs. 525 Crores. No national park/wildlife sanctuary is located within 10 km distance. Sardarpura Village pond and Narmada River are located at a distance of 3.08 km and 6.7 Km respectively. Following products will be manufactured:

S.N.	Products	Existing Capacity (MTPA)	Additional Proposed (MTPA)	Total after expansion (MTPA)
1	Caustic Soda (Lye/Flakes)	171000	171000	342000
2	Chlorine	148900	148900	297800
3	Hydrochloric Acid	40000	40000	80000
4	Hydrogen	4558	4558	9116
5	Sodium hypochlorite	8200	8200	16400
6	Dilute Sulphuric Acid	3775	3775	7550

S.N.	Products	Existing Capacity (MW)	Additional Proposed (MW)	Total after expansion (MW)
1	Copal based Captive Co Generation Power Plant (CPP)	61	61	122
2	HFO based DG sets	24	Nil	24

ESP will be provided to coal fired boiler. Scrubbers will be provided to control process emissions viz. HCl and Cl₂. Electric power requirement will be increased from 61 MW to 122 MW after expansion. Water requirement will be increased from 6300 m³/day to 12233 m³/day after expansion and sourced from GIDC located at Rundh (sourced from Narmada River and supplied from intake point at Rundh). Effluent generation will be 460 KLD and treated in the ETP of Narmada Clean Tech Ltd. through GIDC Jagadia underground drainage system. Brine sludge will be collected and stored at TSDF. Fly ash will be used in cement manufacturing plant. MoEF vide letter no. J-11011/404/2008-IA II (I) dated 22nd September, 2008 has granted environmental clearance for capacity de-bottlenecking of existing chlor alkali.

The Committee prescribed the following additional TORs read with generic TOR at Annexure-5:

- i. Online monitoring system.
- ii. Chlorine management plan.
- iii. PH
- iv. Certified compliance report.

21.10.2 Expansion of Rayon Tyre Cord, Dipped Fabric, Carbon Disulphide, and Captive Power Plant (from 7.2 MW to 11.2 MW) of **M/s Shriram Rayons** (a unit of DCM Shriram Industries Ltd.) at Khasra No. 248, 342, 245, 246, 247, Village and Taluka Ladpura, District Kota, Rajasthan (**TOR**)

The project authorities and their consultant (Kadam Environmental Consultants) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP. All units producing Rayon are listed at S.N. 5(d) under category 'A' and appraised at Central level.

M/s Shriram Rayons (a unit of DCM Shriram Industries Ltd.) has proposed for expansion of Rayon Tyre Cord, Dipped Fabric, Carbon Disulphide, and Captive Power Plant (from 7.2 MW to 11.2 MW) (a unit of DCM Shriram Industries Ltd.) at Khasra No. 248, 342, 245, 246, 247, Village and Taluka Ladpura, District Kota, Rajasthan. Total plot area is 3,25,000m². No additional land acquisition since project is being proposed in existing premises. Cost of project is Rs. 163 Crores. Dara Wildlife Sanctuary is located at a distance of 35 Km. Alaniya Dam and Kota Barrage are located at a distance of 14.13Km and 6.08Km respectively. Chambal River (6.58 Km) and Kishor Sagar (5.48 Km) are located from the project site.

The following products will be manufactured:

S.N.	Product	Production Capacity (MTPD)		
		Existing	Proposed	Total
1	Rayon Tyre Cord	23	13	36
2	Dipped Fabric	20	15	35
3	Carbon Disulphide	15	5	20
4	Sodium Sulphate (By-product)	27	13	40
5	Sodium Sulphide (15% Solution) by-product	2	0.7	2.7
6	Captive Power	7.2 MW	4 MW	11.2 MW

Scrubber will be provided to control process emissions viz. CS₂ and H₂S. Water consumption will be increased from 9200 KLD to 13139 KLD after expansion and sourced from Right main canal of Chambal River. Wastewater generation will be increased from 5995 m³/day to 9709 m³/day after expansion and treated in ETP. Treated effluent is discharged into natural drainage. Solid sludge bearing Zinc > 5 % will be sent to CTDF site at Udaipur. Used /spent oil will be sent to authorised vendor. Cellulose waste will be sold to consumers. Fly ash will be disposed as per Fly Ash Notification.

The Committee prescribed the following additional TORs read with generic TOR at Annexure-5:

- i. Water conservation plan.
- ii. CS₂ monitoring plan.

- iii. CS2 balance chart to be provided for existing unit as well as expansion.
- iv. PH
- v. Certified compliance report.

21.10.3 Proposed Manufacture of Dyes & Dye Intermediates of **M/s Shiv Dyes & Intermediates Pvt. Ltd.**, at Plot 40-C & 40-C-II, AKVN Industrial Growth Centre, Village & Taluka Meghnagar, District Jhabua, M.P. (TOR)

M/s Shiv Dyes & Intermediates Pvt. Ltd., has proposed for setting up of Dyes & Dye Intermediates manufacturing unit at Plot 40-C & 40-C-II, AKVN Industrial Growth Centre, Village & Taluka Meghnagar, District Jhabua, M.P. PP informed that water requirement is 14.0 m³/day. Fuel requirement is 0.8 TPH. Chemicals to be used are not covered in MAH category. As per amendment to EIA Notification, 2006 vide SO 1599 (E) dated 25.06.2014, small units are categorised as Category 'B' project. Small units are defined as with water consumption less than 25 m³/day; fuel consumption less than 25 TPD; and not covered in the category of MAH units as per management, storage, import of Hazardous Chemical Rules, 1989.

Considering the above information supplied by the PP, the Committee recommended that the project proposal may be sent to the respective SEIAA/SEAC as proposal falls under Category 'B' project.

21.10.4 Expansion of Chlorinated Paraffin Wax of **M/s Him Chem Enterprises** at Plot No. 102,103, Village Bela Bathari, Tehsil Haroli, District Una, Himachal Pradesh. (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 along with the draft Term of References for the preparation of EIA-EMP. All Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised by Expert Appraisal Committee (I).

M/s Him Chem Enterprises has proposed for expansion of Chlorinated Paraffin Wax (from 270 MTPM to 1500 MTPM) at Plot No. 102,103, Village Bela Bathari, Tehsil Haroli, District Una, Himachal Pradesh. Plot area is 8521 m² of which greenbelt will be developed in 1000 m². Cost of expansion project is Rs. 4.2 Crore. There are no national parks, wildlife sanctuaries, biosphere reserves, reserve forests are located within 10 km distance. Following products will be manufactured:

S.N.	Product	Existing	Proposed	Total after expansion
1	Chlorinated Paraffin Wax	270	1230	1500
2	Calcium Chloride	--	2000	2000
By-Products				
1	Hydrochloric Acid	540	5460	300

Scrubber will be provide to control process emissions HCl and Cl₂. Water requirement will be increased from 8.7m³/day to 67.7m³/day after expansion. Effluent generation will be increased from 4m³/day to 4.2m³/day after expansion. Lime waste will be sent to TSDF. Used oil will be sent to authorised recyclers. HCl will be sent to actual users.

The Committee prescribed the following additional TORs read with generic TOR at Annexure-5 for preparation of EIA-EMP report:

- (i) CTE of existing to be submitted.
- (ii) PH
- (iii) Chlorine management plan.

21.10.5 Setting up 600 MTPA capacity Sodium Metal Plant of Heavy Water Board, **Department of Atomic Energy** in the existing premises of Heavy Water Plant, Baroda (Gujarat) (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 along with the draft Term of References for the preparation of EIA-EMP.

Heavy Water Board has proposed for Setting up 600 MTPA capacity Sodium Metal Plant in the existing premises of Heavy Water Plant, Baroda (Gujarat). Available land is 1.2 ha (2.96 acre) for sodium metal plant, within the premises of HWP (Baroda). No additional land is required for the facility. Raw Sodium Chloride (NaCl) as per IS 797 Gr. I/II, 1986 is the raw material for this process. Sodium Chloride shall be dried in vacuum driers/fluidised bed dryers. Dried NaCl powder is fed to cells through screw/Pneumatic Conveyor. Sodium metal will be manufactured by the electrolysis of molten sodium chloride in Down's Cell. Chlorine liberated at the graphite anode is led upwards through the Inconel dome. The additional requirement of raw water for sodium metal plant shall be 120 m³/day for which GSFC is in position to augment the supply. Chlorine gas generated as by-product will be compressed and filled in cylinder. Filter elements are used in Sodium Purification Unit. The generated liquid effluent will be treated and disposed off through existing liquid effluent Channel keeping parameters within prescribed limit of GPCB. The solidified Eutecity mixture received after shut down of the cell will also be disposed off to M/s NECL as solid waste.

The Committee was informed that sodium metal is required for the Fast Breed Reactors and is a Strategic Material. The Committee recommended that the said project proposal falls under Metallurgical Industries (Ferrous and non-ferrous) as Sodium is non-ferrous as per item no. 3 (a) of the schedule. However, this proposal does not involve any metallurgical activities but how same can be covered in 3 (a). However, being a strategic Project, this proposal may be appraised by the EAC for Nuclear Power/Strategic Projects.

21.10.6 Proposed Manufacture of New Products (Synthetic Organics) of **M/s Shreenathji Enterprise**, at S.N. 34, vill. Paldi, TalukaKhambhat, Dist. Anand, Gujarat (TOR)

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

21.10.7 Manufacture of Synthetic Organic Chemicals in Existing unit of **M/s Windson Chemicals Pvt. Ltd** at vill. Alipore, Vavsani, Gujarat (TOR)

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

21.10.8 Expansion project for Manufacturing of Resin of **M/s Lalsons Ply Board Pvt. Ltd** at Survey No. 137/1, Dist. Kutch, Gujarat. (TOR)

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

21.10.9 Chemical manufacturing unit of **M/s Apex Enterprise** at Sisodra (Ganesh), Tal. & Dist. Navsari, Gujarat(TOR)

PP informed that they have submitted the proposal for expansion but now, they have dropped the proposal. Existing unit engaged in manufacturing of ortho Cyno Benzyle Chloride (OCBC) by Chlorination since 1988 i.e prior to EIA Notification, 2006.

The Committee suggested that since unit is not going for any expansion/modernization than unit does not require Environmental Clearance for the existing project proposal.

21.10.10 Proposal for manufacturing of wood products like plywood of **M/s GSM Industries Pvt. Ltd.** at Kutch, Gujarat (TOR)

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

21.10.11 Manufacturing of Resin of **M/s Archit Plywood Pvt. Ltd.** at Dist. Kutch, Gujarat (TOR)

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

21.10.12 Expansion project for Manufacturing of Resin of **M/s Margo Plywood Pvt. Ltd.** at Survey No. 15/2, Dist. Kutch, Gujarat (TOR)

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

21.10.13 Resin Manufacturing Unit of **M/s Alora Plywood Pvt. Ltd.** at S. N. 1408/1, Village Nani Chirai, Tehsil Bhachau, District Kutch, Gujarat (TOR)

M/s Alora Plywood Pvt. Ltd. has proposed for setting up of Resin Manufacturing Unit at Sy. No. 1408/1, Village Nani Chirai, Tehsil Bhachau, District Kutch, Gujarat. PP informed that water requirement is 11.0 m³/day. Fuel requirement is 3.5 TPD. Chemicals to be used are not covered in MAH category. As per amendment to EIA Notification, 2006 vide SO 1599 (E) dated 25.06.2014, small units are categorised as Category 'B' project. Small units are defined as with water consumption less than 25 m³/day; fuel consumption less than 25 TPD; and not covered in the category of MAH units as per management, storage, import of Hazardous Chemical Rules, 1989.

Considering the above information supplied by the PP, the Committee recommended that the project proposal may be sent to the respective SEIAA/SEAC as proposal falls under Category 'B' project.

21.10.14 Manufacturing of Polyurethane Foam at Block No. 166/b, Plot No. 143, 144, 145, 146, 149, 150 & 151, Om Textile Park, Vibhag-3, Umbhel Road, Village Parab, Taluka Kamrej, District Surat, Gujarat by **M/s Radhey Foam Pvt. Ltd.** (TOR)

M/s Radhey Foam Pvt. Ltd. has proposed for setting up of Manufacturing of Polyurethane Foam at Block No. 166/b, Plot No. 143, 144, 145, 146, 149, 150 & 151, Om Textile Park, Vibhag-3, Umbhel Road, Village Parab, Taluka Kamrej, District Surat, Gujarat. PP informed that water requirement is 8.6 m³/day. There is no fuel requirement. Chemicals to be used are not covered in MAH category. As per amendment to EIA Notification, 2006 vide SO 1599 (E) dated 25.06.2014, small units are categorised as Category 'B' project. Small units are defined as with water consumption less than 25 m³/day; fuel consumption less than 25 TPD; and not covered in the category of MAH units as per management, storage, import of Hazardous Chemical Rules, 1989.

The Committee decided that PP may clarify whether chemicals to be used are covered in MAH category or not. Proposal was deferred till the addl. information is submitted.

21.10.15 Manufacturing of Resins & Adhesives of **M/s Setco Chemicals (I) Pvt. Ltd.** at Plot No. 788/1, 40 Shed Area, GIDC Estate Vapi, Taluka Paradi, District Valsad, Gujarat (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. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B' and appraised at State level. However, applicability of general condition due to project location within interstate boundary, proposal is treated as category 'A' and appraised at Central Level.

M/s Setco Chemicals (I) Pvt. Ltd. has proposed for setting up of Manufacturing Unit of Resins & Adhesives at Plot No. 788/1, 40 Shed Area, GIDC Estate Vapi, Taluka Paradi, District Valsad, Gujarat. No Eco-sensitive Zone is located within 15 km distance. Proposal has been considered in the EAC meeting as MoEF vide letter dated 10th June, 2014 has decided to keep OM dated 17th September, 2013 in abeyance w.r.t re-imposition of moratorium in the 8 CPA. Plot area is 8801m² of which greenbelt will be developed in 1164.6m². Cost of project is Rs 5 crores. Following products will be manufactured:

S.N.	Name of Product	Quantity,(MTPM)		
		Existing	Proposed	Total
1	Printing	500	-----	500
2	Ink Medium	100	-----	100
3	Retarder	100	-----	100
4	Foil wash	100	-----	100
5	Alkyd Resin	----	100	100
6	Pure Phenolic Resins	----	50	50
7	Reduced phenolic Resin	----	150	150
8	Polyurethane Resin	----	300	300
9	Polyester Resin (saturated & unsaturated)	----	50	50
10	Epoxy resin	-----	50	50
11	Polyamide Resin	-----	200	200
12	MF Resin	-----	50	50
13	UF Resin	-----	50	50
14	Ketonic Resin	-----	100	100
15	Acrylic Resin	-----	50	50
16	Emulsions	-----	50	50
17	Adhesives	-----	50	50
Total of Product Quantity		800	1250	2050

Total water requirement from GIDC water supply will be 10.2m³/day. The effluent generation will be 19m³/day and treated in ETP. Power requirement will be 200 KVA. DG set (250 KVA) will be installed. Sludge and filter cake will be sent to CHWTSDF. Spent solvent will be sent to Authorized Re-processors.

The Committee prescribed generic TOR at Annexure-8 for preparation of EIA-EMP report alongwith Public Hearing.

21.10.16 Proposal for resin manufacturing project of **M/s Fasten Laminate** at Sy. No. 109/p 1 & 3, Sokhda Road, 8 – A National Highway, Village Vaghpar, Taluka Morbi, District Rajkot, Gujarat (**TOR**)

M/s Fasten Laminate has proposed for setting up of Resin Manufacturing Unit at Sy. No. 109/p 1 & 3, Sokhda Road, 8 – A National Highway, Village Vaghpar, Taluka Morbi, District Rajkot, Gujarat. PP informed that water requirement is 16.0 m³/day. Fuel requirement is 0.6 TPD. Chemicals to be used are not covered in MAH category. As per amendment to EIA Notification, 2006 vide SO 1599 (E) dated 25.06.2014, small units are categorised as Category 'B' project. Small units are defined as with water consumption less than 25 m³/day; fuel consumption less than 25 TPD; and not covered in the category of MAH units as per management, storage, import of Hazardous Chemical Rules, 1989.

Considering the above information supplied by the PP, the Committee recommended that the project proposal may be sent to the respective SEIAA/SEAC as proposal falls under Category 'B' project.

21.10.17 Establishing a proposed unit of Resins of **M/s Purnima Enterprise** at Plot No.1, Nilkanth Industrial Estate, Village Dhanot, Taluk Kalol, District Gandhinagar, Gujarat (**TOR**)

M/s Purnima Enterprise has proposed for setting up of Resin Manufacturing Unit at Plot No.1, Nilkanth Industrial Estate, Village Dhanot, Taluk Kalol, District Gandhinagar, Gujarat. PP informed that water requirement is 11m³/day. Fuel requirement is 250 Litre per day. Chemicals to be used are not covered in MAH category. As per amendment to EIA Notification, 2006 vide SO 1599 (E) dated 25.06.2014, small units are categorised as Category 'B' project. Small units are defined as with water consumption less than 25m³/day; fuel consumption less than 25 TPD; and not covered in the category of MAH units as per management, storage, import of Hazardous Chemical Rules, 1989.

Considering the above information supplied by the PP, the Committee recommended that the project proposal may be sent to the respective SEIAA/SEAC as proposal falls under Category 'B' project.

21.10.18 Proposal for setting up manufacturing of Synthetic Organic Dye **M/s I M Dyechem Pvt. Ltd.** at Plot No.1, Sikanda market, Opp. Style Wash EM, Process Gali, Danilimbda, Ahmedabad, Gujarat (TOR)

M/s I M Dyechem Pvt. Ltd. has proposed for setting up of manufacturing of Synthetic Organic Dye at Plot No.1, Sikanda market, Opp. Style Wash EM, Process Gali, Danilimbda, Ahmedabad, Gujarat. PP informed that water requirement is 9.5 m³/day. Fuel requirement is 3.6 TPD. Chemicals to be used are not covered in MAH category. As per amendment to EIA Notification, 2006 vide SO 1599 (E) dated 25.06.2014, small units are categorised as Category 'B' project. Small units are defined as with water consumption less than 25m³/day; fuel consumption less than 25 TPD; and not covered in the category of MAH units as per management, storage, import of Hazardous Chemical Rules, 1989.

Considering the above information supplied by the PP, the Committee recommended that the project proposal may be sent to the respective SEIAA/SEAC as proposal falls under Category 'B' project.

21.10.19 Proposal for manufacturing Laminated sheets & Different types of Resin of **M/s Rajal Laminate Pvt. Ltd.** at vill.Ravapar, Nadi, Morbi, Dist. Morbi, Gujarat (**TOR**)

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

21.10.20 Proposal for Resin Manufacturing Project of **M/s Angel Resins** at village Kadadara, Dahegaon, Gandhinagar, Gujarat (**TOR**)

M/s Angel Resins has proposed for setting up of manufacturing unit of resin at Resin Manufacturing Project at Village Kadadara, Dahegaon, Gandhinagar, Gujarat. PP informed that water requirement is 20m³/day. Fuel requirement is 1.0 TPD. Chemicals to be used are not covered in MAH category. As per amendment to EIA Notification, 2006 vide SO 1599 (E) dated 25.06.2014, small units are categorised as Category 'B' project. Small units are defined as with water consumption less than 25m³/day; fuel consumption less than 25 TPD; and not covered in the category of MAH units as per management, storage, import of Hazardous Chemical Rules, 1989.

Considering the above information supplied by the PP, the Committee recommended that the project proposal may be sent to the respective SEIAA/SEAC as proposal falls under Category 'B' project.

21.10.21 Proposal for manufacturing of Para Toluene Sulphonic Acid of **M/s Aromatic Allied & Organics Ltd.** at Plot No. G1/946, RIICO Industrial Area, Village Bhiwadi, Tehsil Tijara, District Alwar, Rajasthan (**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 along with the draft Term of References for the preparation of EIA-EMP. All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B' and appraised at State Level. However, applicability of General Condition due to location of interstate boundary within 10 Km distance, proposal is treated as Category 'A' project and appraised at Central Level.

M/s Aromatic Allied & Organics Ltd. has proposed for setting up of manufacturing unit of Para Toluene Sulphonic Acid (1800 TPA) at Plot No. G1/946, RIICO Industrial Area, Village Bhiwadi, Tehsil Tijara, District Alwar, Rajasthan. Total plot area is 1762.5 m². Cost of the project is Rs. 1.8 Crore. Fresh water requirement will be 2.0 m³/day and met from RIICO. Protected Forests (11 Nos) are located within 10 km distance. No industrial effluent is generated as the water used in the process for dilution is completely mixed with spend acid, while the blow down from cooling tower is being used for plantation after treatment. Power demand is 90 KVA and the power provided by JVVNL. The unit has existing DG set.

The Committee prescribed TORs at Annexure-5 for preparation of EIA-EMP report alongwith Public Hearing.

21.10.22 Proposed Synthetic Drugs (65 TPA) & Steroids (5TPA) Plant of **M/s Shree Jee Pvt. Ltd.** at Plot No. C-25, RIICO Industrial Area, Village Bhiwadi, Tehsil Tijara, District Alwar, Rajasthan (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 along with the draft Term of References for the preparation of EIA-EMP. All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B' and appraised at State Level. However, applicability of General Condition due to location of interstate boundary within 10 Km distance, proposal is treated as Category 'A' project and appraised at Central Level.

M/s Shree Jee Pvt. Ltd. has proposed for setting up of Synthetic Drugs Manufacturing Plant at Plot No. C-25, RIICO Industrial Area, Village Bhiwadi, Tehsil Tijara, District Alwar, Rajasthan. Total plot area is 9478m². Cost of project is Rs. 35 crores. It is reported that no ecological sensitive area are located within 10 km distance. Interstate boundary is located at a distance 4Km. Water requirement will be 50m³/day and sourced from RIICO. Boiler (2 TPH + 1.0 TPH) based on petcoke/mustered husk/renewable source of energy will be installed. Effluent generation will be 33.5m³/day. Solid waste will be sent to TSDF.

The Committee prescribed TORs at Annexure -5 for preparation of EIA-EMP report alongwith Public Hearing. The Committee agreed to the request of PP that AAQ data collected for April-June 2014 may be used in the preparation of EIA Report.

21.11 Any Other Items

21.11.1 Installation of Delayed Coking Unit (DCU) of **M/s Indian Oil Corp.Ltd.**at Haldia Refinery, Haldia, West Bengal (**Extension of validity of EC – J-11011/904/2007-IA.II(I)** dated 17.03.2009)

Environmental Clearance was granted vide MoEF letter no. J-11011/904/2007-IA II (I) Dated 17th March, 2009.

PP informed that the said EC expired on 16.03.2014 since the work on subject project could not be started because of financial constraints. The major reasons were huge commitment for Pardeep Refinery project. In addition to this, three medium sized projects (Naptha Cracker Project at Panipat, Resid Up-gradation Project at Gujarat & Hydrocracker Project at Haldi) were then in advance stage of construction. After fulfilling the financial obligation of the above projects, investment for the subject project has been approved by the Board of IOCL. Hence, the Validity

of the EC may be extended for another term slight modifications. PP also requested for amendment in EC. The Committee desired that the proposal alongwith form-1 and prefeasibility report may be submitted. The proposal is deferred till requisite information is submitted.

21.11.2 Indmax Project (INDMAX FCC Unit along with Indmax Gasoline De-Sulphurisation Unit) at **M/s Bongaigaon Refinery & Petrochemicals Ltd.**, Dhaligaon to eliminate black oils (LDO, LVFO & LSHS) and Naphtha in Dist. Chirnag, Assam (**Extension of validity of EC – J-11011/9/2008-IA.II(I) dated 02.09.2008**)

PP applied for extension of validity of EC after the expiry of EC.

The Committee recommended that this may be examined by MOEF at the first instance.

21.11.3 Response of RCF dated 25.04.2014 regarding Proposed Sulphur Bentonite Project of **M/s Rashtriya Chemicals and Fertilizers Limited (RCFL)** at Mumbai (**Further consideration on applicability of EC**)

Project proposal was considered in the 17th Expert Appraisal Committee (Industry) meeting held on 18th to 19th March, 2014 wherein the Committee desired following information:

- (i) Manufacturing process details along with the chemical reactions and process flow diagram for the proposed project.
- (ii) Details of utilities to be installed.
- (iii) Details of fuels to be used.
- (iv) Fluoride content in bentonite to be analysis and report to be submitted.
- (v) Status of CTO and details of CTO obtained for the unit.

Project proponent vide letter dated 24th April, 2014 submitted aforesaid information.

The Committee noted that proposed product –Bentonite Clay will be used as micro-nutrients in the manufacturing of fertilizer. Manufacturing process involves only blending and no chemical reactions take place. The Committee suggested such proposal cannot be considered as chemical fertilizer as there in no chemical reaction involved. Such proposal may be exempted from environment clearance process.

21.11.4 Increase in Production of Pentaerythritol (from 450 MTPM to 560 MTPM) and Sodium Formate (275 MTPM to 336 MTPM) of **M/s Asian Paints Limited** at Plot No. B5-B10, Sy. No. 126-131, 137 & 165 at Sipcot Industrial Estate, Village Kudikadu, Mandal & District Cuddalore, Tamil Nadu– (**Corrigendum sought vide letter dated 04.03.2014 on EC granted on 24.02.2014**)

The Committee suggested that clarification may be obtained from the PP whether the above mentioned plant is a standalone plant or part of integrated paint complex. The proposal is deferred till requisite information is submitted.

21.11.5 **Exploratory** Drilling of 10 wells (On-shore) in NELP-VIII block CB-ONN-2009/4 in Western Basin in Vadodara, District Gandhi Nagar, Gujarat by M/s Oil and Natural Gas Corporation Ltd— (**Amendment to EC dated 25.09.2013**)

Environmental clearance was granted to M/s ONGC on 25th September, 2013 for Exploratory Drilling of 10 wells (On-shore) in NELP-VIII block CB-ONN-2009/4 in Western Basin in Vadodara, District Gandhi Nagar, Gujarat. PP vide letter no. BDA/BASIN/BLOCK-III/EC/CB-ONN-2009/4 dated 06.06.2014 has requested for change in location of two wells. Further it is also surmised that the locations of wells were changed due to unavailability of land at previous location. Coordinates of new finalized two locations are as below:

Sl. No.	Final well location	Latitude	Longitude
1	Well#1	23 ^o 32' 53.3"	72 ^o 38' 56.8"
2	Well#2	23 ^o 30' 11.8"	72 ^o 39' 16.8"

PP also emphasized that the Co-ordinates of the other 8 (Eight) locations are also indicative they may also change after G&G data interpretation, availability of land and drilling data of above said wells.

Therefore, the Committee recommended the above amendments in the EC. The Committee also recommended that coordinates may be shifted upto 500 m for other 8 locations if required as proposed activities are exploratory drilling.

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

Project proposal was considered in the 18th Expert Appraisal Committee (Industry) meeting held on 29th April, 2014 wherein the Committee had desired following information:

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

Project proponent vide letter dated 15th May, 2014 has submitted above information. PP has submitted a copy of information collected through RTI from PCC, DD & DNH mentioning that use of coal as fuel is not covered as per UT Administration Notification No. PCC/DMN/13-III/1999-2000/22 dated 03.05.1999. The Coal will be procured from M/s Waheguru Coal Pvt. Ltd and M/s S N Tradlink Pvt. Ltd. Fly ash will be collected by M/s Pragnesh B Solank for use in brick manufacturing . The Committee suggested that explore the possibility to transfer the fly ash to cement industry. ESP will be installed to control particulate emissions. The revised air dispersion modelling report has been submitted. After detailed deliberations, the committee recommended the proposal for fuel change from Natural GAS/LHS to coal in HTF heaters with following specific conditions:

- i. ESP shall be provided to the coal fired HTF heater to control particulate emissions within 50 mg/Nm³. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/APPCB guidelines.
- ii. coal storage shall be done in such a way that it does not get air borne or fly around due to wind. For this, it shall be kept in wet form.
- iii. Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust should be avoided.
- iv. Fly ash shall be sent to brick manufacturers/cement plant.

21.11.7 Proposed Bulk Drug Unit of **M/s Praveen laboratories Pvt. Ltd.** at dist. Surat, Gujarat (**Amendment to EC**)

Project proposal was considered in the 5th Expert Appraisal Committee (Industry) meeting held on 31st January, 2013-1st February, 2013 wherein the Committee desired following information:

- i. Certified compliance report from (GPCB) in respect of the wastewater management scheme

A copy of GPCB's letter no. GPCB/CCA-SRT-352(2)/ID_21094/146519 dated 10th May, 2013 had been submitted.

After detailed deliberations, the committee recommended the following amendment:

“The Process Effluent generated (13.45 m³ /Day) shall be segregated in Dilute Stream and Concentrated Stream (Mother Liquor from Process) and collected separately. The Dilute Stream resulting from Washing, Boiler and Cooling Blow Down shall be treated in ETP having Physico-Chemical Treatment and treated wastewater complying CETP inlet norms shall be disposed off in CETP operated by M/s Globe Enviro Care Ltd., Sachin, Surat. The Concentrated Mother Liquor shall be striped off Low volatiles and then after it will be concentrated in Multiple Effect Evaporator”

21.11.8 EC for 30 KLPD Distillery project of **M/s HuatamaKisanAhirSahakariSakharKarkhana Ltd.**, village & Tehsil Walwe, Dist. Sangli, Maharashtra (**Further consideration of Extension of validity of EC**)

Project proposal was considered in the 17th Expert Appraisal Committee (Industry) meeting held on 18th – 19th March, 2014 wherein the Committee desired following information:

- (i) Collect 2 months baseline data and compare with the existing baseline data.
- (ii) Details of change in project/project profile/project parameters.

Project proponent vide letter dated 11th June, 2014 has submitted above information. After detailed deliberations, the committee recommended for the extension of validity of EC for a period of five years with effect from 17.09.2014.

21.11.9 Letter dated 20.05.2014 of **M/s Numaligarh Refinery Ltd.** seeking waiver of condition No. 3 of **EC J-11011/16/90-IA.II(I) dated 31.05.1991**

The PP did not attend the meeting. The Committee noted that the PP had not attended the EAC meeting held in June 2014 wherein the proposal was listed for consideration. The Committee decided that the proposal may be placed before the EAC as and when requested by the PP.

21.11.10 Manufacturing of Synthetic Resin (2300 MTPM) of **M/s Nirav Chemical Industries** at Plot No.44/1, Changodar Industrial Estate, Sarkhej-Bavla Highway, Village Changodar, TalukaSanand, District Ahmedabad, Gujarat – (**Corrigendum sought vide letter dated 19.02.2014 on the EC dated 07.01.2014**)

Environmental Clearance was granted vide MoEF letter No. J-11011/85/2011-IA II (I) dated 7th January, 2014. Now, PP vide letter dated 19th February, 2014 has informed that there will not be any wastewater generation from manufacturing process and about 1.1 KLD wastewater will be generated from the cooling blow down and steam boiler which will be after pH correction and maintaining the TDS, reused on land for gardening /plantation purpose within premises. PP submitted that there will be no ETP sludge generation from their unit. This was deliberated and the Committee noted that after pH correction, there will be some precipitation of sludge, which they have to remove /clean regularly. Hazardous characteristic of the sludge require to be checked by analysis and submitted to EAC for consideration of their request.

21.11.11 Exploratory Drilling of 6 wells in NELP-VIII Block AA-ONN-2009/3 (Teok) in AAA Basin of **M/s ONGC** in Teok, Assam (**Extension of validity of TOR dated 13.07.2012**)

TOR was granted to the aforesaid project on 13.07.2012. PP has vide letter dated 19.06.2014 requested for extension of validity of TOR by a year. PP has informed that two-third of the block area lies within 10km radius of Hollongapar Gibbon Sanctuary and WL clearance has been applied for. The conduct of Public Hearing has been delayed as the process of obtaining wildlife clearance is still under process.

The EAC recommended extension of validity of TOR by a year upto 12.07.2014.

FRIDAY, 1st AUGUST 2014**CONSIDERATION OF TOR CASES**

21.12.1 Expansion of Synthetic Organic Chemicals-Bulk Drugs & Intermediates Manufacturing Unit of **M/s Mylan Laboratories Ltd.**, Unit-1, at Plot No. 10 & 42, IDA Village Gaddapotharam, Mandal Jinnaram, District Medak, Andhra Pradesh. **(TOR) (138 of 2014)**

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. The project is located within 10km of CPA from Pattancheru and hence a Cat. A project. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within 10 km distance nearest critically polluted area ie. IDA, Pattancheru, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Mylan Laboratories Ltd., Unit-1 has proposed for expansion of Synthetic Organic Chemicals-Bulk Drugs & Intermediates Manufacturing Unit (from 22.65 TPM to 60.51 TPM) at Plot No. 10 & 42, IDA Village Gaddapotharam, Mandal Jinnaram, District Medak, Andhra Pradesh. Plot area is 15 acres of which greenbelt will be developed in 4.95 acres. Cost of project is Rs. 25 Crores. A number of reserve forests are located within 10 km radius; Kistaipalli RF is 0.4 km in west direction, Kazipalli RF 0.5 km in southwest direction, Dundigal RF 0.6 km in east direction, Wailalpur RF 1.7 km in northwest direction, Jinnawaram RF 7.2 km in northwest direction, Pottaguda RF 5.9 km in northwest direction, Kodakanchi RF 9.5 km in northwest direction, Mangampet RF 9.7 km in northwest direction, Bontapalli RF 9 km in northwest direction, Dabilapur RF 9.6 km in northeast direction, Gaudavalli RF 9.4 km in east direction, Pochampalli RF 6.2 km in southeast direction, Borampet 8 km in southeast direction, Suraram RF 8.1 km in southeast direction, Gajularamaram RF 9.4 km in southeast direction and Dulapalli RF 9.6 km in southeast direction. There are no ecologically sensitive areas like national parks, and sanctuaries within 10 km radius of the site. The site is located at a distance of 5 Km from the critically polluted area of Patancheru and Bollaram Industrial estates.

The manufacturing capacity after expansion is as follows:

S.No	Name of the Product	CAS No.	Capacity (TPM)
1	Lopinavir	192725-17-0	5.00
2	Pregabiline	148553-50-8	7.00
3	Zidovudine	30516-87-1	6.00
4	Quetipine Fumarate	111974-72-2	5.00
5	Tenofavir	147127-20-6	7.00
6	Oxcarbazepine	28721-07-5	3.00
7	Febantel	58306-30-2	2.00
8	Zolpidem	82626-48-0	3.00
9	Lamivudine	134678-17-4	4.00
10	Montelukast	151767-02-1	1.00
11	Enrofloxacin	93106-60-6	2.00
12	Paroxetine HCl	78246-49-8	2.00
13	Nadolol	42200-33-9	0.50
14	Atavaquone	95233-18-4	0.50
15	Valgancyclovir	175865-59-5	1.00
16	Duloxetine HCl	136434-34-9	1.00
17	Effavirenz	154598-52-4	0.50
18	Levetiracetam	102767-28-2	1.00
19	Olmesartan Medoxomil	144689-63-4	1.00
20	Nevirapine(RAP)	129618-40-2	0.50
21	Atomoxetine HCl	82248-59-7	0.50
22	Tolmetan	26171-23-3	1.00
23	Sumatriptan	103628-48-4	0.25
24	Clindamycin Palmitate HCl	25507-04-4	0.34
25	Mirtazapine	61337-67-5	0.25

26	Lisinopril	76547-98-3	0.20
27	Moxifloxacin	354812-41-2	0.20
28	Irbesartan	138402-11-6	0.45
29	Oseltamivir	196618-13-0	0.25
30	Atenolol	29122-68-7	0.25
31	Quinapril	85441-61-8	0.10
32	Stavudine	3056-17-5	0.30
33	Citalopram	59729-33-8	0.25
34	Darunavir	206361-99-1	0.25
35	Voriconazole	137234-62-9	0.25
36	Triclabendazole	68786-66-3	0.25
37	Eletripton Hydrobromide	177834-92-3	0.08
38	Sitaglipton phosphate	654671-78-0	0.15
39	Pironaridine Tetraphosphate	76748-86-2	0.25
40	Gatifloxacin	112811-59-3	0.25
41	Clarithromycin	81103-11-9	0.02
42	Bosentan	147536-97-8	0.02
43	Artemether	71963-77-4	0.02
44	Artesunate	88495-63-0	0.02
45	Ezetamibe	163222-33-1	0.02
46	Milnacipran	92623-85-3	0.02
47	Barnidipine	104713-75-9	0.02
48	Febuxostat	144060-53-7	0.02
49	Candesartan	139481-59-7	0.02
50	Fosamprenavir	226700-81-8	0.02
51	Atazanavir sulphate	229975-97-7	0.02
52	Piperaquine Phosphahate	4085-31-8	0.02
53	Raltegravir	518048-05-0	0.02
54	Levofloxacin	100986-85-4	0.02
55	Prasugrel	150322-43-3	0.02
56	Aripiprazole	129722-12-9	0.02
57	Dihydro Artemisinin	71939-50-9	0.02
58	Deasmopression Acetate	62288-83-9	0.01
59	Blonanserin	132810-10-7	0.02
60	Etoicoxib	202409-33-4	0.02
61	Mitiglinide Calcium Dihydrate	207844-01-7	0.02
62	Octreotide Acetate	79517-01-4	0.02
63	Tetrabenazine	58-46-8	0.02
64	Vardenafil Hydrochloride Trihydrate	224785-90-4	0.02
65	Aliskiren Hemifumarate	173334-57-1	0.02
66	Atrovastatin	134523-00-5	0.02
67	Amolodiphine	88150-42-9	0.02
68	Azilsartan medoxomil potassium	147403-03-0	0.02
69	Cabazitaxel	183133-96-2	0.02
70	Fingolimod	162359-55-9	0.15
71	Vilazadone	163521-12-8	0.02
72	Linagliptin	668270-12-0	0.02
73	Bocepravir	394730-60-0	0.02
74	Telepravir	402957-28-2	0.02
75	Miglitol	72432-03-2	0.02
76	Finasartan	247257-48-3	0.02
77	Other Validation Products	-----	0.85
	Total		60.51

List of Utilities

S.No	Utility	Permitted	Proposed
1	Coal Fired Boilers	8TPH	

		2 x 2TPH	
		1TPH	
2	DG Sets*	2 x 500 KVA	3 x 1500 KVA
		3 x 750 KVA	
		1 x 1010 KVA	

* DG set will be used during load shut down.

Existing EC letter no.J-11011/25/2004 dtd.7.7.2005 in the name of Matrix Laboratories. EC transfer to be done in the new name. Addl. Utilities will be made available from neighbouring unit of the same company.

Scrubber will be provided to control process emissions. Water requirement will be increased from 124 m³/day to 713.6 m³/day after expansion. Out of which fresh water requirement from APIIC water supply will be increased from 124 m³/day to 458 m³/day and remaining water requirement of 261.6 m³/day will be met from recycled water. Wastewater generation will be increased from 65 m³/day to 260.6 m³/day after expansion. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. The evaporation salts and ETP sludge will be sent to TSDF. Organic residue, spent carbon and Distillation residue will be sent to cement plant. Waste oil and used batteries from the DG sets are sent to authorize recyclers. Fly ash will be sent to brick manufacturers. Additional DG set (3 x 1500 KVA) will be installed.

After detailed deliberations, the Committee recommended Generic TOR as given in Annexure-5 for preparation of EIA-EMP report along with following additional TORs:

- (i) Recommendation of APPCB
- (ii) Zero-discharge.
- (iii) Explore the possibility of utilization of evaporation salt after some process. Report to be submitted alongwith EIA report.
- (iv) PH
- (v) Certified compliance report.

21.12.2 Bulk Drug & Intermediate Manufacturing Unit of **M/s Satyadeva Organosys Pvt. Ltd.** at Sy. Nos. 1019, 1020/A-2 & 1021, Village Jangamaheshwarapadu, Mandal Durgi, District Guntur, Andhra Pradesh. **(TOR)**

The project authorities and their Consultant (M/s Rightsource Industrial Solutions Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised by Expert Appraisal Committee (I).

M/s Satyadeva Organosys Pvt. Ltd. has proposed for setting up of Bulk Drug & Intermediate Manufacturing Unit at Sy. Nos. 1019, 1020/A-2 & 1021, Village Jangamaheshwarapadu, Mandal Durgi, District Guntur, Andhra Pradesh. Plot area is 12302.88 m² (3.04 acres) of which greenbelt will be developed in 4062.15m².

The following products will be manufactured:

Name of the product	CAS No's	Therapeutic Category	Quantity inMT /Month
Ciprofloxacin Hydrochloride	86483-48-9	Antibiotic	5.00
Domperidone	57808-66-9	Antiemetic	1.00
Efavirenz	154598-52-4	Antiretroviral	2.00
Emtricitabine	143491-57-0	Antiretroviral	3.00
Fexofenadine	153439-40-8	Antihistamine	3.00

Hydrochloride			
Fluconazole	86386-73-4	Antifungal	1.00
Lamivudine	134678-17-4	Antiretroviral	2.00
Lopinavir	19275-17-0	Antiretroviral	1.00
n-Butyl Lithium	109-72-8	Reducing agent	20.00
Omeprazole	73590-58-6	Antiulcer	3.00
Pregabalin	148553-50-8	Anticonvulsant	2.00
RitanaVir	155213-67-5	Antiretroviral	1.50
Sildenafil Citrate	171599-83-0	Erectile Dysfunction	3.00
Telmisartan	144701-48-4	Antihypertensive	2.00
Zidovudine	30516-87-1	Antiretroviral	0.50
Total			50.00

List of by-products :

S.N.	Product	Production Capacity (Kg/Day)
1	Piperazine Hydrochloride	68.9
2	Triethyl Amine Hydrochloride	63.93
3	Thio Acetic Acid	13.33
4	Sodium Citrate	114.13
5	Lithium Chloride	489.33
6	4- Nitro Phenol	34.24

Bagfilter along with stack height of 30 m will be provided to additional coal fired boiler. Scrubber will be provided to control process emissions viz ammonia, SO₂ and HCl. Water requirement from ground water source will be 111.39m³/day. Wastewater generation will be 51.64m³/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. The evaporation salts and ETP sludge will be sent to TSDF. Organic residue, spent carbon and Distillation residue will be sent to cement plant. Waste oil and used batteries from the DG sets are sent to authorize recyclers. Fly ash will be sent to brick manufacturers. Power requirement will be 700 KVA, which will be met from State Electricity Board.

After detailed deliberations, the Committee recommended Generic TOR as given in Annexure-5 along with following additional TORs for preparation of EIA-EMP report:

- (i) Recommendation of APPCB
- (ii) Zero-discharge.
- (iii) Explore the possibility of utilization of evaporation salt after some process. Report to be submitted along with EIA-EMP report.
- (iv) PH

21.12.3 Expansion of Bulk Drugs and Intermediates Manufacturing Unit (From 38.2 TPM to 70 TPM) and 5MW Co-Generation Power Plant at Sy. No 10 & 42, IDA, Gaddapotharam Village, Jinnaram Mandal, Medak District, Telangana by M/s Astrix Laboratories Limited (TOR)

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 Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within 10 km distance nearest critically polluted area ie. IDA, Pattancheru, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Astrix Laboratories Limited has proposed for expansion of Bulk Drugs and Intermediates Manufacturing Unit (From 38.2 TPM to 70 TPM) and 5MW Co-Generation Power Plant at Sy. No 10 & 42, IDA, Gaddapotharam Village, Jinnaram Mandal, Medak District, Telangana. Existing plot area is 28.5 acres. The capital cost for expansion is Rs. 60 crores, towards co-generation power plant, modernization of zero liquid discharge facility, debottlenecking and additional equipment to enhance the capacity. A number of reserve forests are located within 10 km radius; Kistaipalli RF is 0.45 km in west direction, Kazipalli RF 0.6 km in southwest direction, Dundigal RF 0.5 km in south direction, Wailalpur RF 1.8 km in northwest direction, Jinnawaram RF 7.1 km in northwest direction, Pottaguda RF 5.8 km in northwest direction, Kodakanchi RF 9.4 km in northwest direction, Mangampet RF 9.6 km in northwest direction, Bontapalli RF 8.9 km in northwest direction, Dabilapur RF 9.5 km in northeast direction, Gaudavalli RF 9.3 km in east direction, Pochampalli RF 6.3 km in southeast direction, Borampet 8.1 km in southeast direction, Suraram RF 8.2 km in southeast direction, Gajularamaram RF 9.5 km in southeast direction and Dulapalli RF 9.7 km in southeast direction. There are no ecologically sensitive areas like national parks, and sanctuaries within 10 km radius of the site. The site is located at a distance of 5 Km from the critically polluted area of Patancheru and Bollaram Industrial estates. The manufacturing capacity after expansion is as follows:

Manufacturing Capacity – After Expansion

S.No	Name of the Product	CAS No.	Capacity (TPM)
1	Nevirapine	129618-40-2	15
2	Lamivudine	134678-17-4	30
3	Emtricitabine	143491-57-0	15
4	Zidovudine	30516-87-1	5
5	Efavirenz	154598-52-4	0.8
6	Stavudine	3056-17-5	0.7
7	Lopinavir	192725-17-0	0.5
8	Ritanovir	155213-67-5	0.5
9	Didanosin	69655-05-6	1
10	Clopidogrel Bisulphate	120202-66-6	0.5
11	Atomoxetine HCl	82248-59-7	0.1
12	Fluindione	957-56-2	0.4
13	Validation products	----	0.5
	Total		70
	Co-Generation Power Plant		5 MW

List of Utilities

S.No	Utility	Permitted	Proposed
1	Coal Fired Boiler	8TPH	30 TPH
2	Furnace Oil Fired Boiler	4 TPH	---
3	DG Set**	2 x 380 KVA 1 x 500 KVA 1 x 750 KVA 2 x 1025 KVA	2 x 1025 KVA 2 x 1500 KVA

* DG set will be used during load shut down.

Electrostatic precipitators / Bag filters are provided to the existing coal fired boiler. ESP/bagfilter will be provided to the proposed additional coal fired boiler. as air pollution control equipment for coal fired boilers. Water requirement will be increased from 164.01KLD to 916.5 m3/day after expansion. Out of which 666 KLD will be fresh water and 250.5 KLD is recycled water. Fresh water is sourced from APIIC supply. The effluents are treated in "Zero Liquid Discharge" system. The high TDS effluents in the order of 51.5KLD are sent to Stripper followed by MEE, AFTD. The condensate from MEE and ATFD is treated along with LTDS effluent from process, washings, scrubbers, DM plant, SRS system, detoxification, ZLD washings, domestic usage and utility blow downs of 199 KLD in biological treatment plant followed by Reverse Osmosis for reuse in cooling towers. Organic residue, spent carbon and Distillation residue will be sent to cement plant. Waste oil and used batteries from the DG sets are sent

to authorize recyclers. Fly ash will be sent to brick manufacturers. Existing environmental clearance was granted vide MoEF letter no.J-11011/24/2004 dated 7.7.2005 for existing unit.

After detailed deliberations, the Committee recommended Generic TOR as given in Annexure-5 read with additional TORs given below for preparation of EIA-EMP report along with Public Hearing:

- (i) Recommendation of APPCB
- (ii) Zero-discharge.
- (iii) Explore the possibility of utilization of evaporation salt after some process. Report to be submitted alongwith EIA report.
- (iv) PH
- (v) Certified compliance report.

21.12.4 Expansion of Bulk Drugs and Intermediates Manufacturing Unit (From 5 TPM to 20.1 TPM) of M/s Eshwar Pharmaceuticals Ltd. (formerly known as Konar Organics Ltd.) at Sy. No. 180/2, IDA Khazipally, Jinnaram Mandal, Medak District, Telangana (TOR)

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 Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within 10 km distance nearest critically polluted area ie. IDA, Pattancheru, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s. Eshwar Pharmaceuticals Ltd. (formerly known as Konar Organics Ltd.) has proposed for expansion of Bulk Drugs and Intermediates Manufacturing Unit (From 5 TPM to 20.1 TPM) at Sy. No. 180/2, IDA Khazipally, Jinnaram Mandal, Medak District, Telangana. Plot area is 7.98 acres, of which greenbelt will be developed in 2.6 acres. Cost of project is Rs. 5 Crore. The reserve forests located within 10 km radius from the plant site are; Kistaipalli RF 0.3 km in west direction, Kazipalli RF 0.4 km in southwest direction, Dundigal RF 0.5 km in east direction, Wailalpur RF 1.9 km in northwest direction, Jinnawaram RF 7.2 km in northwest direction, Pottaguda RF 6 km in northwest direction, Kodakanchi RF 9.6 km in northwest direction, Mangampet RF 9.8 km in northwest direction, Bontapalli RF 9.1 km in northwest direction, Dabilapur RF 9.7 km in northeast direction, Gaudavalli RF 9.5 km in east direction, Pochampalli RF 6.1 km in southeast direction, Borampet 7.9 km in southeast direction, Suraram RF 8 km in southeast direction, Gajularamaram RF 9.3 km in southeast direction and Dulapalli RF 9.5 km in southeast direction. There are no ecologically sensitive areas like national parks, and sanctuaries within 10 km radius of the site. The site is located at a distance of 4 Km from the critically polluted area of Patancheru and Bollaram Industrial estates.

The existing and proposed manufacturing capacity is as follows:

S.No	Name of the Product	CAS No.	Capacity (TPM)
1	CIS-2-(2,4 Dichloro Phenyl)-2-(1H,1,2,4 Triazol-1-yl Methyl)1-3-Dioxolane-4-yl Methyl Alcohol	67914-86-7	1.25
2	2,4-Di Hydro-4-{4-[4-(4-Methoxy Phenyl)-1-Piperazinyl]Phenyl}-3H 1,2,4 Triazole-3 One	106461-41-0	1.67
3	N-(4-((Amino Iminomethyl Thio-Methyl)-2-Thiazolyl-Guanidine Dihydrochloride	88046-01-9	2
4	N-Sulfamyl-3-Chloro Propionamide HCl	106649-95-0	7.08
5	4,4-Diethoxy-N, N-Dimethyl-1-Butanamine	1116-77-4	2
6	1-Methyl-4-Nitro-3N-Propylpyrazole-5-Corboxamide	139756-01-7	2
7	1,3 Dichloro Acetone	534-07-6	2
8	CIS-2-Bromo Methyl-2-(2.4-Dichloro Phenyl-[1,3] Dioxolan-4-yl Methyl Methane Sulfonate Crude	82966-34-5	0.5
9	Imidazole-1yl-Acetonitrile	98873-55-3	0.02

10	1-(2-Chloro Phenyl)-2 Methane Sulfonyloxy Ethyl Ester Methane Sulfonic Acid		0.06
11	2-Chloromethyl-3, 4-Dimethoxy Pyridine Hydrochloride	72830-09-2	1
12	S(+)-2-Aminobutyramide Hydrochloride	7682-20-4	0.5
	Total		20.1

List of Utilities

S.No	Utility	Permitted	Proposed
1	Coal Fired Boiler	0.5TPH	2 x 3 TPH
2	DG Sets*	2x 125 KVA	2 x 125 KVA

* DG set will be used during load shut down.

Electrostatic precipitators / Bag filters are provided to the existing coal fired boiler. ESP/bagfilter will be provided to the proposed additional coal fired boiler as air pollution control equipment for coal fired boilers. Water requirement will be increased from 41 m³/day to 130.8 m³/day after expansion. Out of which 84.8 m³/day will be fresh water and 46 m³/day is recycled water. Fresh water is sourced from HMWS & SB Industrial Water Supply. The effluents are treated in "Zero Liquid Discharge" system. The high TDS effluents in the order of 41.87KLD are sent to Stripper followed by MEE, AFTD. The condensate from MEE and ATFD is treated along with LTDS effluent from process, washings, scrubbers, DM plant, SRS system, detoxification, ZLD washings, domestic usage and utility blow downs of 14.5 m³/day in biological treatment plant followed by Reverse Osmosis for reuse in cooling towers. Organic residue, spent carbon and Distillation residue will be sent to cement plant. Waste oil and used batteries from the DG sets are sent to authorize recyclers. Fly ash will be sent to brick manufacturers. Existing environmental clearance was granted vide MoEF letter no. J-11011/166/2005 dtd 10.11.2005 for the existing unit in the name of M/s Konar Organics.

After detailed deliberations, the Committee recommended TORs as given in Annexure-5 read with additional TORs given below for preparation of EIA-EMP report along with Public Hearing:

- (i) Recommendation of APPCB
- (ii) Zero-discharge.
- (iii) Explore the possibility of utilization of evaporation salt after some process. Report to be submitted alongwith EIA report.
- (iv) PH
- (v) Certified compliance report.

21.12.5 Modernization/Expansion of Bulk Drugs and Intermediates Manufacturing Unit (From 1.5 TPM to 15 TPM) **of M/s Lakshmi Saras Chem Tech Pvt. Ltd. (formerly known as Saras Chem Tech)** at Plot No 276, Phase II IDA, Pashamylaram, Patancheru Mandal, Medak District, Telangana.- **TOR**

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 Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within 10 km distance nearest critically polluted area ie. IDA, Patancheru, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Lakshmi Saras Chem Tech Pvt. Ltd. (formerly known as Saras Chem Tech) has proposed for setting up of Modernization/Expansion of Bulk Drugs and Intermediates Manufacturing Unit (From 1.5 TPM to 15 TPM) at Plot No 276, Phase II IDA, Pashamylaram, Patancheru Mandal, Medak District, Telangana. Plot area is 1.85 acres, of which greenbelt will be developed in 0.6 acres. Cost of project is Rs. 5 Crore. Nakkavagu stream is at a distance of 8.5 km in northeast direction, flowing from north to south. There are no ecologically sensitive areas like reserve forests, national parks, and sanctuaries within 10 km radius of the site. The site is located at a distance of 6.4 Km from the critically polluted area of Patancheru and Bollaram Industrial estates. The manufacturing capacity after expansion is as follows:

Manufacturing Capacity – Permitted

S.No	Name of the Product	Capacity (TPM)
1	Spent Solvent Distillation (IPA, Acetone, Ethyl Acetate, Toluene, Methelen Chloride)	52.5
2	Benzyl Triethyl Ammonium Chloride	1.5

Manufacturing Capacity – After Expansion

S.No	Name of the Product	CAS No.	Capacity (TPM)
1	Cinnarizine	298-57-7	5
2	Carisoprodol	78-44-4	5
3	Meclizine Dihydrochloride	1104-22-9	1
4	Buclizine Dihydrochloride	129-74-8	1
5	Guaifenesin	93-14-1	10
6	Flunarizine	52468-60-7	0.2
Total - Worst Case 2 Products			15

List of By-Products (Tentative)

S.No	Name of the Product	Stage	Name of the By-Product	Capacity	
				Kg/day	TPM
1	Guaifenesin	I	Sodium phosphate	276	8.3
			Sodium Chloride	98	2.9

List of Utilities

S.No	Utility	Permitted	Proposed
1	Coal Fired Boiler	0.5TPH	2 TPH
2	DG Set*	62.5 KVA	250 KVA

* DG set will be used during load shut down.

Electrostatic precipitators / Bag filters are provided to the existing coal fired boiler. ESP/bagfilter will be provided to the proposed additional coal fired boiler as air pollution control equipment for coal fired boilers. Scrubber will be provided to control process emissions viz. SO₂. Water requirement will be increased from 3.2 m³/day to 46 m³/day after expansion. Out of which 32 m³/day will be fresh water and 14 m³/day is recycled water. Fresh water is sourced from APIIC Water Supply. The effluents are treated in "Zero Liquid Discharge" system. The high TDS effluents in the order of 8.8 KLD are sent to Stripper followed by MEE, AFTD. The condensate from MEE and ATFD is treated along with LTDS effluent from process, washings, scrubbers, DM plant, SRS system, detoxification, ZLD washings, domestic usage and utility blow downs of 6.96 m³/day in biological treatment plant followed by Reverse Osmosis for reuse in cooling towers. Organic residue, spent carbon and Distillation residue will be sent to cement plant. Waste oil and used batteries from the DG sets are sent to authorize recyclers. Fly ash will be sent to brick manufacturers. CTE obtained on 30.09.2003 for the existing from APPCB. Existing unit was engaged in manufacturing of Intermediates. No EC was required for Intermediate manufacturing at that time.

After detailed deliberations, the Committee recommended Generic TOR as given in Annexure-5 read with following additional TORs for preparation of EIA-EMP report along with Public Hearing:

- (i) Recommendation of APPCB
- (ii) Zero-discharge.
- (iii) PH

21.12.6 Expansion of Bulk Drug & Drug Intermediates Manufacturing Unit (from 203.34 Kgs/day to 1825.70 Kgs/day) **(Unit-I) of M/s Neuland Laboratories Ltd.** at Sy. Nos 374, 474 & 490/2, Village IDA Bonthapally, Tehsil Jinnaram Mandal, District Medak, Andhra Pradesh **(TOR)**

The project authorities and their Consultant (M/s Pridhvi Envirotech (P) Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP. It was informed that the unit is a Category B project. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, non existence of SEIAA/SEAC in AP, the said proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Neuland Laboratories Ltd. (Unit-I) has proposed for expansion of Bulk Drug & Drug Intermediates Manufacturing Unit (from 203.34 Kgs/day to 1825.70 Kgs/day). at Sy. Nos 374, 474 & 490/2, Village IDA Bonthapally, Tehsil Jinnaram Mandal, District Medak, Andhra Pradesh. Plot area is 11.2 acres of which greenbelt will be developed in 3.36 acres. Rajanala Cheruvu i.e water body is located at a distance of 0.7 Km. Jinnaram RF is located at a distance of 1.3 Km. There are 19 reserve forests located within 10 Km distance. The unit is located outside 10 km radius of the critically polluted areas (about 17.3 Km away from IDA Patancheru & 11.6 Km away from IDA Bollaram).

The following products will be manufactured:

S.No	Products	Existing Capacity Kgs/Day	After Expansion Quantity Kgs/day
	Existing Products:		
1	Enalapril Maleate	50.0	266.7
2	Mirtazapine	20.0	100.0
3	Sotalol HCl	25.0	200.0
4	Levetiracetam	50.0	400.0
5	Benzyl SalbLevetiracetam utamol (Intermediate)	16.67	66.67
6	Ipratropium Bromide	0.5	0.33
7	Ofloxacin	2.67	33.33
8	Ramipril	20.0	66.67
9	Itraconazole	1.67	0.33
10	Olanzapine	1.67	8.33
11	Moxifloxacin	5.0	33.33
12	Escitalopram Qxalate	1.67	166.67
13	Levofloxacin	16.67	3.33
14	Ropinirole HCl	0.5	
	New Products:		
15	Ciprofloxacin	-	16.67
16	Albutarol/Salbutamol sulphate	-	16.67
17	Donepezil HCl	-	16.67
18	Dorzolamide HCl	-	16.67
19	Salmeterol Xinafoate	-	3.33
20	Basifloxacin	-	1.67
21	Rabeprazole Sodium	-	100.0
22	MZ Alcohol (Intermediates)	-	100.0
23	Rufinamide	-	100.0
24	R& D Activities	-	100.0
	Total	203.34	1825.7

Bagfilter will be provided to addition boiler (1x 8 TPH) to control particulate emissions. Scrubber will be provided to control process emissions viz. HCl, SO₂, H₂, CO₂ etc. Water requirement will be increased from 50.72m³/day to 470m³/day after expansion. Fresh water requirement will be met from tanker supply. Effluent generation will be increased from 33.05m³/day to 320m³/day after expansion. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. The evaporation salts and ETP sludge will be sent to TSDF. Organic residue, spent carbon and Distillation residue will be sent to cement plant. Waste oil and used batteries from the DG sets are sent to authorize recyclers. Fly ash will be sent to brick manufacturers. DG sets (3 x 125 KVA, 1 x 250 KVA + 2 x 725 KVA) will be installed. PP has submitted a copy of consent no. C-1816/PCB/86-1943 dated 16.10.1986 granted by APPCB for the existing unit CTE dated 16.10.86. PP informed that EC was not required at that time, as unit was established prior to 1994.

After detailed deliberations, the Committee recommended Generic TOR as given in Annexure-5 read with following additional TORs for preparation of EIA-EMP report along with Public Hearing:

- (i) Recommendation of APPCB
- (ii) Zero-discharge.
- (iii) TOR + PH

21.12.7 Bulk Drugs & Intermediates manufacturing of M/s Inchem Laboratories Pvt. Ltd., at Madhura Nagar, A.P. (TOR)

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

21.12.8 Bulk Drug Manufacturing Unit of M/s Rani Life Sciences Pvt. Ltd. at Plot No. 118, IDA, Village Kondapally, Mandal Ibrahimpatnam, District Krishna, Andhra Pradesh (TOR)

The project authorities and their Consultant (M/s Right Source Industrial Solutions Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP. It was informed that the unit is a Category B project. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, non existence of SEIAA/SEAC in AP, the said proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Rani Life Sciences Pvt. Ltd. has proposed for setting up of Bulk Drug Manufacturing Unit at Plot No. 118, IDA, Village Kondapally, Mandal Ibrahimpatnam, District Krishna, Andhra Pradesh. Plot area is 1197 m² of which greenbelt will be developed in 4062.15 m². Cost of project is Rs. 3.45 Crores. Following products will be manufactured:

Name of the product	CAS No's	Therapeutic Category	Quantity in Kgs/Month
Amifostine	20537-88-6	Cytoprotective Agent	50.00
Bendamustine	3543-75-7	Anti neoplastic Agent	5.00
Bortezomib	179324-69-7	Antineoplastic	1.00
Chlorombucil	305-03-3	Anti neoplastic Agent	20.00
Cisplatin	15663-27-1	Alkylating agent	5.00
Dacarbazine	4342-03-4	Antineoplastic	10.00
Docetaxel	14977-28-5	Antineoplastic	5.00
Dopxistine hydrochloride	129938-20-1	Premature Ejaculation	120.00

Erlotinib	183319-69-9	Antineoplastic	100.00
Geftinib	184475-35-2	Antineoplastic	100.00
Imatinib Mesylate	220127-57-1	Antineoplastic	100.00
Lomustine	13010-47-4	Antineoplastic	10.00
Melphalan	148-82-3	Antineoplastic	10.00
Methotrexate	59-05-2	Antineoplastic	50.00
Oxaliplatin	61825-94-3	Antineoplastic	24.00
Paclitaxel	33069-62-4	Antineoplastic	1.00
Procarbazine	366-70-1	Antineoplastic	20.00
Prematrexed Disodium	150399-23-8	Antineoplastic	105.00
Temozolamide	85622-93-1	Antineoplastic	50.00
Zoledronic Acid	165800-06-6	Calcium regulator	60.00
		Total	846.00

Stack height of 20 m will be provided oil fired boiler. Scrubber will be provided to control process emissions viz ammonia, SO₂ and HCl. Water requirement from APIIC Water Supply will be 22.65 m³/day. Wastewater generation will be 8.90 m³/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. The evaporation salts and ETP sludge will be sent to TSDF. Organic residue, spent carbon and Distillation residue will be sent to cement plant. Waste oil and used batteries from the DG sets are sent to authorize recyclers. Fly ash will be sent to brick manufacturers. Power requirement will be 250 KVA, which will be met from State Electricity Board. DG set (250 KVA) will be installed.

After detailed deliberations, the Committee recommended Generic TOR as given in Annexure-5 read with following additional TORs for preparation of EIA-EMP report along with Public Hearing:

- (i) Recommendation of APPCB
- (ii) Zero-discharge.
- (iii) TOR + PH

21.12.9 (i) Expansion of Bulk Drug Intermediate manufacturing unit of **M/s Symed Labs limited (Unit-IV)** (formerly Known as Plasma Labs (P) Ltd.) situated at Sy. Nos. 163, 163/A, 163/B, 164/A & 164/B Village Pittampally, Mandal Chityal, District Nalgonda, Telangana (TOR)

The project authorities and their Consultant (M/s Right Source Industrial Solutions Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised by Expert Appraisal Committee (I).

M/s Symed Labs limited (Unit-IV) has proposed for expansion of Bulk Drug Intermediate manufacturing unit (from 109 TPA to 613.5 TPA) at Sy. Nos. 163, 163/A, 163/B, 164/A & 164/B Village Pittampally, Mandal Chityal, District Nalgonda, Telangana. Total plot area is 53986.98 m² of which greenbelt will be developed in 17815.70 m². Cost of expansion project is Rs. 4.0 crores.

The following products will be manufactured:

Name of the product	CAS No's	Therapeutic Category	Quantity in MT /Month
Amisulpride	71675-85-9	Antipsychotic	0.50

Carvedilol	72956-09-3	Beta-blocker	2.00
CarvedilolPhosphate	610309-89-2	Antihypertensive	0.10
Carbidopa	93357-67-6	Anti parkinson	2.00
CinitaprideHydrogen tartrate	66564-14-5	Antiulcer agent	0.05
Dapoxetine Hydrochloride	129938-20-1	Antidepressant	0.50
Epalrestat	82159-09-9	Anti diabetic	1.50
Eszopiclone	138729-47-2	Hypnotic	0.025
Fluconazole	86386-73-4	Antifungal	3.00
Iron sucrose	8047-67-4	Iron supplement	10.00
Itopride Hydrochloride	122892-31-3	Anti gastrointestinal	2.00
Ketorolac Tromethamine	74103-07-4	Anti inflammatory	4.00
Levocetirizine Dihydrochloride	130018-87-0	Antihistaminic	0.30
Levosulpride	23672-07-3	Antiemetic	1.50
Linezolid	165800-03-3	Anti infective	9.00
Mosapride citrate dihydrate	63582-62-2	Anti inflammatory	2.00
Ondansetron Hydrochloride	103639-04-9	Antiemetic	0.50
Pregabalin	148553-50-8	anticonvulsant	5.00
Racecadotril	81110-73-8	Antidiarrheal	3.00
Tamsulosin Hydrochloride	106463-17-6	Antiadrenergic	0.05
Tizanidine Hydrochloride	64461-82-1	Skeletal Muscle Relaxant	0.05
Topiramate	97240-79-4	Anticonvulsant	3.00
Zotepine	26615-21-4	Antipsychotic	1.00
Zopiclone	43200-80-2	Hypnotic	0.05
		Total	51.125

Bagfilter along with stack of adequate height will be provided to Coal fired boiler (5.0 TPH + 2 TPH). Scrubber will be provided to control process emissions viz SO₂. Water requirement from ground water source will be 231.61 m³/day after expansion and sourced from ground water source. Wastewater generation will be 88.28 m³/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. The evaporation salts and ETP sludge will be sent to TSDF. Organic residue, spent carbon and Distillation residue will be sent to cement plant. Waste oil and used batteries from the DG sets are sent to authorize recyclers. Fly ash will be sent to brick manufacturers. Power requirement will be 1100 HP, which will be met from State Electricity Board. Additional DG set (500KVA + 320KVA + 250 KVA) will be installed. PP informed that CTE was obtained in the name of M/s Sharanaa Pharma (P) Ltd. vide order no. NLG-2/PCB/ZO/RCP/CFE/2005-663 dated 14th November, 2005 from APPCB for manufacturing of Intermediates products, which do not require prior EC as per 1994 EIA Notification.

After detailed deliberations, the Committee recommended Generic TOR as given in Annexure-5 read with following additional TORs for preparation of EIA-EMP report along with Public Hearing:

(i) Recommendation of APPCB

(ii) Zero-discharge.

(iii) TOR + PH

21.12.9 (ii) Expansion of Bulk Drugs Manufacturing Unit (Unit-VI) of **M/s Symend Labs** (formerly Known as Plasma Labs (P) Ltd.), at Sy. Nos. 750, 753/1, 753/2 & 753/4, Villages Mandollagudem & Chinnakondur, Mandal Choutuppal, District Nalkonda, Telangana

The project authorities and their Consultant (M/s Right Source Industrial Solutions Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised by Expert Appraisal Committee (I).

Symed Labs Ltd (formerly Known as Plasma Labs (P) Ltd.), Unit-VI has proposed for Expansion of Bulk Drugs Manufacturing Unit (from 108 TPA to 745.5 TPA) at Sy. Nos. 750, 753/1, 753/2 & 753/4, Villages Mandollagudem & Chinnakondur, Mandal Choutuppal, District Nalkonda, Telangana. Plot area is 57265.05 m² of which greenbelt will be developed in 31323.78m². Cost of expansion project is Rs 20 crores.

The following products will be manufactured:

Name of the product	CAS No's	Therapeutic Category	Quantity in MT /Month
Amisulpride	71675-85-9	Antipsychotic	0.50
Carvedilol	72956-09-3	ACE inhibitors and diuretics	2.00
Carvedilol Phosphate	610309-89-2	Antihypertensive	0.10
Carbidopa	93357-67-6	Antiparkinson	2.00
Cinitapride Hydrogen tartrate	66564-14-5	Antiulcer agent	0.05
Dapoxetine Hydrochloride	129938-20-1	Antidepressant	0.50
Epalrestat	82159-09-9	Antidiabetic	1.50
Eszopiclone	138729-47-2	Hypnotic	0.025
Fluconazole	86386-73-4	Antifungal	3.00
Iron sucrose	8047-67-4	Iron supplement	10.00
Itopride Hydrochloride	122892-31-3	Anti gastrointestinal agent	2.00
Ketorolac Tromethamine	74103-07-4	Anti inflammatory agent	4.00
Levocetirizine Dihydrochloride	130018-87-0	Antihistaminic agent	0.30
Levosulpride	23672-07-3	Antiemetic agent	1.50
Linezolid	165800-03-3	Anti infective	20.00
Mosapride citrate dihydrate	63582-62-2	Anti inflammatory agent	2.00
Ondansetron Hydrochloride	103639-04-9	Antiemetic	0.50
Pregabalin	148553-50-8	anticonvulsant	5.00

Racecadotril	81110-73-8	Antidiarrheal	3.00
Tamsulosin Hydrochloride	106463-17-6	Antiadrenergic	0.05
Tizanidine Hydrochloride	64461-82-1	Skeletal Muscle Relaxant	0.05
Topiramate	97240-79-4	Anticonvulsant	3.00
Zotepine	26615-21-4	Antipsychotic	1.00
Zopiclone	43200-80-2	Hypnotic	0.05
		Total	62.125

Bagfilter along with stack of adequate height will be provided to Coal fired boiler (4 TPH + 5 TPH). Scrubber will be provided to control process emissions viz SO₂. Water requirement from ground water source will be 239.41m³/day after expansion and sourced from ground water source. Wastewater generation will be 93.50m³/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. The evaporation salts and ETP sludge will be sent to TSDF. Organic residue, spent carbon and Distillation residue will be sent to cement plant. Waste oil and used batteries from the DG sets are sent to authorize recyclers. Fly ash will be sent to brick manufacturers. Power requirement will be 1000 HP, which will be met from State Electricity Board. Additional DG set (500 KVA x 2 Nos) will be installed. PP informed that CTE was obtained in the name of M/s Plasma Labs (P) Ltd. vide order no. NLG-2/PCB/ZO/RCP/CFE/2005-659 dated 14th October, 2005 from APPCB for manufacturing of Intermediates products, which do not require prior EC as per 1994 EIA Notification.

After detailed deliberations, the Committee recommended Generic TOR as given in Annexure-5 read with following additional TORs for preparation of EIA-EMP report along with Public Hearing:

- (i) Recommendation of APPCB
- (ii) Zero-discharge.
- (iii) TOR + PH

21.12.10 Manufacturing of Synthetic Organic Chemicals/Bulk Drugs of **M/s SrikarChem & Pharma India Pvt. Ltd.** at Plot No. 193, Sy. No. 98 (pt) & 97 (pt), APIIC Growth Centre, Village Thumakunta, Mandal Hindurpur, District Ananthpur, Andhra Pradesh. **(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 along with the draft Term of References for the preparation of EIA-EMP. It was informed that the unit is a Category B project. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within 10 km distance nearest interstate boundary ie. AP and Karnataka, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Srikar Chem & Pharma India Pvt. Ltd. has proposed for setting up of manufacturing unit of Synthetic Organic Chemicals/Bulk Drugs at Plot No. 193, Sy. No. 98 (pt) & 97 (pt), APIIC Growth Centre, Village Thumakunta, Mandal Hindurpur, District Ananthpur, Andhra Pradesh. Plot area is 3668 m², of which greenbelt will be developed in 1215 m². Cost of project is Rs. 4.4 Crores. Pennar River is located at a distance of 2.5 Km. There are no ecologically sensitive, wet lands, water bodies, monuments etc within the 15 Km.

The following products will be manufactured:

S.N.	Name of the Product/ Intermediates	Installed Capacity (in TPA).
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1	Sodium tertiary butoxide	60
2	Potassium tertiary butoxide	60
3	Magnesium tertiary butoxide	60
4	Lithium tertiary butoxide	60
5	n-Butyl magnesium chloride (20.6% Solution).	60
6	Benzyl magnesium chloride (30% Solution).	60
7	Sodium hexamethyldisilazane (40% Solution).	120
8	Lithium hexamethyldisilazane (33% Solution).	120
9	Sodium amide	60
10	Omeprazole	24

Bagfilter will be provided to coal fired boiler. DG set (200 KVA) will be installed. Power requirement will be 265 KW and coal requirement is 10 TPD. Fresh water requirement will be 49.97 m³/day and met from ground water source. Effluent will be treated in ETP. The Committee advised them to give treatment plan for treatment based on segregation of effluent w.r.t high TDS/COD and low TDS/COD. Fly ash will be sent to brick manufacturers. Hazardous waste will be sent to TSDF.

After detailed deliberations, the Committee recommended Generic TOR as given in Annexure-5 read with following additional TORs for preparation of EIA-EMP report along with Public Hearing:

(i) Recommendation of APPCB

(ii) Zero-discharge.

(iii) TOR + PH

21.12.11 Expansion of Bulk Drugs and Intermediates Manufacturing Unit (From 363.22 TPM to 505.47 TPM) of M/s Piramal Enterprises Limited at Sy. No. 71, 77, 78, 79A to 80A, 81A & 82A, Digwal Village, Kohir Mandal, Medak District, Telangana (TOR)

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

M/s Piramal Enterprises Limited has proposed for Expansion of Bulk Drugs and Intermediates Manufacturing Unit (From 363.22 TPM to 505.47 TPM) at Sy. No. 71, 77, 78, 79A to 80A, 81A & 82A, Digwal Village, Kohir Mandal, Medak District, Telangana. M/s. Piramal Enterprises Limited proposes to expand the API manufacturing capacity from 363.22 TPM to 505.47 TPM in existing area of 79 acres. It is proposed to merge three colocated units and expand the capacity. The capital cost for expansion is Rs. 250 crores, towards production blocks, utilities and enhancement of zero liquid discharge facility at Sy. No. 71, 77, 78, 79A to 80A, 81A & 82A, Digwal Village, Kohir Mandal, Medak District, Telangana. Kotturu reservoir at a distance of 7.2 km in northeast direction. Digwal RF is at a distance of 2.5 km in north direction. There are no ecologically sensitive areas like national parks, and sanctuaries within 10 km radius of the site.

The manufacturing capacity after expansion is as follows:

S.No	Name of the Product	Capacity (TPM)
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1	Abacavir Sulfate	2
2	Diltiazem Hydrochloride	25
3	Cis Hydroxy Lactam	10
4	Ketoconazole	17.5
5	Verapamil Hydrochloride	13.75
6	Halothane	25
7	Desflurane	25
8	Isoflurane	150
9	Sevoflurane (Bottling)	72
10	Levobunolol Hydrochloride	0.04
11	Brimonidine Tartrate	0.04
12	Trazodone Hydrochloride	5.57
13	FA (2,5-Bis (2,2,2-trifluoroethoxy)-2,2,2-trichloro acetophenone)	2.9
14	Mebeverine Hydrochloride	8.75
15	FC-4010 (hydroxysulphane)	0.42
16	Paroxetine	4.5
17	Oxybutynin Hydrochloride	0.05
18	Iodoaniline Methyltriazole	0.3
19	Immiquimod	0.1
20	Flecainide Acetate	2.2
21	Vitamin A Palmitate	0.1
22	Vitamin E Alcohol	12.5
23	Vitamin A Alcohol	6.67
24	Dry Vitamin A Acetate	25
25	Chloropurine	9.2
26	Sevoflurane	25
27	Amiodarone Hydrochloride	2.6
28	Sertraline Hydrochloride	1
29	Quetiapine Hemifumarate	2.3
30	Tolcapone	0.4
31	Methyl-2-(2-methyl-1H-pyrrolo [2,3-b] Pyridin-3yl) acetate (FCI-1641)	0.03
32	Sodium Carboxymethyl Cellulose	0.19
33	SSPP (4aS, 7aS)-Octahydro-1H-Pyrrolo[3,4-b] Pyridine	0.9
34	Droxidopa	0.4
35	Tramadol Hydrochloride	5.47
36	Acyclovir	1.3
37	Tafenoquine Succinate	0.08
38	Spirapril Hydrochloride Dihydrate	0.01
39	Clozapine	2.08
40	Halofuginone Hydrobromide	0.25
41	Donepezil Hydrochloride	0.1
42	Irbesartan	0.4
43	Telmisartan	0.4
44	Sulindac	0.2
45	Ziprasidone Hydrochloride	0.05
46	Valacyclovir Hydro chloride	2
47	Metaxalone	0.8
48	Lisnopril Dihydrate	0.2
49	Loratadine	0.2
50	Netaglinide Hydrochloride	0.1
51	Imipramine Hydro chloride	0.1
52	Opipramol Dihydrochloride	0.1

53	Clomipramie Hydrochloride	0.1
54	Memantine Hydrochloride	10
55	Itra 1330	0.1
56	Itra 1334	0.5
57	Aprepitant	0.03
58	Candesartan Cilexetil	3
59	Perindopril Erbumine	12.54
60	Bittermelon	1.4
61	Tinefcon	12.54
62	Allopurinol	0.01
	Total	505.47

List of By-Products after Expansion - (Tentative)

S.No	Name of the Byproduct	Quantity (Kg/day)	Name of the Product
1	Sodium Chloride	5025	Isoflurane
2	Sodium Sulphate	1675	
3	Sodium Bromide Solution	1793	Halothane

List of Utilities

S.No	Utility	Permitted	Proposed	Total after expansion
1	Coal Fired Boiler	2x 4TPH* 3x6TPH * 1x16TPH	16TPH	2x16TPH 1x4TPH 2x6TPH
2	Oil Fired Boilers	1x6TPH	1x6TPH	2x6TPH
3	DG Set**	2x1000KVA 3x500KVA 2x380KVA 2x250KVA 1x225KVA	4x750 KVA 3x725KVA	2x1000KVA 3x500KVA 2x380KVA 2x250KVA 1x225KVA 4x750 KVA 3x725KVA

*1x 4TPH and 1x 6TPH coal fired boilers will be removed

** DG sets will be used during load shutdown.

Electrostatic precipitators / Bag filters are provided to the existing coal fired boiler. ESP/bagfilter will be provided to the proposed additional coal fired boiler as air pollution control equipment for coal fired boilers. Scrubbers will be provided to control process emissions viz. HCl, SO₂ & NH₃. Water requirement will be increased from 1162.64 m³/day to 2305.2 m³/day after expansion. Out of which 1295 m³/day will be fresh water and 1010 m³/day is recycled water. Fresh water is sourced from ground water source. The effluents are treated in "Zero Liquid Discharge" system. The high TDS effluents in the order of 497.18 KLD are sent to Stripper followed by MEE, AFTD. The condensate from MEE and AFTD is treated along with LTDS effluent from process, washings, scrubbers, DM plant, SRS system, detoxification, ZLD washings, domestic usage and utility blow downs of 672.26 m³/day in biological treatment plant followed by Reverse Osmosis for reuse in cooling towers. Organic residue, spent carbon and Distillation residue will be sent to cement plant. Waste oil and used batteries from the DG sets are sent to authorize recyclers. Fly ash will be sent to brick manufacturers. Existing environmental clearance was granted vide MoEF letter no. J-11011/392/2006 dated 21st February, 2007 for expansion of bulk drugs unit of M/s Alpex International Ltd. Existing environmental clearance was granted vide MoEF letter no. J-11011/393/2006 dated 21st February, 2007 for expansion of bulk drugs unit of M/s Nicholas Piramal India Ltd. Existing environmental clearance was granted vide MoEF letter no. J-11011/394/2006 dated 21st February, 2007 for expansion of bulk drugs unit of M/s Nicholas Piramal India Ltd. (Unit III).

After detailed deliberations, the Committee recommended Generic TOR as given in Annexure-5 read with following additional TORs for preparation of EIA-EMP report along with Public Hearing:

- (i) Recommendation of APPCB
- (ii) Zero-discharge.
- (iii) Explore the possibility of utilization of evaporation salt after processing. Report to be submitted alongwith EIA report.
- (iv) PH
- (v) Certified compliance report.

21.12.12 Expansion of Bulk Drugs and Intermediates Manufacturing Unit (From 22.2 TPM to 725 TPM) and Pharmaceutical Formulation Ingredients (PFI) of **M/s Granules India Limited Ltd.**, at Plot No. 15A/1, Phase III, IDA Jeedimetla, Qutubullapur Mandal, Rangareddy District, Telangana (**TOR**)

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 Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within 10 km distance nearest critically polluted area ie. IDA, Pattancheru, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s. Granules India Limited Ltd. has proposed for Expansion of Bulk Drugs and Intermediates Manufacturing Unit (From 22.2 TPM to 725 TPM) and Pharmaceutical Formulation Ingredients (PFI) at Plot No. 15A/1, Phase III, IDA Jeedimetla, Qutubullapur Mandal, Rangareddy District, Telangana. Plot area is 2.5 acres of which greenbelt will be developed in 0.82 acres. Cost of the project is Rs. 12 Crores. The reserve forests located within 10 km radius from the plant site are; Dulapalle RF is 1 km in north direction and Gajularamaram RF is 3 km in northwest direction, Suraram RF is 5 km in northwest direction, Pochampalli RF is 9 km in north and Gaudavalli RF is 9.5 km in north directions respectively. There are no ecologically sensitive areas like national parks, and sanctuaries within 10 km radius of the site. The site is located at a distance of 8.8 Km from the critically polluted area of Patancheru and Bollaram Industrial estates. The existing and proposed manufacturing capacity is as follows:

Manufacturing Capacity

S.No	Name of the Product	CAS No.	Capacity (TPM)	
			Permitted	After Expansion
1	Guaifenesin	93-14-1	15	150
2	Methocarbamol	532-03-6	2.25	50
3	Metformin HCl	1115-70-4	4.93	375
4	Pharma Formulation Ingredients (PFI)*	-----	---	150
	Total		22.2	725

Note: All products involve final stage manufacturing

* Formulation activity and not synthetic organic chemical manufacturing

List of Utilities

S.No	Utility	Permitted	Proposed	Total after expansion
1	Coal Fired Boiler	3TPH* 1 TPH **	5TPH	5TPH 1 TPH
2	DG Sets	320KVA* 125KVA*	2x500 KVA#	500KVA – 2 Nos.

* 3TPH boilers and existing DG sets will be removed

** 1TPH boiler shall be kept as standby

#DG sets shall be kept as standby.

The sources of air pollution from the proposed expansion are 5TPH coal fired Boiler, and 2 x 500 KVA DG sets. The sources of air pollution from the existing plant site are 1TPH coal fired boiler. The utilities are provided with effective stack height in addition to bag filter as air pollution control equipment for coal fired boiler. Water requirement will be increased from 95m³/day to 235m³/day after expansion. Out of which 135m³/day will be fresh water and 100 m³/day is recycled water. Fresh water is sourced from ground water source. The effluents are treated in "Zero Liquid Discharge" system. The high TDS effluents in the order of 60.3 KLD are sent to Stripper followed by MEE, AFTD. The condensate from MEE and AFTD is treated along with LTDS effluent from process, washings, scrubbers, DM plant, SRS system, detoxification, ZLD washings, domestic usage and utility blow downs of 49.5m³/day in biological treatment plant followed by Reverse Osmosis for reuse in cooling towers. Organic residue, spent carbon and Distillation residue will be sent to cement plant. Waste oil and used batteries from the DG sets are sent to authorize recyclers. Fly ash will be sent to brick manufacturers. Existing environmental clearance was granted vide MoEF letter no. J-11011/62/2005 dated 15th July, 2005 for the existing unit.

After detailed deliberations, the Committee recommended Generic TOR as given in Annexure-5 read with following additional TORs for preparation of EIA-EMP report along with Public Hearing:

- (i) Recommendation of APPCB
- (ii) Zero-discharge.
- (iii) Explore the possibility of utilization of evaporation salt after some process. Report to be submitted alongwith EIA report.
- (iv) PH
- (v) Certified compliance report.

21.12.13 Letter dated 09.07.2014 of **M/s Maithri Drugs Pvt. Ltd.** on Expansion of Bulk Drugs and Its Intermediates Manufacturing Unit of **M/s Maithri Drugs Pvt. Ltd.** at Sy. No. 205, 222-226 villageBonthapally, Tehsil Jinnaram, District Medak, AP **(TOR) (Further internal consideration of TOR on baseline data)**

The EAC could not consider the matter as the details of baseline data collected was not circulated.

21.12.14 Letter dated 09.07.2014 reg.Expansion of Bulk Drugs Intermediates Manufacturing Unit of **M/s Vegesna Laboratories Pvt. Ltd.** at plot No.34/A, S.V.Cooperative Industrial Estate Jeedimetal, Ranga Reddy District A.P. **(TOR) (Further internal consideration of TOR on baseline data)**

The EAC could not consider the matter as the details of baseline data collected was not circulated.

21.12.15Letter dated 11.07.2014 from **M/s M/s Ambey Lab. Ltd.** on Expansion of Pesticide Manufacturing Unit of **M/s Ambey Lab. Ltd.** at Village Sotanala, Tehsil Behror, District Alwar, Rajasthan **(Further internal consideration of TOR on baseline data)**

The EAC could not consider the matter as the details of baseline data collected was not circulated.

The meeting ended with a vote of thanks to the chair.

* * *

**LIST OF PARTICIPANTS OF EAC (I) IN 21st MEETING OF EAC (INDUSTRY) HELD ON
30th JULY -1st AUGUST 2014**

S.N.	Name		
1	Shri M. Raman	Chairman	A
2	Shri R.K. Garg	Vice-Chairman	P
3	Prof. R.C. Gupta	Member	P
4	Dr. Prem Shankar Dubey	Member	P
5	Dr. R.M. Mathur	Member	A
6	Dr. S. K. Dave	Member	P (31 st July and 1 st Aug.
7	Dr. B. Sengupta	Member	P
8	Shri Rajat Roy Choudhary	Member	A
9	Dr. S.D. Attri	Member	A
10.	Dr. Antony Gnanamuthu	Member	A
11.	Prof. C. S. Dubey	Member	P
12.	Shri Niranjan Raghunath Raje	Member	P
MOEF Representatives			
13.	Dr.T.Chandini	Scientist F& MS	
14.	Shri A.N.Singh	Scientist D	
15.	Shri Sundar Ramanathan	Scientist C	(30 th July'14)

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

1. Executive summary (*maximum 2-3 sheets in A4 size paper*) of the project covering project description, description of the environment, anticipated environmental impacts & its mitigation measures, environmental management plan, environmental monitoring programme, public consultation, project benefits, Social impacts including R&R.
2. **Site Details:**
 - i. Location of the project site covering village, Taluka/Tehsil, District and State on Indian map of 1:1000,000 scale.
 - ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet.
 - iii. Co-ordinates (lat-long) of all four corners of the site.
 - iv. Google map-Earth downloaded of the project site.
 - v. A map showing environmental sensitivity [land use/land cover, water bodies, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc.] and from critically/severely polluted area(s) and Eco-sensitive Areas within 10km radius of the project site vis-à-vis shortest (aerial) distance from the project. If the project is located within 10km of CPAs/severely Polluted Areas, confirm whether moratorium has been imposed on the area.
 - vi. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. In addition, if located within an Industrial area/Estate/Complex, layout of Industrial Area and location of unit within the Industrial area/Estate/Complex, layout of Industrial Area.
 - vii. Photographs of the proposed and existing (if applicable) plant site. If existing, in addition to site map, provide photographs of plantation/greenbelt in the existing project. If fresh EC application, photographs
3. Landuse break-up of total land of the project site (identified and acquired) – agricultural, forest, wasteland, water bodies, settlements, etc shall be included.
4. A copy of the mutual agreement for land acquisition signed with land oustees.
5. Proposal shall be submitted to the Ministry for environment clearance only after acquiring at least 60% of the total land required for the project. Necessary documents indicating acquisition of land shall be included.
6. **Forest and wildlife related issues:**
 - i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department.
 - ii. Landuse map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (*in case of projects involving forest land more than 40 ha*)
 - iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.
 - iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon
 - v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area
 - vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife
7. **Expansion/modernization proposals:**
 - i. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments should be provided. In addition, status of compliance of Consent to Operate for the ongoing /existing operation of the project from SPCB shall be attached with the EIA-EMP report.
 - ii. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.

Details of Industrial Operations

8. A list of major industries with name and type within study area (10km radius) shall be incorporated.
9. Details of proposed raw materials and products along with production capacity. If expansion project, details for existing unit, separately for existing and new (proposed) unit.
10. Details of manufacturing process, major equipment and machinery. If expansion project, details of existing unit, separately for existing and new (proposed) unit.
11. List of raw materials required and its source along with mode of transportation shall be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".

12. Quantity of fuel required, its source and characteristics and documentary evidence to substantiate confirmed fuel linkage shall be furnished
13. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site shall be included.
14. Manufacturing process details of all the plants including captive power plant if any along with process flow chart shall be included.
15. Mass balance for the raw material and products shall be included.
16. Energy balance data for all the components of the plant shall be incorporated.

Environmental Status

17. Geological features and Geo-hydrological status of the study area shall be included.
18. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of RL of the project site and mRL of the river should also be provided.
19. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) at 8 locations for PM₁₀, PM_{2.5}, SO₂, NO_x, CO and HC (methane & non-methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
20. Surface water quality of nearby River (60m upstream and downstream) and other surface drains at eight locations to be provided.
21. Ground water monitoring minimum at 8 locations shall be included.
22. Noise levels monitoring at 8 locations within the study area.
23. Traffic study of the area for the proposed project in respect of existing traffic, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
24. Detailed description on flora and fauna (terrestrial and aquatic) exists in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
25. Emissions (g/second) with and without the air pollution control measures.
26. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be well assessed. Details of the model used and the input data used for modeling shall also be provided. The air quality contours should be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.
27. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.
28. Details of water requirement, water balance chart for new unit or for existing unit as well as proposed expansion (in case of expansion).
29. Source of water supply and quantity and permission of withdrawal of water (surface/ground) from Competent Authority.
30. Details regarding quantity of effluents generated, recycled and reused and discharged to be provided. Methods adopted/to be adopted for the water conservation shall be included. Zero discharge effluent concepts to be adopted.
31. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.
32. Action plan for control of ambient air quality parameters as per NAAQES Standards for PM₁₀, PM_{2.5}, SO₂ and NO_x, etc as per GSR 826(E) dated 16th November, 2009.
33. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008.
34. Action plan for solid/hazardous waste generation, storage, utilization and disposal. Copies of MOU regarding utilization of solid waste shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
35. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 and 2009. A detailed plan of action should be provided.
36. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated. All rooftops/terraces shall have some green cover.
37. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and

- Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
38. Environment Management Plan (EMP) to mitigate the adverse impacts due to the project along with item wise cost of its implementation. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.
 39. Details of Rehabilitation & Resettlement (R & R) involving the project. R&R shall be as per policy of the State Govt. and a detailed action plan shall be included.
 40. Action plan for post-project environmental monitoring shall be submitted.
 41. Disaster Preparedness and Emergency Management Plan including Risk Assessment and damage control needs to be addressed and included.
 42. Occupational health:
 - i. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
 - ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
 - iii. Annual report of health status of workers with special reference to Occupational Health and Safety.
 - iv. Action plan for the implementation of OHS standards as per OSHAS/USEPA.
 - v. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.
 43. Corporate Environment Policy
 - i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
 - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
 - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
 - iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report
 44. 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.
 45. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be included. Socio-economic development activities need to be elaborated upon.
 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 shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.
 47. The questionnaire for industry sector (available on MOEF website) shall be submitted as an Annexure to the EIA-EMP Report.
 48. 'TORs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA-EMP report for the project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation shall be provided. The draft EIA-EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The issues raised in the Public Hearing and during the consultation process and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in the form of tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.
 49. A tabular chart with index for point wise compliance of above TORs.
 50. The TORs prescribed shall be valid for a period of two years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points shall be noted:

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

- iii. Authenticated English translation of all material in Regional languages shall be provided.
- iv. The letter/application for environmental clearance shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report
- vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MOEF vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry shall also be followed.
- viii. The consultants involved in the preparation of EIA-EMP report after accreditation with Quality Council of India (QCI) /National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA-EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc.

ADDITIONAL TORS FOR INTEGRATED STEEL PLANT

1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
 2. Quantum of generation of coal and iron ore from coal & iron ore mines and the projects they cater to
 3. For Large ISPs, a 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. MRL details of project site and RL of nearby sources of water shall be indicated.
 4. Recent land-use map based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
 5. Respirable Suspended particulate matter (RSPM) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements). The RSPM shall also be analysed for presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction, where applicable. Chemical characterization of RSPM and incorporating of RSPM data.
 6. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ.
 7. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer shall be included.
 8. If the site is within 1 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean River discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of RL of the project site and mRL of the river.
 9. End use of solid waste and its composition shall be covered. Toxic metal content in the waste material and its composition particularly of slag should also be covered. A time bound action plan should be submitted to reduce solid waste, its proper utilization and disposal.
 10. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 and 2009. All the fly ash should be provided to cement and brick manufacturers for further utilization.
 11. Details of evacuation of ash, details regarding lining/impermeability of ash pond, if so details of the lining etc. need to be addressed.
 12. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
 13. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines must be prepared.
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ADDITIONAL TORs FOR CEMENT INDUSTRY

1. Limestone and coal linkage documents along with the status of environmental clearance of limestone and coal mines
 2. Quantum of generation of coal and limestone from coal & limestone mines and the projects they cater to;
 3. For large Cement Units, a 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
 4. Present land use shall be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
 5. Topography of the area shall be given clearly indicating whether the site requires any filling. If so, details of filling, quantity of fill material required, its source, transportation etc. shall be given. In case the site is located on a hilly terrain, a 3-dimesional view of the location vis-à-vis major landuse features and locations such as Critically Polluted Area(s) and Eco-sensitive Area(s) found within the study area, indicating shortest distance from the site shall be provided. If within 10km of CPA, to indicate if the CPA is under moratorium.
 6. If the raw materials used have trace elements, an environment management plan shall also be included.
 7. Source analysis of Respirable Suspended Particulate Matter (RSPM) present in the ambient air for– natural dust/generated from plant operations (for eg. Cement dust)/flyash/coal dust/trace metals/etc. Chemical characterization of RSPM and incorporating of RSPM data.
 8. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ.
 9. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer shall be included.
 10. If the site is within 1 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean River discharge as well as flood occurrence frequency.
 11. Details of storage of flyash, details regarding lining/impermeability of ash pond and whether it would be lined, if so details of the lining etc. need to be addressed.
 12. Plan for the implementation of the recommendations made for the cement plants in the CREP guidelines must be prepared.
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ADDITIONAL TORs FOR PULP AND PAPER INDUSTRY

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

TERMS OF REFERENCE (TOR) FOR MANUFACTURING OF SYNTHETIC ORGANICS

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30th May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA-EMP report.
2. Executive summary of the project
3. Justification of the project.
4. Promoters and their back ground.
5. Regulatory framework.
6. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the APPCB.
7. Copy of NOC/Consent to Establish for the existing unit.
8. Compliance to the conditions stipulated in the NOC granted by the SPCB.
9. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s).
10. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
11. A map indicating location of the project and distance from severely polluted area.
12. Project location and plant layout.
13. Infrastructure facilities including power sources.
14. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
15. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
16. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
17. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
18. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
19. Details of the total land and break-up of the land use for green belt and other uses.
20. List of products alongwith the production capacities.
21. Detailed list of raw material required and source, mode of storage.
22. Manufacturing process details alongwith the chemical reactions and process flow chart.
23. Action plan for the transportation of raw material and products.
24. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
25. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
26. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM_{2.5}, PM₁₀, SO₂, NO_x, CO, NH₃ including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
27. Details of water and air pollution and its mitigation plan
28. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
29. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
30. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
31. Name of all the solvents to be used in the process and details of solvent recovery system.
32. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
33. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16th September, 2009.
34. Source and permission from Competent Authority for the drawl of 80 m³/day water. Water balance chart including quantity of effluent generated recycled and reused and effluent discharge.
35. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
36. Zero discharge effluent concepts to be adopted.
37. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).

38. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
39. Material Safety Data Sheet for all the Chemicals are being used/will be used.
40. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
41. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
42. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
43. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
44. Details of occupational health programme.
 - a) To which chemicals, workers are exposed directly or indirectly.
 - b) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - c) What measures company have taken to keep these chemicals within PEL/TLV.
 - d) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - e) What are onsite and offsite emergency plan during chemical disaster.
 - f) Liver function tests (LFT) during pre-placement and periodical examination.
 - g) Details of occupational health surveillance programme.
45. Socio-economic development activities shall be in place.
46. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
47. Note on compliance to the recommendations mentioned in the CREP guidelines.
48. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
49. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
50. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 51. Corporate Environmental Responsibility**
 - (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
 - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
 - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
 - (d) Does the company have a system of reporting of non-compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
52. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
53. The aforesaid 'TORs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA-EMP report for the project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation shall be provided. The draft EIA-EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The issues raised in the Public Hearing and during the consultation process and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in the form of tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.
54. The TORs prescribed shall be valid for a period of two years from date of issue for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points shall be noted:

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

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

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

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

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

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

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

GENERIC TOR FOR ONSHORE OIL & GAS EXPLORATION, DEVELOPMENT & PRODUCTION

1. Executive summary of a project
2. Project description, project objectives and project benefits.
3. 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.
4. Details of forest land involved in the proposed project. A copy of forest clearance letter, if applicable.
5. Distance from nearby critically/severely polluted area as per Notification, if applicable. Status of moratorium imposed on the area.
6. Does proposal involves rehabilitation and resettlement? If yes, details thereof.
7. Details of project cost.
8. 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.
9. 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.
10. Topography of the project site.
11. Action plan for ambient air quality parameters as per NAAQES Standards for PM₁₀, PM_{2.5}, SO₂ and NO_x and Benzene, etc as per GSR 826(E) dated 16th November, 2009.
12. Details of Ambient Air Quality monitoring at 8 locations for PM₁₀, SO₂, NO_x, VOCs, Methane and non-methane HC.
13. Soil sample analysis (physical and chemical properties) at the areas located at 5 locations.
14. Ground and surface water quality in the vicinity of the proposed wells site.
15. Climatology and Meteorology including wind speed, wind direction, temperature rainfall relative humidity etc.
16. Measurement of Noise levels within 1 km radius of the proposed wells.
17. Vegetation and land use; flora/fauna in the study area with details of endangered species, if any.
18. Incremental GLC as a result of DG set operation.
19. Potential environmental impact envisages during various stages of project activities such as site activation, development, operation/ maintenance and decommissioning.
20. Actual source of water and 'Permission' for the drawl of water from the Competent Authority. Detailed water balance, wastewater generation and discharge.
21. Noise abatement measures and measures to minimize disturbance due to light and visual intrusions in case coastally located.
22. Treatment and disposal of waste water.
23. Treatment and disposal of solid waste generation.
24. Disposal of spent oil and lube.
25. Storage of chemicals and diesel at site.
26. Commitment for the use of WBM only
27. Mud make up and mud and cutting disposal – all options considered shall be listed with selective option.
28. Hazardous material usage, storage accounting and disposal.
29. Disposal of packaging waste from site.
30. Oil spill emergency plans in respect of recovery/ reclamation.
31. H₂S emissions control.
32. Produced oil handling and storage.
33. Details of scheme for oil collection system along with process flow diagram and its capacity.
34. Details of control of air, water and noise pollution in oil collection system.
35. Disposal of produced/formation water.
36. Whether any burn pits being utilised for well test operations.
37. Restoration and decommissioning plans which shall include mud pits and wastage restoration also and documentation and monitoring of site recovery.
38. Measures to protect ground water and shallow aquifers from contamination.

39. Risk assessment and disaster management plan for independent reviews of well designed construction etc. for prevention of blow out.
40. Environmental management plan.
41. Documentary proof of membership of common disposal facilities, if any.
42. Details of environmental and safety related documentation within the company including documentation and proposed occupational health and safety Surveillance Safety Programme for all personnel at site. This shall also include monitoring programme for the environmental.
43. Total capital and recurring cost for environmental control measures.
44. 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.
45. Any litigation pending against the project and or any direction/order passed by any court of law against the project. If so details thereof.
46. A tabular chart with index for point-wise compliance of above TORs.
47. Expansion/modernization proposals:
 - i. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments should be provided. In addition, status of compliance of Consent to Operate for the ongoing /existing operation of the project from SPCB shall be attached with the EIA-EMP report.
 - ii. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.
48. CRZ clearance/ recommendation from State Coastal Zone Management Authority, if applicable.
49. Approval of the State Forest Department regarding the impact of the proposed project on the surrounding National Park/Wild life Sanctuary/Reserve Forest/Eco sensitive area, if any. Approval obtained from the State/Central Government under Forest (Conservation Act, 1980 for the forestland shall be submitted.
50. The TORs prescribed shall be valid for a period of two years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points shall be noted:

- (i) All documents shall be properly indexed, page numbered.
- (ii) Period/date of data collection shall be clearly indicated.
- (iii) Authenticated English translation of all material provided in Regional languages.
- (iv) The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
- (v) A copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- (vi) The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report where the above issues have been incorporated.
- (vii) The consultants involved in the preparation of EIA-EMP report after accreditation with Quality Council of India (QCI) / National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA-EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc.

The aforesaid TORs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA-EMP report for the project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation shall be provided. The draft EIA-EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The issues raised in Public Hearing and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in the form of tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

TORS FOR SUGAR, DISTILLERY WITH CPP/CO-GENERATION UNIT

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

36. 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.
37. List of flora and fauna in the study area.
38. Noise levels monitoring at five locations within the study area.
39. 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.
40. EMP should also include the concept of waste-minimization, recycle/reuse/ recover techniques, Energy conservation, and natural resource conservation.
41. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
42. Details of occupational health surveillance programme.
43. Details of socio-economic welfare activities.
44. Transportation of raw materials and finished products for the project (proposed/expansion) in respect of existing traffic, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
45. Action plan for post-project environmental monitoring.
46. Corporate Environmental Responsibility
47. (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.
48. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
49. Total capital cost and recurring cost/annum for environmental pollution control measures.
50. Expansion/modernization proposals:
 - i. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments should be provided. In addition, status of compliance of Consent to Operate for the ongoing /existing operation of the project from SPCB shall be attached with the EIA-EMP report.
 - ii. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.
51. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.
52. The EIA-EMP report for the project shall be based on the aforesaid TORs in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation shall be provided. The draft EIA-EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The issues raised in the Public Hearing and during the consultation process and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in the form of tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.
53. The TORs prescribed shall be valid for a period of two years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points shall be noted:

All documents shall be properly indexed, page numbered.

Period/date of data collection shall be clearly indicated.

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

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

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

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

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

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

GENERIC TORs FOR RESIN MANUFACTURE

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

36. A write up on "Safe Practice" followed for methanol handling, storage, transportation and unloading to be submitted.
37. A write up on "Treatment of workers affected by accidental spillage of chemicals".
38. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
39. An action plan to develop green belt in 33 % area
40. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
41. Details of occupational health programme.
 - i. To which chemicals, workers are exposed directly or indirectly.
 - ii. Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - iii. What measures company has taken to keep these chemicals within PEL/TLV.
 - iv. How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - v. What are onsite and offsite emergency plan during chemical disaster.
 - vi. Liver function tests (LFT) during pre-placement and periodical examination.
42. Details of occupational health surveillance programme.
43. Socio-economic development activities shall be in place.
44. 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 incorporated.
45. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
46. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
47. 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 shall be detailed in the EIA report.
48. Expansion/modernization proposals:
 - i. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments should be provided. In addition, status of compliance of Consent to Operate for the ongoing /existing operation of the project from SPCB shall be attached with the EIA-EMP report.
 - ii. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.
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 separate chapter on status of compliance of Environmental Conditions of Environmental Clearances 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 of all ECs on existing unit to be provided in EIA-EMP report.
51. A tabular chart with index for point wise compliance of above TORs.
52. The proponent shall prepare EIA-EMP Report based on the above TORs as per the generic structure given in Appendix-III of EIA Notification, 2006 and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions

of EIA notification, 2006. The issues raised in Public Hearing and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in the form of tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance. Replies on the issues raised during the Public Hearing/ Consultation shall be incorporated in the EIA-EMP Report and the final EIA-EMP report submitted to the Ministry for obtaining environmental clearance.

53. The TORs prescribed shall be valid for a period of two years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points shall be noted:

- 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 consultants involved in the preparation of EIA-EMP report after accreditation with Quality Council of India (QCI) /National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA-EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. 'Certificate of accreditation' issued by QCI to the environmental consultant should be included.
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TORS FOR EXPLORATION & DRILLING AND DEVELOPMENT OF OFF-SHORE WELLS

Executive summary of the project.

No. of exploratory/Development/Production wells for which environmental clearance is accorded and No. of new wells proposed during expansion. Status and No. of the wells which are completed and closed.

Project Description and Project Benefits;

Distance from coast line.

Commitment that no drilling would be carried within 1 Km of the coast.

Details of sensitive areas such as coral reef, marine water park, sanctuary and any other eco-sensitive area.

Details of land area, land use and status of land acquisitions for land for on-shore facilities. Approval for the forest land from the State/Central Govt. under Forest (Conservation) Act, 1980, if applicable (for any facilities on shore).

CRZ clearance as per CRZ Notification dated 6th January, 2011, and/or for facilities on-shore.

Climatology and meteorology including wind speed, wave and currents, rainfall etc.

Base line data collection for surface water for one season leaving the monsoon season within 1 km for each exploratory wells, particularly in respect of oil content.

Actual source of water and 'Permission' for the drawl of water from the Competent Authority. Detailed water balance, waste water generation and discharge.

Noise abatement measures and measures to minimize disturbance due to light and visual intrusions in case coastally located.

Procedure for handling oily water discharges from deck washing, drainage systems, bilges etc.

Procedure for preventing spills and spill contingency plans.

Procedure for treatment and disposal of produced water.

Procedure for sewage treatment and disposal and also for kitchen waste disposal.

Procedure for handling solid waste and any waste segregation at source for organic, inorganic and industrial waste.

Storage of chemicals on site.

Commitment for the use of WBM and synthetic oil based mud in special case.

Risk assessment and mitigation measures including whether any independent reviews of well design, construction and proper cementing and casing practices have been followed.

Handling of spent oils.

Handling of oil from well test operations.

Mud make up and mud and cuttings disposal procedures.

H2S emissions control plans, if required.

Details of all environment and safety related documentation within the company in the form of guidelines, manuals, monitoring programmes including Occupational Health Surveillance Programme etc.

Restoration plans and measures to be taken for decommissioning of the rig and restoration of on-shore support facilities on land.

Documentary proof for membership of common disposal facilities, if required.

Any litigation pending against the project or any directions/order passed by any Court of Law against the project. If so, details thereof.

Total capital and recurring cost for environmental pollution control measures.

A tabular chart with index for point-wise compliance of above TOR.

31. The proponent shall prepare an EIA-EMP Report based on the above TORs. The EIA-EMP Report shall be prepared as per the generic structure given in Appendix-III of EIA Notification, 2006.

32. Expansion/modernization proposals:

i. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments should be provided. In addition, status of compliance of Consent to Operate for the ongoing /existing operation of the project from SPCB shall be attached with the EIA-EMP report.

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

33. Public Hearing is not required if project is located in off-shore. In case of on-shore projects, the proponent shall prepare EIA-EMP Report based on the above TORs as per the generic structure given in Appendix-III of EIA Notification, 2006 and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The issues raised in Public Hearing and the commitments made by the project proponent on the same shall be included separately in EIA-

EMP Report in the form of tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance. Replies on the issues raised during the Public Hearing/ Consultation shall be incorporated in the EIA-EMP Report and the final EIA-EMP report submitted to the Ministry for obtaining environmental clearance.

33. The TORs prescribed shall be valid for a period of two years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points should be noted:

All documents shall be properly indexed, page numbered.

Period/date of data collection shall be clearly indicated.

Authenticated English translation of all material provided in Regional languages.

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

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

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.

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

TORS FOR OIL REFINERY PROJECT

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.

Executive summary of the project.

Project Description and Project Benefits.

A separate chapter on environmental clearance accorded for all the existing plants along with point-wise compliance report.

Point-wise compliance report to the 'Consent to Establish' 'Consent to operate' and Authorization accorded by Punjab Pollution Control Board for all the existing units along with all the necessary annexure.

Existing data for the last 2 years for all the relevant parameters should be included.

Site details including satellite imagery for 5km around the site.

A list of industries within 10 km radius of the project.

Details of facilities along with utilities to be provided for the proposed project.

Manufacturing process details along with the chemical reactions and process flow diagram.

List of products along with the production capacities and list of solvents and its recovery plan.

Detailed list of raw material required and source, mode of storage and transportation.

Details of the storage and technical specifications with safety aspects & standards.

Is there additional storage required for the proposed products mix.

Proposal for safety buffer zone around the proposed site with map.

Details indicating National Park/Wild life Sanctuary/Eco sensitive area/reserve forest within 10 Km.

Land use along with maps & cropping pattern, vegetation, ecology, flora & fauna

Demography & socio-economics of the area.

Baseline data collection for air, water and soil for the period of 3 months (except monsoon season) for :

Ambient air quality monitoring for PM_{2.5}, PM₁₀, SO₂, NOx, CO

Background levels of hydrocarbons (methane & non-methane HC) and VOCs.

Soil sample analysis.

Base line underground and surface water quality in the vicinity of project.

Climatology & meteorology including wind speed, wind direction, temperature, rainfall etc.

Measurement of noise levels.

Give existing status of stack emission, raw water requirement, treated effluent quantity & quality data, noise pollution and solid waste management in the existing units.

Action plan to achieve smokeless flare should be included.

Details of Sulphur balance in the existing refinery unit. Additional SO₂ emissions due to the proposed product mix.

Unit-wise air pollution control devices to be installed.

Details of water consumption and source of water supply, waste water generation, treatment and utilisation of treated water generated from the facilities and effluent disposal and measures for release of effluent in case of fire. Water balance chart for the existing unit and proposed expansion.

Details of existing and proposed effluent treatment plant along with water quality of inlet and outlet of ETP.

Action plan to reduce wastewater discharge from the all existing units.

Detailed solid waste generation, collection, segregation, its recycling and reuse, treatment and disposal.

Note on compliance to the recommendations mentioned in the CREP for oil refineries and petrochemical industries.

A note on implementation of new refinery standards for refineries.

Quantification of oil sludge generation from the existing and proposed refinery including management of the oil sludge in the existing refinery. Details of temporary storage for the oil sludge.

Details of catalyst waste generated from the refinery along with temporary storage facility at site. Action plan for disposal of the catalyst solid waste.

Status of existing secured landfill sites. Design details as well as ground water monitoring around the project site.

Details of membership of TSDF for hazardous waste disposal.

Assessment of impact on air, water, soil, solid/hazardous waste and noise levels.

List of hazardous chemicals (as per MSIHC rule) with toxicity levels.

Details of proposed preventive measures for leakages and accident.

Details of Vapour Recovery System.

Earmarking of area for parking of Lorries at a remote location to avoid congestion.

Traffic management with adequate width of approach road to avoid congestion and to have safe exit in emergencies.

Type of seismic zone.

Full Quantitative Risk Assessment & Disaster Management Plan should include:

Identification of hazards

Consequence Analysis

Determination of Individual Risk and Societal Risk

List of last Major Refinery Incidents Globally in last 10 years

Proposed measures for risk reduction.

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) Plan and fund allocation to ensure the occupational health & safety of all contracts and sub-contract workers.

Details including existing green belt developed. Action plan for development of green belt in 33%.

Total capital cost and recurring cost/annum for environmental pollution control measures. Break up details should also be included.

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.

Environmental monitoring programme including online stack monitoring system as well as continuous ambient air quality monitoring system. Method/System to be adopted to ensure correct calibration of automatic monitoring system.

Details of Corporate Social Responsibility (CSR) including sufficient budgetary provision for health improvement, education, water and electricity supply etc. in and around the project.

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.

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

A tabular chart indicating point-wise compliance of the TOR.

The aforesaid TORs 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 conducting public hearing/consultation. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The issues raised in Public Hearing and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in the form of tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

The TORs prescribed shall be valid for a period of two years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points should be noted:

- i. All documents shall be properly indexed, page numbered.
 - ii. Period/date of data collection shall be clearly indicated.
 - iii. Authenticated English translation of all material provided in Regional languages.
 - iv. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
 - v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
 - vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
 - vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included. The consultants involved in the preparation of EIA-EMP report after accreditation with Quality Council of India (QCI) /National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA-EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. 'Certificate of accreditation' issued by QCI to the environmental consultant should be included.
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GENERIC TORs FOR Pipeline

1. Executive summary of the project, Feasibility study report and pipeline route survey report.
2. Project description and project benefits.
3. Details of existing and proposed new activities in tabulated form.
4. Point-wise compliance to the all the conditions stipulated in environmental clearance accorded so far for the existing projects along with all the necessary annexures.
5. Point-wise compliance to the Consent to Establish, Consent to Operate and Authorization for the existing units along with all the necessary annexures.
6. Land use details of the site based on satellite imagery.
7. Details of land to be acquired. Details of rehabilitation and resettlement involved, if any.
8. A list of industries within 10 km radius of the project.
9. Details of the storage and technical specifications with safety aspects & standards
10. Site details including satellite imagery for 5 km around the site.
11. Location of National Park/Wild life sanctuary/Reserve Forests or any other ecologically sensitive area within 10 km radius of the project and permission from the competent authority.
12. Permission and recommendations of the Forest Department regarding impact of proposed pipeline on the reserve forests, if any.
13. Forest clearance for the forest land involved, if any.
14. Land use along with maps & cropping pattern, vegetation, ecology, flora & fauna
15. Demography & socio-economics of the area.
16. Baseline data collection for air, water and soil for:
 - a. Ambient air quality monitoring for PM₁₀, SO₂, NO_x, CO.
 - b. Background levels of hydrocarbons (methane & non-methane) and VOCs.
 - c. Soil sample analysis.
 - d. Base line underground and surface water quality in the vicinity of project.
 - e. Climatology & meteorology including wind speed, wind direction, temperature, rainfall etc.
 - f. Measurement of noise levels within 1 Km.
17. Details of water consumption and source of water supply, waste water generation, treatment and utilization of treated water generated from the facilities and effluent disposal
18. Detailed solid waste generation, collection, segregation, its recycling and reuse, treatment and disposal.
19. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions.
20. Assessment of impact on air, water, soil, solid/hazardous waste and noise levels.
21. Details of proposed preventive measures for leakages and accident.
22. Noise monitoring within one km.
23. Type of seismic zone.
24. Environmental Management Plan for construction and operational phase.
25. Action plan for proper restoration of site after laying the pipeline.
26. Risk Assessment & Disaster Management Plan
 - i. Identification of hazards
 - ii. Consequence Analysis
 - iii. Risk assessment should also include leakages and proposed measures for risk mitigation.
 - iv. Corrosion management plan for pipe line.
27. Details of proposed Occupational Health Surveillance program for the employees and other labour.
28. Details of proper restoration of land after laying the pipelines.
29. Environmental Monitoring programme.
30. Measures to control hydrocarbon emissions from crude oil tanks and other equipments.

31. Water drainage facilities from crude oil tanks and treatment facilities for drained water.
32. Total capital cost and recurring cost/annum for environmental pollution control measures.
33. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
34. A tabular chart indicating point-wise compliance of the TOR
35. The proponent shall prepare EIA-EMP Report based on the above TORs as per the generic structure given in Appendix-III of EIA Notification, 2006 and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The issues raised in Public Hearing and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in the form of tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance. Replies on the issues raised during the Public Hearing/ Consultation shall be incorporated in the EIA-EMP Report and the final EIA-EMP report submitted to the Ministry for obtaining environmental clearance.
36. The TORs prescribed shall be valid for a period of two years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points shall be noted:

- viii. All documents shall be properly indexed, page numbered.
 - ix. Period/date of data collection shall be clearly indicated.
 - x. Authenticated English translation of all material provided in Regional languages.
 - xi. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
 - xii. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
 - xiii. 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.
 - xiv. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included. The consultants involved in the preparation of EIA-EMP report after accreditation with Quality Council of India (QCI) /National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA-EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. 'Certificate of accreditation' issued by QCI to the environmental consultant should be included.
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