

**FINAL MINUTES FOR 26th RECONSTITUTED EXPERT APPRAISAL COMMITTEE
(INDUSTRY-2) HELD DURING 29th - 30th OCTOBER, 2014**

VENUE: Indus Hall, Ministry of Environment, Forests and Climate Change, Indira Paryavaran Bhawan Aliganj, Jorbagh Road, New Delhi -110003.

Time : 10: 00 AM

26.1 : Opening Remarks of the Chairman

Time : 10: 00 - 10: 30 AM

26.2 Confirmation of the Minutes of the 24th Reconstituted Expert Appraisal Committee (Industry-2) held during 29th – 30th September, 2014.

29th October, 2014

26.3 Environmental Clearance

26.3.1 Resin Manufacturing Unit at Survey No.238 Palki 1, Opp. Dadashri Nagar, Malia Road, Morbi, Gujarat by M/s OM Lamcoat Pvt. Ltd- regarding EC

The project proponent and their consultant (M/s T R Associates, Stay order no. C/SCA/1782/2013 dated 9/12/2013) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 12th Meeting of the Expert Appraisal Committee (Industry) held during 30th September, 2013 to 1st October, 2013 for preparation of EIA-EMP report. All the synthetic organic chemicals industry (basic organic, chemicals, other, synthetic organic chemicals and chemical Intermediates) located outside the notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s OM Lamcoat Pvt. Ltd. has proposed for setting up of resin manufacturing unit at Survey No.238 Palki 1, Opp. Dadashri Nagar, Malia Road, Morbi, Gujarat. Total plot area is 13456 m² of which greenbelt will be developed in 4440 m². It is reported that no national park/ wildlife sanctuary is located within 10 km distance. Cost of project is Rs. 80 lakhs. Following products will be manufactured:

S.N.	Product	Quantity
1	Phenol Formaldehyde Resin	400 MTPM
2	Melamine Formaldehyde Resin	150 MTPM
3	Urea Formaldehyde Resin	150 MTPM
4	H P Decorative Laminated Sheets	1,50,000 Nos./Month

PP has submitted the copy of consent to establish issued by GPCB vide letter no. PC/CCA/RJ-2272/ID-42130/169845 dated 1st January, 2014 for the existing laminated sheet.

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 7 locations during November-January, 2014 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (62.8 µg/m³ to 78.9 µg/m³), PM_{2.5} (33.9 µg/m³ to 46.9 µg/m³), SO_x (13 µg/m³ to 19.1 µg/m³) and NO_x (20.0 µg/m³ to 26.7 µg/m³)

respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 11.1 $\mu\text{g}/\text{m}^3$, 0.40 $\mu\text{g}/\text{m}^3$ and 2.00 $\mu\text{g}/\text{m}^3$ with respect to SPM, SO₂ and NO_x. The resultant concentrations are within the National Ambient Quality Monitoring Standards (NAAQM) set by CPCB.

Multi-cyclone Dust collector has been proposed to coal/white coal fired boiler & Thermic fluid heater to control particulate emissions. The Committee suggested for bagfilter instead of dust collector. DG set (250 KVA) will be installed. Scrubber will be provided to Dryer to control methanol. Total water requirement is 44.30 m³/day, of which fresh water requirement from surface source will be 15.384 m³/day. Remaining water requirement will be met from treated effluent. PP confirmed that no ground water will be used as ground water level is 200 m below. Fresh water will be sourced from Narmada Canal. Industrial effluent generation will be 12.1 m³/day. Industrial effluent will be treated in ETP with photo fenton oxidation process method followed by evaporator. Condensate from evaporator will be recycled/reused in process. No effluent will be discharged outside the plant premises. ETP sludge will be sent to TSDF. Resin waste/residue will be sent to common incineration facility. Used oil/spent oil will be sent to registered recyclers. Fly ash will be sent to brick manufacturers.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 26th June, 2014. The issues were raised regarding employee welfare, Industrial waste generation etc. The Committee noted that issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

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

- i) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.
- ii) Bag filter along with stack of adequate height should be installed to coal/white coal fired boiler & Thermic fluid heater to control particulate emissions.
- iii) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored.
- iv) Wet scrubber should be provided to control process emissions. Methanol should be recovered from the process area.
- v) Total fresh water requirement from surface water source should not exceed 15.4 m³/day and prior permission should be obtained from the Competent Authority (Narmada Nigam Ltd). No ground water will be used.
- vi) Industrial effluent will be treated in ETP based on photo fenton process followed by evaporation to achieve zero discharge. Water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB.
- vii) The company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from GPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire fighting facilities in case of emergency.
- viii) As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- ix) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

- x) All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 26th June, 2014 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhopal.
- xi) At least 2.5 % of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.

26.3.2 Phenol formaldehyde Resin (87.5 MTPM) and Melamine Formaldehyde Resin (37.5 MTPM) Manufacturing Unit at Sy.No.86/P, Plot NO.1, behind Rajhuvir Ginning, National Highway No.8B, Village Hadamtala, Taluka Kotala Sangani, District Rajkot, Gujarat by M/s Kunj Laminates– regarding EC

The project proponent and their consultant (M/s NISARG ENVIRO CONSULTANTS, Stay order no. C/SCA/12466/2013 dated 13/08/2013) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 1st Meeting of the Expert Appraisal Committee (Industry) held during 24th-25th September, 2012 for preparation of EIA-EMP report. All the synthetic organic chemicals industry (basic organic, chemicals, other, synthetic organic chemicals and chemical Intermediates) located outside the notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Kunj Laminates has proposed for setting up of Phenol formaldehyde Resin (87.5 MTPM) and Melamine Formaldehyde Resin (37.5 MTPM) Manufacturing Unit at Sy.No.86/P, Plot NO.1, behind Rajhuvir Ginning, National Highway No.8B, Village Hadamtala, Taluka Kotala Sangani, District Rajkot, Gujarat. Total plot area is 1875 m² of which 620 m² of area is earmarked for greenbelt. It is reported that no eco-sensitive area/ Reserve Forest is located within 10Km distance. Total cost of project is Rs 5.0 crores. Following products will be manufactured:

S.N.	Products	Capacity
1	Phenol Formaldehyde Resin	87.5 MTPM
2	Melamine Formaldehyde Resin	37.5 MTPM

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 6 locations during May, 2013 and submitted baseline data of RSPM, SO₂ and NO_x. However, the Committee suggested to conduct ambient air quality monitoring w.r.t PM₁₀, PM_{2.5}, SO₂, NO_x and CO for one more month period. Coal fires boiler (2.5 TPH) will be installed. Imported coal will be used. DG set (250 KVA) will be installed. The Committee suggested for bagfilter to control particulate emissions. Scrubber will be provided to Dryer to control methanol. Total water requirement is 46.5 m³/day, of which fresh water requirement from ground water source will be 15 m³/day. Remaining water requirement will be met from treated effluent. Industrial effluent generation will be 1.0 m³/day. Industrial effluent will be treated in ETP. Phenol will be removed. No effluent will be discharged outside the plant premises. ETP sludge will be sent to TSDF. Resin waste will be sent to common incineration facility. Used oil/spent oil will be sent to registered recyclers. Fly ash will be sent to brick manufacturers.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 18th March, 2014. The issues were raised regarding water balance, methanol recovery, water

monitoring, ambient air quality monitoring study etc. The Committee noted that issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

After deliberations, the Committee sought the following additional information:

- (i) Conduct ambient air quality monitoring w.r.t PM10, PM2.5, SO2, NOx and CO for one month period.
- (ii) Layout map of proposed unit reflecting process, ETP and other important features adequately.
- (iii) Layout map of proposed greenbelt in the plan covering 33% of the project area.

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

26.3.3 Resin Manufacturing Unit at S.No.6/A, Village Changodar, District Ahmedabad, Gujarat by M/s Creative Laminates – regarding Environmental Clearance

The project proponent and their consultant (M/s T R Associates, Stay order no. C/SCA/1782/2013 dated 9/12/2013) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 11th Meeting of the Expert Appraisal Committee (Industry) held during 26th to 27th August, 2013 for preparation of EIA-EMP report. All the synthetic organic chemicals industry (basic organic, chemicals, other, synthetic organic chemicals and chemical Intermediates) located outside the notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Creative Laminates have proposed for setting up of Resin Manufacturing Unit at S.N. 6/ A, Village Changodar, District Ahmedabad, Gujarat. Total plot area is 3299.52 m² of which greenbelt will be developed in 216 m². Cost of resin plant is Rs. 80.00 Lakhs. It is reported that no ecological sensitive area is located within 10 Km distance. However, Thol Bird sanctuary is located at a distance of 23.9 km. Following products will be manufactured:

S.N.	Product	Quantity
1	Phenol Formaldehyde Resin	400 MTPM
2	Melamine Formaldehyde Resin	120 MTPM
3	Urea Formaldehyde Resin	120 MTPM

PP has submitted the copy of consent to establish issued by GPCB vide letter no. PC/CCA/ABD-1002/ID-42013/170413 dated 4th January, 2014 for the existing laminated sheet.

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 7 locations during October-December, 2013 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (66.6 µg/m³ to 104.2 µg/m³), PM2.5 (46.1 µg/m³ to 62.5 µg/m³), SOx (13 µg/m³ to 20.6 ug/m³) and NOx (19.9 µg/m³ to 28.0 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 60 µg/m³, 2.5 µg/m³ and 15.6 µg/m³ with respect to SPM, SO2 and NOx. The resultant concentrations are within the NAAQS except particulate matter. Multi-cyclone Dust collector will be provided to coal/white coal fired boiler & Thermic fluid heater to control particulate emissions. The Committee suggested for

bagfilter instead of dust collector. DG set (175 KVA) will be installed. Scrubber will be provided to Dryer to control methanol. Total water requirement is 33.87 m³/day, of which fresh water requirement from ground water source will be 12.8 m³/day. Remaining water requirement will be met from treated effluent. PP informed that fresh water requirement can be met from the proposed water pipeline without using ground water. Industrial effluent generation will be 5.3 m³/day. Industrial effluent will be treated in ETP with photo fenton oxidation process method followed by evaporator. Condensate from evaporator will be recycled/reused in process. No effluent will be discharged outside the plant premises. ETP sludge will be sent to TSDF. Resin waste will be sent to common incineration facility. Used oil/spent oil will be sent to registered recyclers. Fly ash will be sent to brick manufacturers.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 4th July, 2014. The issues were raised regarding local employment, greenbelt etc. The Committee noted that issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

The Committee noted that as per page no. 4.16 of EIA-EMP report, predicted SPM is in the range of 20 ug/m³ to 60 ug/m³ and resultant SPM due to the proposed project is in the range of 121.5 ug/m³ to 157 ug/m³. The Committee suggested to recheck the SPM prediction data. Reasons for high PM10 data to be submitted.

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

- i) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.
- ii) Bag filter along with stack of adequate height should be installed to coal/white coal fired boiler & Thermic fluid heater to control particulate emissions.
- iii) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored.
- iv) Wet scrubber should be provided to control process emissions. Methanol should be recovered from the process area.
- v) Total fresh water requirement shall not exceed 12.8 m³/day. No ground water shall be used. As informed the water requirement will be met from authorized pipeline for the area.
- vi) Industrial effluent will be treated in ETP based on photo fenton process followed by evaporation to achieve zero discharge. Water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB.
- vii) The company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from GPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire fighting facilities in case of emergency.
- viii) Green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- ix) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- x) All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 4th July, 2014 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhopal.

- xi) At least 2.5% of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.

26.3.4 Molasses based Distillery (30 KLPD) at Gat No. 61 A, Village Watwate, Tehsil Mohol, District Solapur, Maharashtra by M/s Jakraya Sugar Ltd– regarding EC

The project proponent and their consultant (Mantras Green Resources 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 5th Meeting of the Expert Appraisal Committee (Industry) held during 31st January, 2013-1st February, 2013 for preparation of EIA-EMP report. All molasses based distilleries are listed at S.N. 5(g) (i) under category 'A' and appraised at Central level.

M/s Jakraya Sugar Ltd. has proposed for setting up of molasses based Distillery (30 KLPD) at Gat No. 61 /1/A, Village Watwate, Tehsil Mohol, District Solapur, Maharashtra. Total plot area is 68300 m² of which greenbelt will be developed in 29271.3 m². Proposed distillery unit will be established in the existing 2500 TCD Sugar Factory and Co-generation Power Plant (11 MW). The project site is located about 3.18 km distance from Bhima River. It is reported that no national park/wildlife sanctuary/biosphere reserves are located within 10 km distance. Cost of project is Rs. 31.74 Crore. Distillery will be operated for 190 days. Total requirement of molasses is 22800 MT for the proposed 30 KLPD Distillery for 190 days, which will be sourced from own molasses to the extent of 25,200 MT after crushing 6.3 Lakh MT sugar cane. Fuel alcohol will be generated around 810 KL/month; Head spirit : 45 KL/Month; Rectified Spirit : 855 KL/month; Extra neutral alcohol : 855 KL/month and Fusel oil consumption: 1.8 KL/month. Biogas generation will be 12000 m³/day. Bio-compost generation will be 23640 MT/ annum. No boiler will be installed. Steam will be taken from the existing sugar mill for process use.

Ambient air quality monitoring was carried out at 5 locations during March, 2013 – May, 2013 and submitted data indicates as PM10 (41.9–72.5 ug/m³), PM2.5 (8.2–16.1 ug/m³), SO₂ (5.9 – 14.8 ug/m³) and NO_x (10.3-17.9 ug/m³). Predicted value of ground level concentration due to proposed project is SPM (0.011 ug/m³). The resultant concentrations are within the NAAQS. Fresh water requirement from Bima River will be 300 m³/day. Spent wash generation will be 80 m³/day and treated through bio-methanation process followed by MEE and bio-composting. Spentlees will be treated and bio-composting. No effluent will be discharged outside the plant premises. PP also informed that the steam requirement for the 30 KLPD distillery and evaporation plant will be 3.5 to 4.0 MT/hr. Presently, the existing unit has 1 boiler with steam generation capacity of 70 MT/hr and having 67 kg/cm² pressure. The unit is also having two co-generation units having capacity of 11.0 MW & 4.5 MW respectively. Therefore, in season and off season required steam and power will be made available for distillery plant and sugar factory.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Maharashtra Pollution Control Board on 24th February, 2014. Dr. Praveen Gedam, District Magistrate vide letter No. 2014, DCB/2/RR/2966 dated 8th August, 2014 has clarified that public hearing was conducted on 24.02.2014 & was supervised and presided by Shri VijaySingh Deshmukh, Reesident District Collector and Additional District Magistrate, Solapur. However due to typing mistake the designation of Chairman was written as Residence Deputy Collector, Solapur in the minutes of meeting of the public hearing submitted by the Committee. The issues were raised

regarding noise pollution, manure, water pollution, air pollution, local employment etc. The Committee noted that issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

After deliberations, the Committee desired following additional information:

- 1 Re-analysing the river water and ground water qualities and the same to be submitted within 15 days.
- 2 Item-wise details along with time bound action plan for ESR for 2.5% of project cost to be prepared and submitted.
- 3 Copy of valid consent to operate of existing sugar unit.

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

26.3.5 Resin Manufacturing Unit at Survey No.814 Paiki 1, 817, 818, 839, 840, Village Ghodasar, Taluka Mahemdabad, District Kheda, Gujarat by M/s Kalpsar Lam Pvt. Ltd. – regarding EC.

The project proponent and their consultant (M/s T R Associates, Stay order no. C/SCA/1782/2013 dated 9/12/2013) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 12th Meeting of the Expert Appraisal Committee (Industry) held during 30th September to 1st October, 2013 for preparation of EIA-EMP report. All the synthetic organic chemicals industry (basic organic, chemicals, other, synthetic organic chemicals and chemical Intermediates) located outside the notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Kalpsar Lam Pvt. Ltd. have proposed for setting up of resin manufacturing unit at Sy. No. 814 Paiki 1, 817, 818, 840, 839, Village Ghodasar, Nainpur-Haldarwas Road, Taluka Mahemdabad, District Kheda, Gujarat. Total plot area is 13772 m² of which greenbelt will be developed in 4540 m². It is reported that no national park/ wildlife sanctuary/ reserve forest/ is located within 10 Km distance. River Vatrak is flowing at a distance of 0.65 Km away. Cost of project is Rs. 1 Crore. Following products will be manufactured:

S.N.	Product	Quantity
1	Phenol Formaldehyde Resin	1000 MTPM
2	Melamine Formaldehyde Resin	500 MTPM
3	Urea Formaldehyde Resin	1000 MTPM
4	H P Decorative Laminated Sheets	2,50,000 Nos./Month

PP has submitted the copy of consent to establish issued by GPCB vide letter no. GPCB/CTE-KH-956/ID:42756/224120 dated 3rd September, 2014 for the existing laminated sheet (2,50,000 Nos./Month).

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 7 locations during November, 2013-January, 2014 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (60 µg/m³ to 76.9 µg/m³), PM_{2.5} (33.6 µg/m³ to 45.2 µg/m³), SO_x (10.2 µg/m³ to 20.0 µg/m³) and NO_x (13.6 µg/m³ to 25.7 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 8.1 µg/m³, 0.28 µg/m³ and 1.0 µg/m³ with respect to SPM, SO₂ and NO_x. The resultant concentrations are within the NAAQS.

Multi-cyclone Dust collector will be provided to coal fired boiler & Thermic fluid heater to control particulate emissions. The Committee suggested for bagfilter instead of dust collector. DG set (250 KVA) will be installed. Scrubber will be provided to Dryer to control methanol. Total water requirement is 53.2 m³/day, of which fresh water requirement from ground water source will be 28.74 m³/day. Remaining water requirement will be met from treated effluent and condensate. Industrial effluent generation will be 21 m³/day. Industrial effluent will be treated in ETP with photo fenton oxidation process method followed by evaporator. Condensate from evaporator will be recycled/reused in process. No effluent will be discharged outside the plant premises. ETP sludge will be sent to TSDF. Resin waste will be sent to common incineration facility. Used oil/spent oil will be sent to registered recyclers. Fly ash will be sent to brick manufacturers.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 18th June, 2014. The issues were raised regarding impact on human health, local employment, impact on agriculture land etc. The Committee noted that issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

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

- i) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.
- ii) Bag filter along with stack of adequate height should be installed to coal fired boiler & Thermic fluid heater to control particulate emissions.
- iii) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored.
- iv) Wet scrubber should be provided to control process emissions. Methanol should be recovered from the process area.
- v) Total fresh water requirement from ground water source should not exceed 28.74 m³/day and prior permission should be obtained from the CGWA/SGWA.
- vi) Industrial effluent will be treated in ETP based on photo fenton process followed by evaporation to achieve zero discharge. Water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB.
- vii) The company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from GPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire fighting facilities in case of emergency.
- viii) Green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- ix) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- x) All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 18th June, 2014 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhopal.
- xi) At least 2.5 % of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.

26.3.6 Proposed IND Adept Project at Guwahati Refinery IOCL, Assam by M/s Indian Oil Corporation Ltd- reg EC

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 9th meeting held during 10-11th June, 2013 for grant of Environmental Clearance. As per the minutes of the meeting, the Committee had sought the following documents from the proponent for reconsideration of the proposal:

- i. Map authenticated by wildlife warden indicating Refinery and Amchang Wildlife Sanctuary.
- ii. SO₂ and NO_x emission load (TPD) from the refinery before and after the proposed project.

The proponent vide letter HSE/EP/EC-APPL/18 dated 3rd July, 2013 furnished the aforesaid additional information to the Ministry. As per authenticated map by the Chief Conservator of Forests indicating the location of Guwahati Refinery falls within the radius of 10 km from the boundary of Amchang Wildlife Sanctuary. SO₂ emission load will be increased from 5.04 TPD to 5.14 TPD after expansion. NO_x emission load will be increased from 2.23 TPD to 2.30 TPD after installation of IND Adept Demonstration Unit. Further, PP vide letter no. GR/HSE/ENV/325 dated 25th September, 2014 has submitted copy of the application submitted for NBWL clearance.

After detailed deliberations, the Committee on the basis of documents furnished and presentation made, 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. Permission to be obtained from the Standing Committee of NBWL in respect of Amchang Wildlife sanctuary.
- ii. M/s IOCL 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.
- iii. Continuous on-line stack monitoring for SO₂, NO_x and CO of all the stacks shall be carried out. Scrubber will be provided to control Sox emission from installation of IND Adept Unit.
- 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 5.14 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 Brahmaputra River shall not exceed 331 m³/hr. Industrial effluent (183 m³/hr) shall be treated in the effluent treatment plant. Treated effluent shall be recycled/reused recycled as make up for the raw water cooling tower and coke cutting water. Treated Effluent (65 m³/hr) will be discharged into surface water

- body i.e. River Brahmaputra after achieving standards prescribed. Domestic sewage shall be treated in sewage treatment plant (STP).
- viii. 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.
 - ix. Oil catchers/oil traps shall be provided at all possible locations in rain/ storm water drainage system inside the factory premises.
 - x. 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.
 - xi. Green belt shall be developed at least in 33% of the plot 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.
 - xii. All the commitment made regarding issues raised during the Public Hearing/ consultation meeting held on 9th April, 2013 shall be satisfactorily implemented.

Reconsideration for Environmental Clearance

26.3.7 Exploratory and Test Production of Coal Bed Methane (CBM) in Block: RM (E)-CBM-2008/IV, Rajmahal CBM Block, Jharkhand by M/S Essar Oil Limited (E&P Division)-reg. EC

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 10th meeting held during 29th – 31st July, 2013 for grant of Environmental Clearance. As per the minutes of the meeting, the Committee had sought the following documents from the proponent for reconsideration of the proposal:

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

PP vide letter no. EOL/CBM-IV/RM (East)/ENV/2014-02 dated 8th August, 2014 has submitted that above mentioned addl. information. PP has submitted the copy of letter no. 165/LA dated 5th August, 2014 of District Commissioner cum District Magistrate, District land acquisition Division, Pakhur regarding tribal land acquisition. He informed that the Company shall acquire land permanent or temporary as per the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013. TDS of produced water will be 10,000 mg/l. PP informed that they will install treatment plant comprises Multi stage RO treatment and MEE for drying of rejects for ensuring 'Zero' discharge. Treated produced water will be recycled/reused for beneficial purpose. Gas fired boiler will be installed for steam generation for the purpose of MEE. Rs. 2.5 Crore has been allocated as Enterprise Social Responsibility for Coreholes & Test hole wells project. Besides, Rs. 50 Crores has been earmarked as Enterprise Social Responsibility for pilot wells, GGS & MCS projects. The allocated funds will be distributed across various thrusts areas viz. Health, Education, Livelihood opportunity generation and infrastructure. Villages

have been identified in the Blocks namely Maheshpur, Pakuria, Litipara, Hiranpur, Amrapara and Pakur.

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. Compensation for the land acquisition to the land ousters, if any, and also for standing crop shall be paid as per the National Resettlement and Rehabilitation Policy (NRRP) 2007 or State Government norms. It may be ensured that compensation provided shall not be less than the norms of the NRRP, 2007.
- ii. Adequate stack height will be provided to gas fired boiler to disperse waste gases.
- iii. The surface facilities shall be installed as per the applicable codes and standards, international practices and applicable local regulations.
- iv. Ambient air quality shall be monitored near the closest human settlements as per the National Ambient Air Quality Emission Standards (NAAQES) issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for PM₁₀, PM_{2.5}, SO₂, NO_x, CO, CH₄, VOCs, HC, Non-methane HC etc. Efforts shall be made to improve the ambient air quality of the area.
- v. The flare system shall be designed as per good oil field practices and Oil Industry Safety Directorate (OISD) guidelines. The company shall take necessary measures to prevent fire hazards and soil remediation as needed. At the place of ground flaring, the flare pit shall be lined with refractory bricks and efficient burning system. In case of overhead flare stacks, the stack height shall be provided as per the regulatory requirements and emissions from stacks shall meet the MOEF/CPCB guidelines.
- vi. The company shall make the arrangement for control of noise from the drilling activity and DG/GG sets by providing necessary mitigation measures such as proper acoustic enclosures to DG/GG sets and meet the norms notified by the MoEF. Height of all the stacks/vents shall be as per the CPCB guidelines.
- vii. 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.
- viii. Total fresh water requirement shall not exceed (25 m³/core hole) and test /pilot drilling (75 m³/day) for each well during drilling phase and prior permission shall be obtained from the Competent Authority and a copy submitted to the Ministry's Regional Office at Bhubaneswar.
- ix. During well drilling, wastewater shall be segregated into waste drilling fluid and drill cuttings. Drill cutting shall be stored onsite impervious HDPE lined pit for solar evaporation and drying. Effluent shall be properly treated and treated effluent shall conform to CPCB standards.
- x. As proposed, produced water shall be treated through RO and RO rejects shall be concentrated/evaporated in MEE. Treated water shall be reused in drilling of other core/test wells as well as other beneficial purposes.

- xi. Ground water quality monitoring shall be done to assess if produced water storage or disposal has any effect.
- xii. Drilling wastewater including drill cuttings, wash water shall be collected in disposal pit lined with HDPE lining, evaporated or treated and shall comply with the notified standards for on-shore disposal on land. Proper toxicological analysis shall be done to ensure there is no hazardous material. Copy of toxicological analysis shall be submitted to Ministry's Regional Office at Bhubaneswar.
- xiii. Only water based drilling mud shall be used. The drilling mud shall be recycled. Hazardous waste shall be disposed of as per Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008. The recyclable waste (oil sludge) and spent oil shall be disposed of to the authorized recyclers/re-processors.
- xiv. The Company shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. At place of ground flaring, the overhead flaring stack with knockout drums shall be installed to minimize gaseous emissions during operation.
- xv. To prevent underground coal fire, preventive measures shall be taken for ingress of ambient air during withdrawal inside the coal seams by adopting technologies including vacuum suction. Gas detectors for the detection of CH₄ and H₂S shall be provided.
- xvi. The design, material of construction, assembly, inspection, testing and safety aspects of operation and maintenance of pipeline and transporting the natural gas/oil shall be governed by ASME/ANSI B 31.8/B31.4 and OISD standard 141. Pipeline wall thickness and minimum depth of burial at river crossing and casings at rails, major road crossings should be in conformity with ANSI/ASME requirements.
- xvii. 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.
- xviii. Adequate well protection system shall be provided like Blow Out Preventer (BOP) or diverter systems as required based on the geological formation of the blocks.
- xix. The top soil removed shall be stacked separately for reuse during restoration process.
- xx. Emergency Response Plan shall be based on the guidelines prepared by OISD, DGMS and Govt. of India. Recommendations mentioned in the Risk Assessment & Consequence Analysis and Disaster Management Plan shall be strictly followed.
- xxi. Project proponent shall comply with the environment protection measures and safeguards recommended in the EIA/EMP/risk analysis report/disaster management plan.
- xxii. The company shall take measures after completion of drilling process by well plugging and secured enclosures, decommissioning of rig upon abandonment of the well and drilling site shall be restored in original condition. In the event that no economic quantity of hydrocarbon is found a full abandonment plan shall be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations.

- xxiii. Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.
- xxiv. In case the commercial viability of the project is established, the Company shall prepare a detailed plan for development of gas fields and obtain fresh environmental clearance from the Ministry.
- xxv. All the commitments made to the public during the Public Hearing / Public Consultation meetings held on 24th November, 2012 shall be satisfactorily implemented.
- xxvi. At least 5 % of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program should be ensured accordingly in a time bound manner.

26.3.8 Fertilizer capacity Enhancement (2000 to 3000 TPD) at Ambalamedu, Kochi, Kerala by M/s Fertilizers and Chemicals Travancore Ltd. reg. EC .

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 18th meeting held during 28th – 30th April, 2014 for grant of Environmental Clearance. As per the minutes of the last meeting, the Committee noted that there was an error in the ambient air quality monitoring data as tabulated in EIA report. Minimum value has been reported as maximum and vice versa. The Committee requested that the table may be rechecked and submitted as part of the EIA – Report. PP vide letter dated 10th July, 2014 (received in the Ministry on 19th September, 2014) has submitted the corrected EIA-EMP report.

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

- i) All the conditions stipulated in environmental clearance J-11011/24/89-IA (II) dated 30th January, 1991 accorded for the existing projects shall be implemented.
- ii) Ammonia bearing fumes from the reactor and granulator of the Complex Fertilizer shall be scrubbed. Scrubbing shall have interlocking system with main plant.
- iii) The gaseous emissions (SO₂, Nox, NH₃, HC and Fluoride) 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.
- iv) Fluoride monitoring through continuous fluoride analyzer shall be carried out in ambient air as well as stack.

- v) Total fresh water requirement from ground water source shall not exceed 11 m³/day and prior permission shall be obtained from CGWA/SGWB and a copy submitted to the Ministry's Regional Office at Lucknow.
- vi) As proposed, industrial effluent shall be treated in effluent treatment plant (ETP) and recycled back in the process.
 - i) No effluent shall be discharged outside the premises and 'Zero' effluent discharge shall be ensured.
 - ii) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
 - iii) Total water demand shall not exceeds 7850 m³/day after expansion and prior permission shall be obtained from concerned Authority and a copy submitted to the Ministry's Regional Office at Bangalore.
 - iv) Industrial effluent shall be treated in effluent treatment plant (ETP) and recycled back in the process.
 - v) No effluent shall be discharged outside the premises and 'Zero' effluent discharge shall be ensured.
 - vi) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- 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. Measures shall be taken for fire fighting facilities in case of emergency.
- viii) Spent catalysts and used oil shall be sold to authorised recyclers/re-processors only.
- ix) The company shall strictly follow all the recommendations mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP).
- x) 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 the OISD 117 norms.
- xi) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- xii) Green belt shall be developed in 33 % of the plant area. Selection of plant species shall be as per the CPCB guidelines.
- xiii) Storage of ammonia shall not be more than 5000 MT at a time.
- xiv) Remote operated valve placed on NH₃ line to avoid leakage/equipment. Adequate check shall be done to ensure that remote operated valve (ROV) is all time is functional.

26.4 Terms of Reference (TOR)

26.4.1 Development Drilling Construction of GGS, GPP, and Laying of transportation pipeline at onshore block AAP-ON-94/1 District Tinsukia, Assam by M/S Exploration Company Ltd.- regarding TOR

The PP did not attend the meeting as the Proposal was already considered in the 24th EAC (I) meeting held during 29th to 30th September, 2014 at item no. 24.6.1.

26.4.2 Proposed Grain Based Distillery (ENA/RS 60 KLPD) and 6 KLPD malt sprit plant along with Cogeneration Power Plant (3.0 MW) at Dag. no. 150, 151, 154, 155, 156, 157, 160 & 161 of K., P. no. 306, 248, 94, 75, 237, 317, 211, & 168 Village Pacharia Dalar Pathar, District Kamrup, Assam by M/S Mangalam Distillers & Bottling Industries- reg. TOR.

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

26.4.3 Exploratory/ Appraisal Drilling in offshore KG-2009/3 Block, Bay of Bengal, Andhra Pradesh by M/S Cairn India Ltd.,-reg. TOR

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

26.4.4 Greenfield multipurpose plant for manufacturing of various Technical Grade Herbicides, Insecticides, Fungicides and Caustic Chlorine Plant at Plot no. D-2/CH/357, Village Jolwa, Tehsil Vagra, District Bharuch, Gujarat by M/S Hetban Spechem Ltd.-reg. 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. After deliberation, the committee observed that there is inadequacy in capital cost, power requirement and land. In this regard, the Committee suggested the PP to submit the realistic project proposal that should cover essential components of the proposed unit.

The committee therefore recommended the PP to submit the revised Form-1 along with feasibility report covering all suggested points.

26.4.5 Coal to Poly generation Plant at Village Tunda, Tehsil Mundra, District Kutch, Gujrat by M/s Adani Synergy- reg. TOR

The project authorities and their consultant (M/s Kadam Enviornmental Consultants) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP report. All the petrochemical units are listed at serial no 5 (e) under category A and appraise at Central Level.

M/s Adani Synergy have Proposed for setting up of Coal to Poly generation Plant at Village Tunda, Tehsil Mundra, District Kutch, Gujarat. Total plot area is 178.06 ha, of which 58.68 ha, (about 33%) will be developed for green belt. Total cost of the project is Rs. 24,000 Crore. As per the PP, no national parks/wildlife sanctuaries/biosphere reserves lies within 10 Km radius of the proposed project site. Siracha and Navinal Reserved Forests are at distance of 1.5 km and 7 km from the project site. Navinal River is flowing at a distance of 1.05 km. Water requirement will be met from Gulf of Kutch as sea water. Coal shall be imported from Indonesia/Australia and Petcoke for blending from refinery. Coal linkage will be met from the West Port at a distance of 5.4 km from project site.

During construction phase power requirement of 5 MW will be from nearby grid and during operation phase, power demand for CTP plant will be 600 MW, of which 320 MW will be generated from internal process steam by heat recovery and 280 MW power shall be source from nearby grid. The project is proposed for zero liquid discharge. Coal ash so generated shall be utilized in road/ embankment and land development. Following products will be manufactured;

S. No.	Name of Product	Production Capacity
1	Substitute Natural Gas (SNG)	4 MMSCMD
2	Methanol	5000 TPD
3	FT Diesel/Naphtha	4000 BPD
4	Additional SNG from methanol and FT Block	2.4 MMSCMD
5	Sulphur	240 TPD
6	Process Steam based Captive Power Plant	320 MW

Considering the size of the project and involvement of environmental impact on larger area, the Committee, after deliberation decided that a site visit by the sub-committee of EAC may be undertaken for spot assessment before prescribing the TOR. The sub-committee comprising three members of EAC and representative of Ministry shall visit the site. Meanwhile the Committee also suggested the PP to prepare toposheet with suitable scale reflecting all important features within 10 km radius of the project and submit the same before the site visit is undertaken.

26.4.6 Proposed manufacturing of Chlorinated and hydrogenated Derivatives (11000 MTM) for agro intermediates Plant at Plot No. D-2/CH/6, Survey No. 843/P, 844/P, 845/P, 850/P, 851/P, 852/P, GIDC Industrial Estate, Town Dahej-II, Tehsil Vagra, District Bharuch, Gujrat by M/S Radha Madhav Processors Pvt. Ltd. – reg. TOR

The project authorities and their consultant (M/s Kadam Environmental Consultants) 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 units producing technical grade pesticides are listed at S.N. 5(b) under category 'A' and appraised at Central level. PP informed that project is located in the notified industrial area and the public hearing of this Industrial Estate was conducted on 30th August, 2014. However, environmental clearance to the industrial area is not available at the time of presentation.

M/s Radha Madhav Pvt. Ltd have Proposed manufacturing of Chlorinated and hydrogenated Derivatives (11000 MTM) for agro intermediates Plant at Plot No. D-2/CH/6, Survey No. 843/P, 844/P, 845/P, 850/P, 851/P, 852/P, GIDC Industrial Estate, Town Dahej-II, Tehsil Vagra, District Bharuch, Gujarat. Total plot area is 3.0 ha, of which 33% will be developed for green belt. Total cost of the project is Rs. 95.4 Crore. No national parks/wildlife sanctuaries/biosphere reserves lies within 10 Km radius of the proposed project site. Dahej reserved forests is at distance of 8.3 km from the project site. About 21 ponds are within 10 km radius of the project site. Following products includes inorganic, agrochemicals intermediates produced from hyderogenation and Chlorinated process will be manufactured:

<u>Plant Code</u>	<u>Common Name</u>	<u>Products</u>	<u>Capacity (MTPM)</u>
Plant A	CPVC	Chlorinated Poly Vinyl Chloride	1500
Plant B	Chlorination of Benzene and Toluene	Benzyl chloride	2000
		2,6 Dichloro Phenol	
		2,4 Dichloro Phenol	
		2,4 Chloro Phenol	
		Benzyl chloride/Benzo Trichloride/Benzal chloride	
		P-Chorobenzyl choride/P-Chorobenzal Choride/P-Chloro Benzotrichloride	
		o-Chorobenzyl Choride/o-Chorobenzal Choride/o-Chloro Benzotrichloride	
		Benzotrichloride	
		Chloro Benzene/Di Chloro Benzene	
		Mono Chloro Benzene (MCB)	
Dichloro Benzene (DCB) (Ortho/Meta/Para)			

		Para Chloro Toluene/ Ortho Chloro Toluene	
Plant C	Chlorination of Acetic Acid	Mono Chloro Acetic Acid	1500
		Tri Chloro Acetyl Chloride	
Plant D	Hydrolysis of	Iso Phthaloyl chloride	1500
		Phthaloyl chloride	
	Chlorinated Compound	o-Chlorobenzaldehyde	
		p-Chlorobenzaldehyde	
		Benzyl Alcohol	
		o-Chloro Benzyl Alcohol	
		p-Chloro Benzyl Alcohol	
		Benzoyl Chloride	
		Benzaldehyde	
		2-Methoxy 5-Bromo 6-Methyl Benzoyl Chloride	
		2,4 Dichloro Benzoyl Chloride	
		4 Methyl Benzoyl Chloride	
		Propargyl Chloride	
		Pivaloyl Chloride	
	4-Chloro Butyryl Chloride		
	Terephthaloyl Chloride		

		N-Valeroyl Chloride	
		4-Chloro Benzoyl Chloride	
		3-Nitro Benzoyl Chloride	
		4-Nitro Benzoyl Chloride	
Plant E	Amines	Primary Amines	1000
		Ethoxylation of Primary Amines	
Plant F		Paracetamol	1000
		4-Chloro 3,5 Dinitro Benzoic Acid	
		6, Nitro 3,4 Dichloro Aniline	
		4-Nitro ,5-Chloro, 2-methyl Aniline	1000
		2-Nitro 4-Methyl Aniline	
Plant G	Nitro Compounds	3, Nitro 4-Chloro Benzoic Acid	
		3-Nitro-para Toluic acid	
		2,4 Dichloro 6 Nitro Phenol	
		2,3 Dichloro 4 Nitro Phenol	
		2,5 Dichloro 4 Nitro Phenol	
		1,3 Di Nitro Benzene	
		Nitro Benzene	
		2/3/4 Nitro Toluene	
		3,5 Di Nitro Benzoic Acid	

		p-Nitro Salicylic Acid	
		2,5 Dichloro Nitro Benzene	
		3,4/2,3 Dichloro Nitro Benzene	
Plant H	Hydrogenatio n compounds	p-Hydroxy Aniline/o-Hydroxy Aniline	1000
		3,4 Dichloro Aniline	500
		3-Iso Propoxy Aniline	
		o-Toluidine	
		m-Toluidine	
		p-Toluidine	
		Aniline	
		3,4 Diamine Toluene	
		2,5 Dimethyl 1,4 Phenylene Diamine	
Total			11000

Water requirement from GIDC, Dahej watersupply line will be 2159 m³/day. About wastewater of 1882 m³/day will be generated. Effluent will be treated in the ETP and finally proposed to be disposed off to deep sea through underground pipe. Dust collector is proposed to control process emissions. Power requirement of 1 MW will be met from Dakin Gujarat Vij Company Ltd and one additional Genset of 250 KVA capacity will be installed. Various streams of Hazardous waste will be generated as; used oil, process residue, spent carbon, spent catalyst, discarded drum and ETP sludge. These are proposed to be temporary stored and sent for common TSDF/ or final treatment and or sale to authorized vendor as per norms of hazardous waste (Management & Handling) Rules.

After detailed deliberations, the Expert Appraisal Committee prescribed the following standard and additional TOR for preparation of EIA/EMP:

A. Standard TOR

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework.
5. Approval from Central Insecticide Bureau for manufacturing of new compounds alongwith testing reports to be submitted.
6. 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.
7. A map indicating location of the project and distance from severely polluted area
8. Project location and plant layout.
9. Infrastructure facilities including power sources.
10. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
11. Project site location alongwith photographs and site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
12. Present land use based on satellite imagery for the study area of 10 km radius.
13. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
14. Details of the total land and break-up of the land use for green belt and other uses.
15. List of products alongwith the production capacities.
16. Detailed list of raw material required and source, mode of storage and transportation.
17. Manufacturing process details alongwith the chemical reactions and process flow chart.
18. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
19. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
20. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, SO₂, NO_x, CO including HC and VOCs should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
21. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
22. Name of all the solvents to be used in the process and details of solvent recovery system.
23. Design details of ETP, incinerator, if any alongwith control of Dioxin & Furan, boiler, scrubbers/bag filters etc.
24. Details of water and air pollution and its mitigation plan
25. An action plan to control and monitor secondary fugitive emissions from all the sources.
26. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
27. Permission of 2159 m³/day of water from GIDC, Dahej water supply will be submitted. Water balance chart including quantity of effluent generated recycled and reused and discharged.

28. Action plan for possible 'Zero' discharge of effluent should be included.
29. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
30. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the management of fly ash generated from boiler should be included.
31. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
32. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilize all the organic solid waste generated.
33. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF.
34. Management of toxic chemicals and risk assessment for storage for chemicals/solvents.
35. Material safety data sheet to be submitted. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
36. An action plan to develop green belt in 33 % area. Layout map indicating greenbelt to be submitted.
37. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
38. Details of occupational health programme.
 - i) To which chemicals, workers are exposed directly or indirectly.
 - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - iii) What measures company have taken to keep these chemicals within PEL/TLV.
 - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - v) What are onsite and offsite emergency plan during chemical disaster.
 - vi) Liver function tests (LFT) during pre-placement and periodical examination.
 - vii) Details of occupational health surveillance programme.
39. Socio-economic development activities shall be in place.
40. Note on compliance to the recommendations mentioned in the CREP guidelines.
41. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
42. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
43. Total capital cost and recurring cost/annum for environmental pollution control measures.
44. Corporate Environmental Responsibility
 - (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
 - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
 - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.

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

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

B. Additional TOR

1. Public hearing to be conducted by SPCB and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
2. Permission letter from the respective SPCB for movement of vehicle carrying HCL
3. Detailed comprehensive scheme for ETP and STP for treatment of wastewater to be provided separately
4. Detailed plan for reduction of fresh water and recycling /reuse to be provided to achieve zero discharge.

The following general points shall be noted:

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

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

26.4.7 Exploratory Drilling and seismic survey of four (04) wells in block CB-ONN-2010/5 at District Patan and Mehsana, Gujarat by M/S consortium of Pan India Consultants Pvt. Ltd.-reg. TOR

The project authorities and their consultant (M/s SGS India Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) 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 consortium of Pan India Consultants Pvt. Ltd. has proposed for Exploratory Drilling and seismic survey of four (04) wells in block CB-ONN-2010/5 at District Patan and Mehsana, Gujarat. Block was awarded in NELP-IX round of bidding vide order no. PEL-10-2012-964-E dated 15.03.2013 and amendment dated 28.03.2013 which is valid for 4 years. The cost of project is 54 crore and covering block area of 49 sq. km. Exploratory drilling shall be carried out upto depth of 3000 m by using Water Based Mud (WBM). In case, WBM is unable to be used due to geological formation complexities then low toxic oil based mud with less than 1% aromatic content is proposed to be used under intimation of SPCB/MoEF. 3D survey shall be carried out by using shot holes blast. An area of 1.2 ha (100x120 m) shall be used for exploratory drilling within the block and about 0.5 ha for camp site. Whereas area of 2.25 ha shall be used for camp site and land for ROW for Seismic Survey. Followings are the coordinates of the blocks w.r..t points givens in form1.

Pt.	Longitude	Latitude
A	72 ⁰ 7'	23 ⁰ 42' 30"
B	72 ⁰ 9' 35"	23 ⁰ 43' 33"
C	72 ⁰ 10' 30"	23 ⁰ 41' 40"
D	72 ⁰ 11' 4.98"	23 ⁰ 41' 53.82"
E	72 ⁰ 12' 21.93"	23 ⁰ 39' 5.52"
F	72 ⁰ 14' 12"	23 ⁰ 39' 48"
G	72 ⁰ 14' 12"	23 ⁰ 38' 48"
H	72 ⁰ 12' 38"	23 ⁰ 38' 06"
I	72 ⁰ 12' 40"	23 ⁰ 37' 08"
J	72 ⁰ 12' 03"	23 ⁰ 37' 08"
K	72 ⁰ 11' 41"	23 ⁰ 38' 49"
L	72 ⁰ 11' 23.48"	23 ⁰ 38' 39.51"
M	72 ⁰ 10'	23 ⁰ 39' 29.9"
N	72 ⁰ 9' 1.11"	23 ⁰ 40' 22.76"
O	72 ⁰ 7' 52"	23 ⁰ 40' 38"

No forest land, sensitive zone and bio-reserves are located within 10 Km distance. Two rivers namely Khari and Pushpawati are flowing within the Block. Habitats lives in adjacent 20 villages nearby to block.

During exploratory, water requirement shall be 10-12 m³/day for site preparation and 20 m³/day for drilling. Four DG sets (3x 500 KVA and 1 x 100KVA capacity) shall be used for drilling and camp office. Whereas 2 DG set of 50 KVA capacity shall be used for seismic survey. Drill cutting during drilling shall be generated about 700-800 MT per well which is to be disposed off to lined HDPE lined pit. Drilling fluid will be reused after extraction of drill cutting and necessary treatment. Oily cotton waste, spent & waste oil so generated shall be disposed off through authorized vendor to TSDF site.

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

A. Standard TOR:

1. Executive summary of a project
2. Project description, project objectives and project benefits.
3. Site details within 1 km of the each proposed well, any habitation, any other installation/activity, flora and fauna, approachability to site, other activities including agriculture/land, satellite imagery for 10 km area.
4. Distance from nearby critically/severely polluted area as per Notification dated 13th January, 2010, if applicable.
5. Does proposal involves rehabilitation and resettlement? If yes, details thereof.
6. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s).
7. Comprehensive proposal covering surface facilities, pipeline/gas collection system, utilities etc.
8. Design details of all the facilities including GGS, pipe network, utilities and technology to be used for development project.
9. Details of project cost.
10. 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.
11. Baseline data collection for air, water and soil for one season leaving the monsoon season in an area of 10 km radius with centre of Oil Field as its centre covering the area of all proposed drilling wells.
 - (i) Topography of the project site.
 - (ii) Ambient Air Quality monitoring at 8 locations for PM 2.5, PM10, SO₂, NO_x, VOCs, Methane and non-methane HC.
 - (iii) Soil sample analysis (physical and chemical properties) at the areas located at 5 locations.
 - (iv) Ground and surface water quality in the vicinity of the proposed wells site.
 - (v) Climatology and Meteorology including wind speed, wind direction, temperature rainfall relative humidity etc.
 - (vi) Measurement of Noise levels within 1 km radius of the proposed wells.
 - (vii) Vegetation and land use; Animal resources
12. Incremental GLC as a result of DG set operation.
13. Potential environmental impact envisages during various stages of project activities such as site activation, development, operation/ maintenance and decommissioning.
14. Actual source of water and 'Permission' for the drawl of water from the Competent Authority. Detailed water balance, wastewater generation and discharge.
15. Noise abatement measures and its plan to be drawn.
16. Treatment and disposal of waste water.
17. Treatment and disposal of solid waste generation.
18. Disposal of spent oil and lubes.
19. Storage of chemicals and diesel at site.
20. Commitment for the use of WBM only
21. Mud make up and mud and cutting disposal – all options considered should be listed with selective option.
22. Hazardous material usage, storage accounting and disposal.
23. Disposal of packaging waste from site.

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

39. Corporate Environment Policy

- i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
 - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
 - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
 - iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
40. 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.
 41. A note on identification and implementation of Carbon Credit project if any should be included.
 42. A tabular chart with index for point-wise compliance of above TORs.

The following general points should be noted:

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

- (v) A copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- (vi) The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report where the above issues have been incorporated.

B. Additional TOR:

1. Public hearing to be conducted and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
2. Adequate plan to be drawn for noise control from the block for adjacent habitats.
3. Drilling to be avoided from the flood zone of two rivers namely Khari and Pushpawati

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

26.4.8 Manufacturing of single super phosphate fertilizer (100 TPD) at Plot no. 5A & 5C, IDCO Industrial Estate, Tehsil Athagad, District Cuttack, Orrisa by M/S Cee Vee Agrience Pvt. Ltd.-reg. TOR

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

26.4.9 Proposal for manufacturing of drug formulation products at Plot no. A 1128, RIICO Industrial area Phase III, Village Bhiwadi, Tehsil Tijara, District Alwar, Rajasthan by M/S Auronext Pharma Ltd.-reg. 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. The project is covered under Category 'B'. However, project site is located within 5 Km of interstate boundary (Rajasthan & Haryana) and treated as category 'A' project due to applicability of general condition of the EIA notification, 2006 and appraised at Central level. All Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f).

M/s Auronext Pharma Ltd. have proposed for expansion of Bulk Drugs Unit at Plot no. A 1128, RIICO Industrial area Phase III, Village Bhiwadi, Tehsil Tijara, District Alwar, Rajasthan. The unit has obtained Environmental Clearance vide letter no. J-11012/69/95-IA.II(I) in the name of M/s Dee Pharma Ltd. for manufacturing of bulk drug (38.4TPA Amplicillin Sodium). The unit has now proposed for expansion of bulk drug by replacing existing products with following new products in the name of M/s Auronext Pharma Ltd. Following products are proposed to be manufactured:

S. No.	Product	Quantity (kg/year)
1.	Meropenem Trihydrate Sterile	24000
2.	Sodium Carbonate Sterile	4000
3.	Imipenem Monohydrate Sterile	7000
4.	Cilastatin Sodium Sterile	7200
5.	Sodium Bicarbonate Sterile	1000
6.	Doripenem Monohydrate sterile	3000
	Total	46200

Total plot area is 10112 m² of which 33% area will be used for development of green belt. The cost of existing project is Rs. 61.51 Crore and proposed expansion project will be Rs. 40 Crore. No National Park/Forest/Wildlife Sanctuary is located within 10 km distance from the project site. Four reserve forests are indicated from project site namely Rangla Reserve Forest (2.75 km.), Chaupanki PF (8.20 km.), Godhan PF (2.08 km.) and Indauri Nala (5.66 km.).

Water requirement will be 100 m³/day. Existing unit has contract demand of 1525 KVA and transformer of 2000 KVA. After modification there will be increase in contract demand to 2500 KVA & transformer to 2500 KVA. The unit has two D.G. set of 500 KVA. Further, the unit will install either three D.G. set of 500 KVA or one of 1000 KVA & one of 500KVA. Boiler (4TPH) using furnace oil shall be installed. Emission shall be controlled by adequate pollution control device. During manufacturing process odour will be generated. The unit will take mitigation measures to control the same. The waste water generated from the process shall be treated in ETP. ETP sludge will be produced of 5 T/annum will be transported to CTFD Udaipur. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted.

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

A. Standard TOR:

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework.
5. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the APPCB.
6. Copy of NOC/Consent to Establish for the existing unit.
7. Compliance to the conditions stipulated in the NOC granted by the SPCB.
8. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s).
9. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
10. A map indicating location of the project and distance from severely polluted area.
11. Project location and plant layout.
12. Infrastructure facilities including power sources.

13. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
14. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
15. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
16. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
17. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
18. Details of the total land and break-up of the land use for green belt and other uses.
19. List of products alongwith the production capacities.
20. Detailed list of raw material required and source, mode of storage.
21. Manufacturing process details alongwith the chemical reactions and process flow chart.
22. Action plan for the transportation of raw material and products.
23. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
24. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
25. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM_{2.5}, PM₁₀, SO₂, NO_x, CO, 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.
26. Details of water and air pollution and its mitigation plan
27. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
28. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
29. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
30. Name of all the solvents to be used in the process and details of solvent recovery system.
31. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
32. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16th September, 2009.
33. Source and permission from Competent Authority for the drawl of water. Water balance chart including quantity of effluent generated recycled and reused and effluent discharge.
34. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
35. Zero discharge effluent concepts to be adopted.
36. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
37. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
38. Material Safety Data Sheet for all the Chemicals are being used/will be used.
39. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.

40. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
41. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
42. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
43. Details of occupational health programme.
 - a) To which chemicals, workers are exposed directly or indirectly.
 - b) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - c) What measures company have taken to keep these chemicals within PEL/TLV.
 - d) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - e) What are onsite and offsite emergency plan during chemical disaster.
 - f) Liver function tests (LFT) during pre-placement and periodical examination.
 - g) Details of occupational health surveillance programme.
44. Socio-economic development activities shall be in place.
45. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
46. Note on compliance to the recommendations mentioned in the CREP guidelines.
47. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
48. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
49. Total capital cost and recurring cost/annum for environmental pollution control measures.

50. Corporate Environmental Responsibility

- (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
 - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
 - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
 - (d) Does the company have a system of reporting of non-compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
51. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.

B. Additional TOR

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. Public hearing to be conducted and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
3. Permission from the State Forest Department regarding the impact of the proposed project on Reserve Forest and Protected Forest.

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

26.4.10 Development drilling of 45 wells at Block KG-DWN-98/2, KG offshore, Tehsil Allavaram, District East Godavari, Andhra Pradesh by M/s ONGC Ltd.-reg. TOR

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

M/s ONGC Ltd. has proposed for development drilling of 45 wells at Block KG-DWN-98/2, KG offshore, Tehsil Allavaram, District East Godavari, Andhra Pradesh. The location of block is as follows;

Block 98/2	Lat. 14° 30'N to 16° 31' 43"N Long. 82° E to 82° 30' E
G-4	Lat. 16° 30' 30"N to 16° 38' 0"N Long. 82° 24'57.62"E to 82° 31'48" E

The proposed drilling locations are more than 25 kms distance i.e. 12 nautical miles away from the coast line. Total cost of the project is 16200 crore. About 7294.6 Km² of area involved in block named KG-DWN-98/2 and 111.5 Km² under block G-4. The whole block named KG-DWN-98/2 mainly covered Northern and Southern Discovery areas. Northern Discovery Region further covers 3800 sq km area. It is proposed to carry out development drilling in Northern Discovery Region by drilling 45 numbers of wells including Oil, gas and water injection wells. Produced hydrocarbons shall be evacuated by utilization of GSPC infrastructure for the produced gas from clusture-1 of NDA &G-4 of PML. The produced gas from Clusture-II is planned to be transported by sub-sea pipeline to an onshore terminal through landfall point to nearest coastline of Odalarevu. The produced oil from clustered-II is planned to be transported to an FPSO and after processing to be sent to Refineries by tankers. As per ONGC, there is no sensitive area within 10 km of Block.

During meeting, PP confirmed distance the project from the shore is about 25 Km. Water depth in drilling is about 250-3000 m and target depth of wells are in range of 1000-2600 m from seabed. Water requirement from sea shall be about 25-30 m³/day for each well. 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 300-500 m³/day 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. DG set (4 nos) of 1100 KW shall be installed using 8-12 KL of HSD per day.

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

A. Standard TOR

1. Details of sensitive areas such as coral reef, marine water park, sanctuary and any other eco-sensitive area.
2. Project Description and Project Benefits;
3. Distance from coast line.
4. Climatology and meteorology including wind speed, wave and currents, rainfall etc.
5. Base line status for surface water within 1 km for drilling and coring site, particularly in respect of oil content.
6. Noise abatement measures and measures to minimize disturbance due to light and visual intrusions in case coastally located.
7. Procedure for handling oily water discharges from deck washing, drainage systems, bilges etc.
8. Procedure for preventing spills and spill contingency plans.
9. Procedure for treatment and disposal of produced water.
10. Procedure for sewage treatment and disposal and also for kitchen waste disposal.
11. Procedure for handling solid waste and any waste segregation at source for organic, inorganic and industrial waste.
12. Storage of chemicals on site.
13. Safety issues, Risk assessment and mitigation measures including whether any independent reviews of well design, construction and proper cementing and casing practices have been followed.
14. Handling of spent oils and lubes.
15. Handling of oil from well test operations.
16. H₂S emissions control plans.
17. Details of all environment and safety related documentation within the company in the form of guidelines, manuals, monitoring programmes including Occupational Health Surveillance Programme etc.
18. Restoration plans and measures to be taken for decommissioning of the rig.
19. A note on identification and implementation of Carbon Credit project if any should be included.

20. CRZ clearance, if any, may be obtained wherever applicable for offshore to onshore activities.
21. A tabular chart with index for point-wise compliance of above TORs.

The following general points should be noted:

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

B Additional TOR:

The Committee exempted the public hearing as project is located in offshore and it is beyond 12 nautical miles.

It was recommended that '**TORs**' with exemption of Public Hearing prescribed by the Reconstituted Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006.

26.4.11 Development drilling of 22 wells at Survey nos. 111/2P, 111/3P, 111/4P, 113/1, 114/1P, 237/1P, 102/3P, Village Alamuru, Mandapeta, Kesavadasupalem, Kesanapalli, Kammapalem Hamlet of Sivakodu, Vygreswaram, East Godavari District, Andhra Pradesh by M/S ONGC- reg. TOR

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

M/s ONGC Ltd. has proposed for development drilling of 22 wells at Survey nos. 111/2P, 111/3P, 111/4P, 113/1, 114/1P, 237/1P, 102/3P, Village Alamuru, Mandapeta, Kesavadasupalem, Kesanapalli, Kammapalem Hamlet of Sivakodu, Vygreswaram, East Godavari District, Andhra Pradesh. The PP informed the followings;

- That the present proposal is for issuance of TOR to conduct public hearing in respect of 22 development wells in East Godavari district and for grant of EC.
- EIA report was submitted to MoEF&CC under the title " Development drilling of 40 wells in KG basin in East Godavari, West Godavari and Krishna district of Andhra Pradesh as

per TOR issued vide F. No. J-11011/31/2012-IA II(I) dated 17.07.2012 included EIA studies with respect of the drilling of 22 development wells in East Godavari district.

- The presentation to the above EIA report was given to the 21st EAC (Industry) on 1st August, 2014 vide agenda no. 21.9.2014. EAC agreed to split the project - Development drilling of 40 wells in KG basin in East Godavari, West Godavari and Krishna district of Andhra Pradesh in two parts;

Part-1: Development drilling of 18 wells in KG basin in West Godavari Krishna district of A.P.:- The project was considered in 21st EAC meeting held on 01.08.2014 as public hearing were conducted and included in the EIA Report.

Part-2: Development drilling of 22 wells in KG Basin in East Godavari district of A.P.:- On this Part of the project, public hearing could not be conducted. EAC then recommended to submit the Form-1 for issuance of separate TOR for this part. Accordingly, PP has separately submitted the Form-1.

With regard to part of the project, the development of 22 wells in KG basin in East Godavari district of A.P. has been proposed. Total area of project under Godavari Onland PML Block) is 2176 sq. km. Total cost of the project is 242 crores. Capital and recurring cost towards environmental protection measures will 13.5 lakhs per well. No National Park/Wild life sanctuary/Reserve Forest is locate within 10 km radius of the project. Approximate depth of drilling will be 2-4 km. Water requirement will be 25 m³/day for each well and 15 m³/day of wastewater will be generated from drilling process. The same shall be treated and recycled with mobile ETP. Water based mud system shall be used and drill cutting are non-hazardous. Hazardous waste namely spent oil, used batteries will be managed as per the Hazardous Waste (Management & Handling), Rules.

After deliberation, the Committee noted that since the project has already been considered for 40 development wells but the public hearing for East Godavari district could not be conducted as in case of other 2 districts. Therefore, the Committee recommended that all conditions prescribed in the TOR issued vide letter no, J- 11011/31/2012-IA II (I) dated 17.07.2012 by MoEF&CC for 40 wells will remain same for this project. Further, the Committee prescribed for conducting Public Hearing for East Godavari district for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report shall be submitted to the Andhra Pradesh State Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report.

26.5 Any Other Items

26.5.1 Proposed Drilling of 3 wells in CB-ONN-2003/02 by M/s Gujarat State Petroleum Corporation Ltd, District Bharuch, Gujarat – regarding extension of validation of EC

MoEF vide letter no. J-11011/180/2008-IA-II (I) dated 2nd September, 2008 has issued environmental clearance for the above mentioned project. Now, PP vide letter dated 18th June, 2013 has submitted the request for extension of the validity of EC as three oil and gas discoveries are to be made in the block namely ANK-21, ANK-40s and ANK-41S in

Ankleswar, Canbay Shale and Olphad. Field development plan is already been approved by the Govt.

After detailed deliberations, the committee recommended for the extension of validity of EC for a period of five years with effect from 2nd September, 2013.

26.5.2 Expansion of Distillery Unit Capacity from 200 KLPD to 320 KLPD based on grain/cassava/tapioca/sugar cane juice/molasses as raw material and 40 KLPD to 260 KLPD ENA at Sameerwadi, Bagalkot District in Karnataka by M/s Godavari Biorefineries Limited – extension of EC

MoEF vide letter no. J-11011/272/2009-IA-II (I) dated 7th July, 2009 has issued environmental clearance for the above mentioned project. Now, PP vide letter dated 25th June, 2014 has submitted the request for extension of the validity of EC as the distillery plant has not been constructed due to slow down of market.

After detailed deliberations, the committee recommended for the extension of validity of EC for a period of five years with effect from 7th July, 2014.

26.5.3 Sugar Complex comprising of 7500 TCD sugar plant, 37 MW cogeneration power plant and 60 KLPD distillery plant of M/s NSL Sugar Ltd (Unit-II) in Bhausnorr village, Aland Taluk, Gulbarga district, Karnataka- regarding Amendment of existing EC : sending spent wash to cement plant.

The PP vide letter dated 20.08.2014 (application received online on 13.09.2014) has requested for amendment of existing EC issued to them vide letter no. J-11011/375/2010-IA II(I) dated 20.0.2012. The PP has sought the following amendments in the existing EC;

1. Permission to treat concentrated spent wash by bio-composting in 6.5 acres of land
2. Permission to send concentrated spent wash to cement kiln (50 kld)

The PP gave detailed presentation on the above points and requested for amendments in the existing EC. After deliberation, the committee was of the view that proposed stipulation may give rise to chance of environment damage and the committee, therefore, did not accept the said proposal and suggested all conditions given in the existing EC will remain unchanged.

26.5.4 Coal to liquid plant (80,000 barrel per day) at village Durgapur, Tehsil Banrapal/Chhhendipada, district Angul, Odisha by M/s Jindal Synfuel Ltd. Regarding extension of TOR

The PP has applied for extension of validity of TOR issued to them for Coal to liquid plant (80,000 barrel per day) at village Durgapur, Tehsil Banrapal/Chhhendipada, district Angul, Odisha vide letter no. J-11011/301/2012-IA II(I) dated 11th January 2013. In this regard, the Ministry vide O.M. dated 22nd August 2014 has already issued clarifications/instructions. According to which, the validity of TOR to the projects has been extended from 2 to 3 years. Therefore, in light of this Ministry's OM, the Committee agreed to extend the validity of TOR for period of three years from the date of issue i.e. 11.01.2013.

30th October, 2014

26.6 Environmental Clearance

26.6.1 Organic Synthetic Plant (Unit-II 15,000 MTPA) at Dag No. 910-911, 930-933, 944 at Mouza, Khariberia, P.O. & P.S. Bishnupur, District South 24 Parganas, West Bengal by M/S GTZ (India) Private Limited - Regarding EC

The project proponent and their consultant (M/s JM Environet) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 32nd Meeting of the Expert Appraisal Committee (Industry) held during 16th–17th February, 2012 for preparation of EIA-EMP report. All the Organic Synthetic plants located outside notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s GTZ (India) Pvt. Ltd. have proposed for setting up of the Organic Synthetic Plant (Unit-II 15,000 MTPA) at Dag No.910-911, 930-933,944 at Mouza Khariberia, P.O. & P.S. Bishnupur, District South 214 Parganas, West Bengal. Total plot area is 2 acres. Hoogly River is flowing at 13.5 km distance in West direction. It is reported that there is no national park/sanctuary/elephant/tiger reserve/migratory route within 10 km distance. Total cost of the project is Rs. 9.58 Crores. Following will be manufactured:

S.N.	Product Name	Production Quantity	
		Per Month (MTPM)	Per Year (MTPA)
1	Sodium Allyl Sulphonate (25%) (RP6)	50	600
2	Benzylidene Acetone (98%) (AZ 486)	25	300
3	Pyridine Hydroxy Sulpho Betain (50%) (RP-5)	1.5	18
4	Benzyl Nicotinate (RP-19)	3	36
5	Imidazone-Epichl Orohydrin Cond.PDT (RP-21)	1	12
6	Aquous Solution of Polyamines (RP-27)	0.5	6
7	Aquous Solution of Phosphate Ester Sodium Salt (SC 66)	6	72
8	Phenol Sulphonic Acid (65%) (PSA)	100	1200
9	Polyquaternium – 2 (Mirapol)	25	300
10	Ethoxylated Naphthol Sulphonic Acid (ENSA)	5	60
11	Diocetyl Sebacate (DOS)	1	12
12	Amphoteric Surfactant (SC 40)	6	72
13	Pyridinium Propyl Sulfobetain (PPS)	26	312
14	Simethicone	200	2400
15	Polymer Products	800	9600
15.1	Polyvinyl Acetate Based Emulsion (PVAC Grade)	(150)	(1800)
15.2	Styrine Acrylate Emulsion (Aqualac PAE Grade)	(250)	(3000)
15.3	Acrylamide Formalin Emulsion (Aqualac Moa Grade)	(100)	(1200)
15.4	Urethane Acrylic Hybrid Emulsion (RP HAP1 Grade)	(200)	(2400)
15.5	Styrene Acrylate Emulsion (RP PAC1 Grade)	(100)	(1200)
	TOTAL	1250	15000

Ambient air quality monitoring was carried out at 6 locations March, 2012 –May, 2012 and submitted data indicates as PM10 (48–119 ug/m³), PM2.5 (18–52 ug/m³), SO₂ (4 – 25

ug/m³) and NO_x (14-52 ug/m³). Predicted value of ground level concentration due to proposed project is PM (0.79 ug/m³), SO₂ (1.05 ug/m³) and NO_x (0.79 ug/m³). The resultant concentrations are within the NAAQS except particulate matters. GTZ (India) Pvt. Ltd. (Unit II) will be using utilities like steam and hot oil for process heating requirement and for that company has proposed to set up a 600 kg capacity non IBR boiler and thermic fluid heater for heating oil. Stack of adequate height will be provided to oil fired IBR boiler and thermic fluid heater to disperse flue gas. Scrubber will be provided to control process emissions viz. ammonia. Total fresh water requirement from groundwater source will be 23.3 m³/day. Industrial effluent generation will be 1.5 m³/day and treated in ETP. Treated effluent will be used for horticulture and fire water make up. No effluent will be discharged outside the plant premises and 'Zero' effluent discharge condition will be followed. Process waste and ETP sludge will be sent to TSDF site of M/s Ramky. Waste/used oil will be sold to authorized recyclers/re-processors.

A total of 0.67 acre of land has been earmarked for greenbelt development. Power requirement of 300 KVA will be sourced from W.B. State Electricity Board. HSD will be used as fuel in the thermic fluid heater and non-IBR boiler. D.G. set (1x200 KVA) will be installed. HSD will be used as fuel in D.G. sets.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 21st June, 2013 under the Chairmanship of District Magistrate. The issues raised during Public Hearing were regarding commitment regarding pollution control measures to be adopted, local employment, noise pollution control measures etc. Public Hearing issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

After detailed deliberations, the Committee, on the basis of the additional information provided and presentation made, recommended the project for environmental clearance and stipulated following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i. Stack of adequate height shall be provided to oil fired IBR boiler and thermic fluid heater to disperse flue gas.
 - ii. Scrubber shall be provided to control process emissions viz. ammonia. The scrubbing media shall be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. At no time, the emission levels shall go beyond the prescribed standards.
 - iii. Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emissions shall conform to the limits imposed by APPCB. Odour management plan shall be implemented.
 - iv. Total fresh water requirement from ground water source shall not exceed 23.3 m³/day and prior permission shall be obtained from the CGWA/SGWA.
- i) Effluent generation shall not exceed 4.09 m³/day and treated in ETP. 'Zero' effluent discharge shall be adopted and no effluent will be discharged outside the premises.
 - ii) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

- iii) 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.
- iv) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- v) All the issues raised during the Public Hearing/consultation meeting held on 21st June, 2013 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- vi) At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhubneshwar. Implementation of such program shall be ensured accordingly in a time bound manner.
- vii) 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.

26.6.2 Drilling of 15 Exploratory Wells for Oil and gas in Block CB-ONN-2009/7 in Ahmedabad and Mehsana District, Gujarat by M/s Sintex Oil and Gas Ltd.-regarding EC.

The project proponent and their consultant (M/s Kadam Environmental Consultants) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 9th Meeting of the Expert Appraisal Committee (Industry) held during 10th June, 2013– 11th June, 2013 for preparation of EIA-EMP report. All the projects related to offshore and onshore Oil and Gas exploration, development and production are listed in para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at central level.

M/s Sintex Oil and Gas Ltd. has proposed for exploratory drilling of 15 wells in block CB –ONN -2009/7 in Ahmedabad and Mehsana Districts in Gujarat. Total block area is 144 km², which is located in Mehsana, Ahmedabad and Gandhinagar districts. However, public hearing was not conducted for Gandhinagar district as no drilling of exploratory well is proposed. No well will be drilling in forest land. Thol lake bird Sanctuary is located at a distance of 7.06 km from the block. Well will be drilled upto depth of 2000m. Production sharing contract with Govt. of India was signed on 30.06.2010. PEL to start the activities was signed on 4.01.2011. Cost of project is Rs. 150 Crore. PP informed that they have suggested 20 drilling coordinates but drilling will be carried out at 15 drilling locations only. Coordination of the block are as given below:-

Point	Latitude			Longitude		
	Deg.	Min.	Sec.	Deg.	Min.	Sec.
A	23	10	0.00	72	12	25.49
B	23	10	0.00	72	18	39.89

C	23	01	42.00	72	22	5.00
D	23	01	42.00	72	17	19.31

Ambient air quality monitoring was carried out at 8 locations October, 2013 – December, 2013 and submitted data indicates as PM₁₀ (30– 109 ug/m³), SO₂ (<8 – 14.7 ug/m³) and NO_x (10.5-24.6 ug/m³). Predicted value of ground level concentration due to proposed project is PM (0.13ug/m³), SO₂ (0.13 ug/m³) and NO_x (41.56 ug/m³). The resultant concentrations are within the NAAQS except PM₁₀.

Flare stack of adequate height will be provided. Adequate stack will be provided to DG set to disperse air emissions. Total water requirement will be 20 m³/day and procured from outside. Effluent generation will be 5 m³/day. Drill cutting (DC) will be separated from water based mud (WBM) and washed properly and unusable drilling fluids (DF) will be disposed off in well designed lined pit with impervious liner for solar drying. Disposal of drill cuttings and drill mud will be carried out in accordance with the GSR 546 (E) dated 30th August, 2005. Used oil will be sent to authorized recyclers.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 20th May, 2014 for Mehsana District and 27th June, 2014 for Ahmedabad District. PP informed that public hearing for Gandhinagar district was not conducted as no drilling will be carried out in the said district. The issues raised during Public Hearing were regarding compensation for land, restoration of etc. Public Hearing issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

After detailed deliberations, the Committee 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. The Company shall obtain wildlife clearance from National Board for Wildlife in respect of Thol Wildlife Sanctuary.
- ii. The present EC is for Exploratory Drilling only. In case Development drilling to be done in future, prior environmental clearance must be obtained from the Ministry.
- iii. 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.
- iv. Mercury shall also be analyzed in air, water and drill cuttings twice during drilling period.
- v. Approach road shall be made pucca to minimize generation of suspended dust.
- vi. 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.
- vii. Total water requirement shall not exceed 20 m³/day and prior permission shall be obtained from the concerned agency.
- viii. 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.

- ix. 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 Bhopal.
- x. Good sanitation facility shall be provided at the drilling site. Domestic sewage shall be disposed off through septic tank/ soak pit.
- xi. 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.
- xii. 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.
- xiii. 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.
- xiv. 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.
- xv. On completion of drilling, the company have to plug the drilled wells safely and obtain certificate from environment safety angle from the concerned authority.
- xvi. Blow Out Preventer (BOP) system 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.
- xvii. Emergency Response Plan (ERP) shall be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- xviii. 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.
- xix. Abandoned well inventory and remediation plan shall be submitted within six months from the date of issue of letter.
- xx. Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.
- xxi. In case the commercial viability of the project is established, the Company shall prepare a detailed plan for development of oil and gas fields and obtain fresh environmental clearance from the Ministry.
- xxii. Restoration of the project site shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office at Bhopal.
- xxiii. 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 Bhopal.

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

26.6.3 Manufacturing of Captive Resin at Plot No. 48/P1, Sarbhon Puni road, Ninat, Taluka Bardoli, District Surat, Gujarat by M/s Hi-Tech Board Pvt. Ltd, Gujarat – regarding EC.

The project authorities and their consultant (M/s Enkay Enviro Services Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 8th Meeting of the Expert Appraisal Committee (Industry) held during 16th–17th May, 2013 for preparation of EIA/EMP report. All the Synthetic Organic Chemical including resins plants are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Hi-Tech board Pvt. Ltd. have proposed for setting up of captive Melamine Urea Formaldehyde Resin (MUF) Manufacturing Facility within the existing Particle Board Unit at Plot No. 48/P1, Village Ninat, Tehsil Bardoli, District Surat, Gujarat. Available plot area is 47450.0 m². Land requirement for the proposed resin unit is 1512 m² in the existing plot. Total cost of project is Rs. 29.30 Lakhs. Mindhola River and Purna River are flowing at a distance of 2.2 Km and 7.0 Km respectively. It is reported that no national parks & reserve forests are located within 10 Km distance. Following product will be manufactured:

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

M/s Creative Laminates have proposed for setting up of Resin Manufacturing Unit at S.N. 6/ A, Village Changodar, District Ahmedabad, Gujarat. Total plot area is 3299.52 m² of which greenbelt will be developed in 216 m². Cost of resin plant is Rs. 80.00 Lakhs. It is reported that no ecological sensitive area is located within 10 Km distance. However, Thol Bird sanctuary is located at a distance of 23.9 km. Following products will be manufactured:

S.N.	Product	Quantity
1	Phenol Formaldehyde Resin	400 MTPM
2	Melamine Formaldehyde Resin	120 MTPM
3	Urea Formaldehyde Resin	120 MTPM

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 6 locations during 15th March, 2013-14th June, 2013 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (40 µg/m³ to 65 µg/m³), PM_{2.5} (24 µg/m³ to 54 µg/m³), SO₂ (6 µg/m³ to 20 µg/m³) and NO_x (12 µg/m³ to 28 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.15 µg/m³, 3.0 µg/m³ and 1.14 µg/m³ with respect to SPM, SO₂ and NO_x. The resultant concentrations are within the NAAQS. Multi-cyclone Dust collector will be provided to wood waste/bagasse dust fired Thermic fluid heater to control particulate emissions. DG set (100 KVA) will be installed. Total water requirement is 15.5 m³/day and met from ground water source. Industrial effluent generation will be 0.1 m³/day and treated in ETP. Treated effluent will be recycled/reused in the gardening. No effluent will be discharged outside the plant premises. ETP sludge will be sent to TSDF. Resin waste will be sent to common incineration facility. Used oil/spent oil will be sent to registered recyclers.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 14th March, 2014. The issues were raised regarding benefits of the project, location of industry, pollution from the existing unit etc. The Committee noted that issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

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

- i) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.
- ii) Bag filter along with stack of adequate height should be installed to coal/white coal fired boiler & Thermic fluid heater to control particulate emissions.
- iii) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored.
- iv) Wet scrubber should be provided to control process emissions.
- v) Total fresh water requirement from ground water source should not exceed 15.5 m³/day and prior permission should be obtained from the CGWA/SGWA.
- vi) Industrial effluent will be treated in ETP. Treated effluent shall be used for gardening after achieving water quality as per the standards. Water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB.
- vii) The company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from GPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire fighting facilities in case of emergency.
- viii) As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- ix) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- x) All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 14th March, 2014 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhopal.
- xi) At least 2.5 % of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be

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

26.6.4 Expansion of Sugar Mill (from 4800 TCD to 7500 TCD) and Co-Generation Power Plant (from 14.5 MW to 30 MW) and Setting Up of 60 KLPD Molasses based Distillery at Village Asurie-Porie, Tehsil Panhala, District Kolhapur, Maharashtra by Dalmia Bharat Sugar & Industries Ltd.- regarding Environmental Clearance.

The project proponent 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 as per Draft Terms of References (TORs) awarded during the 18th Meeting of the Expert Appraisal Committee (Industry) held during 18th to 20th November, 2013 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 Datta Sakhar Karkhana (M/s Dalmia Bharat Sugar & Industries) have proposed for expansion of Sugar Mill (from 4800 TCD to 7500 TCD) and Co-Generation Power Plant (from 14.5 MW to 30 MW) and addition of 60 KLPD Molasses based Distillery, at Village Asurle-Porle, Tehsil Panhala, District Kolhapur, Maharashtra. Protected Forests (9 Nos.) are located within 10 Km distance. It is reported that no national park/wildlife sanctuary/biosphere reserve/tiger reserve/ elephant reserve is located within 10 Km distance. Kasari River and Panchganga River are flowing at a distance 2.5 km and 5.5km respectively. Total plot area is 86 acres of which 33% of area is earmarked for greenbelt. Cost of project is Rs. 190 Crores. Out of which Rs. 28 Crore and Rs. 2 Crore per annum are earmarked for capital cost and recurring cost per annum for pollution control measures. No of working days of sugar mill, distillery and power plant will be 160 days, 270 days and 330 days respectively.

Ambient air quality monitoring was carried out at 8 locations December, 2013 – February, 2014 and submitted data indicates as PM₁₀ (58.2–95.1ug/m³), PM_{2.5} (25.1–46.2 ug/m³), SO₂ (6.2 – 11.2 ug/m³) and NO_x (13.0-22.1ug/m³). Predicted value of ground level concentration due to proposed project is PM (0.21 ug/m³), SO₂ (2.82 ug/m³) and Nox (3.56 ug/m³). The resultant concentrations are within the NAAQS. ESP alongwith stack of adequate height will be provided to bagasse and 15% coal & biogas fired boiler to control particulate emissions. Total fresh water requirement will be increased from 700 m³/day to 1250 m³/day during cane crushing season while during offseason water requirement will be increased from 700 m³/day to 1024 m³/day after expansion and source of water supply shall be surface water. No ground water will be extracted. Spent wash will be concentrated in MEE and incinerated in incineration boiler. spentlees and condensate water after treatment in CPU will be recycled back in process. Effluent from sugar unit will be treated in ETP and treated effluent will be recycled/reused in the process. ETP capacity of sugar unit will be enhanced from 650 KLPD to 930 KLPD after expansion. Uses of fresh water in power plant has been reduced by installing air cooled condenser (although with a higher capital cost) instead of water intensive cooling tower operation hence reduction in demand of fresh water. No effluent will be discharged outside the plant premises and 'zero' effluent discharge condition is being adopted. Press-mud will be used as manure. Bagasse will be used as fuel in CPP. ETP sludge from sugar will be used as manure. Ash will be given to brick

manufacturing unit and cement plant. Committee suggested to go for concentration followed by incineration scheme instead of concentration followed by bio-composting scheme. For this PP informed that boiler (22 TPH) with auxiliary fuel will be installed. ESP will be provided as an air pollution control measures.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Maharashtra Pollution Control Board on 30th July, 2014 under the Chairmanship of Residential Deputy Collector, Kolhapur. Further, PP clarified that level of Residential Deputy Collector is equivalent to Additional District Magistrate as per the website of Collector Office, Nasik. The issues raised during Public Hearing were regarding wastewater management, fly ash management, spent wash treatment, ETP of sugar unit etc. Public Hearing issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

After detailed deliberations, the Committee, on the basis of the additional information provided and presentation made, recommended the project for environmental clearance and stipulated following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i) Bagfilter/ESP alongwith stack of adequate height shall be provided to bagasse fired boilers to control particulate emissions within 50 mg/Nm³. 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.
- ii) Company shall follow good management practices viz. collection of waste yeast sludge from fermentation section in a closed system and proper disposal, reduced volume of effluent by adopting strategic approaches, closed drains carrying spent wash to the treatment units; minimization of fugitive emissions from anaerobic treatment; minimum retention of treated & untreated spent wash in the lagoons; and green belt development with suitable plantation in and around the treatment units to mitigate odour from the distillery unit.
- iii. Pucca approach road to project site shall be constructed prior to commencing construction activity of the main distillery to avoid fugitive emissions.
- iv. Total fresh water requirement from Kasari River for distillery and sugar alongwith cogeneration shall not exceed 1250 m³/day. Prior permission for the drawl of 1250 m³/day water shall be obtained from the Competent Authority and submitted to the MoEF&CC's Regional Office.
- v. Spent wash generation from molasses shall not exceed 8 KI/KI of alcohol produced (i.e. 480 m³/day). The spent wash from molasses based distillery should be concentrated in MEE followed by incineration in the incineration boiler to achieve 'Zero' discharge.
- vi. Wastewater generation from the sugar unit shall not exceed 100 litres per tonne of cane crushed i.e. 750 m³/day. Effluent from sugar unit shall be treated in the effluent treatment plant (ETP). Water quality of treated effluent shall be monitored regularly. In any case, no wastewater/treated effluent shall be discharged into river/natural stream. Domestic effluent shall be treated in treatment plant.

- vii. Spent wash shall be stored in impervious lagoon with HDPE lining as per CPCB guidelines and shall be kept in proper condition to prevent ground water pollution. Storage capacity of spent wash lagoon shall be for 5 days.
- viii. 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, COD, Chloride, Sulphate and total dissolved solids (TDS) 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. As proposed, no effluent from sugar, distillery and co-generation power plant shall be discharged outside the premises and Zero effluent discharge concept shall be followed.
- x. Baggase storage should be done in such a way that it does not get air borne or fly around due to wind. 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 alongwith the storm water. Direct exposure of workers to fly ash & dust shall be avoided.
- xi. Occupational health surveillance programme should be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre should be strengthened and the regular medical test records of each employee should be maintained separately.
- xii. 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.
- xiii. Green belt should be developed in 33 % of plot area to mitigate the effects of fugitive emissions all around the plant as per CPCB guidelines in consultation with the local DFO.
- xiv. Occupational health surveillance programme should be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre should be strengthened and the medical records of each employee should be maintained separately.
- xv. All the commitments made during the Public Hearing / Public Consultation meeting held on 30th July, 2014 should be satisfactorily implemented and adequate budget provision should be made accordingly.
- xvi. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.

26.6.5 Development Drilling of 30 Wells (on-shore) in Cauvery Basin in 7 Blocks (On-shore), Greater Narimanam ML Block, Adiyakkamangalam ML Block, Nannilam-I & Nannilam-II ML Block, Kali & Kali # 6 ML Block, Kuthanallur ML Block, Greater Kovikalapal ML Block and Pundi ML Block, Tamil Nadu by M/s Oil & Natural Gas Corporation Ltd. (ONGCL)-. Reg 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 24th Meeting of the Expert Appraisal Committee (Industry) held during 22nd – 23rd June, 2011 for preparation of EIA-EMP report. The validity of the TOR was further extended from December, 2013 to July 2014 vide F.No. J-11011/250/2011-IA II (I) dated 6th December, 2013. All the projects related to offshore and onshore Oil and Gas exploration, development and production are listed in para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at central level.

M/s Oil and Natural Gas Corporation Ltd. have proposed for the Development Drilling of 30 Wells (onshore) in Cauvery Basin in 7 Blocks (On-shore), Greater Narimanam ML Block, Adiyakkamangalam ML Block, Nannilam-I & Nannilam-II ML Block, Kali & Kali # 6 ML Block, Kuthanallur ML Block, Greater Kovikalapal ML Block and Pundi ML Block, Tamil Nadu. Cauvery basin falls in Nagapattinam, Thiruvarur and Thanjavur Districts, Tamil Nadu. Total cost of the project is Rs. 120.00 Crores. No national park and wildlife sanctuary/reserve forest is located within 10 Km. PAs clarified that they did not obtain environmental clearance for the 30 wells because exploration activity in the mentioned block was carried out before 14th Sep., 2006. Proposal does not involve clearance under Forest (Conservation) Act, 1980 and Coastal Regulations Zone, Act, 2011. Rs. 7.5 Lakhs per site is earmarked for pollution control measures. No litigation/court case is in pending against the proposal. Details of 30 wells to be drilled in seven ML blocks are as given below:

S.N.	ML Block	District	Wells	Block (km ²)	Area	Collection point
1	Kali & Kali # 6	Nagapattinam	3	20.6		GCS Kuthalam
2	Greater Narimanam	Nagapattinam	5	54		GGs Narimanam, EPS TVR
3	Adiyakkamangalam	Thiruvarur	5	17.8		GGs AKM
4	Nannilam-I & II	Thiruvarur	5	5.70		EPS NLM
5	Kuthanallur	Thiruvarur	5	6.25		EPS KN#3
6	Greater Kovikalapal	Thiruvarur	5	34		GCS KVK
7	Pundi	Thanjavur	2	1		EPS Pundi

Drilling period for each well will be 90 to 100 days. Water based mud will be used. Depth of drilling will be 3000m. oil storage tank capacity will be 40 m³ each tank. The new wells will be directly connected to the existing installations or to the nearest existing flow

line. Maximum length of new line to be laid is 500 m to 2000 m. Expected production of oil is 395 m³/day and Gas is 0.855 MMSCMD.

The PP informed the Committee that ambient air quality monitoring was carried out at 20 locations during January, 2013 – March, 2013 and submitted data indicates PM₁₀ (42.18-60.21 ug/m³), PM_{2.5} (20.43-28.31 ug/m³), SO₂ (6.19-8.94 ug/m³) and NO_x (14.67- 16.70 ug/m³). Air emissions from D.G. sets will be dispersed by providing adequate stack height. Fresh water requirement for each well will be 25m³/day. Water based mud (WBM) will be used. Total wastewater generation will be around 20 m³/day. Drill cutting (DC) will be separated from water based mud (WBM) and washed properly and unusable drilling fluids (DF) will be disposed off in well designed lined pit with impervious liner for solar drying. Disposal of drill cuttings and drill mud will be carried out in accordance with the GSR 546 (E) dated 30th August, 2005. Produced water will be treated in the two existing ETPs with total capacity of 1900 m³/day. Nearest ETP (1400 m³/day) is located at Narimanam (approximately 50 Km) In addition, another ETP of 500 m³/day is commissioned at EPS KMP (approximately 25 Km). Used oil will be sent to authorized recyclers. DG sets (2 x 1250 KVA) will be installed. Blow out prevention techniques will be part of drilling rig unit. Blow out preventers (BOP) will be installed to control fluid from the formation gushing to the surface. In the event the well is unsuccessful, the well bore will be cement plugged.

The Committee deliberated upon the issues raised during the Public Hearing/Public Consultation meeting conducted by the TN Pollution Control Board on 20th June, 2014 for Nagaapptinam District. Public hearing was conducted for Thiruvarur District on 27th June, 2014. Public hearing was conducted for Thanjavur District on 10th July, 2014. The issues raised were regarding pipeline leakage in past history, produced water , injection of produced water below ground, village welfare, restoration of site after drilling etc. and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

After detailed deliberations, the Committee on the basis of the additional information provided and presentation made recommended the project for environmental clearance and stipulated following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i. Ambient air quality shall 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 shall be analyzed in air, water and drill cuttings twice during drilling period.
- iii. Approach road shall be made pucca to mitigate generation of suspended dust.
- iv. The company shall make the arrangement for control of noise from the drilling activity. Acoustic enclosure shall be provided to DG sets and proper stack height should be provided as per CPCB guidelines.

- v. Total water requirement shall not exceed 25m³/day/well and prior permission shall be obtained from the concerned agency.
- vi. The company shall construct the garland drain all around the drilling site to prevent runoff of any oil containing waste into the nearby water bodies. Separate drainage system shall be created for oil contaminated and non-oil contaminated. Effluent shall be properly treated and treated wastewater should conform to CPCB standards.
- vii. Drilling wastewater including drill cuttings wash water shall be collected in disposal pit lined with HDPE lining evaporated or treated and shall comply with the notified standards for on-shore disposal. The membership of common TSDF shall be obtained for the disposal of drill cuttings and hazardous waste. Otherwise, secured land fill shall be created at the site as per the design approved by the CPCB and obtain authorization from the SPCB. Copy of authorization or membership of TSDF shall be submitted to Ministry's Regional Office at Bangalore.
- viii. Produced water shall be treated in ETP. Treated effluent shall 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 shall be provided at the drilling site. Domestic sewage shall be disposed off through septic tank/ soak pit/STP.
- 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. The Company shall carry out long term subsidence study by collecting base line data before initiating drilling operation till the project lasts. The data so collected shall be submitted six monthly to the Ministry and its Regional Office at Bangalore.
- xv. Blow Out Preventer (BOP) system shall 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) 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. Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.
- xix. Restoration of the project site shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office at Bangalore.
- xx. 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 Bangalore.
- xxi. All the commitments made to the public during public hearing/public consultation meeting held on 20th June, 2014 for Nagaapptinam District, on 27th June, 2014 for Thiruvarur District and on 10th July, 2014 for Thanjavur District shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xxii. At least 2.5 % 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 Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner.
- xxiii. Company should have own Environment Management Cell having qualified persons with proper background.

- xxiv. 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.

26.6.6 Exploratory Drilling of 3 wells in NELP VI Block: VN-ONN- 2004/2 in Chambal Valley Vindhyan, Frontier Basin by M/s ONGC- reg 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 14th Meeting of the Expert Appraisal Committee (Industry) held during 19th – 20th December, 2013 for preparation of EIA-EMP report. All the projects related to offshore and onshore Oil and Gas exploration, development and production are listed in para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at central level.

M/s ONGC have proposed for exploratory drilling of 3 wells in Chambal Valley Vindhyan ,Frontier Basin ONGC, Rajasthan. The block area available for exploration in the block VN-ONN-2004/2 is 4466 sq. km. is confined in the districts namely, Kota, Baran and Jhalwar. Block was spread in three districts (Kota-Jhalawar-Baran). The Cost of project is Rs. 75.68 Crore for 3 wells. It is reported that no forest/national park/wildlife sanctuary /Eco-sensitive zone exists in the project site. Following is the coordinates of the block:

S.N.	Latitude	Longitude
1	24°39'14.89"	76°40'14.05"

PSC signed on 02.03.2007. PEL granted w.e.f. 17.01.2008. Depth of well will be 2800m. Water based mud will be used.

The PP informed the Committee that ambient air quality monitoring was carried out at 8 locations during March, 2014 – June, 2014 and submitted data indicates PM₁₀ (52-101 ug/m³), PM_{2.5} (19-43 ug/m³), SO₂ (8-15 ug/m³) and NO_x (10- 26 ug/m³). The resultant concentrations are within the NAAQS except PM₁₀. PP informed that data exceeds may be due to windblown dust. Drilling wastewater generation will be 15-20 m³/day. Quantity of drilling waste residual mud will be 1200 m³. Quantity of cutting generation will be 2-3 m³/day of wet drilling cuttings. Total water requirement will be 25 m³/day. DG sets will be installed to meet the power requirement. Wastewater from drilling activities will be collected in HDPE lined waste pits and treated with mobile ETP unit. Treated water is recycled for preparation of mud and other drilling activities.

Public hearing for Kota district was exempted as per para 7 (ii) of EIA Notification, 2006 as public hearing was conducted on 23.01.2012 in Village Arniya Kalan, Tehsil Ramganj Mandi, district Kota. The Committee deliberated upon the issues raised during the Public Hearing/Public Consultation meeting conducted by the Rajasthan State Pollution Control Board on 27th August, 2014 for Baran District. The issues raised were regarding local employment, village development activities etc. and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

After detailed deliberations, the Committee on the basis of documents furnished and presentation made recommended the project for environmental clearance and stipulated the

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

- i. Ambient air quality shall be monitored near the closest human settlements as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for PM₁₀, PM_{2.5}, SO₂, NO_x, CO, methane & Non-methane HC etc.
- ii. Mercury shall also be analyzed in air, water and drill cuttings twice during drilling period.
- iii. Approach road shall be made pucca to minimize generation of suspended dust.
- iv. The company shall make the arrangement for control of noise from the drilling activity. Acoustic enclosure shall be provided to DG sets and proper stack height shall be provided as per CPCB guidelines.
- v. Total water requirement shall not exceed 20m³/day and prior permission shall be obtained from the concerned agency.
- vi. The company shall construct the garland drain all around the drilling site to prevent runoff of any oil containing waste into the nearby water bodies. Separate drainage system shall be created for oil contaminated and non-oil contaminated. Effluent shall be properly treated and treated wastewater shall conform to CPCB standards.
- vii. Drilling wastewater including drill cuttings wash water shall be collected in disposal pit lined with HDPE lining evaporated or treated and shall comply with the notified standards for on-shore disposal. The membership of common TSDF shall be obtained for the disposal of drill cuttings and hazardous waste. Otherwise, secured land fill shall be created at the site as per the design approved by the CPCB and obtain authorization from the SPCB. Copy of authorization or membership of TSDF shall be submitted to Ministry's Regional Office at Lucknow.
- viii. Good sanitation facility shall be provided at the drilling site. Domestic sewage shall be disposed off through septic tank/ soak pit.
- ix. Oil spillage prevention scheme shall be prepared. In case of oil spillage/contamination, action plan shall be prepared to clean the site by adopting proven technology. The recyclable waste (oily sludge) and spent oil shall be disposed of to the authorized recyclers.
- x. The company shall comply with the guidelines for disposal of solid waste, drill cutting and drilling fluids for onshore drilling operation notified vide GSR.546(E) dated 30th August, 2005.
- xi. The Company shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. Possibility of using ground flare shall be explored. At the place of ground flaring, the overhead flaring stack with knockout drums shall be installed to minimize gaseous emissions during operation.
- xii. The company shall develop a contingency plan for 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.
- xiii. On completion of drilling, the company have to plug the drilled wells safely and obtain certificate from environment safety angle from the concerned authority.
- xiv. Blow Out Preventer (BOP) system shall be installed to prevent well blowouts during drilling operations. BOP measures during drilling shall focus on maintaining well bore hydrostatic pressure by proper pre-well planning and drilling fluid logging etc.

- xv. Emergency Response Plan (ERP) shall be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- xvi. The company shall take measures after completion of drilling process by well plugging and secured enclosures, decommissioning of rig upon abandonment of the well and drilling site shall be restored to the original condition. In the event that no economic quantity of hydrocarbon is found a full abandonment plan shall be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations.
- xvii. Abandoned well inventory and remediation plan shall be submitted within six months from the date of issue of letter.
- xviii. All the issues raised during the Public Hearing/consultation meeting held on 26th February, 2014 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xix. Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.
- xx. Restoration of the project site shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office at Lucknow.
- xxi. Oil content in the drill cuttings shall be monitored by some Authorized agency and report shall be sent to the Ministry's Regional Office at Lucknow.
- xxii. Under Enterprise Social Commitment (ESC), sufficient budgetary provision shall be made for health improvement, education, water and electricity supply etc. in and around the project.
- xxiii. An audit shall be done to ensure that the Environment Management Plan is implemented in totality and report shall be submitted to the Ministry's Regional Office.
- xxiv. All personnel including those of contractors shall be trained and made fully aware of the hazards, risks and controls in place.
- xxv. Company shall have own Environment Management Cell having qualified persons with proper background.
- xxvi. Company shall prepare operating manual in respect of all activities. It shall cover all safety & environment related issues and system. Measures to be taken for protection. One set of environmental manual shall be made available at the drilling site/ project site. Awareness shall be created at each level of the management. All the schedules and results of environmental monitoring shall be available at the project site office.

26.7 Terms of Reference (TOR)

26.7.1 Resin Manufacturing Unit at Survey no. 573 Village Jagudan, Tehsil Mehsana, District Mehsanan, Gujarat by M/s Parista Laminates -regarding TOR

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA-EMP. All 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 Parista Laminates has proposed for setting up of Resin Manufacturing Unit at Survey no. 573 Village Jagudan, Tehsil Mehsana, District Mehsanan, Gujarat. Total plot

area is 2975 m² of which greenbelt will be developed in 388 m². Cost of resin plant is Rs. 1 crore.

The following products will be manufactured:

S.N.	Products	Quantity (MTPM)
1	P. F Resin	200
2	M F Resin	150
3	U F Resin	200

It is reported that Multi cyclone dust collector will be provided to steam boiler and Thermic Fluid Heater. Total fresh water requirement will be 18.73 m³/day. Effluent generation will 6.12 m³/day and the same will be treated in ETP. DG set (125 KVA) will be installed. ETP sludge will be sent to TSDF site for disposal. Used oil will be sent to registered recycler.

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

A. Standard TOR:

1. Executive summary of the project
2. Justification of the project.
3. Photographs of proposed plant site.
4. Promoters and their back ground.
5. Regulatory framework.
6. A map indicating location of the project and distance from severely polluted area
7. Project location and plant layout.
8. Infrastructure facilities including power sources.
9. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
10. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
11. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
12. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
13. Details of the total land and break-up of the land use for green belt and other uses.
14. List of products alongwith the production capacities.
15. Detailed list of raw materials required and source, mode of storage and transportation.
16. Manufacturing process details alongwith the chemical reactions and process flow chart.
17. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
18. Ambient air quality monitoring at 6 locations within the study area of 5 km. aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
19. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, PM_{2.5}, 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 18.73 m³/day ground water from CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
 29. Action plan for 'Zero' discharge of effluent shall be included.
 30. Treatment of phenol in the effluent, if any.
 31. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
 32. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
 33. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
 34. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
 35. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
 36. A write up on "Safe Practice" followed for methanol handling, storage, transportation and unloading to be submitted.
 37. A write up on "Treatment of workers affected by accidental spillage of methanol/phenol".
 38. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
 39. An action plan to develop green belt in 33 % area
 40. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
 41. Details of occupational health programme.
 - i. To which chemicals, workers are exposed directly or indirectly.
 - ii. Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - iii. What measures company have taken to keep these chemicals within PEL/TLV.
 - iv. How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - v. What are onsite and offsite emergency plan during chemical disaster.
 - vi. Liver function tests (LFT) during pre-placement and periodical examination.
 42. Details of occupational health surveillance programme.
 43. Socio-economic development activities shall be in place.
 44. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring

- frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
45. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
 46. Corporate Environmental Responsibility
 - (a) Does the company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
 - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
 - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
 - (d) Does the company has a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
 47. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.

B. Additional TOR

1. Public hearing to be conducted and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
2. Since three months environmental data already monitored, one month additional environmental data to be monitored and revalidated.

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

26.7.2 Proposed Bulk Drug and Its Intermediate Manufacturing Units (2800 TPA) at Plot no. SPA 503- RIICO Industrial Area, Bhiwadi, Rajasthan by M/S Dalas Biotech Ltd.-regarding TOR

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA-EMP. 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. Proposal is treated as "A" Category because the project attracts general condition that located within 5 km from the Inter-State boundary i.e. Haryana and Rajasthan.

Dalas Biotech Ltd. has proposed for setting up of a manufacturing unit of Bulk Drugs, & its Intermediates (2800 TPA) at plot no. SPA-503, RIICO Industrial Area, Bhiwadi,

Rajasthan. The Inter-state boundary (Haryana and Rajasthan) is 0.87 km towards NNW from the site. The proposed plot area acquired for the proposed project is 42,000 sq. m. The existing plot was purchased from Samtel India Ltd. in April, 2007 with built up area of 211029 m² and there is no alteration of existing infrastructure of the premises. The proposed unit will utilize enzymatic synthesis process which will contribute Quality and purity enhancement; reduction of pollution load; reduction of production cost; no byproduct, energy conservation; low risk process. It is reported that there no national park/forest/wildlife sanctuaries in the study area. Few RFs are Rangla reserve forest; Chaupanki PF; Godhan PF; Indauri nala. The total project cost for the proposed unit is Rs. 19.653 Crores. Daily fresh water requirement will be 230 m³/day. 150 m³/day water will be recycled in the industrial process. Water demand of the industry will be met partially through RIICO water supply and partially through ground water. The domestic and industrial wastewater will be treated in ETP. The unit already has a power connection of 250 kVA. However, as the unit is going to set up the drug manufacturing plant, the industry requires additional power demand from 250 kVA to 3000 kVA for the manufacturing. The power supply will be provided by JVVNL. The pet coke will be required for boiler of 3 TPH to the tune of 150 TPM. The unit will have storage area of 30 T within the premise. H.S.D. to the tune of 20 KLM is expected to be required for two D.G. set of 1100 kVA each. The quantity mentioned is estimation only as the D.G set will be operated only during power failure.

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

A. Standard TOR:

1. Executive summary of the project
2. Justification of the project.
3. Project location and plant layout.
4. Promoters and their back ground.
5. Regulatory framework
6. A map indicating location of the project and distance from severely polluted area
7. Infrastructure facilities including power sources.
8. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
9. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
10. Present land use based on satellite imagery for the study area of 10 km radius.
11. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
12. Details of the total land and break-up of the land use for green belt and other uses.
13. List of products alongwith the production capacities.
14. Detailed list of raw material required and source, mode of storage and transportation.
15. Manufacturing process details alongwith the chemical reactions and process flow chart.
16. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
17. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
18. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, PM_{2.5}, SO₂, NO_x including HC and VOCs should be collected. The monitoring stations should take into account the pre-dominant wind direction,

- population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
19. Air pollution control measures specifically suggested by the Committee as Bagfilter to be installed for the effective control of gaseous emissions within permissible limits.
 20. Name of all the solvents to be used in the process and details of solvent recovery system.
 21. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
 22. Details of water and air pollution and its mitigation plan
 23. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
 24. An action plan to control and monitor secondary fugitive emissions from all the sources.
 25. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
 26. Source and permission for the drawl of total 397.5 m³/day water from the competent authority. Water balance chart including quantity of effluent generated recycled and reused and discharged. Efforts shall be made to reduce ground water drawl.
 27. Action plan for 'Zero' discharge of effluent should be included.
 28. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
 29. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste.
 30. Action plan for the management of fly ash generated from boiler should be included. Tie-up or agreement with brick manufacturer to be provided.
 31. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
 32. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilize all the organic solid waste generated.
 33. A copy of 'Memorandum of Understanding' (MoU) signed with coal supplier for imported coal and brick manufacturers for management of fly ash.
 34. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
 35. Material Safety Data Sheet for all the Chemicals are being used/will be used. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
 36. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
 37. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
 38. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
 39. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
 40. Details of occupational health programme.
 - i) To which chemicals, workers are exposed directly or indirectly.
 - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - iii) What measures company have taken to keep these chemicals within PEL/TLV.
 - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - v) What are onsite and offsite emergency plan during chemical disaster.
 - vi) Liver function tests (LFT) during pre-placement and periodical examination.

- vii) Details of occupational health surveillance programme.
- 41. Socio-economic development activities should be in place.
- 42. Note on compliance to the recommendations mentioned in the CREP guidelines.
- 43. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
- 44. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
- 45. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.

B. Additional TOR

- 1. Public hearing to be conducted by SPCB and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
 - 2. Permission to be obtained from the State's forests department in respect of protected or reserved forests covers within the study area.
46. A tabular chart with index for point wise compliance of above TORs.
47. The following general points shall be noted:
- i. All documents shall be properly indexed, page numbered.
 - ii. Period/date of data collection shall be clearly indicated.
 - iii. Authenticated English translation of all material provided in Regional languages.
 - iv. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
 - v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
 - vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
 - vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

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

26.7.3 Manufacturing of Synthetic Organic Chemicals (API's: 233Kg/day + R&D: 50Kg/day) at Plot No. 5, Industrial Park, Attivaram Village, Ozili Mandal, SPSR Nellore District, Andhra Pradesh by M/s. Shimoga Life Sciences Pvt. Ltd.- regarding 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' and appraised at State level . However, due to non-existence of SEAC/SEEIA at the time of submission of project, the project is treated as category A.

M/s. Shimoga Life Sciences Pvt. Ltd., proposed for setting up of a Synthetic Organic Chemical Manufacturing Unit at Plot No. 5, Industrial Park, Attivaram Village, Ozili Mandal, SPSR Nellore District, Andhra Pradesh. Total plot area is 4.435 acres and earmarked 1.46 acres of the area for green belt. The nearest human settlement from the site is Attivaram village located at distance of 1.1 km from the site. Mamidi Kalva is at a distance of 5.28 km in south direction, flowing from northeast to southwest. Attivaram RF is at a distance of 0.5 Km in east, Jayampu RF is at a distance of 7 Km in northwest , Permidi RF is at a distance of 5 Km in southwest and Sangavaram RF is at a distance of 4.5 Km in southwest directions respectively. It is reported that there are no national parks or sanctuaries within 10 km radius of the site. Total cost of the project is Rs. 5 Crores. The unit has obtained consent for establishment from Andhra Pradesh Pollution Control Board, for manufacture of herbal based products. It is proposed to include API products in the same site Manufacturing capacity of APIs is presented as follows;

Manufacturing Capacity

S.No	Name of the Product	Capacity	
		Kg/day	TPM
1	Ambroxol HCl	66.7	2
2	Armodafinil	8.3	0.25
3	Bromhexine HCl	66.7	2
4	Candesartan	8.3	0.25
5	Clopidogrel	16.7	0.5
6	Duloxetine HCl.	8.3	0.25
7	Ezitimibe	8.3	0.25
8	Febuxostat	16.7	0.5
9	Losortan potassium	16.7	0.5
10	Mesalamine	8.3	0.25
11	Phenylephrine HCl	66.7	2
12	Repaglinide	3.3	0.1
13	Sertraline HCl	16.7	0.5
14	Sumatriptan Succinate	8.3	0.25
15	Tamsulosin HCl	8.3	0.25
16	Telmisartan	8.3	0.25
17	Terbutaline Sulphate	16.7	0.5
	Total (Worst 5 Products)	233	7
18	R&D Products	50	1.5
	Grand Total	283	8.5

List of Utilities

S.No	Name of the Product	Permitted	Proposed	Total After Expansion
1	Coal Fired Boilers	1TPH	3TPH	3TPH & 1 TPH
2	DG Sets*	125KVA	250KVA	250 KVA & 125 KVA

* DG Sets shall be used during load shutdown period only.

Bag filters will be provided to the coal fired boiler (1 TPH + 3 TPH). Water requirement will be 124.4 m³/day for herbal products and API. Out of which 103.4 m³/day will be fresh water

and 21 m³/day is recycled water. Fresh water is sourced from ground water source and APIIC 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 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. DG set (125 KVA + 250 KVA) will be installed.

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

A. Standard TORs

1. Executive summary of the project
2. Justification of the project.
3. Project location and plant layout.
4. Promoters and their back ground.
5. Regulatory framework
6. A map indicating location of the project and distance from severely polluted area
7. Infrastructure facilities including power sources.
8. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
9. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
10. Present land use based on satellite imagery for the study area of 10 km radius.
11. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
12. Details of the total land and break-up of the land use for green belt and other uses.
13. List of products alongwith the production capacities.
14. Detailed list of raw material required and source, mode of storage and transportation.
15. Manufacturing process details alongwith the chemical reactions and process flow chart.
16. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
17. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
18. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, SO₂, NO_x including HC and VOCs should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
19. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
20. Name of all the solvents to be used in the process and details of solvent recovery system.
21. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
22. Details of water and air pollution and its mitigation plan
23. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
24. An action plan to control and monitor secondary fugitive emissions from all the sources.

25. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
26. Source and permission for the drawl of total 103.4 m³/day water from the competent authority. Water balance chart including quantity of effluent generated recycled and reused and discharged. Efforts shall be made to reduce ground water drawl.
27. Action plan for 'Zero' discharge of effluent should be included.
28. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
29. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste.
30. Action plan for the management of fly ash generated from boiler should be included. Tie-up or agreement with brick manufacturer to be provided.
31. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
32. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilized all the organic solid waste generated.
33. A copy of 'Memorandum of Understanding' (MoU) signed with coal supplier for imported coal and brick manufacturers for management of fly ash.
34. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
35. Material Safety Data Sheet for all the Chemicals are being used/will be used. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
36. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
37. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
38. An action plan to develop green belt in 54% area. Layout plan for green belt shall be provided.
39. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
40. Details of occupational health programme.
 - i. To which chemicals, workers are exposed directly or indirectly.
 - ii. Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - iii. What measures company have taken to keep these chemicals within PEL/TLV.
 - iv. How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - v. What are onsite and offsite emergency plan during chemical disaster.
 - vi. Liver function tests (LFT) during pre-placement and periodical examination.
 - vii. Details of occupational health surveillance programme.
41. Socio-economic development activities should be in place.
42. Note on compliance to the recommendations mentioned in the CREP guidelines.
43. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
44. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.

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

B. Additional TOR

1. Public hearing to be conducted by SPCB as proposed project is located in the new industrial area and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
2. Permission from the state forests department in respect of reserved and protected forests exists within the study area.

The following general points shall be noted:

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

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

26.7.4 Manufacture of synthetic organic chemical (APIs 375 kg/day plus R&D 138.9 kg/day) at plot no. 6, industrial park, Attivaram village, Ozili Mandal, SPSR Nellore district, Andhra Pradesh by M/S Anvitha Life Care -regarding 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' and appraised at State level . However, due to non-existence of SEAC/SEEIA at the time of submission of project, the project is treated as category A.

M/s. Anvitha Life Care has proposed for setting up of bulk drugs manufacturing unit at Plot No. 6, Industrial Park, Attivaram Village, Ozili Mandal, SPSR Nellore District, Andhra Pradesh. The company acquired 4.363 acres of land for the proposed plant and earmarked 1.44 acres of the area for green belt. The site is surrounded by internal IDA road in north

direction, Shimoga Life Sciences Pvt. Ltd., in west direction, Norrish Laboratories Pvt. Ltd., in east direction and open plot in south direction. The nearest human settlement from the site is Attivaram village located at distance of 1.1 km from the site. Mamidi Kalva is at a distance of 4.3 km in south west direction, flowing from northeast to southwest. Attivaram RF is at a distance of 0.5 Km in east, Jayampu RF is at a distance of 7 Km in northwest , Permidi RF is at a distance of 5 Km in southwest and Sangavaram RF is at a distance of 4.5 Km in southwest directions respectively. It is reported that there are no national parks or sanctuaries within 10 km radius of the site. Total capital cost of the project is Rs. 5 Crores. The unit obtained consent for establishment from Andhra Pradesh Pollution Control Board, for manufacture of herbal based products. It is proposed to include API products in the same site. The Manufacturing capacity of APIs is presented as follows:

Manufacturing Capacity

S.No	Name of the Product	Capacity	
		Kg/day	TPM
1	Atorvastatin Calcium	5.6	166.7
2	Bupropion	2.8	83.3
3	Diphenhydramine HCl	27.8	833.3
4	Duloxetine HCl	2.8	83.3
5	Glebecnamide	5.6	166.7
6	Glimipiride	2.8	83.3
7	Glipizide	2.8	83.3
8	Metformin Hcl	27.8	833.3
9	N-benzylethanolamine	222.2	6666.7
10	Pyrrolidinyl Phenylpropanolamine	83.3	2500
11	Rivastigmine	2.8	83.3
12	Rosuvastatin Calcium	13.9	416.7
13	Zolmitriptan	2.8	83.3
14	(-)Dibenzoyltartaric acid	2.8	83.3
15	(+)Dibenzoyltartaric acid	2.8	83.3
16	(-)Ditoulouyl tartaric acid	2.8	83.3
17	(+)Ditoulouyl tartaric acid	2.8	83.3
18	4-Hydroxy Coumarin	13.9	416.7
	Total (Worst 5 Products)	375	11250
19	R&D Products	138.9	4166.7
	Grand Total	513.9	15416.9

List of Utilities

S.No	Name of the Product	Permitted	Proposed	Total After Expansion
1	Coal Fired Boilers	2TPH	3TPH	3TPH & 2 TPH
2	DG Sets*	125KVA	250KVA	250 KVA & 125 KVA

* DG Sets shall be used during load shutdown period only.

Multicyclone separator will be provided to proposed coal fired boilers 3TPH to control particulate emissions. However, the Committee suggested to go for bagfilter instead of Multicyclone. Stand by DG set of capacity 125KVA existing and 250KVA proposed. The total water requirement shall be 65.5 KLD out of which 46.5KLD shall be drawn from ground water/APIIC supply and balance shall be recycled water in addition to consented water requirement of 56KLD for herbal products. The source of wastewater from the plant are mainly process, washings, scrubbers, utilities and domestic use. The wastewater from process, washings and scrubbers, in the order of 12.9 KLD is sent to stripper followed by MEE, and AFTD. The condensate from MEE and AFTD is treated along with utility

blowdowns of 7.2 KLD will be treated in biological treatment plant followed by RO for reuse in cooling tower. Domestic effluent of 1.8KLD will be sent to septic tank followed by soak pit. solid wastes are generated from process, solvent distillation, stripper, ATFD, ETP (primary & secondary), and DG sets. The stripper distillate, process residue and solvent residue are sent to cement plants for co-incineration. The evaporation salts are sent to TSDF. Filter media like activated carbon and hy-flow are sent to TSDF. Waste oil and used batteries from the DG sets are sent to authorize recyclers. The sludge from effluent treatment plant is sent to TSDF. Ash generated from coal fired boilers sent to brick manufacturers. The other solid wastes expected from the unit are containers, empty drums which are returned to the product seller or sold to authorized buyers after detoxification.

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

A. Standard TORs

1. Executive summary of the project
2. Justification of the project.
3. Project location and plant layout.
4. Promoters and their back ground.
5. Regulatory framework
6. A map indicating location of the project and distance from severely polluted area
7. Infrastructure facilities including power sources.
8. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
9. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
10. Present land use based on satellite imagery for the study area of 10 km radius.
11. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
12. Details of the total land and break-up of the land use for green belt and other uses.
13. List of products alongwith the production capacities.
14. Detailed list of raw material required and source, mode of storage and transportation.
15. Manufacturing process details alongwith the chemical reactions and process flow chart.
16. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
17. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
18. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, SO₂, NO_x including HC and VOCs should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
19. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
20. Name of all the solvents to be used in the process and details of solvent recovery system.
21. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
22. Details of water and air pollution and its mitigation plan
23. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.

24. An action plan to control and monitor secondary fugitive emissions from all the sources.
25. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
26. Source and permission for the drawl of total 121 m³/day water from the competent authority. Water balance chart including quantity of effluent generated recycled and reused and discharged. Efforts shall be made to reduce ground water drawl.
27. Action plan for 'Zero' discharge of effluent should be included.
28. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
29. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste.
30. Action plan for the management of fly ash generated from boiler should be included. Tie-up or agreement with brick manufacturer to be provided.
31. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
32. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilized all the organic solid waste generated.
33. A copy of 'Memorandum of Understanding' (MoU) signed with coal supplier for imported coal and brick manufacturers for management of fly ash.
34. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
35. Material Safety Data Sheet for all the Chemicals are being used/will be used. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
36. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
37. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
38. An action plan to develop green belt in 54% area. Layout plan for green belt shall be provided.
39. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
40. Details of occupational health programme.
 - i. To which chemicals, workers are exposed directly or indirectly.
 - ii. Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - iii. What measures company have taken to keep these chemicals within PEL/TLV.
 - iv. How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - v. What are onsite and offsite emergency plan during chemical disaster.
 - vi. Liver function tests (LFT) during pre-placement and periodical examination.
 - vii. Details of occupational health surveillance programme.
41. Socio-economic development activities should be in place.
42. Note on compliance to the recommendations mentioned in the CREP guidelines.
43. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.

44. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
45. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
46. A tabular chart with index for point wise compliance of above TORs.

B. Additional TOR

1. Public hearing to be conducted by SPCB as proposed project is located in the new industrial area and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
2. Permission to be obtained from the State's forests department in respect of protected or reserved forests covers within the study area.

The following general points shall be noted:

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

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

26.7.5 Manufacture of synthetic Organic Chemicals (317 kg/day) at plot no. 7A, Industrial park, Attivaram village, Ozili Mandal, SPSR Nellore district, Andhra Pradesh by M/S Norrish Laboratories Pvt. Ltd -regarding 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' and appraised at State level. However, due to non-existence of SEAC/SEEIA at the time of submission of project, the project is treated as category A.

M/s. Norrish Laboratories Pvt. Ltd. has proposed for setting up of Synthetic Organic Chemical Manufacturing Unit at Plot No. 7A, Industrial Park, Attivaram Village, Ozili Mandal,

SPSR Nellore District, Andhra Pradesh. The company acquired 4.304 acres of land for the proposed plant and allocated 1.42 acres of the area for green belt. The site is surrounded by internal IDA road in north direction and open plots in all other directions. The nearest human settlement from the site is Attivaram village located at distance of 1.1 km from the site. Mamidi Kalva is at a distance of 4.3 km in southwest direction, flowing from northeast to southwest. Attivaram RF is at a distance of 0.5 Km in east, Jayampu RF is at a distance of 7 Km in northwest, Permidi RF is at a distance of 5 Km in southwest and Sangavaram RF is at a distance of 4.5 Km in southwest directions respectively. There are no national parks or sanctuaries within 10 km radius of the site. Total capital cost of the project is Rs. 5 Crores. Manufacturing capacity is presented as follows;

Manufacturing Capacity

S.No	Name of the Product	Capacity	
		Kg/day	Kg/Month
1	Alfuzosin Hydrochloride	0.8	25
2	Atomoxetine	3.3	100
3	Cetirizine Dihydrochloride	66.7	2000
4	Clopidogrel Bi Sulphate	66.7	2000
5	Dabigatran	1.7	50
6	Disodium Pamidronate	0.3	10
7	Doxazosin Mesylate	3.3	100
8	Escitalopram Oxalate	50	1500
9	Esomeprazole Magnesium	66.7	2000
10	Fluconazole	66.7	2000
11	Lacidipine	0.8	25
12	Letrozole	1.7	50
13	Levo Cetirizine Dihydrochloride	33.3	1000
14	Meloxicam	16.7	500
15	Mesalamine	33.3	1000
16	Naratriptan Hydrochloride	3.3	100
17	Residronate Sodium	0.5	15
18	Rivastigmine Hemi Tartrate	3.3	100
19	Rizatriptan Benzoate	3.3	100
20	Sumatriptan Succinate	50	1500
21	Tamsulosin HCl	3.3	100
22	Zafirlukast	8.3	250
23	Ziprasidone Hydrochloride	8.3	250
24	Zoledronic Acid	0.8	25
25	Zolmitriptan	8.3	250
26	Zonisamide	33.3	1000
	Total (Worst 5 Products)	317	9500

List of Utilities

S.No	Name of the Product	Capacity
1	Coal Fired Boiler	3TPH
2	DG Sets*	500KVA

* DG Sets shall be used during load shutdown period only.

Multi-cone cyclone separators will be provided to 3TPH coal fired boiler to control particulate emissions. However, the Committee suggested to go for bagfilter instead of Multicyclone. Standby DG set of capacity 500KVA will be installed. The total water requirement shall be 75.3 KLD out of which 47.3KLD shall be drawn from ground water/APIIC supply and balance shall be recycled water. The source of wastewater from the

plant are mainly process, washings, scrubbers, utilities and domestic use. The wastewater from process, washings and scrubbers, in the order of 23.4 KLD is sent to stripper followed by MEE, and AFTD. The condensate from MEE and AFTD is treated along with utility blowdowns of 7.2 KLD will be treated in biological treatment plant followed by RO for reuse in cooling tower. Domestic effluent of 1.8KLD will be sent to septic tank followed by soak pit. Solid wastes are generated from process, solvent distillation, stripper, AFTD, ETP (primary & secondary), and DG sets. The stripper distillate, process residue and solvent residue are sent to cement plants for co-incineration. The evaporation salts are sent to TSDF. Filter media like activated carbon and hy-flow are sent to TSDF. Waste oil and used batteries from the DG sets are sent to authorized recyclers. The sludge from effluent treatment plant is sent to TSDF. Ash generated from coal fired boilers sent to brick manufacturers. The other solid wastes expected from the unit are containers, empty drums which are returned to the product seller or sold to authorized buyers after detoxification.

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

A. Standard TORs

1. Executive summary of the project
2. Justification of the project.
3. Project location and plant layout.
4. Promoters and their back ground.
5. Regulatory framework
6. A map indicating location of the project and distance from severely polluted area
7. Infrastructure facilities including power sources.
8. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
9. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
10. Present land use based on satellite imagery for the study area of 10 km radius.
11. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
12. Details of the total land and break-up of the land use for green belt and other uses.
13. List of products alongwith the production capacities.
14. Detailed list of raw material required and source, mode of storage and transportation.
15. Manufacturing process details alongwith the chemical reactions and process flow chart.
16. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
17. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
18. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, SO₂, NO_x including HC and VOCs should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
19. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
20. Name of all the solvents to be used in the process and details of solvent recovery system.
21. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
22. Details of water and air pollution and its mitigation plan

23. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
24. An action plan to control and monitor secondary fugitive emissions from all the sources.
25. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
26. Source and permission for the drawl of total 75.3 m³/day water from the competent authority. Water balance chart including quantity of effluent generated recycled and reused and discharged. Efforts shall be made to reduce ground water drawl.
27. Action plan for 'Zero' discharge of effluent should be included.
28. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
29. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste.
30. Action plan for the management of fly ash generated from boiler should be included. Tie-up or agreement with brick manufacturer to be provided.
31. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
32. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilize all the organic solid waste generated.
33. A copy of 'Memorandum of Understanding' (MoU) signed with coal supplier for imported coal and brick manufacturers for management of fly ash.
34. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
35. Material Safety Data Sheet for all the Chemicals are being used/will be used. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
36. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
37. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
38. An action plan to develop green belt in 54% area. Layout plan for green belt shall be provided.
39. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
40. Details of occupational health programme.
 - i. To which chemicals, workers are exposed directly or indirectly.
 - ii. Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - iii. What measures company have taken to keep these chemicals within PEL/TLV.
 - iv. How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - v. What are onsite and offsite emergency plan during chemical disaster.
 - vi. Liver function tests (LFT) during pre-placement and periodical examination.
 - vii. Details of occupational health surveillance programme.
41. Socio-economic development activities should be in place.
42. Note on compliance to the recommendations mentioned in the CREP guidelines.
43. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency,

responsibility and time bound implementation plan for mitigation measure should be provided.

44. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
45. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
46. A tabular chart with index for point wise compliance of above TORs.

B. Additional TOR

1. Public hearing to be conducted by SPCB as proposed project is located in the new industrial area and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
2. Permission to be obtained from the State's forests department in respect of protected or reserved forests covers within the study area.

The following general points shall be noted:

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

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

26.7.6 Synthetic Organic Chemicals Manufacturing Unit (APIs 400 kg/day plus R&D 33.3 kg/day) at Plot no. 4, Industrial park, Attivaram village, Ozili Mandal, SPSR Nellore district, Andhra Pradesh by M/S Balaji Chirex Pvt. Ltd. -regarding 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' and appraised at State level. However, due to non-existence of SEAC/SEEIA at the time of submission of project, the project is treated as category A.

M/s. Balaji Chirex Pvt. Ltd. has proposed for setting up of Synthetic Organic Chemical Manufacturing Unit at Plot No. 4, Industrial Park, Attivaram Village, Ozili Mandal, SPSR Nellore District, Andhra Pradesh. The company acquired 4.515 acres of land for the proposed plant and allocated 1.49 acres of the area for green belt. The site is surrounded by internal IDA road in north direction, Shimoga Life Sciences Pvt. Ltd., in east direction and open plots in south and west directions. The nearest human settlement from the site is Attivaram village located at distance of 1.1 km from the site. Mamidi Kalva is at a distance of 4.28 km in southwest direction, flowing from northeast to southwest. Attivaram RF is at a distance of 0.5 Km in east, Jayampu RF is at a distance of 7 Km in northwest, Permidi RF is at a distance of 5 Km in southwest and Sangavaram RF is at a distance of 4.5 Km in southwest directions respectively. There are no national parks or sanctuaries within 10 km radius of the site. Total capital cost of the project is Rs. 5 Crores. Manufacturing capacity is presented as follows;

Manufacturing Capacity

S.No	Name of the Product	Capacity	
		Kg/Month	Kg/Day
1	Alfuzosin	50	1.7
2	Allantion	200	6.7
3	Aripiprazole	100	3.3
4	Calcium Ascorbate	500	16.7
5	Calcium Aspartate	1000	33.3
6	Calcium Citrate Malate	2000	66.7
7	Calcium Citrate	2000	66.7
8	Calcium Dobesilate	250	8.3
9	Calcium Gluconate	3000	100
10	Calcium Lactate	1000	33.3
11	CalciumOrotate	500	16.7
12	Choline Bicarbonate	1000	33.3
13	Choline Bitartrate	1000	33.3
14	Choline Solution	1000	33.3
15	D-Biotin	100	3.3
16	Duloxetine Hydrochloride	50	1.7
17	Febuxostat	100	3.3
18	Ferrous Ascorbate	2000	66.7
19	Ferrous Fumarate	1000	33.3
20	Ferrous Gluconate	200	6.7
21	Ferrous Lactate	500	16.7
22	Finasteride	50	1.7
23	Iron Sucrose	200	6.7
24	L-Carnosine	100	3.3
25	L-Glutathione	100	3.3
26	L - Ornithine-L-aspartate	1000	33.3
27	Magnesium Gluconate	200	6.7
28	Magnesium Orotate	100	3.3
29	Menadione sodium bisulphate	500	16.7
30	N-Acetyl Cysteine	500	16.7
31	Orotic acid	1000	33.3
32	Repaglinide	50	1.7
33	Tolterodine Tartrate	50	1.7
34	Tricholine Citrate	500	16.7
35	Vitamin D3	100	3.3

36	Zinc Aspartate	500	16.7
37	Zinc Gluconate	500	16.7
38	Zinc Lactate	200	6.7
39	Zinc monomethionine	100	3.3
	Total (Worst 7 Products)	12000	400
40	Research Chemicals	1000	33.3
	Grand Total	13000	433.3

List of Utilities

S.No	Name of the Product	Capacity
1	Coal Fired Boiler	2TPH
2	DG Sets*	500KVA

* DG Sets shall be used during load shutdown period only.

Multi-cone cyclone separators will be provided to 2TPH coal fired boiler to control particulate emissions. However, the Committee suggested to go for bagfilter instead of Multicyclone. The total water requirement shall be 45.2 m³/day out of which 31.2 m³/day shall be drawn from ground water/APIIC supply and balance shall be recycled water. The source of wastewater from the plant are mainly process, washings, scrubbers, utilities and domestic use. The wastewater from process, washings and scrubbers, in the order of 9.5m³/day is sent to stripper followed by MEE, and AFTD. The condensate from MEE and ATFD is treated along with utility blowdowns of 4.9 KLD will be treated in biological treatment plant followed by RO for reuse in cooling tower. Domestic effluent of 1.8KLD will be sent to septic tank followed by soak pit. Solid wastes are generated from process, solvent distillation, stripper, ATFD, ETP (primary & secondary), and DG sets. The stripper distillate, process residue and solvent residue are sent to cement plants for co-incineration. The evaporation salts are sent to TSDF. Filter media like activated carbon and hy-flow are sent to TSDF. Waste oil and used batteries from the DG sets are sent to authorize recyclers. The sludge from effluent treatment plant is sent to TSDF. Ash generated from coal fired boilers sent to brick manufacturers. The other solid wastes expected from the unit are containers, empty drums which are returned to the product seller or sold to authorized buyers after detoxification.

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

A. Standard TORs

1. Executive summary of the project
2. Justification of the project.
3. Project location and plant layout.
4. Promoters and their back ground.
5. Regulatory framework
6. A map indicating location of the project and distance from severely polluted area
7. Infrastructure facilities including power sources.
8. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
9. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
10. Present land use based on satellite imagery for the study area of 10 km radius.
11. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
12. Details of the total land and break-up of the land use for green belt and other uses.
13. List of products alongwith the production capacities.

14. Detailed list of raw material required and source, mode of storage and transportation.
15. Manufacturing process details alongwith the chemical reactions and process flow chart.
16. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
17. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
18. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, SO₂, NO_x including HC and VOCs should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
19. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
20. Name of all the solvents to be used in the process and details of solvent recovery system.
21. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
22. Details of water and air pollution and its mitigation plan
23. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
24. An action plan to control and monitor secondary fugitive emissions from all the sources.
25. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
26. Source and permission for the drawl of total 75.3 m³/day water from the competent authority. Water balance chart including quantity of effluent generated recycled and reused and discharged. Efforts shall be made to reduce ground water drawl.
27. Action plan for 'Zero' discharge of effluent should be included.
28. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
29. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste.
30. Action plan for the management of fly ash generated from boiler should be included. Tie-up or agreement with brick manufacturer to be provided.
31. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
32. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilized all the organic solid waste generated.
33. A copy of 'Memorandum of Understanding' (MoU) signed with coal supplier for imported coal and brick manufacturers for management of fly ash.
34. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
35. Material Safety Data Sheet for all the Chemicals are being used/will be used. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
36. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
37. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
38. An action plan to develop green belt in 54% area. Layout plan for green belt shall be provided.

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

B. Additional TOR

1. Public hearing to be conducted by SPCB as proposed project is located in the new industrial area and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
2. Permission to be obtained from the State's forests department in respect of protected or reserved forests covers within the study area.

The following general points shall be noted:

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

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

26.7.7 Proposed Viscous Rayon (500 MT/month) a Block no. 70 Village Moti Naroli, Taluka: Mangrol, district Surat, Gujarat by M/S Subhlon Industries Pvt. Ltd. - regarding TOR

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

The committee noted that details such as plant configuration, process of the unit, effluent treatment details, layout map of plant etc are not mentioned in the prefeasibility report. PP informed that the plot area has been revised. The Committee noted that proposal is premature and is deferred for further consideration after submission of the revised Form-1 alongwith complete details.

26.7.8 Manufacturing of Technical Grade pesticides and Intermediates (32350 MTPA) at Plot No. 5, SEZ operated by M/s JIL at Village Vilayat GDIC, Taluka Vagra, District Bharuch, Gujarat. -regarding TOR

The project authorities and their Consultant (M/s Kadam Environmental Consultants, Vadodara) 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 technical grade pesticides and pesticide specific intermediates are listed at S.N. 5(b) under category 'A' and appraised at Central level.

Initially M/s Jubilant Life Sciences Ltd. has submitted a proposal for setting up of Manufacturing Unit of Technical Grade pesticides and Intermediates (18700 MTPA) at Plot No. 5, SEZ operated by M/s JIL at Village Vilayat GDIC, Taluka Vagra, District Bharuch, Gujarat. Further, PP has revised their proposal for manufacturing of technical Grade pesticides and Intermediates for the capacity of 32350 MTPA. Proposed project is located in the SEZ operated by M/s Jubilant Infrastructure Limited, which was constructed in 2008 for sector specific synthetic organic chemicals (category 5 (f)). JIL has applied to infrastructure sector of MoEF seeking expansion for change of scope to include technical grade pesticide manufacturing in the SEZ. Total plot area is 2,00,000 m². Cost of project is Rs. 250 Crore. Bhukhi river is at 2.94 km in South and Narmada river is at 11.1 km in south are flowing. Following products will be manufactured:

S.N.	Name of Product	Quantity (in MTPA)
1	Mepiquat Chloride	16
2	Chlormequent Chloride	2000
3	Chlorpyrifos & its derivatives	10000
4	Imidacloprid	1000

5	Acetamiprid	500
6	Thiamethoxam	500
7	Thiacloprid	200
8	Chlorfluazuron	100
9	Cyantraniliprole	1000
10	Cyantraniliprole	1000
11	Triclopyr	220
12	Triclopyr butoxy ethyl ester	220
13	fluroxypyr-meptyl	10000
14	Clodinafop Propargyl	200
15	Diquat dibromide	1500
16	Haloxypyr-P-methyl	100
17	Fluazifop-P-butyl	50
18	Diflufenican	100
19	Nicosulfuron	150
20	Picloram	300
21	Clopyralid	300
22	Paraquat & its derivatives	5000
23	Trifloxystrobin	400
24	Imazethapyr	100
25	Pyroxsulam	150
26	Picoxystrobin	2000
27	Boscalid	100
28	Azoxystrobin	1000
29	Intermediates of all above (#1 to #28)	
30	2-Chloro-6-(trichloromethyl) pyridine	3000
	Total	32350

Coal fired Thermic fluid heater (3 Nos) will be installed. Steam will be supplied by the operator of SEZ. Scrubber will be provided to control process emissions viz. Cl₂, HCl, SO₂, HBr and HF. Total fresh water requirement will be 1660 m³/day. Fresh water will be supplied by and sourced from GIDC. Effluent generation will be 849 m³/day. Process effluent will be sent to MEE after primary treatment. Contaminated condensate will be sent to ETP and clear condensate will be recycled and reused in plant area. Sewage will be sent to STP. Condensate (200 m³/day) from MEE will be recycled to process. Solid waste and liquid waste incinerator will be installed by SEZ operator M/s Jubilant Infrastructure Ltd. ETP sludge, process residue and MEE salt will be sent to TSDF for landfill. Organic process residue and used filter media will be sent to incinerator. Spent catalyst and spent oil will be sent to the authorized recycler/re-processors.

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

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework.
5. Plant layout alongwith details of facility.
6. Infrastructure facilities including power sources.
7. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
8. Project site location alongwith photographs and site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
9. Present land use based on satellite imagery for the study area of 10 km radius.

10. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
11. Details of the total land and break-up of the land use for green belt and other uses.
12. List of products alongwith the production capacities.
13. Detailed list of raw material required and source, mode of storage and transportation.
14. Manufacturing process details alongwith the chemical reactions and process flow chart.
15. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
16. 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.
17. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, PM_{2.5}, SO₂, NO_x, Cl₂, HCl, SO₂, HBr, HF including HC and VOCs should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
18. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
19. Name of all the solvents to be used in the process and details of solvent recovery system.
20. Design details of ETP, incinerator, if any alongwith control of Dioxin & Furan, boiler, scrubbers/bag filters etc.
21. Details of water and air pollution and its mitigation plan
22. An action plan to control and monitor secondary fugitive emissions from all the sources.
23. Action plan for odour assessment and control to be submitted.
24. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
25. Source and quantity of fresh water requirement. Water balance chart including quantity of effluent generated recycled and reused and discharged.
26. Action plan for 'Zero' discharge of effluent should be included.
27. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
28. Detailed plan for zero liquid discharge and reduction of water consumption to be prepared .
29. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the management of fly ash generated from boiler should be included.
30. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
31. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilized all the organic solid waste generated.
32. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF.
33. Risk assessment for storage for chemicals/solvents. Risk assessment for Cyanide.
34. Material safety data sheet to be submitted. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
35. An action plan to develop green belt in 33 % area. Layout map indicating greenbelt to be submitted.

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

B. Additional TOR

1. Public hearing to be conducted by SPCB as proposed project is located in the new industrial area and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
2. Since three months environmental data already monitored, one month additional environmental data to be monitored and revalidated.

The following general points shall be noted:

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

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

The Committee prescribed the above ToRs for preparation of EIA/EMP reports. The proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the Gujarat Pollution Control Board for conducting public hearing/consultation. The Committee noted that EC for ESZ has obtained for specific sector only i.e. Synthetic Organic (5f). The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns raised alongwith the replies during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

26.7.9 Proposed exploratory/appraisal wells (4 nos.) in existing NELP Block AA-ONN-2001/2, Mizoram by M/s Oil and Natural Gas Corporation Ltd.-regarding TOR

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

M/s Oil and Natural Gas Corporation Ltd. has proposed for drilling of exploratory/appraisal wells (4 nos.) in existing NELP Block AA-ONN-2001/2, Mizoram. Original block area is 5340 sq. km. Relinquished area (after phase-I) is 1335 sq. km. Relinquished area after Phase-II is 1345 sq. km. Area retained in phase III is 2660 sq. km. PP informed that none of the proposed location is in forest land/wild life sanctuary area. Total cost of project is Rs. 160 Crore. Depth of the proposed wells will vary from 3500 m to 4300 m. Following are the coordinates of the proposed wells:

S.N.	Proposed Location	Latitude	Longitude	Nearest village	District
1	HOAC	24 ^o 12'14.24"	92 ^o 35'53.32"	North of Meidum	Kolasib
2	HOAD	24 ^o 09'41.42"	92 ^o 36'13.31"	South of Meidum	Kolasib
3	BRBAA	24 ^o 07'10.08"	92 ^o 31'06.77"	South of Sauhliap	Mamit
4	AZAA	23 ^o 58'59.99"	92 ^o 42'49.76"	Taitow, Zanlawn	Kolasib

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

A. Standard TOR:

1. Executive summary of a project
2. Project description, project objectives and project benefits.
3. Site details within 1 km of the each proposed well, any habitation, any other installation/activity, flora and fauna, approachability to site, other activities including agriculture/land, satellite imagery for 10 km area.
4. Details of forest land involved in the proposed project. A copy of forest clearance letter, if applicable.
5. Details of National Park/Wild life Sanctuary/Reserve Forest/Eco sensitive area within 10 km distance.
6. Permission from the State Forest Department regarding the impact of the proposed project on the surrounding National Park/Wild life Sanctuary/Reserve Forest/Eco sensitive area, if any. Approval obtained from the State/Central Government under Forest (Conservation Act, 1980 for the forestland should be submitted.
7. Distance from nearby critically/severely polluted area as per Notification dated 13th January, 2010, if applicable.
8. Does proposal involves rehabilitation and resettlement? If yes, details thereof.
9. Details of project cost.
10. 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.
11. 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.
 - a. Topography of the project site.
 - b. Ambient Air Quality monitoring at 8 locations for PM10, SO₂, NO_x, VOCs, Methane and non-methane HC.
 - c. Soil sample analysis (physical and chemical properties) at the areas located at 5 locations.
 - d. Ground and surface water quality in the vicinity of the proposed wells site.
 - e. Climatology and Meteorology including wind speed, wind direction, temperature rainfall relative humidity etc.
 - f. Measurement of Noise levels within 1 km radius of the proposed wells.
 - g. Vegetation and land use; Animal resources
12. Incremental GLC as a result of DG set operation.
13. Potential environmental impact envisages during various stages of project activities such as site activation, development, operation/ maintenance and decommissioning.
14. Actual source of water and 'Permission' for the drawl of water from the Competent Authority. Detailed water balance, wastewater generation and discharge.

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

38. 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.
39. Any litigation pending against the project and or any direction/order passed by any court of law against the project. If so details thereof.
40. A tabular chart with index for point-wise compliance of above TORs.

The following general points should be noted:

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

The Committee prescribed the above TORs for preparation of EIA/EMP reports. The proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation for districts Mamit. The Committee noted that MoEF vide letter no. J-11011/972/2007 IAII (I) dated 14.10.2009 has granted environmental clearance for the existing exploratory drilling in Kolasib District of Mizoram and public hearing was conducted on 09.01.2009. Therefore, the Committee recommended for exemption of public hearing for Kolasib District as per para 7 (ii) of EIA Notification, 2006. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns raised alongwith the replies during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP report submitted to the Ministry for obtaining environmental clearance.

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

26.7.10 Expansion by adding Methyl Iso Butyle Ketone (30000 MTPA) alongwith CPP (2MW) at S.No. 67-2, 74 to 79 of Chinna Sekkadu (V), Manali Industrial area, Ambattur Taluk, Chennai, Tamil Nadu by M/s Cetex Petrochemicals Ltd. - regarding TOR

The project authorities and their Consultant (M/s Ramky Enviro Engineers Limited, Hyderabad) 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 Petro-chemical based processing unit located inside the notified industrial area/estate are listed at S.N. 5(e) under category 'B' and appraised at State level. Proposal is treated as "A" Category because the project attracts general condition that located within 5 km from CPA i.e. Manali Industrial Area.

M/s Cetex Petrochemicals Ltd. has proposed for Expansion by adding Methyl Iso Butyle Ketone (30000 MTPA) alongwith coal/biomass based CPP (2MW) at S.No. 67-2, 74 to 79 of Chinna Sekkadu (V), Manali Industrial area, Ambattur Taluk, Chennai, Tamil Nadu. The total cost of the proposed project with an investment of Rs 140 Crores and total capital cost for Environmental pollution control equipment is Rs 5 Crores. Total plot area is 27.20 acres of which area for greenbelt is earmarked for 7.34 acres. Total Area earmarked for the MIBK plant is 15.56 Acre. Pallikaranai Marsh Reserve forest is located at a distance of 20.5 km. Bay of Bengal and Kortttalaiyar River is at a distance of 3.6 km and 3 km respectively. The proposed project with a production capacity of Methyl Iso Butyl Ketone – 30,000 MTPA, and by products are Methyl Iso Butyl Carbinol – 10,000 MTPA, Di Acetone Alcohol – 5000 MTPA, Hexylene Glycol – 5000 MTPA Following products will be manufactured:

S.No	Name of Product	Existing capacity	Capacity after expansion TPA (EC obtained on 16 th Sep 2008)	Proposed Expansion TPA
1	Methyl Ethyl Ketone	5000	10000	--
2	Secondary Butyl Alcohol	6000	12000	--
Fine Chemicals				
3	Cinnamic Alcohol	180	1080	--
4	Anisyl Alcohol	180	276	--
5	Styrallyl Alcohol	180	228	--
6	Strayll Acetate	--	150	--
7	Oxinome	--	20	--
8	Phenyl Ethyl Alcohol	--	96	--
9	Tertiaery Butyl Cyclohexyl Acetate	--	200	--
	Proposed Product			
	Methyl Iso Butyl Ketone	--		30000
	By Products	--	--	
1	Methyl Iso Butyl Carbinol	--	--	10000
2	Di Acetone Alcohol	--	--	5000
3	Hexylene Glycol	--	--	5000
	Total	11540	24050	50000

Mechanical dust collector and wet ash chamber will be provided to the boiler. Chilled brine solution is proposed to be installed in secondary Condenser for condensation of VOC's. Water requirement will be increased from 845 m3/day to 1445 m3/day and sourced from CMWSSB. Wastewater generation will be increased from 18 m3/day to 168 m3/day after expansion. Wastewater generation is 150 KLD and will be treated in proposed (ETP). The ZLD (Zero liquid Discharge) will be maintained. The total power required for the production process is 1.8 MW and will be fetched through (TNEB) Tamil Nadu Electricity Board and the plant also infuse with 2 MW coal / biomass based captive power plant. A DG set of capacity 1500 KVA is proposed for the emergency backup.

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

A. Standard TOR:

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework.
5. Plant layout alongwith details of facility.
6. Infrastructure facilities including power sources.
7. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
8. Project site location alongwith photographs and site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
9. Present land use based on satellite imagery for the study area of 10 km radius.
10. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
11. Details of the total land and break-up of the land use for green belt and other uses.
12. List of products alongwith the production capacities.
13. Detailed list of raw material required and source, mode of storage and transportation.
14. Manufacturing process details alongwith the chemical reactions and process flow chart.
15. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
16. 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.
17. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, PM_{2.5}, SO₂, NO_x, CO including HC and VOCs should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
18. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
19. Name of all the solvents to be used in the process and details of solvent recovery system.
20. Design details of ETP, incinerator, if any alongwith control of Dioxin & Furan, boiler, scrubbers/bag filters etc.
21. Details of water and air pollution and its mitigation plan
22. An action plan to control and monitor secondary fugitive emissions from all the sources.
23. Action plan for odour assessment and control to be submitted.
24. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
25. Source and quantity of fresh water requirement. Water balance chart including quantity of effluent generated recycled and reused and discharged.
26. Action plan for 'Zero' discharge of effluent should be included.
27. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
28. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the management of fly ash generated from boiler should be included.
29. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.

30. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilize all the organic solid waste generated.
31. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF.
32. Risk assessment for storage for chemicals/solvents. Risk assessment for Cyanide.
33. Material safety data sheet to be submitted. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemical.
34. An action plan to develop green belt in 33 % area. Layout map indicating greenbelt to be submitted.
35. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
36. Details of occupational health programme.
 - i) To which chemicals, workers are exposed directly or indirectly.
 - ii) Whether these chemicals are within Thresh Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - iii) What measures company have taken to keep these chemicals within PEL/TLV.
 - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - v) What are onsite and offsite emergency plan during chemical disaster.
 - vi) Liver function tests (LFT) during pre-placement and periodical examination.
37. Details of occupational health surveillance programme.
38. Socio-economic development activities shall be in place.
39. Note on compliance to the recommendations mentioned in the CREP guidelines.
40. 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. Toxic substance monitoring plan.
41. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
42. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 43. Corporate Environmental Responsibility**
 - (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
 - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
 - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
 - (d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
44. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
45. A tabular chart with index for point wise compliance of above TORs.

B. Additional TOR

1. Certified Compliance report from the Regional Office of MoEF&CC of the environmental conditions stipulated in the existing environmental clearance
2. Public hearing to be conducted by SPCB and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.

The following general points shall be noted:

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

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

26.7.11 Sugar Plant (5000 TCD to 7500 TCD) at Survey No. 19, 18A, Village Nellikuppam,, Tehsil Pantruti, District Cuddalore, Tamil Nadu by M/S EID Parry (India) Limited-reg. reconsideration of TOR

TOR was granted vide MoEF's letter no. J-11011/545/2011-IA II (I) dated 5th June, 2012. Further proposal was transferred to SEIAA, Tamil Nadu. Subsequently SEIAA has again transferred the proposal to the MoEF& CC giving the reasons that proposal is treated as Category 'A' project as the proposed industry is located within distillery plant campus. SEIAA also made following observations:

- i. Cumulative impacts due to distillery unit were not considered while preparing EIA-EMP report.
- ii. Exemption from the Govt. of Tamil Nadu as per G O Ms No. 123 with respect to location of unit.
- iii. EIA-EMP report prepared by non accredited Environmental Consultant has been submitted.
- iv. Besides, a complaint has been received from Shri T Arulselvam, Sipcot Area Community Environment Monitoring regarding partial compliance of TOR points in the EIA-EMP report.

Accordingly, project proponent gave a detailed presentation on the salient features of the project. The committee discussed the project as a whole and assessed the implications of cumulative impact due to both units in the campus. Regarding point no. 2 on exemption from Government of Tamil Nadu, the committee was of view that this may be stipulated in

the environmental clearance. Further, it was also desired to obtain the confirmation from the Regional Office regarding certified Compliance report. After detailed deliberations, the Committee agreed with the project for environmental clearance and further desired for following essential information for reconsideration

- i) Confirmation w.r.t. EIA-EMP report prepared by accredited Environmental Consultant.
- ii) Response to complaint of Shri T Arulselvam, Sipcot Area Community Environment Monitoring regarding partial compliance of TOR points in the EIA-EMP report.

26.7.12 Drilling of 19 wells of Exploratory/Appraisal/Development nature and setting up of Production facilities at CB-ONN-2000/1 Block at Gandhinagar, Gujarat by M/S GSPC LTD. reconsideration of TOR

Project proposal was considered in the 19th Expert Appraisal Committee (Industry) meeting held during 28th-30th May, 2014 and Committee finalized TOR for preparation of EIA-EMP report alongwith public hearing. The Committee however, decided that for granting exemption from conduct of Public Hearing, the proceedings of the P.H. for the same Block for another project should be furnished for taking a decision for granting of P.H. for this project. Further, Ministry suggested that first obtain details of information regarding existing public hearings so as to take a view on requirement of public hearing before issuing TORs. Accordingly, PP submitted public hearing proceedings for the following projects:

(i) Public hearing conducted for surface production facility (EPS) -3 Nos. in CB-ONN-2000/01 in EPS SE11 –Sy. No. 473, 478, 479 & EPS SE1A1-Survey No. 316/P, 322, Village Ghuma, Ta Daskroi, District Ahmedabad, EPS PK1-256, 257/P, Village Ingoli, Ta Dholka, District Ahmedabad.

(ii) Public hearing conducted for setting of EPS at M-1 and (2) setting of EPS M1A1 in CB-CNN-2002/03 (Sananad Miroli Block) in Ahmedabad Districts at EPS M1 Survey No. 832, 833, 835, 836 & 838 EPS M1 A1 Sy. No. 827, 828 Village Ambriyara Ta. Dholka, District Ahmedabad.

(iii) Public hearing conducted for the proposed drilling of exploratory wells total 5 Nos. in block CB-ONN-2000/1 at Villages Pisawada, Sindhraj, Dholka Town and Village Ghum, District Ahmedabad.

Since Public hearing has already been conducted for the same block. Therefore, in view of the above, the Committee recommended for the exemption of public hearing under para 7 (ii) of EIA Notification, 2006. Final EIA-EMP report as per TOR recommended by the Committee in the earlier meeting alongwith certified compliance report on the environmental condition stipulated in the existing EC shall be submitted to the MoEF&CC for consideration of environmental clearance.

24.7.13 Development Drilling in 3 onshore Wells in Khoraghat Extension ML Block KHDD, KHDF & KHDE, Assam by M/s Oil & Natural Gas Corporation Ltd (ONGCL)- regarding Environmental Clearance.

The project proponent and their Consultant (M/s SENES Consultants India Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 32nd Meeting of the Expert Appraisal Committee (Industry-2) held during 16th-17th February, 2012 for preparation of EIA-EMP report. Extension of

validity of TOR was accorded vide MoEF letter no. J-11011/563/2011 IA II (I) dated 28th July, 2014 for another one year. All the projects related to offshore and onshore Oil and Gas exploration, development and production are listed in para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at central level.

M/s Oil & Natural Gas Corporation Ltd (ONGCL) has proposed for Development Drilling in 3 onshore wells in Khoraghat Extension ML Block KHDD, KHDF & KHDE, Assam. However, TOR was granted for two development wells. But PP submitted EIA-EMP report for development drilling of 3 wells. Project proponent informed that discovery and production started in 1989. Current rate of production is 121.8 m³/day. The Khoraghat Extension ML Block part of Assam Basin is located in Golaghat District of Assam. M/s ONGC already has existing facilities like production wells, two Group Gathering Stations and Interconnecting Pipelines in the block. KHDD and KHDE will be drilled at new locations in agriculture fields and KHDF is proposed to be drilled at an existing facility of Khoraghat GGS-1 of ONGC. KHDD and KHDE development wells are located at Rengma Reserve Forest. M/s ONGC will obtain forest clearance from Centre/State for diversion of forest land. PP vide letter no. A&AAB/HR-LAQ/KHDD/2012 dated 20th July, 2012 has submitted the request for Forest clearance from Forest Department of the State Government. ONGC has already obtained permission for the conversion of forest land from KHDF drill site. It is reported that block is located at a distance of more than 20 km from any Wildlife Sanctuary or eco-sensitive Areas. Total cost of the project is Rs. 75.00 Crores. Following will be the coordinates of Khoraghat Extension ML Block:

S.N.	Name of the Block	As on 1.08.07	Co-ordinates						
			Boundary Points	Latitude			Longitude		
				Deg.	Min	Sec	Deg	Min.	Sec.
1	Khoraghat Extension ML Effective Date: 17.07.2000	83 SKM	A	26	05	47.57	93	53	12.37
			B	26	09	23.07	93	56	06.58
			C	26	09	12.44	93	59	55.55
			D	26	02	25.57	93	58	17.54
			E	26	02	31.29	93	55	37.36
			F	26	03	25.27	93	56	03.89
			G	26	04	05.34	93	56	52.89
			H	26	04	46.23	93	56	07.45
			A	26	05	47.57	93	53	12.37

Crude oil to be transported through existing flow lines to GGS-2, Khoraghat (GGS-2 is an existing Group Gathering Station having crude storage capacity of 900 m³). Crude oil after separating from associated water and gas will be dispatched through existing pipeline to GGS-Borholla located about 57 km from GGS-2. Further from GGS, Borholla this crude will be pumped through existing Borholla-CTE, Jorhat trunk pipeline. Water and gas separated at GGS-2 Koraghat will be dispatched to existing production facility, GGS-1 Koraghat.

Ambient air quality monitoring was carried out at 8 locations during April, 2013 – June, 2013 and submitted data indicates as PM10 (50.21–70.07ug/m³), SO₂ (< 4 ug/m³) and NO_x (19.79-24.21 ug/m³). Predicted value of ground level concentration due to proposed project is PM10 (0.156 ug/m³), SO₂ (0.103 ug/m³) and NO_x (25.44 ug/m³). The resultant concentrations are within the NAAQS.

Flare stack of adequate height will be provided. Adequate stack will be provided to DG set to disperse air emissions. Total water requirement will be 20 m³/day and met from

surface water source. Effluent generation will be 9 m³/day and treated in ETP. Produced water will be treated and Drill cutting (DC) will be separated from water based mud (WBM) and washed properly and unusable drilling fluids (DF) will be disposed off in well designed lined pit with impervious liner for solar drying. Disposal of drill cuttings and drill mud will be carried out in accordance with the GSR 546 (E) dated 30th August, 2005. Used oil will be sent to authorized recyclers.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Assam Pollution Control Board on 4th July, 2014. The issues raised during Public Hearing were regarding village development activities, supply of drinking water, health centre etc. Public Hearing issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

After detailed deliberations, the Committee 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. The Company shall obtain forest clearance.
- 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 20 m³/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 Shillong.
- 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 companies have to plug the drilled wells safely and obtain certificate from environment safety angle from the concerned authority.
- xv. Blowout Preventer (BOP) system shall be installed to prevent well blowouts during drilling operations. BOP measures during drilling shall focus on maintaining well bore hydrostatic pressure by proper pre-well planning and drilling fluid logging etc.
- xvi. Emergency Response Plan (ERP) shall be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- xvii. The company shall take measures after completion of drilling process by well plugging and secured enclosures, decommissioning of rig upon abandonment of the well and drilling site shall be restored to the original condition. In the event that no economic quantity of hydrocarbon is found, a full abandonment plan shall be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations.
- xviii. Abandoned well inventory and remediation plan shall be submitted within six months from the date of issue of letter.
- xix. Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.
- xx. In case the commercial viability of the project is established, the Company shall prepare a detailed plan for development of oil and gas fields and obtain fresh environmental clearance from the Ministry.
- xxi. Restoration of the project site shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office at Shillong.
- xxii. Oil content in the drill cuttings shall be monitored by some Authorized agency and report shall be sent to the Ministry's Regional Office at Shillong.
- xxiii. Under Enterprise Social Responsibility (ESR), sufficient budgetary provision shall be made for health improvement, education, water and electricity supply etc. in and around the project during drilling period.
- xxiv. An audit shall be done to ensure that the Environment Management Plan is implemented in totality and report shall be submitted to the Ministry's Regional Office.
- xxv. 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.

26.8. Any Other Items

26.8.1 Onshore exploratory drilling (10 wells) and testing of hydrocarbons in Namchik PEL Block, District Changlang, Arunachal Pradesh by M/s Oil India Ltd- regarding extension of EC

MoEF vide letter no. J-11011/877/2008-IA –II dated 23rd November, 2010 has issued environmental clearance for the above mentioned project.

PP vide letter no. 02/9(D)-783/2014 dated 9th September, 2014 has informed that one exploratory drilling falling within Namphuk Reserve Forest and request for forest clearance has been submitted to the Forest Department. Therefore, pending receipt of the Forest Clearance, OIL could not proceed with its hydrocarbon exploration drilling activities in the block till date. Therefore PP requested to extend the validity of Environmental clearance of Namchik PEL for a period of five years w.e.f. 23.11.2015.

After detailed deliberations, the committee recommended for the extension of validity of EC for a period of five years with effect from 23.11.2015.

26.8.2 Proposed 65 KLPD molasses and grain based distillery with 20 MW cogeneration power and sugar expansion upto 3500 TCD at village Rajeshwarampuram village of Nelakondapalli Mandal at Khammam district, Telangana by M/S Madhucon Sugar & Powder Industries Ltd. - Extension of validity of EC and its amendment.

MoEF vide letter no. J-11011/359/2006-IA –II dated 27th August, 2007 has issued environmental clearance for the above mentioned project. Now, PP vide letter dated 8th July, 2014 has submitted the request for revalidation of the existing EC as the distillery plant has not been constructed till now and EC validity is going to expire.

The Committee noted that PP has applied for extension of validity after expiry of environmental clearance. As per EIA Notification, 2006, application for extension of validity of EC is required to be made to the MoEF within the validity period, together with an updated form-I.

In view of the above, the Committee recommended that PP has to apply afresh for environmental clearance.

26.8.3 Integrated sugar plant for 7500 TCD with 120 KLD Molasses and grain based distillery unit and 40 MW- cogeneration power plant at Ramkrishnapur and Pullareddy kunta, Kothkota, Mahaboobnagar, Andra Pradesh by Krishnaveni Sugar Ltd. – regarding extension of EC and amendment in existing EC conditions

MoEF vide letter no. J-11011/193/2007-IA–II (I) dated 26th June, 2007 has issued environmental clearance for the above mentioned project. Now, PP vide online web portal has submitted the request for extension of the validity of EC.

The Committee noted that PP has applied for extension of validity after expiry of environmental clearance. As per EIA Notification, 2006, application for extension of validity

of EC is required to be made to the MoEF within the validity period, together with an updated form-I.

In view of the above, the Committee recommended that PP has to apply afresh for environmental clearance.

LIST OF PARTICIPANTS OF EAC (Industry) IN 24TH MEETING OF EAC (INDUSTRY) HELD ON 29TH- 30TH October 2014

S.N.	Name	Designation	Attendance
1	Shri M. Raman	Chairman	A
2	Shri R.K. Garg	Vice-Chairman Acting Chairman	P
3	Prof. R.C. Gupta	Member	A
4	Dr. Prem Shankar Dubey	Member	A
5	Dr. R.M. Mathur	Member	A
6	Dr. S. K. Dave	Member	P
7	Dr. B. Sengupta	Member	P
8	Shri Rajat Roy Choudhary	Member	P
9	Dr. S.D. Attri	Member	A
10.	Dr. Antony Gnanamuthu	Member	P
11.	Prof. C. S. Dubey	Member	P
12.	Shri Niranjana Raghunath Raje	Member	P
MOEF Representatives			
13.	Shri Lalit Bokolia	Additional Director & MS Industry-(2)	P
14.	Shri A.N.Singh	Joint Director	P