

MINUTES FOR 3rd EXPERT APPRAISAL COMMITTEE (INDUSTRY-2) MEETING HELD DURING 18th- 19th January, 2016

VENUE: Teesta Hall, Vayu Wing, 1st Floor, Ministry of Environment, Forests and Climate Change, Indira Paryavaran Bhawan Aliganj, Jorbagh Road, New Delhi -110003.

Time : Meeting held at 10: 00 AM

3.1 In Opening Remarks, the Chairman emphasized the need of expert in the field of distillery and a member from the CPCB who may guide latest norms issued w.r.t. Chemical Sector. The Chairman urged Member Secretary to take up the matter for nomination in the Committee.

Time : 10: 00 - 10: 15 AM

3.2 Confirmation of the Minutes of the 2nd Expert Appraisal Committee (Industry-2) held during 16th -17th December, 2015.

3.2 The following modifications/correction in the minutes of the 46th Reconstituted Expert Appraisal Committee (Industry) held during 20-21st August 2015 were confirmed:

Agenda No.: 46.4.7 project titled “Proposed 45 KLPD molasses based distillery cum ethanol plant at Village Kachirayapalayam, Taluka Chinnasalem, District Villupuram, Tamilnadu by M/s Kallakurichi-II Cooperative Sugar Mills Ltd.– reg TOR” the following may be substituted with product:

S.No.	Name of product	Quantity
1	Fuel Ethanol (99.8% v/v) Or Extra Neutral Alcohol (96% v/v) rectified spirit	45 KLPD
2	Impure Spirit	2.25 KLPD

3.3 The following modifications/correction in the minutes of the 46th Reconstituted Expert Appraisal Committee (Industry) held during 20-21st August 2015 were confirmed:

Agenda Item no. 46.4.4 : project titled “Setting up of 45KLPD Molasses Based Distillery Cum Ethanol Plant at village Gopalapuram, Alapuram Post, Taluka Pappireddipatti, District Dharmapuri, TamilNadu by M/s Subramaniya Siva Cooperative-reg TOR” ” the following may be substituted with products:

S.No.	Name of product	Quantity
1	Fuel Ethanol (99.8% v/v) Or Extra Neutral Alcohol (96% v/v) rectified spirit	45 KLPD
2	Impure Spirit	2.25 KLPD

18th January, 2016 (Day 1)

3.3 Environmental Clearance

3.3.1 Synthetic Organic and Chemical Fertilizer manufacturing unit at Gut no. 324, Village Wahegaon, Taluka Paithan, District Aurangabad, Maharashtra by M/s Rama Pulp and Paper Ltd. – reg EC.

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

3.3.2 Resin Manufacturing Unit at Survey No. 416/1 Paiki-3, Poglu- Piludra Crossing, NH. No. 8 at Poglu, Tehsil Prantij, District Sabarkantha, Gujarat by M/s. Levin Décor LLP- reg 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 32nd Meeting of the Expert Appraisal Committee (Industry) held during 20th to 21st January, 2015 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. Levin Décor LLP has proposed for setting up of Resin Manufacturing Unit at Survey No. 416/1 Paiki-3, Poglu- Piludra Crossing, NH. No.8 at Poglu, Tehsil Prantij, District Sabarkantha, Gujrat. Total plot area is 12192 m² of which greenbelt will be developed in 4519 m². It is reported that no national park/ wildlife sanctuary/ reserve forest/ is located within 10 Km distance. River Sabarmati is flowing within 10 km distance. Bok River is flowing at a distance of 3.38 km. Poglu Lake is located at a distance of 1 km. Cost of project is Rs. 1 Crore, of which Rs. 24.55 Lakh is earmarked towards capital cost for environmental management plan. Following products will be manufactured:

S.N.	Product	Quantity
1	Phenol Formaldehyde Resin	300 MTPM
2	Melamine Formaldehyde Resin	150 MTPM
3	Phenol Urea Formaldehyde Resin	100 MTPM

4	H P Decorative Laminated Sheets	2,00,000 Nos./Month
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Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 9 locations during December, 2014 - February, 2015 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (57 µg/m³ to 84 µg/m³), PM_{2.5} (21.5 µg/m³ to 34 µg/m³), SO₂ (4.6 µg/m³ to 17.2 ug/m³) and NOx (6.9 µg/m³ to 21.3 µg/m³) respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 9.0 µg/m³, 0.25 µg/m³ and 1.5 µg/m³ with respect to SPM, SO₂ and NOx. The resultant concentrations are within the NAAQS. Bagfilter will be provided to coal/briquettes fired Thermic fluid heater and steam boiler to control particulate emissions. Scrubber will be provided to Dryer to control methanol. Total fresh water requirement from ground water source will be 28.2 m³/day. Industrial effluent generation will be 7.5 m³/day. Industrial effluent from resin unit will be treated in ETP based on photo fenton oxidation process method followed by evaporator. Effluent from utilities i.e. cooling tower and boiler blow down will be collected in collection tank and treated. Condensate from evaporator will be recycled/reused in process. Sewage will be treated in the STP. 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. DG set (150 KVA) will be installed.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 29th May, 2015. The issues were raised regarding permission from Panchayat; CGWA permission; impact on agriculture field 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/briquettes fired Thermic fluid heater and steam boiler 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 28.2 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. Process plant should be interlocked with ETP. In case of shut down of ETP, the plant should be stopped automatically.
- 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 4519 m² 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 29th May, 2015 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.

3.3.3 Expansion of P.F. Resin (240 MTM to 750 MTM), M.F. Resin (80 MTM to 250 MTM) & Laminated sheets (2.5 lakh PM) at Survey No.355, Village Dalpur, Tehsil Prantij, District Sabarkantha, Gujarat by M/s Airolam Ltd. – reg EC.

The project proponent and their consultant (M/s Bhagwati Enviro Care 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 9th & 34th Meeting of the Expert Appraisal Committee (Industry) held during 10th -

11th June, 2013 and 17th to 19th February, 2015 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 Airolam Ltd. has proposed for expansion of P.F. Resin (240 MTM to 750 MTM), M.F.Resin (80 MTM to 250 MTM) & Laminated sheets (2.5 lakh PM) at Survey No.355, Village Dalpur, Tehsil Prantij, District Sabarkantha, Gujarat. Total plot area is 28689.46 m². Out of which greenbelt will be developed in 8000 m². Cost of project is Rs. 250 Lakh. It is reported that no national park/wildlife sanctuary/reserve forest is located within 10 km distance. Water bodies i.e. Nananpur Lake and River Hathmati are located at a distance of 1.65 km and 4.16 km respectively. Following products will be manufactured:

Sr. No.	Name of Product	Quantity		
		Existing	Additional Proposed	Total after Expansion
1.	Laminated Sheets	2,50,000 Nos. /M	0	2,50,000 Nos. /M
2.	P. F Resin	240 MT /M	510 MT /M	750 MT /M
3.	M.F.Resin	80 MT /M	170 MT /M	250 MT /M

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 6 locations during January, 2015 - April, 2015 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (66.77 µg/m³ to 79.28 µg/m³), PM_{2.5} (27.96 µg/m³ to 38.62 µg/m³), SO₂ (10.87 µg/m³ to 16.67 µg/m³) and NOx (17.05 µg/m³ to 41.4 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 3.42 µg/m³, 5.95 µg/m³ and 2.12 µg/m³ with respect to SPM, SO₂ and NOx. The resultant concentrations are within the NAAQS. Multi-cyclone dust collector will be provided to lignite/coal fired Thermic fluid heater and steam boiler to control particulate emissions. Committee suggested them to install bagfilter instead of multicyclone for better efficiency. It was also suggested that wood shall not be used fuel. Scrubber will be provided to Dryer to control methanol. Total fresh water requirement from ground water source will be 57.5 m³/day. Industrial effluent generation will be 8.5 m³/day. Industrial effluent from resin unit will be treated in ETP with photo fenton oxidation process method followed by evaporator. Effluent from utilities i.e. cooling tower and boiler blow down will be collected in collection tank and treated. Condensate from evaporator will be recycled/reused in process. The Committee suggested them that sewage shall be treated in the STP. 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. DG set (125 KVA) will be installed.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 23rd June, 2015. The issues were raised regarding CSR activities; local employment; details of raw materials to be used; 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/lignite fired Thermic fluid heater and steam boiler 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 57.5 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. ETP to be interlocked with process.
- 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 8000 m² 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 23rd June, 2015 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.

3.3.4 Molasses based Distillery Unit (50 KLPD) at Gut No. 477, 478/1, 494 & 567 Village Sakharwadi, Taluka Phaltan, District Satara, Maharashtra by M/s New Phaltan sugar Works Distilleries Division Ltd. – reg EC.

The project proponent and their consultant (M/s SD Engineering 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 in the 20th Meeting of the Expert Appraisal Committee (Industry -2) held during 23rd – 24th June, 2014 for preparation of EIA-EMP report. All molasses based distillery are listed at S.N. 5(g) (i) under category 'A' and appraised at Central level.

M/s New Phaltan sugar Works Distilleries Division Ltd. has proposed for setting up of Molasses based Distillery Unit (50 KLPD) at Gut No. 477, 478/1, 494 & 567 Village Sakharwadi, Taluka Phaltan, District Satara, Maharashtra. Plot area is 14.33 acres. Area earmarked for greenbelt is 19000 m². Cost of project is Rs. 45 Crore of which Rs. 7.5 Crore has been earmarked towards capital cost for EMP. It is reported that no national park/sanctuary is located within 10 Km distance. Nearest River is Nira River flowing at 10 km distance. Number of working days for distillery is 270 days. The following products will be manufactured :

S.N.	Product	Maximum Quantity (KLPD)
1	Alcohol (ENA/RS/AA)	50

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 9 locations during October - December, 2014 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (27.2 µg/m³ to 40.5 µg/m³), PM_{2.5} (9.1 µg/m³ to 19.3 µg/m³), SO₂ (6.4 µg/m³ to 7.5 ug/m³) and NOx (8 µg/m³ to 9 µg/m³) respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.6 µg/m³ with respect to PM. The resultant concentrations are within the NAAQS. Multi-cyclone Dust Collector followed by wet scrubber will be provided to bagasse/biogas fired boiler to control particulate emission. The Committee suggested to install bagfilter/ESP to control particulate emissions. Total fresh water requirement from Nira River will be 542 m³/day. Spent wash generation will be 400 m³/day. Spent wash will be treated in the digester. Treated spent wash will be evaporated

and used for bio-composting. Spent wash storage will be for 30 days. Effluent stream like boiler blow down, cooling tower blow down, spent lees, MEE condensate, floor washing will be collected together and subject to primary and two stage biological treatment followed by UF and RO to recycle the treated effluent. The Committee noted that the proposed distillery unit is located 2 km away from sugar manufacturing unit

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Maharashtra Pollution Control Board on 6th May, 2015. The issues were raised regarding CSR fund; EMP etc. The Committee noted that issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

After deliberation, the Committee deferred the proposal for want of following information;

1. Adequate treatment technology to be proposed as distance of distillery from the sugar plant is 2 km. Treatment scheme for spent wash shall be modified in place of bio-composting.
2. Adequate Green belt to be provided

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

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

The project proponent and their consultant (Kadam Environmental Consultants) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 21st Meeting of the Expert Appraisal Committee (Industry) held during 30th-31st July and 1st August, 2014 for preparation of EIA-EMP report. All units producing Rayon are listed at S.N. 5(d) under category 'A' and appraised at Central level.

M/s Shriram Rayons (a unit of DCM Shriram Industries Ltd.) has proposed for expansion of Rayon Tyre Cord, Dipped Fabric, Carbon Disulphide, and Captive Power Plant (from 7.2 MW to 11.2 MW) (a unit of DCM Shriram Industries Ltd.) at Khasra No. 248, 342, 245, 246, 247, Village and Taluka Ladpura, District Kota, Rajasthan. Total plot area is 3,25,000 m². No additional land acquisition since project is being proposed in existing premises. Cost of project is Rs. 163 Crores. It is reported that National Chambal River Sanctuary is located at a distance of 5.19 km. Water Bodies i.e. Sur Sagar and Kishor Talav are located at a distance of 1.13Km and 5.44 Km respectively. Chambal River (6.58 Km) and Alnia River (5.48 Km) are located from the project site. Ladpur Reserve Forest (0.82 km),

Sakatpur Reserve Forest (6.76 km) and Umedganj Conservation Reserve (3.70 km) are located within 10 km distance. The following products will be manufactured:

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

Additionally, PP informed the Committee that ambient air quality monitoring was carried out at 6 locations during October 2014-December, 2014 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (12 µg/m³ to 170 µg/m³), PM_{2.5} (6 µg/m³ to 39 µg/m³), SO₂ (8 µg/m³ to 10.3 µg/m³) and NO_x (14.1 µg/m³ to 20.7 µg/m³) respectively. Consultant informed that high concentration of PM₁₀ in monitoring area is due to the increasing number of vehicles and re-suspension of natural dust. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 11.2 µg/m³, 0.002 µg/m³, 0.006 µg/m³, 19.15 µg/m³ and 11.49 µg/m³ with respect to PM, SO₂, NO_x, CS₂ and H₂S. The resultant concentrations are within the NAAQS except PM₁₀. ESP alongwith stack of adequate height will be provided to additional coal/agro waste fired boiler to control particulate emissions. Adequate stack height will be provided to CNG fired Burner- ASSR Dryer. Scrubber will be provided to control process emissions viz. CS₂ and H₂S. Fresh water consumption will be increased from 8900 m³/day to 10,149 m³/day after expansion and sourced from Right main canal of Chambal River. Wastewater generation will be increased from 5995 m³/day to 8629 m³/day after expansion and treated in ETP. Treated effluent (1910 m³/day) will be recycled /reused in the process. Remaining treated effluent (6719 m³/day) will be discharged into natural drain. Sewage will be treated in the STP. Solid sludge bearing Zinc > 5 % will be sent to CTDF site at Udaipur. Used /spent oil will be sent to authorised vendor. Cellulose waste will be sold to consumers. Fly ash will be disposed as per Fly Ash Notification.

After detailed deliberations, the Committee recommended that site visit should be undertaken by the Sub-Committee of EAC. Meanwhile the industry prepare the plan for reduction of fresh water by reuse/recycling and documents related to agreement with charcoal supplier be submitted.

3.3.6 Bulk Drug manufacturing unit at Sy. Nos. 1019, 1020/!-2, 1020/B & 1021, Village Jangamaheswarapadu, Mandal Durgi, District Guntur, Andhara Pradesh by M/s Vineet Life sciences Pvt. Ltd. – reg EC.

The project proponent and their consultant (M/s Rightsource Industrial Solutions Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 19th Meeting of the Expert Appraisal Committee (Industry) held during 28th to 30th May, 2014 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 Vineet Life sciences Pvt. Ltd. has proposed for setting up of Bulk Drug manufacturing unit at Sy. Nos. 1019, 1020/!-2, 1020/B & 1021, Village Jangamaheswarapadu, Mandal Durgi, District. Guntur, Andhara Pradesh. Cost of project is Rs. 12.31 crores. Total plot area is 13760 m² (3.40 acres) of which greenbelt will be developed in 4790.55 m². It is reported that no national park is located within 10 km distance. Bugga Dam Reservoir is located at a distance of 7.5 km. Reserved Forests (i.e. Kakirala RF (0.58 Km), Mutukuru RF (1.2 Km) and Bollapalle RF (6.8 Km)) are located within 10 km distance. The following products will be manufactured:

S.N.	Name of the Product	CAS No's	Quantity Kg/Month	Quantity in Kg/ Day
1	Albendazole	54965-21-8	5000.00	166.67
2	Amlodipine Besylate	111470-99-6	2000.00	66.67
3	Efavirenz	154598-52-4	3000.00	100.00
4	Emtricitabine	143491-57-0	3000.00	100.00
5	Famotidine	76824-35-6	6000.00	200.00
6	Fluconazole	86386-73-4	2000.00	66.67
7	Lamivudine	134678-17-4	1500.00	50.00
8	Levosulpride	23672-07-3	2000.00	66.67
9	Lopinavir	192725-17-0	1000.00	33.33
10	n-Butyl Lithiumrazole	109-72-8	15000.00	500.00
11	Pantoprazole Sodium	138789-67-1	1500.00	50.00
12	Ritanovir	155213-67-1	1000.00	33.33
13	Triclabendazole	68786-66-3	5000.00	166.67
14	Valsartan	13786-2-53-4	1000.00	33.33
15	Zidovudine	30516-87-1	1000.00	33.33

	Total		50000.00	1666.67
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Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 6 locations during October, 2014 – December, 2014 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (46.12 µg/m³ to 62.55 µg/m³), PM_{2.5} (14.62 µg/m³ to 22.64 µg/m³), SO₂ (8.41 µg/m³ to 13.63 µg/m³) and NO_x (12.54 µg/m³ to 17.54 µg/m³) respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.33 µg/m³, 3.39 µg/m³ and 4.42 µg/m³ with respect to PM, SO₂ and NO_x. The resultant concentrations are within the NAAQS. Bagfilter along with stack height of 30 m will be provided to coal fired boiler (1x 2 TPH + 1x 3TPH). Scrubber will be provided to control process emissions viz. ammonia, SO₂ and HCl. Total water requirement will be 113 m³/day. Out of which fresh water requirement from the ground water source will be 90 m³/day and remaining water requirement (23 m³/day) will be met from recycled treated effluent. Wastewater generation will be 53.50 m³/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. The evaporation salts and ETP sludge will be sent to TSDF. Organic residue, spent carbon and Distillation residue will be sent to cement plant. Waste oil and used batteries from the DG sets are sent to authorize recyclers. Fly ash will be sent to brick manufacturers. DG sets (380 & 250 KVA) will be installed.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the AP Pollution Control Board on 15th May, 2015. The issues were raised regarding air pollution control measures; local employment; pollution control measures from chemical industries, CSR activities; implementation of various development activities 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, 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 shall be provided to the coal fired boiler to control particulate emissions within permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.
- ii. Scrubber shall be provided to control process emissions viz. ammonia, SO₂ and HCl. 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 SPCB. Odour management plan shall be implemented.

- iv. Total fresh water requirement from ground water source shall not exceed 90 m³/day and prior permission shall be obtained from the CGWA/SGWA.
- v. Trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD shall be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream shall be treated in ETP and then passed through RO system. Condensate and recover water will be recycled/reused within factory premises. 'Zero' effluent discharge shall be adopted and no effluent will be discharged outside the premises.
- vi. All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.
- vii. As proposed, process organic residue and spent carbon shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF. The ash from boiler shall be sold to brick manufacturers/cement industry.
- viii. The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from SPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. Measures shall be taken for fire-fighting facilities in case of emergency.
- ix. Fly ash shall be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust shall be avoided.
- x. Solvent management shall be as follows :
 - Reactor shall be connected to chilled brine condenser system
 - Reactor and solvent handling pump shall have mechanical seals to prevent leakages.
 - The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
 - Solvents shall be stored in a separate space specified with all safety measures.
 - Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.
 - Entire plant where solvents are used shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.
- xi. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

- xii. All the issues raised during the Public Hearing/consultation meeting held on 15th May, 2015 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xiii. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner.
- xiv. As proposed, green belt of 4790.55 m² 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.

Reconsideration for Environmental Clearance

3.3.7 Proposed expansion of laminate & resin manufacturing unit at Diamond Harbour Road, Village kanchowki, Tehsil Bishupur, District-24 Parganas (South), West Bengal by M/s Century Plyboards (I)- reg EC.

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 42nd meeting held during 16th – 17th June, 2015 and the Committee sought following additional information:-

- (i) Layout of greenbelt around the proposed and existing plant to be submitted .
- (ii) Surface and Ground Water quality data to be reanalyzed and fresh one monitoring data to be submitted.
- (iii) Detailed Plan for Enterprise Social Commitment considering 2.5 % of project cost.
- (iv) Generation of process effluent from condensate to be quantified. Characteristics of process condensate alongwith disposal plan to be submitted.
- (v) Scheme to treat sewage generated from the factory to be submitted.

PP vide letter dated 09.01.2016 has submitted the above mentioned information. The Committee found that layout plan does not contain information about thickness of greenbelt. In response, PP committed that greenbelt thickness around the existing premises will be atleast 8 m. PP has earmarked Rs. 1.45 Crore towards ESC for next 5 years and present detailed break up of budget allocated. Sewage will be treated in the Sewage treatment plant based on MBBR technology. The Committee found satisfactory response

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/lignite fired Thermic fluid heater and steam boiler 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 70 m³/day and prior permission should be obtained from the CGWA/SGWA.
- vi) As proposed, no process effluent will be generated. Sewage shall be treated in the Sewage Treatment Plant. Water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB. The ETP should be interlocked with the process. In case of shut down of ETP, the plant to be shut down automatically.
- 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 16755.3 m² 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 21st November, 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 Bhubaneswar.
- 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 Bhubaneswar. Implementation of such program should be ensured accordingly in a time bound manner.

3.3.8 Expansion of Sugar Plant (from 4500 TCD to 12000 TCD), Distillery Plant (60 KLPD to 90 KLPD) and Power Plant (24 MW to 54 MW) of M/s Athani Sugars Ltd., at Vishnu Nagar, Tehsil Athani, District Belgaum, Karnataka – reg EC.

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 40th meeting held during 18th – 19th May, 2015 and the Committee suggested the PP to take immediate corrective action on the non-complied points and submit the action taken report alongwith photographs to the Regional Office, Bangalore for their comments.

M/s Athani Sugars Ltd. has proposed for expansion of Sugar Plant (from 4500 TCD to 12000 TCD), Distillery Plant (60 KLPD to 90 KLPD) and Power Plant (24 MW to 54 MW) at Vishnu Nagar, Tehsil Athani, District Belgaum, Karnataka. Total plot area is 120 acres. It is reported that no national park/wildlife sanctuary/biosphere reserve is located within 10 km distance. Cost of project is Rs. 161.83 Crore.

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 7 locations during March - May, 2014 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (30.2 µg/m³ to 62.3 µg/m³), PM_{2.5} (7.5 µg/m³ to 28.46 µg/m³), SO₂ (4.2 µg/m³ to 14.98 µg/m³) and NO_x (7.6 µg/m³ to 20.3 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.0 µg/m³ and 38.0 µg/m³ with respect to PM and NO_x. The resultant concentrations are within the NAAQS. ESP will be provided to bagasse fired boiler to control particulate emissions. Fresh water requirement from Krishna River will be 850 m³/day. Effluent generation from the sugar unit will be 747 m³/day and treated in the ETP. Spent wash will be concentrated in the evaporator and concentrated spent wash will be biocomposted. Condensate will be treated in the CPU. Treated Condensate water will be used in process and cooling water make up.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Karnataka State Pollution Control Board on 22nd August, 2014. The issues were raised regarding local employment, water requirement for greenbelt; Fund earmarked for CSR; drinking water problem; greenbelt; etc. The Committee noted that issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

After deliberation, the Committee noted that report from the Region Office, Bangalore on the corrective action taken by the PP on the non-complied points is yet to be received. It was noted that clarification from the Regional Office is necessary in respect of prior construction alongwith other deficiencies indicated in the Certified Compliance report. Therefore, the Committee suggested that Ministry should take the matter with their Regional Office at Bangalore.

3.3.9 Resin Manufacturing Unit (130 MTPM) at Sy. No. 898/p, Village Susvas, Tehsil Ishwarnagar, District Surender nagar, Gujarat by M/s Parikshit Laminate Pvt. Ltd. – reg EC.

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 44th meeting held during 20th – 21st July, 2015 and the Committee sought following additional information:-

- (i) Meteorological data in respect mixing height to be rechecked.
- (ii) River water quality data in respect of BOD, COD and DO to be reanalyzed by conducting one month sampling.
- (iii) Fluoride and nitrate in the ground water to be rechecked. Source of high nitrate shall be identify.

PP vide letter dated 3.10.2015 has submitted the addl. information. All above information submitted by PP was discussed in length. The Committee found satisfactory response

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 steam boiler 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 15 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. Sewage shall be treated in the Sewage Treatment Plant. Water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB. ETP to be interlocked with the process plant.
- 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 plot 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 March, 2015 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 Bhubaneswar. Implementation of such program should be ensured accordingly in a time bound manner.

3.3.10 Expansion of Molasses based Distillery Plant (from 30 KLPD to 60 KLPD) at Survey No.290, Village Sainagar Ranjani, Tehsil Kallam, District Osmanabad, Maharashtra by M/s Natural Sugar & Allied industries Ltd. – reg EC.

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 46th meeting held on 21st August, 2015 and the Committee sought following additional information:-

- (i) Reanalyzing of one month ambient air quality monitoring data.
- (ii) As per page 116 of EIA-EMP report, effluent treatment scheme will comprise bi-methanation, MEE followed by Bio-composting. However, during presentation it was informed that Bio-methanated spent wash will be evaporated in the MEE followed by ATFD. Concentrated spent wash will be mixed with bagasse as boiler fuel. Therefore, correct, treatment scheme need to be suitably defined.
- (iii) Submission of Action taken report to the non-compliance points reported in the Certified Compliance Report of the Regional Office, Bhopal.

PP vide letter dated 21.09.2015 has submitted the addl. information. PP informed that spent wash will be treated in the biomethantation plant. Treated spent wash will be dried in the MEE followed by ATFD. Concentrated spent wash will be mixed with bagasse as boiler fuel to achieve zero effluent discharge.

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 should be provided to the bagasse fired boiler to control particulate emissions within permissible limit. The gaseous emissions should be dispersed through stack of adequate height as per CPCB/SPCB guidelines.
- ii) Adequate stack height will be provided to biogas fired boiler.
- iii) Total fresh water requirement from Manjra River for distillery unit shall not exceed 600 m³/day.
- iv) Spent wash generation from molasses based distillery shall not exceed 8 KI/KI of alcohol. The spent wash from molasses based distillery shall be treated in bio-methanation process and evaporated in MEE. Concentrated spent wash shall be incinerated in the incineration boiler to achieve 'Zero' discharge. Evaporator Condensate, spentlees and utilities effluent shall be treated and recycled/reused in process. No effluent shall be discharged outside the premises and 'Zero' discharge shall be maintained.
- v) Automatic /online monitoring system (24 x 7 monitoring devices) for flow measurement and relevant pollutants in the treatment system to be installed. The data to be made available to the respective SPCB and in the Company's website.
- vi) Spent wash shall be stored in impervious RCC lagoons with proper lining with HDPE and shall be kept in proper condition to prevent ground water pollution. The storage of spent wash shall not exceed 5 days capacity.
- vii) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- viii) Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area and compost yard shall be set up. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to SPCB and this Ministry. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and total dissolved solids shall be monitored. Sampling and trend analysis monitoring must be made on monthly basis and report submitted to the Ministry's Regional Office at Bhopal and MPCB.
- ix) Bagasse/biomass storage in the existing sugar unit shall be done in such a way that it does not get air borne or fly around due to wind.
- x) Boiler ash in the sugar unit shall be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust shall be avoided. Bagasse ash and coal ash shall be stored separately.

- xi) Fire fighting system shall be as per the norms and cover all areas where alcohol is produced, handled and stored. Provision of foam system for fire fighting shall be made to control fire from the alcohol storage tank. DMP shall be implemented.
- xii) Occupational health surveillance programme shall be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre shall be strengthened and the regular medical test records of each employee shall be maintained separately.
- xiii) Dedicated parking facility for loading and unloading of materials shall be provided in the factory premises. Unit shall develop and implement good traffic management system for their incoming and outgoing vehicles to avoid congestion on the public road.
- xiv) As proposed, green belt over 33% of the plot area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xv) All the commitments made during the Public Hearing/Public Consultation meeting held on 23rd November, 2012 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xvi) At least 2.5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.

3.3.11 Expansion of the existing POL terminal with existing storage capacity 1,62,790 KL to 2,27,360 KL at Pyala at Tehsil Ballabgarh, District Faridabad, Haryana by M/s BPCL – reg EC.

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

3.3.12 Expansion of existing pesticide unit (3525 MT/Y to 9325 MT/Y) at Gat no. 367, Village Rasegaon, Tehsil Dindori, District Nashik, Maharashtra by M/s Spectrum Ether Ltd. – reg EC.

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 46th meeting held on 21st August, 2015 and the Committee sought following additional information:-

- (i) Action plan to install dedicated incinerator for odorous gas.

- (ii) Existing effluent treatment scheme to be submitted.
- (iii) Wastewater characteristic of ETP at inlet and outlet.
- (iv) Present mode of disposal of treated effluent and hazardous waste.
- (v) Air dispersion modeling should be done for winter season.
- (vi) Action plan to install bagfilter instead multicyclone dust collector in the coal/biomass fired boiler.
- (vii) Action Taken Report (ATR) on the non-complied points observed by the Regional Office.
- (viii) Quantitative Risk assessment report for solvent storage.
- (ix) Point-wise replies to issues raised during public hearing.

PP has submitted the addl. information through online submission. PP also confirmed that they will install "Catalytic Thermal Oxidation/Non-Plasma Oxidation/Ozonation" system for treating odourous gases. Bagfilter will be provided to coal/biomass fired boiler to control particulate emissions. Industrial effluent will be segregated into high COD/TDS and low COD/TDS effluent streams. High COD/TDS effluent stream will be pretreated and pass through steam stripper followed by MEE and ATFD. low COD/TDS effluent stream will be treated in the ETP followed by tertiary treatment. Treated effluent will be recycled for cooling tower make up and gardening. It was informed that Phorat Technical production will be reduced with the introduction of new products. PP informed that product no 37 may be read as Diafenthuron

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) Company should not manufacture banned agrochemical products. As proposed Phorate Technical production shall be reduced with the introduction of new products.
- ii) Bagfilter shall be provided to coal/biomass fired boiler to control particulate matter. Continuous air emission monitoring system to be installed from the stack. The gaseous emissions should be dispersed through stack of adequate height as per CPCB/SPCB guidelines.
- iii) Scrubber will be provided to control process emissions viz. HCl, HBr, NH₃, H₂S Cl₂ and SO₂. The scrubbed water should be sent to ETP for further treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. Scrubbers vent shall be provided with on-line detection and alarm system to indicate higher than permissible value of controlled parameters. At no time, the emission levels shall go beyond the prescribed standards. The system should be interlocked with the pollution control equipments so that in case of any increase in pollutants beyond permissible limits, plant should be automatically stopped.
- iv) A proper Leak Detection And Repair (LDAR) Program for pesticide industry shall be prepared and implemented as per CPCB guidelines. Focus shall be given for prevention of fugitive emissions for which preventive maintenance of pumps, valves, pipelines are required. Proper maintenance of mechanical seals of pumps and valves

shall be given. A preventive maintenance schedule for each unit shall be prepared and adhered to.

- v) Solvent management shall be carried out as follows :
 - i. Chilled brine circulation system shall be provided to condensate solvent vapors and reduce solvent losses. It shall be ensured that solvent recovery should not be less than 95%.
 - ii. Reactor and solvent handling pump shall have mechanical seals to prevent leakages.
 - iii. The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
 - iv. Solvents shall be stored in a separate space specified with all safety measures.
 - v. Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.
 - vi. Entire plant shall be flame proof. The solvent storage tanks should be provided with breather valve to prevent losses.
- vi) Total water requirement from Alandi dam shall not exceed 935 m³/day and prior permission shall be obtained from the Competent Authority.
- vii) Industrial effluent generation shall not exceed 29.5 m³/day. Effluent shall be segregated into High COD/TDS and low COD/TDS effluent streams. High COD/TDS effluent stream shall be passed through steam stripper followed by evaporation in MEE. Low COD/BOD effluent stream and condensate of MEE will be treated in ETP. Treated effluent shall be recycled /reused for process purpose and cooling water make up.
- viii) As proposed, no effluent from sugar, distillery and co-generation power plant shall be discharged outside the premises and Zero discharge shall be achieved.
- ix) Automatic /online monitoring system (24 x 7 monitoring devices) for flow measurement and relevant pollutants in the treatment system to be installed. The data to be made available to the respective SPCB and in the Company's website.
- x) As proposed, process organic residue and spent carbon shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF. The ash from boiler shall be sold to brick manufacturers/cement industry.
- xi) Fly ash shall be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust shall be avoided.
- xii) All the recommendations made in the risk assessment report shall be satisfactorily implemented.

- xiii) As proposed, green belt over an area of 60,000 m² 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.

3.4 Terms of Reference (TOR)

3.4.1 Setting up of Synthetic Organic Chemicals and Agro Chemicals Unit at Plot No. 755/1, GIDC Industrial Estate, Village Jhagadia, District Bharuch, Gujarat by M/s Parikh Enterprises Pvt. 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 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. Project also involve manufacturing of specialty chemicals and bulk drugs intermediates, which also to be appraised at Central level if the unit is located outside the notified industrial area/estate and listed at S.N. 5(f) under category 'A'.

M/s Parikh Enterprises Pvt. Ltd. has proposed for Setting up of Synthetic Organic Chemicals and Agro Chemicals Unit at Plot No. 755/1, GIDC Industrial Estate, Village Jhagadia, District Bharuch, Gujarat. It is reported that no national parks, wildlife sanctuaries, Reserve Forest (RF)/ Protected Forests (PF), Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. Consultant did not present properly Environment Sensitivity within 10 km radius of the toposheet. Committee advised for improvement in presentation. About 195 personal to be employed.

Total plot area is 1,65,825.90 m², of which an area earmarked for greenbelt is 54750 m². Total project cost including existing facilities is Rs. 90 Crore. Following products will be manufactured:

Sr. No.	Name Of Product	Production Capacity (MT/Month)
A	Synthetic Organic Chemicals	
1	Activated Copper Phthalocyanine Blue	500
2	Copper Phthalocyanine Blue	500
3	Alpha Blue	65
4	Pigment Beta Blue (15:3)	300
5	Pigment Beta Blue (15:4)	200
6	Copper Phthalocyanine Pigment Green -7	200
7	Pigment Violet 23	50
8	Pigment Red 122 or Pigment Violet 19	50
9	Sosperse 5000	50
10	Carbazole	50
11	Azo Pigments(Red Series -50 + Yellow Series-50)	100
12	Pigment Dispersion	400
13	Reactive Blue 21/ Turquoise Blue - G	200
14	Reactive Blue 25/Turquoise Blue - H5G	50

15	Direct Blue 86	100
16	Direct Blue 199	100
17	Ammonium Sulphate Solution	3400
18	Ammonium Sulphate	451
19	Aluminium Hydroxide	193

Sr No.	Name Of Product	Production Capacity (MT/Month)
B	Agro Chemicals Technical	
1	Copper Sulphate Technical	500
2	Copper Sulphate (Basic)/Tribasic Copper Sulphate	200
3	Bordeaux Mixture Tech	200
4	Copper Oxychloride Tech	800
5	Copper Hydroxide Tech	100
6	Cuprous Oxide Tech	400
By-Product		
1.	Ammonium Carbonate (100%)	850
2.	Ammonium Carbonate Solution	2442
3.	Dilute HCL	370
4.	Sodium Hypochloride Solution	562

Electricity requirement of 10000 KV will be sourced from DGVCL and 2000 KV of DG set will be provided as a standby. Coal fired boiler having capacities 1 no. 3 TPH and 2x6 TPH will be connected to scrubber followed by bagfilter with adequate stack height of 30 mt.

Fresh water shall be supplied by GIDC and quantity to be used will be 1184m³/day against which 993m³/day of wastewater will be generated. Treated effluent will be discharged to NCTC pipeline for final disposal. Domestic waste water will be treated in ETP. The process industrial effluent will be kept segregated and will be taken to the Multiple Effect Evaporator (MEE) system. The condensate generated in the MEE will then be allowed to go into an effluent treatment plant (ETP) consisting of primary, secondary and tertiary treatments/cooling towers. The residue from the MEE will be sent to incinerator. ETP sludge, ME residue, Spent Carbon will be stored and sent to incinerator. Besides spent acid so generated will be used in production of other products or sent to IFFCO. Used oil and discarded drum will be sold to the authorized recycler.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I (as referred on Ministry's web site) for preparation of EIA-EMP report.

A. Specific TOR

1. Commitment that no banned pesticides will be manufactured.
2. Details on solvents to be used, measures for solvent recovery and for emissions control.
3. Details of process emissions from the proposed unit and its arrangement to control.
4. Ambient air quality data should include VOC, other process-specific pollutants* like NH₃*, chlorine*, HCl*, HBr*, H₂S*, HF*, CS₂ etc., (* - as applicable)
5. Work zone monitoring arrangements for hazardous chemicals.
6. Detailed effluent treatment scheme including segregation for units adopting 'Zero' liquid discharge.
7. Action plan for odour control to be submitted.

8. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they co-process organic solid/hazardous waste generated.
9. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
10. Material Safety Data Sheet for all the Chemicals are being used/will be used.
11. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
12. Details of incinerator if to be installed.
13. Risk assessment for storage and handling of hazardous chemicals/solvents. Action plan for handling & safety system to be incorporated.
14. Arrangements for ensuring health and safety of workers engaged in handling of toxic materials.
15. Details on solvents to be used, measures for solvent recovery and for emissions control.
16. Details of process emissions from the proposed unit and its arrangement to control.
17. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
18. Action plan for utilization of MEE/dryers salts.
19. Material Safety Data Sheet for all the Chemicals are being used/will be used.

B. Additional TOR

- i. Public hearing is exempted as per para 7(i) III Stage (3)(i)(b) of EIA Notification, 2006 for preparation of EIA/EMP Report, being site is located in the Notified industrial area.
- ii. Recommendation of the SPCB.
- iii. Plan for bio-assy test.

It was recommended that '**TORs**' without **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.

3.4.2 Expansion of existing distillery from capacity 200 KLPD to 350 KLPD along with 8.0MW power at Village Allehpur, Tehsil Dhampur, District Bijnor, Uttar Pradesh by M/s Dhampur Sugar Mills Ltd.-reg. TOR

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

3.4.3 Expansion of Distillery Plant from 100 KLPD to 250 KLPD and 5 MW at Village Asmoli, Tehsil & District Sambhal Uttar Pradesh by M/s Dhampur Sugar Mills Ltd. Unit D.S.M Chemicals – reg 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 molasses based distillery are listed at S.N. 5(g) (i) under category 'A' and appraised at Central level.

M/s Dhampur Sugar Mills Ltd. Unit D.S.M Chemicals has proposed for expansion of Distillery Plant from 100 KLPD to 250 KLPD (RS/ENN/AA) and 5 MW at Village Asmoli, Tehsil & District Sambhal Uttar Pradesh. The Ministry has issued the EC vide letter no. J-11011/224/2007 dated 17th July, 2007. There is no National Park, Wildlife Sanctuary, Tiger/Elephant or Biosphere Reserve within the distance of 10km from the project site.

Total cost of the project is Rs. 97.20 crore for the proposed expansion. Out of which Rs. 18.85 crore will be earmarked towards environmental protection measures and Rs. 50 lac will be invested towards recurring cost. Project area is in 44 acres, of which 33% will be developed as greenbelt. Distillery will be operated for 365 days. About 180 personal will be employed.

Bagases fired Boiler of 50TPH will be installed by providing wet scrubber with a height of 90 m. Committee suggested for bagfilter in place of scrubber flyash so generated shall be used as manure and fermenter sludge will be used for bio composting and manure.

Ground water shall be used as a source of fresh water. Currently existing water requirement are 2400 m³/day and 25m³/day for industrial and domestic purposes respectively. After expansion, it is reported that water requirement will vary as 2150m³/day and 2350m³/day for non rainy season (Industrial) and rainy season respectively. Against this spent wash of 1900 m³/day i.e. of 7.6 KL/KL of product will be generated. Treatment has been proposed for rainy and non rainy seasons. During rainy season, spent wash will be treated through bio-methanation followed by RO and then evaporation through MEE. The reject of MEE to be used in bio composting along with press mud. During rainy season bio methanation followed by RO and then evaporation through MEE will be followed. Reject of MEE will be incinerated. Therefore, non rainy season 100% bio composting will be followed while during rainy season incineration along with bagases will be adopted. Zero liquid discharge system will be adopted. The Committee suggested that effective treatment technology should be followed uniformly being a Ganga Basin.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I for preparation of EIA-EMP report:

A. Specific TOR

1. List of existing distillery units in the study area along with their capacity and sourcing of raw material.
2. Number of working days of the distillery unit.
3. Details of raw materials such as molasses/grains, their source with availability.
4. Details of the use of steam from the boiler.
5. Surface and Ground water quality around proposed spent wash storage lagoon, and compost yard.
6. Plan to reduce spent wash generation within 6-8 KL/KL of alcohol produced.
7. Proposed effluent treatment system for molasses/grain based distillery (spent wash, spent lees, condensate and utilities) as well as domestic sewage and scheme for achieving zero effluent discharge (ZLD).
8. Proposed action to restrict fresh water consumption within 10 KL/KL of alcohol production.
9. Details about capacity of spent wash holding tank, material used, design consideration. No. of peizometers to be proposed around spent wash holding tank.
10. Action plan to control ground water pollution.

11. Details of solid waste management including management of boiler ash, yeast, etc. Details of incinerated spent wash ash generation and its disposal.
12. Details of bio-composting yard (if applicable).
13. Action plan to control odour pollution.
14. Arrangements for installation of continuous online monitoring system (24x7 monitoring device)

B. Additional TOR

- i 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.
- ii A Copy of certified compliance report to the environmental conditions prescribed in the existing EC. Action taken report/ detailed action plan on the partly/non-compliance conditions reported by the MoEF&CC Regional Office.
- iii Treatment scheme for spent wash should be followed as per CPCB guidelines formulated for Ganga Basin.

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.

3.4.4 Proposed Expansion & Modernization of Existing Molasses Based Distillery (30 to 60 KLPD) along with installation of 2.1 MW Co-Generation Power Plant at Dwarikesh Nagar, Village Bundki, Tehsil Nagina, District Bijnor, U.P. by M/s Dwarikesh Sugar Industries 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 along with the draft Term of References for the preparation of EIA-EMP. All molasses based distillery are listed at S.N. 5(g) (i) under category 'A' and appraised at Central level.

M/s Dwarikesh Sugar Industries Ltd. has proposed for Expansion & Modernization of existing Molasses Based Distillery (30 to 60 KLPD) along with installation of 2.1 MW Co-Generation Power Plant at Dwarikesh Nagar, Village Bundki, Tehsil Nagina, District Bijnor, U.P. Ministry vide letter no J-11011/35/2004-IA-II (I) dated 24.06.2004 has issued the Environmental Clearance. It is reported that no national parks, wildlife sanctuaries, Reserve Forest (RF)/ Protected Forests (PF), Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. Padhoi River is flowing at a distance of 5 km from the project site. Gangan Tributary (3 km in West) and Khoh Tributary (7 km in East) are flowing at their respective distance.

Total plot area is 9.9 ha, of which land earmarked for greenbelt is 3.26 ha. Cost of project is Rs. 50 Crore. Out of which, Rs. 5 Crore and Rs. 0.5 Crore earmarked towards capital investment and recurring cost per annum for Environmental Protection Measure. Products namely Extra Neutral Alcohol (ENA), Absolute alcohol and Rectified Spirit are

proposed for expansion. Distillery will be working for 330 days. Number of employee will be 55 numbers.

Fresh water requirement will increase from 252m³/day to 587 m³/day from the groundwater source. Spent wash will be treated through bio-methanation, MEE and bio-composting. Process condensate from MEE will be treated and recycled back in the process. No effluent will be discharge outside the plant premises. Committee suggested to follow treatment as per the CPCB guidelines applicable for Ganga Basin.

Bagasse and bio gas fired boiler having 25 TPH capacity will be installed and connected to ESP/ bagfilter with stack height. Flyash from the boiler will be used for brick manufacturing or land filling.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I for preparation of EIA-EMP report:

A. Specific TOR:

1. List of existing distillery units in the study area along with their capacity and sourcing of raw material.
2. Number of working days of the distillery unit.
3. Details of raw materials such as molasses and their source with availability.
4. Details of the use of steam from the boiler.
5. Surface and Ground water quality around proposed spent wash storage lagoon, and compost yard.
6. Commitment for spent wash generation within 6-8 KL/KL of alcohol produced.
7. Proposed effluent treatment system for molasses distillery (spent wash, spent lees, condensate and utilities) as well as domestic sewage and scheme for achieving zero effluent discharge (ZLD).
8. Proposed action to restrict fresh water consumption within 10 KL/KL of alcohol production.
9. Details about capacity of spent wash holding tank, material used, design consideration. No. of peizometers to be proposed around spent wash holding tank and composting yard.
10. Action plan to control ground water pollution.
11. Details of solid waste management including management of boiler ash, yeast, etc. Details of incinerated spent wash ash generation and its disposal.
12. Details of bio-composting yard.
13. Action plan to control odour pollution.
14. Arrangements for installation of continuous online monitoring system (24x7 monitoring device).

B. Additional TOR

- i. A Copy of certified compliance report to the environmental conditions prescribed in the existing EC. Action taken report/ detailed action plan on the partly/non-compliance conditions reported by the MoEF&CC Regional Office.
- ii. 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.
- iii. Treatment scheme for spent wash should be followed as per CPCB guidelines formulated for Ganga Basin.

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.

3.4.5 Proposed capacity enhancement in existing grain/molasses based distillery (120 KLPD to 144 KLPD) & co-generation power plant (10 MW to 11 MW) by modernization & efficiency improvement Village Sandharshi, Tehsil Rajpura, District Patiala, Punjab by M/s NV Distilleries And Breweries Pvt. 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 along with the draft Term of References for the preparation of EIA-EMP. All molasses based distillery are listed at S.N. 5(g) (i) under category 'A' and appraised at Central level. All Grain based distillery (> 60 KLPD) are listed at S.N. 5(g) (ii) under category 'A' and appraised at Central level.

M/s NV Distilleries And Breweries Pvt. Ltd. has proposed for enhancement in existing grain/molasses based distillery (120 KLPD to 144 KLPD) & co-generation power plant (10 MW to 11 MW) by modernization & efficiency improvement Village Sandharshi, Tehsil Rajpura, District Patiala, Punjab. Ministry has issued EC for the existing unit vide letter no. J-11011/42/2008 dated 10.06.2009.

Total plot area is 26.22 ha, out of this 8.66 ha will be developed with green belt. Total cost of project for expansion is Rs. 6 Crore. It is reported that no national parks, wildlife sanctuaries, Protected Forests (PF), Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. Ghagagar River is flowing at a distance of 3 km (South East) from the proposed site.

Existing water consumption of the industry is 1542 m³/day which will remain same after expansion. Existing power requirement of 4 MW will also remain same after expansion. It is noted that 10MW Co generation power plant will be expanded to 11MW. Capacity enhancement will be done by modernization and efficiency improvement. Since no additional water, steam and fuel, land will be required for 20% enhancement. At the request of PP the Committee exempted the Public Hearing under exempted under section 7 (ii) of EIA Notification, 2006 as increase in pollution load is insignificant.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I (as available in Ministry web site) for preparation of EIA-EMP.

A. Specific TOR:

1. List of existing distillery units in the study area along with their capacity and sourcing of raw material.
2. Number of working days of the distillery unit.
3. Details of raw materials such as grains, their source with availability.
4. Details of the use of steam from the boiler.
5. Plan to reduce spent wash generation within 6-8 KL/KL of alcohol produced.

6. Proposed effluent treatment system for grain based distillery (spent wash, spent lees, condensate and utilities) as well as domestic sewage and scheme for achieving zero effluent discharge (ZLD).
7. Proposed action to restrict fresh water consumption within 10 KL/KL of alcohol production.
8. Details about capacity of spent wash holding tank, material used, design consideration. No. of peizometers to be proposed around spent wash holding tank.
9. Action plan to control ground water pollution.
10. Details of solid waste management including management of boiler ash, yeast, etc.
11. Commitment to install dryer.
12. Action plan to control odour pollution.
13. Arrangements for installation of continuous online monitoring system (24x7 monitoring device)

B. Additional TOR

- i. Public hearing is exempted under section 7 (ii) of EIA Notification, 2006
- ii. A Copy of certified compliance report to the environmental conditions prescribed in the existing EC. Action taken report/ detailed action plan on the partly/non-compliance conditions reported by the MoEF&CC Regional Office.
- iii. Collection of 1 month data.

Public hearing is exempted under section 7 (ii) of EIA Notification, 2006. It was recommended that 'TORs' without 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.

3.4.6 Proposed expansion of existing plant (33 MT/Month to 50 MT/month) at Plot No. B-14, MIDC Chincholi, Taluka Mohol, District Solpaur, Maharashtra by M/s Sri Krishna Pharmaceuticals Limited- reg. 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 Synthetic Organic Chemicals Industry (bulk drugs and intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B' and appraised at State level Expert Appraisal Committee (I). However, due to applicability of General Condition w.r.t wildlife sanctuary (GIB sanctuary) within 5 km, the project is treated as 'A' category.

M/s Sri Krishna Pharmaceuticals Limited has proposed for expansion of existing plant at Plot No. B-14, MIDC Chincholi, Taluka Mohol, District Solpaur, Maharashtra. Ministry has issued EC vide letter no J-11011/916/2007-IA II(I) dated 07.02.2008. It is reported that the Great Indian Bustard is located within 5 km from the proposed project site. No national parks, Reserve Forest (RF)/ Protected Forests (PF), Biosphere Reserves, Tiger/Elephant Reserves, lies within 10 km distance.

Total plot area is 31,895.5 m² of which greenbelt will be developed in the area of 11,992 m² (38%). Cost of project is Rs. 37.5 Crore which includes existing and proposed expansion. Followings are existing and proposed products.

Sr. No.	Name of Products & by products	Existing Products Quantity MT/Month	Proposed Products Quantity MT/Month	Total MT/Month
1.	Folic Acid	--	40	40
2.	Domperidone	--	10	10
3.	CADS	18	--	18
4.	Lasamide	15	--	15
Total		33	50	83

Capacity of coal fires boiler will increase from 3TPH to 15TPH. In the existing facility multi cyclone dust collector has been installed and in the proposed boiler, bagfilter will be provided as a pollution control device. Solvent recovery system will be provided for toluene, acetone, xylene, methanol. Fresh water requirement will increase from 203 m3/day to 767 m3/day. Existing ETP will be scrapped. Under expansion project, it is proposed to install a new ETP in its premises. The effluent from existing and proposed activity shall be segregated in two streams. In Stream- I, wastewater shall be neutralized and then forwarded to MEE followed by Agitated Type Film Dryer (ATFD). Stream-II shall be given a biological treatment followed by R.O treatment. The R.O permeate would be used for cooling tower and the R.O reject shall be forwarded to MEE thereby achieving zero discharge. Committee suggested segregating high TDS/ COD and low TDS/ COD for treatment of waste water to achieve zero discharge. Spent carbon and ETP sludge will be sent to, disposal facility whereas spent acid will be sold authorized party. Boiler ash will be sold to brick manufacturer.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I (refer Ministry's web site) for preparation of EIA-EMP report:

A. Specific TOR:

- 1) Details on solvents to be used, measures for solvent recovery and for emissions control.
- 2) Details of process emissions from the proposed unit and its arrangement to control.
- 3) Ambient air quality data should include VOC, etc.,
- 4) Work zone monitoring arrangements for hazardous chemicals.
- 5) Detailed effluent treatment scheme including segregation of effluent streams for units adopting 'Zero' liquid discharge.
- 6) Action plan for odour control to be submitted.
- 7) Details of Incinerator alongwith pollution control device to be provided.
- 8) A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they co-process organic solid/hazardous waste generated.
- 9) Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
- 10) Action plan for utilization of MEE/dryers salts.
- 11) Material Safety Data Sheet for all the Chemicals are being used/will be used.
- 12) Authorization/Membership for the disposal of solid/hazardous waste in TSDF are being used/will be used.
- 13) Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
- 14) Risk assessment for storage and handling of hazardous chemicals/solvents. Action plan for handling & safety system to be incorporated.
- 15) Arrangements for ensuring health and safety of workers engaged in handling of toxic materials.

B. Additional TOR

- i. Public hearing is exempted as per para 7(i) III Stage (3)(i)(b) of EIA Notification, 2006 for preparation of EIA/EMP Report, being site is located in the Notified industrial area.
- ii. 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.
- iii. A copy of application submitted to NBWL seeking permission w.r.t GIB.

It was recommended that '**TORs**' **without 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.

3.4.7 Proposed expansion from 4500 TCD to 7500 TCD of existing sugar plant with 36 MW Cogeneration unit and establishment of 60 KLPD distillery with installation of incineration boiler to generate 3 MW power at Sy No 413 & 443 , Hirenandi Village, Gokak Taluk, Belgaum district, Karnataka by M/s Soubhagya Laxmi Sugars 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 along with the draft Term of References for the preparation of EIA-EMP. All molasses based distillery are listed at S.N. 5(g) (i) under category 'A' and appraised at Central level. The project is treated as integrated with sugar plant.

M/s Soubhagya Laxmi Sugars Ltd has Proposed expansion from 4500 TCD to 7500 TCD of existing sugar plant with 36 MW Cogeneration unit, establishment of 60 KLPD distillery with installation of incineration boiler to generate 3 MW power at Sy No 413 & 443 , Hirenandi Village, Gokak Taluk, Belgaum district, Karnataka. There is no National Park, Wildlife Sanctuary, Tiger/Elephant or Biosphere Reserve within the distance of 10km from the project site. As reported, Hanmapur reserved forest is located at 5.75 kms from the proposed site in NW direction.

Total Cost of proposed project is Rs. 252.5 Crore . Total 375 personal will be employed for the project. Plot area of the project is 429 acres, of which 33% will be developed as green belt.

In the Sugar and Co-generation plant, 2 boilers of 50 TPH and 100 TPH are provided and connected to ESP with common Chimney of 85 mt height. Additional boiler of 100 TPH has been proposed with ESP as pollution control device. In distillery plant 22 TPH incineration boiler will be connected with bag filter with stack of adequate height. To supplement the power, additional 1000 KVA DG set will be installed in addition to existing DG set of capacity 2x 625 KVA and 320 KVA.

Source of water is minor irrigation tank at Hanampur. Fresh water required for proposed project will increase from 984 m³/day to 2476 m³/day during off season. ETP capacity of sugar unit will be enhanced from 500 KLD to 1000 KLD. Spent wash from distillery will be

evaporated in MEE followed by incineration in 22 TPH boiler to achieve Zero Liquid discharge. Spentlee of 160 KLD and evaporated condensate will be treated and reuse in the process. No effluent will be discharged outside the industry premise.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I (refer Ministry's web site) for preparation of EIA-EMP report:

A. Specific TOR

- 1 List of existing distillery units in the study area along with their capacity and sourcing of raw material.
- 2 Number of working days of the distillery unit.
- 3 Details of raw materials such as molasses and their source with availability.
- 4 Details of the use of steam from the boiler.
- 5 Surface and Ground water quality around proposed spent wash storage lagoon, and compost yard.
- 6 Commitment for spent wash generation within 6-8 KL/KL of alcohol produced.
- 7 Proposed effluent treatment system for molasses/grain based distillery (spent wash, spent lees, condensate and utilities) as well as domestic sewage and scheme for achieving zero effluent discharge (ZLD).
- 8 Proposed action to restrict fresh water consumption within 10 KL/KL of alcohol production.
- 9 Details about capacity of spent wash holding tank, material used, design consideration.
- 10 No. of peizometers to be proposed around spent wash holding tank and composting yard.
- 11 Action plan to control ground water pollution.
- 12 Details of solid waste management including management of boiler ash, yeast, etc. Details of incinerated spent wash ash generation and its disposal.
- 13 Details of bio-composting yard (if applicable).
- 14 Action plan to control odour pollution.
- 15 Arrangements for installation of continuous online monitoring system (24x7 monitoring device).
- 16 Complete process flow diagram describing each unit, its processes and operations in production of sugar, alongwith material and energy inputs and outputs (material and energy balance).
- 17 Details on water balance including quantity of effluent generated, recycled & reused. Efforts to minimize effluent discharge and to maintain quality of receiving water body.
- 18 Details of effluent treatment plant, inlet and treated water quality with specific efficiency of each treatment unit in reduction in respect of all concerned/ regulated environmental parameters in respect of Sugar.
- 19 Number of working days of the sugar production unit.
- 20 Details of the use of steam from the boiler.
- 21 Details of proposed source-specific pollution control schemes and equipments to meet the national standards.
- 22 Collection, storage, handling and transportation of molasses,
- 23 Collection, storage and handling of bagasse and press mud.
- 24 Flyash management plan for coal based and bagasse and action plan
- 25 Details on surface/ground water quality parameters such as Temperature, Colour, pH, BOD, COD, Total Kjeldhal Nitrogen, Phosphates, Oil & Grease, Total suspended Solids, Total Coliform bacteria etc.

- 26 Details on existing ambient air quality and expected, stack and fugitive emissions for PM10, PM2.5, SO₂*, NO_x*, etc., and evaluation of the adequacy of the proposed pollution control devices to meet standards for point sources and to meet AAQ standards. (*-As applicable)

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. 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.
3. Five year plan of CSR activities drawn out of the Public hearing and included in EIA-EMP report.

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.

3.4.8 Proposed 30 KLPD (rectified spirit/ENA/Ethanol) molasses based Distillery plant with 1 MW plant Sy.No.37, Village & Post Jainapur, Taluka Chikodi, District Belagavi, Karnataka by M/s Om Sugars Limited- reg. 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 molasses based distillery are listed at S.N. 5(g) (i) under category 'A' and appraised at Central level.

M/s Om Sugars Limited has proposed for 30 KLPD (rectified spirit/ENA/Ethanol) molasses based Distillery plant with 1 MW plant Sy.No.37, Village & Post Jainapur, Taluka Chikodi, District Belagavi, Karnataka. It is reported that no national parks, wildlife sanctuaries, Reserve Forest (RF)/ Protected Forests (PF), Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. Raybag Branch Canal is at a distance of 5 km from the project site.

Total plot area is 19.35 Acres, of which 33% of the area will be earmarked for greenbelt. Cost of project is Rs. 52.38 Crore and out of this Rs. 5 Crore and Rs. 0.5 Crore has been earmarked towards capital cost and recurring cost per annum for Environmental Protection Measure. Products namely Extra Neutral Alcohol (ENA), Absolute alcohol and Rectified Spirit are proposed for expansion. Unit will be operational for 270 days. The distance between existing sugar plant and proposed distillery is 300 m.

Biomass/biogas boiler of 10 TPH capacity will be installed and connected with electrostatic precipitator as pollution control device to control particulate emission.

Fresh water requirement will be sourced from Doodganga river which 20 km away from the project site. Water requirement will be 610 m³/day. Spent wash generation will be 366 m³/day. Spent wash will be treated through bio-methanation, MEE followed by bio-composting. No effluent will be discharge outside the plant premises. Boiler ash will be used by farmers as manure in agriculture field. PP requested to commence for base line data from December 2015 to February 2016. The Committee recommended to collect season data rather month based data.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I (refer Ministry's website) for preparation of EIA-EMP report:

A. Specific TOR:

- 1 List of existing distillery units in the study area along with their capacity and sourcing of raw material.
- 2 Number of working days of the distillery unit.
- 3 Details of raw materials such as molasses and their source with availability.
- 4 Details of the use of steam from the boiler.
- 5 Surface and Ground water quality around proposed spent wash storage lagoon, and compost yard.
- 6 Commitment for spent wash generation within 6-8 KL/KL of alcohol produced.
- 7 Proposed effluent treatment system for molasses distillery (spent wash, spent lees, condensate and utilities) as well as domestic sewage and scheme for achieving zero effluent discharge (ZLD).
- 8 Proposed action to restrict fresh water consumption within 10 KL/KL of alcohol production.
- 9 Details about capacity of spent wash holding tank, material used, design consideration. No. of peizometers to be proposed around spent wash holding tank and composting yard.
- 10 Action plan to control ground water pollution.
- 11 Details of solid waste management including management of boiler ash, yeast, etc. Details of incinerated spent wash ash generation and its disposal.
- 12 Details of bio-composting yard.
- 13 Action plan to control odour pollution.
- 14 Arrangements for installation of continuous online monitoring system (24x7 monitoring device).
- 15 Complete process flow diagram describing each unit, its processes and operations in production of sugar, alongwith material and energy inputs and outputs (material and energy balance).
- 16 Details on water balance including quantity of effluent generated, recycled & reused. Efforts to minimize effluent discharge and to maintain quality of receiving water body.
- 17 Details of effluent treatment plant, inlet and treated water quality with specific efficiency of each treatment unit in reduction in respect of all concerned/ regulated environmental parameters in respect of Sugar.
- 18 Number of working days of the sugar production unit.
- 19 Details of the use of steam from the boiler.
- 20 Details of proposed source-specific pollution control schemes and equipments to meet the national standards.
- 21 Collection, storage, handling and transportation of molasses,
- 22 Collection, storage and handling of bagasse and press mud.

- 23 Flyash management plan for coal based and bagasse and action plan
- 24 Details on surface/ground water quality parameters such as Temperature, Colour, pH, BOD, COD, Total Kjeldhal Nitrogen, Phosphates, Oil & Grease, Total suspended Solids, Total Coliform bacteria etc.
- 25 Details on existing ambient air quality and expected, stack and fugitive emissions for PM10, PM2.5, SO₂*, NO_x*, etc., and evaluation of the adequacy of the proposed pollution control devices to meet standards for point sources and to meet AAQ standards. (*-As applicable)

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. Five year plan of CSR activities to be discussed in the Public hearing and drawn accordingly for inclusion in EIA-EMP report.

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.

3.4.9 Setting up of Bamboo based Bioethanol Project at Village Owguri Chapori Gaon, Tehsil Golaghat, adjacent to Numaligarh Refinery, Mouza- Morong, District Golaghat, Assam by M/s Numaligarh Refinery 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 along with the draft Term of References for the preparation of EIA-EMP. All Grain based distillery (> 60 KLPD) are listed at S.N. 5(g) (ii) under category 'A' and appraised at Central level.

M/s Numaligarh refinery Limited has proposed for setting up of Bamboo based Bioethanol Project at Village Owguri Chapori Gaon, Tehsil Golaghat, adjacent to Numaligarh Refinery, Mouza- Morong, District Golaghat, Assam. It is reported that there is no National Park, Wildlife Sanctuary within the distance of 10 km. However, Kaziranga National park and Garampani & Wildlife sanctuaries are situated at as aerial distance of 22.5 km north-west and 20 km south-east from the refinery boundary. Cost of the project is 800 Crore. Refinery plant area is 750 acre. As reported, about 300000 ton/annum of bamboo (on dry basis), which will be sourced from Assam and North East States. Following products as mentioned in PFR is given below:

Sr. No.	Name	Annual Capacity (tonnes/annum)
1.	Ethanol	49,000
2.	Acetic acid	11,000
3.	Furfural	19,000
4.	Lignin	0
5.	Biocoal(20 MJ/kg)	160,000

6.	Stillages (dry basis)	30,000
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Committee noted that PP has applied the above products under 4(a) category of EIA Notification, 2006 whereas such operations fall under 5(g). The Committee discussed the viability of the project w.r.t. availability of raw material, process involved, etc. PP could not explain satisfactory response and expressed that whole process is at conceptual stage. However, Committee agreed to award of TOR.

Water requirement for the project is around 600-700 m³/hr. Committee noted that waste water generation is not assessed properly. PP informed that small liquid volume from bio refining process will be treated in ETP of capacity 220 m³/hr. Residual biomass i.e. bio coal and stillage are combusted to generate energy for bio refinery. Gases such as NO_x and SO₂ will be controlled with adequate pollution control equipments. No specific information w.r.t. solid waste has been provided.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I (refer Ministry's Website) for preparation of EIA-EMP report:

A. Specific TOR:

1. Number of working days of the bio refinery unit.
2. Details of raw materials such as grains/ bamboos, their source with availability.
3. Details of the use of steam from the boiler.
4. Plan to reduce process waste water generation within 6-8 KL/KL of alcohol produced.
5. Proposed effluent treatment system for grain/bamboo based bio refinery (spent wash, spent lees, condensate and utilities) as well as domestic sewage and scheme for achieving zero effluent discharge (ZLD).
6. Proposed action to restrict fresh water consumption within 10 KL/KL of alcohol production.
7. Details about capacity of spent wash holding tank, material used, design consideration. No. of peizometers to be proposed around spent wash holding tank.
8. Action plan to control ground water pollution.
9. Details of solid waste management including management of boiler ash, yeast, etc.
10. Commitment to install dryer.
11. Action plan to control odour pollution.
12. Arrangements for installation of continuous online monitoring system (24x7 monitoring device)

B. Additional TOR

- i. 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.
- ii. Cumulative impact of air emissions from proposed unit along with Numaligarh Refinery on Kaziranga National Park in terms of SO₂, NO_x, and particulate matter to be assessed.

- iii. Actual availability of bamboos from market and storage management on site and off site.
- iv. Traffic management for raw material and product handling.

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

3.4.10 Proposed expansion from 60 KLD to 75 KLD by switching over from molasses to grain based distillery at Village Laukha, Tehsil & District Tarn Taran, Punjab by M/s Rana Sugar Limited (Distillery Division)- reg. 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 Grain based distillery (> 60 KLPD) are listed at S.N. 5(g) (ii) under category ‘A’ and appraised at Central level.

M/s Rana Sugar Limited (Distillery Division) has proposed for expansion from 60 KLD to 75 KLD by switching over from molasses to grain based distillery at Village Laukha, Tehsil & District Tarn Taran, Punjab Ministry vide letter no J-11011/9/2005-IA-II (I) dated 26.04.2005 has issued the Environmental Clearance. It is reported that no national parks, wildlife sanctuaries, Reserve Forest (RF)/ Protected Forests (PF), Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. Beas and Satluj River is flowing at a distance of 20 km from the project site. Total plot area is 35 acre out of which 33% area has been developed as greenbelt in the existing unit. Cost of proposed expansion is Rs. 6 Crore and total cost of project including existing plant is Rs. 41 crore. Following products will be manufactured:

S. No.	PARTICULAR	CAPACITY		
		Existing	Proposed	Total
1.	Rectified Spirit (KLD)	60 or	15	75
2.	Extra Neutral Alcohol (ENA) (KLD)	60 or	15	75
3.	Anhydrous Alcohol* (KLD)	60 or	15	75
4.	Liquified Carbon-dioxide (KLD)	30	13	43
5.	Captive Power Plant (MW)	1.6	Nil	1.6

In the existing plant spent wash so generated from distillery is being treated through evaporation through MEE after decanting and recycling. Wet cake and thick syrup is mixed and evaporated in a dryer and converted to DDGS which has to be sold as cattle feed. The rice husk boiler has been provided with multi-cyclones to maintain emission levels within specified limit

It is noted that PP is proposing to increase distillery capacity of existing molasses/ grain based distillery by 25% from 60 to 75 KLPD for grain route only while molasses capacity will remain same i.e. 60 KLPD. The proposal does not involve any increase in water consumption w.r.t. existing requirement and thereby no increase in effluent generation. The plant is based on zero liquid discharge. Further, no change in manufacturing process is

proposed. Since no additional water, steam and fuel, land will be required for 25% enhancement. At the request of PP the Committee exempted the Public Hearing under exempted under section 7 (ii) of EIA Notification, 2006 as increase in pollution load is insignificant.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I for preparation of EIA-EMP report:

A. Specific TOR:

1. List of existing distillery units in the study area along with their capacity and sourcing of raw material.
2. Number of working days of the distillery unit.
3. Details of raw materials such as grains, their source with availability.
4. Details of the use of steam from the boiler.
5. Plan to reduce spent wash generation within 6-8 KL/KL of alcohol produced.
6. Proposed effluent treatment system for grain based distillery (spent wash, spent lees, condensate and utilities) as well as domestic sewage and scheme for achieving zero effluent discharge (ZLD).
7. Proposed action to restrict fresh water consumption within 10 KL/KL of alcohol production.
8. Details about capacity of spent wash holding tank, material used, design consideration. No. of peizometers to be proposed around spent wash holding tank.
9. Action plan to control ground water pollution.
10. Details of solid waste management including management of boiler ash, yeast, etc.
11. Commitment to install dryer.
12. Action plan to control odour pollution.
13. Arrangements for installation of continuous online monitoring system (24x7 monitoring device)

B. Additional TOR

- i. Public hearing is exempted under section 7 (ii) of EIA Notification, 2006
- ii. A Copy of certified compliance report to the environmental conditions prescribed in the existing EC. Action taken report/ detailed action plan on the partly/non-compliance conditions reported by the MoEF&CC Regional Office.

Public hearing is exempted under section 7 (ii) of EIA Notification, 2006. It was recommended that 'TORs' without 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.

3.4.11 Expansion of Bulk Drugs & Drug intermediates (200.0 TPM) at Sy. No 75(A), Village Kothur , Bidar Road, Mandal Zaheerabad, District Medak, Telangana by M/s Deccan Remedies Limited- 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 along with the draft Term of References for the preparation of EIA-EMP. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located outside the

notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised by Expert Appraisal Committee (I).

M/s Deccan Remedies Limited has proposed for Expansion of Bulk Drugs & Drug intermediates (200.0 TPM) at Sy. No 75(A), Village Kothur, Bidar Road, Mandal Zaheerabad, District Medak, Telangana. The plant was established in the year 1996 vide CFE letter no 57/PCB/C.ESTT.RO-SRD/AEE-N/96-4348 dated 10.10.1996. As per Form-1 it is reported that no national parks, wildlife sanctuaries, Reserve Forest (RF)/ Protected Forests (PF), Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. During presentation it is reported that Zahirabad RF is at 0.77 km (S).

Total plot area is 31.8 acres out of which greenbelt will be developed on 10.9 acres of land. Total Cost of the project is Rs. 12.4 crore. Following are the details of products of existing and proposed expansion:

S.No	Product	Quantity TPM	Quantity in TPA
API's			
1	Guaifenesin	90.0	1080.0
2	Methocarbamol	55.0	660.0
3	Phenazopyridine HCl	5.0	60.0
4	Flucanazole	5.0	60.0
5	Mephensine	2.0	24.0
6	Mefenamic Acid	5.0	60.0
7	Chlorophenesine	2.0	24.0
8	Domperidone	4.0	48.0
9	Nitazoxanide	1.0	12.0
10	Melitracin HCl	0.5	6.0
11	Flupenithol	0.05	0.6
12	Ambroxil	7.45	89.4
	Total API's	177.0	2124.0
Intermediates			
13	1 - (3 - Chloropropyl)-2-Benzimidazolinone	5.0	60.0
14	1-Isopropyl-1,3-dihydro-2H-benzimidazol-2-one	2.0	24.0
15	2,4-Difluoro-alpha-(1H-1,2,4-triazolyl) acetophenone	8.0	96.0
16	2(2,4-Difluoro)-4-Amino-1H-1,2,4Trizoleacetophenone.HCl	5.0	60.0
17	3,3-dimethyl-2-benzofuran-1(3H)-one.	1.0	12.0
18	1- Phathalanol -3,3-dimethyl-1-Phenyl-1.	1.0	12.0
19	10,10-dimethylantracene-9(10H)-one	0.5	6.0
20	9-[3-(dimethylamino)propyl]-9,10-dihydro-10,10-dimethylantracene-9-ol	0.5	6.0
21	2-(Trifluoromethyl)thioxanthen-9-one	0.001	0.0
	Total Intermediates	23.0	276.0
	Total (API's + Intermediates)	200.0	2400.0

One boiler (Coal fired) having capacity 5 TPH will be installed and connected to bagfilter as pollution control device. Another boiler (Oil Fired) having 0.5 TPH capacity will be provided. DG set of 500 KVA will be provided along with Thermic fluid heater of 4×10^5 K.cal/hr. Process emission such as HCl, SO₂, Methyl iodide shall be scrubbed.

Fresh water requirement will be met from bore well which will increase upto 171.9m³/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. Process organic residue, solvent residue and spent carbon will be sent to TSDF/cement industries. Process Inorganic residue, evaporation salts and ETP sludge will be sent to TSDF. Fly ash will be sent to brick manufacturers.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure (Refer Ministry's web site) for preparation of EIA-EMP report:

A. Specific TOR:

1. Details on solvents to be used, measures for solvent recovery and for emissions control.
2. Details of process emissions from the proposed unit and its arrangement to control.
3. Ambient air quality data should include VOC, etc.,
4. Work zone monitoring arrangements for hazardous chemicals.
5. Detailed effluent treatment scheme including segregation of effluent streams for units adopting 'Zero' liquid discharge.
6. Action plan for odour control to be submitted.
7. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they co-process organic solid/hazardous waste generated.
8. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
9. Action plan for utilization of MEE/dryers salts.
10. Material Safety Data Sheet for all the Chemicals are being used/will be used.
11. Authorization/Membership for the disposal of solid/hazardous waste in TSDF are being used/will be used.
12. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
13. Risk assessment for storage and handling of hazardous chemicals/solvents. Action plan for handling & safety system to be incorporated.
14. Arrangements for ensuring health and safety of workers engaged in handling of toxic materials

B. Additional TOR

- i. 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.
- ii. Ground Level Concentration towards Reserve Forest to be assessed.

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.

3.4.12 Drilling of 11 wells & setting up of EPS in BB-ONN-2002/03 block at District Mahesana, Ahmedabad by M/s Gujarat State Petroleum Corporation 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 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 Gujarat State Petroleum Corporation Ltd. has Drilling of 11 wells & setting up of EPS in BB-ONN-2002/03 block at District Mahesana, Ahmedabad. As per Form-1, It is reported that no national parks, Reserve Forest (RF)/ Protected Forests (PF), Biosphere Reserves, Tiger/Elephant Reserves, etc. lies within 10 km distance. However, Thol Bird Sanctuary lies within 10 km radius. It is reported that as per Gazette notification dated 9th February 2015 defining eco sensitive zone, the project lies outside the zone. PP did not mention the exact distance of the site. Total cost of Rs. 198 Crores, out of which Rs. 5.8 crore has been earmarked towards Environmental Protection measures. PP did not mention status of existing EC and elaborate the compliance status of existing EC. The Committee noted that presentation is not satisfactory with full details of latitude and longitude. Area required for drilling will be approx. 15000 m² and production facility is 27000 m². In the proposal following are proposed;

- Drilling of 11 wells (5 development and 6 exploratory)
- Setting up EPS at well site: Commissioning of production of facilities at each well or any well site depending on oil & gas discovery to optimize the number of number of EPS location.
- Connection wells through underground 4 inch or 60 inches pipelines to nearest EPS depending on oil/gas discovery

Details of well location are given below;

Sr. No	Well Name	Latitude	Longitude
1	Proposed #3	23 ⁰ 2'20.37"N	72 ⁰ 25'14.22"E
2	Proposed #4	23 ⁰ 2'19.28"N	72 ⁰ 26'43.35"E
3	Proposed #5	23 ⁰ 2'19.47"N	72 ⁰ 25'56.54"E
4	Proposed #6	23 ⁰ 2'38.95"N	72 ⁰ 26'32.29"E
5	Proposed #7	23 ⁰ 1'43.69"N	72 ⁰ 26'3.74"E
6	Proposed #8	23 ⁰ 3'3.91"N	72 ⁰ 25'1.42"E
7	Pr#1	23 ⁰ 10'5.40"N	72 ⁰ 20'50.37"E
8	Pr#2	23 ⁰ 10'10.38"N	72 ⁰ 21'7.58"E
9	Pr#3	23 ⁰ 10'25.83"N	72 ⁰ 20'43.61"E
10	M1_D1	23 ⁰ 45'59.79"N	72 ⁰ 30'38.72"E
11	M6_Substitutue	23 ⁰ 45'49.18"N	72 ⁰ 30'4.92"E

Two numbers of D.G. sets (662.5 KVA) using HSD will be provided for drilling and one DG set of 82.5 KVA capacity will be use for production. Acoustic enclosures will be provided to D.G. sets.

About 40 m³/day of water will be required for drilling operation and domestic purposes. Against this 22 m³/day of wastewater will be generated. Waste water will be collected in impervious HDPE lined pits at site operation for drilling operation. Wastewater generated during production will be sent to the authorized Common Effluent Treatment for disposal. Precautionary measures will be taken as per The Hazardous Wastes (Management, Handling and Trans-boundary Movement) Amendment Rules, 2009 for drilling cutting, spent drilling mud and waste oil etc.

PP requested for exemption of public hearing as already public hearing conducted in the district. In view of the EPS facility making greater impact to environment, it was emerged to go for public hearing.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure (Refer Ministry's web site) for preparation of EIA-EMP report:

A. Standard TOR

1. Executive summary of a project.
2. Project description, project objectives and project benefits.
3. Cost of project and period of completion.
4. Site details within 1 km of the each proposed well, any habitation, any other installation/activity, flora and fauna, approachability to site, other activities including agriculture/land, satellite imagery for 10 km area. All the geological details shall be mentioned in the Topo sheet of 1:40000 scale, superimposing the well locations and other structures of the projects. Topography of the project site.
5. Details of sensitive areas such as National Park, Wildlife sanctuary and any other eco-sensitive area alongwith map indicating distance.
6. Approval for the forest land from the State/Central Govt. under Forest (Conservation) Act, 1980 as project involves forest land.
7. Distance from nearby critically/severely polluted area as per Notification, if applicable. Status of moratorium imposed on the area.
8. Does proposal involve rehabilitation and resettlement? If yes, details thereof.
9. Environmental considerations in the selection of the drilling locations for which environmental clearance is being sought. Present any analysis suggested for minimizing the foot print giving details of drilling and development options considered.
10. Baseline data collection for air, water and soil for one season leaving the monsoon season in an area of 10 km radius with centre of Oil Field as its centre covering the area of all proposed drilling wells.
11. Climatology and Meteorology including wind speed, wind direction, temperature rainfall relative humidity etc.
12. Details of Ambient Air Quality monitoring at 8 locations for PM_{2.5}, PM₁₀, SO₂, NO_x, CO, VOCs, Methane and non-methane HC.
13. Soil sample analysis (physical and chemical properties) at the areas located at 5 locations.
14. Ground and surface water quality in the vicinity of the proposed wells site.
15. Measurement of Noise levels within 1 km radius of the proposed wells.
16. Vegetation and land use; flora/fauna in the block area with details of endangered species, if any.
17. Incremental GLC as a result of DG set operation, flaring etc.
18. Potential environmental impact envisaged during various stages of project activities

- such as site activation, development, operation/ maintenance and decommissioning.
19. Actual source of water and 'Permission' for the drawl of water from the Competent Authority. Detailed water balance, wastewater generation and discharge.
 20. Noise abatement measures and measures to minimize disturbance due to light and visual intrusions.
 21. Details on wastewater generation, treatment and utilization /discharge for produced water/ formation water, cooling waters, other wastewaters, etc. during all project phases.
 22. Details on solid waste management for drill cuttings, drilling mud and oil sludge, produced sand, radio active materials, other hazardous materials, etc. including its disposal options during all project phases.
 23. Disposal of spent oil and lube.
 24. Storage of chemicals and diesel at site. Hazardous material usage, storage and accounting.
 25. Commitment for the use of water based mud (WBM) only
 26. Oil spill emergency plans for recovery/ reclamation.
 27. H2S emissions control.
 28. Produced oil/gas handling, processing and storage/transportation.
 29. Details of control of air, water and noise pollution during production phase.
 30. Measures to protect ground water and shallow aquifers from contamination.
 31. Whether any burn pits being utilised for well test operations.
 32. Risk assessment and disaster management plan for independent reviews of well designed construction etc. for prevention of blow out. Blowout preventer installation.
 33. Environmental management plan.
 34. Total capital and recurring cost for environmental control measures.
 35. Emergency preparedness plan.
 36. Decommissioning and restoration plans.
 37. Documentary proof of membership of common disposal facilities, if any.
 38. Details of environmental and safety related documentation within the company including documentation and proposed occupational health and safety Surveillance Safety Programme for all personnel at site. This shall also include monitoring programme for the environmental.
 39. A copy of Corporate Environment Policy of the company as per the Ministry's O.M. No. J-11013/41/2006-IA.II(I) dated 26th April, 2011 available on the Ministry's website.
 40. Any litigation pending against the project and or any direction/order passed by any court of law against the project. If so details thereof.

B. Additional TOR

- i. 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.
- ii. A separate chapter on status of compliance of Environmental Conditions granted by 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.

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

draft EIA/EMP report 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.

3.4.13 Expansion of distillery (from 50KLPD to 130 KLPD) at Khasra no. 262/1, Village Sejwaya, Lebad Chowki, Ghatabillod, Tehsil & District Dhar, Madhya Pradesh by M/s Great Galleon 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 along with the draft Term of References for the preparation of EIA-EMP. All Grain based distillery (> 60 KLPD) are listed at S.N. 5(g) (ii) under category 'A' and appraised at Central level.

M/s Great Galleon Ltd. has proposed for expansion of 80 KLPD distillery at Khasra no. 262/1, Village Sejwaya, Lebad Chowki, Ghatabillod, Tehsil & District Dhar, Madhya Pradesh. The existing distillery as established in year 1985 before first EIA Notification issued in 1994. Industry has been in operation on the basis of consent to operate by SPCB since that period. Now company is proposing expansion of additional capacity with 80 KLPD.

After deliberation, the Committee observed that fresh water for the proposed expansion will be sourced through tanker from the local municipality which is far away from the project site. The Committee suggested to lay a pipeline in place of tanker to reduce traffic congestion on which PP did not agreed. Therefore, due to scarcity of water on the project site and its vicinity, the Committee did not agree with the exiting proposal and advised to explore adequate method for sourcing fresh water.

3.5 Any other

3.5.1 Expansion of Chemical Manufacturing Unit at Survey No.114/115 P, Village: JAHAJ, Dharmaj - Khambhat Road, Taluka Khambhat, District Anand, Gujarat by M/s Nisol Manufacturing Company Private Limited –reg. reconsideration of 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 Synthetic Organic Chemicals Industry (Bulk drug and intermediate) located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised by Expert Appraisal Committee (I).

M/s Nisol Manufacturing Company Private Limited has proposed for Expansion of Chemical Manufacturing Unit at Survey No.114/115 P, Village: JAHAJ-388580, Dharmaj - Khambhat Road, Taluka Khambhat, District Anand, Gujarat. Ministry has issued the Environmental Clearance vide letter no. J-11011/1280/2007-IA II(I) dated 22.12.2008.

The project was first considered in 40th and 44th EAC meeting held during 18-19th May 2015 and 20-21st July 2015 respectively. The Committee noted that there is no involvement of synthesis during the process except extraction. Though the earlier Committee has recommended such type of project for EC but now it is clear that only extraction step is involved in the process rather than synthesis. Therefore, the Committee recommended that since no synthesis is involved, proposal may be exempted from EC process. However, competent authority did not agree with the recommendation as the similar proposal had earlier obtained EC. Therefore, the proposal again referred to the Committee.

As reported in Form-1, no national parks, wildlife sanctuaries, Protected Forests (PF), Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. Total 46450 sq. meter land area is available at site; out of this area about 20000 sq. meter (43.05 %) area will be developed as greenbelt and other forms of greenery. Total cost for proposed expansion is Rs. Rs. 10.00 crore, out of which Rs. 40.00 lakh will be invested on pollution control measures. Following will be manufactured

S.No.	Name of products	Capacity (MTPM)		
1.	Nicotine sulphate	50	50	100
2.	Spent tobacco dust	2064	6436	8500

Power requirement will increase from 50 KVA to 250 KVA which will be sourced from MGVCL. Capacity of DG set will increase from 50KVA to 150 KVA using diesel.

Fresh water requirement will increase from 2.7 m³/day to 141 m³ /day which will be met through bore well and tanker. The wastewater generation will be 63 m³ /day, out of which, 45.0 m³ /day from process & washing will be reused back in process, 5.0 m³ /day from RO used in flushing purpose & garden and 13.0 m³ /day Domestic Wastewater will be disposed off in septic tank & soak pit.

Discarded Bag / Plastic Gunny bag will be Collected, Stored, transported as per Hazardous waste management rules and finally be disposed by selling to authorized recycler. Used oil will be sold to the authorized dealer.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I (as referred on Ministry's web site) for preparation of EIA-EMP report.

A. Specific TOR

- 1 Details on solvents to be used, measures for solvent recovery and for emissions control.
- 2 Details of process emissions from the proposed unit and its arrangement to control.
- 3 Ambient air quality data should include VOC, other process-specific pollutants* like NH₃*, chlorine*, HCl*, HBr*, H₂S*, HF*, etc., (* - as applicable)
- 4 Work zone monitoring arrangements for hazardous chemicals.
- 5 Detailed effluent treatment scheme including segregation of effluent streams for units adopting 'Zero' liquid discharge.
- 6 Action plan for odour control to be submitted.
- 7 A copy of the Memorandum of Understanding signed with cement

- manufacturers indicating clearly that they co-process organic solid/hazardous waste generated.
- 8 Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
 - 9 Action plan for utilization of MEE/dryers salts.
 - 10 Material Safety Data Sheet for all the Chemicals are being used/will be used.
 - 11 Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
 - 12 Details of incinerator if to be installed.
 - 13 Risk assessment for storage and handling of hazardous chemicals/solvents. Action plan for handling & safety system to be incorporated.
 - 14 Arrangements for ensuring health and safety of workers engaged in handling of toxic materials.

B. Additional TOR

- i 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.
- ii A Copy of certified compliance report to the environmental conditions prescribed in the existing EC. Action taken report/ detailed action plan on the partly/non-compliance conditions reported by the MoEF&CC Regional Office.
- iii ZLD system to be adopted with reuse-recycling of wastewater.

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

3.5.2 Setting up of Nicotine Sulphate plant (60 MTPM) at Survey No.210, Opp.The H.M.Patel Eng. Medium School, Village: Vadadla, Tahsil Petlad, District Anand , Gujarat by M/s. Nisol Manufacturing Company Private Limited (Unit-II). -reg. reconsideration of 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 Synthetic Organic Chemicals Industry (Bulk drug and intermediate) located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised by Expert Appraisal Committee (I).

M/s. Nisol Manufacturing Company Private Limited (Unit-II) has proposed Setting up of Nicotine Sulphate plant (60 MTPM) at Survey No.210, Opp.The H.M.Patel Eng. Medium School, Village: Vadadla, Tahsil Petlad, District Anand , Gujarat

The project was first considered in 40th and 44th EAC meeting held during 18-19th May 2015 and 20-21st July 2015 respectively. The Committee noted that there is no involvement of synthesis during the process except extraction. Though the earlier Committee has recommended such type of project for EC but now it is clear that only extraction step is involved in the process rather than synthesis. Therefore, the Committee recommended that since no synthesis is involved, proposal may be exempted from EC process. However, competent authority did not agree with the recommendation as the similar proposal had earlier obtained EC. Therefore, the proposal again referred to the Committee.

As reported in Form-1, no national parks, wildlife sanctuaries, Protected Forests (PF), Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. Total 14500 sq. meter land area is available at site; out of this area about 5000 sq. meter (34 %) area will be developed as greenbelt and other forms of greenery. Total cost for proposed expansion is Rs. Rs. 10.00 crore, out of which Rs. 40.00 lakh will be invested on pollution control measures. Following will be manufactured

S. No.	Name of product	Capacity (MTPM)
1.	Nicotine sulphate	60
2.	Spent tobacco dust	2500
		2560

Power requirement will be 200 KVA which will be sourced from MGVCL. Capacity of DG set shall be 200 KVA using diesel as a stand by.

Total water requirement will be 55 m³ /day which will be met through bore well and tanker. The wastewater generation will be 22 m³ /da. Out of this quantity of 10.0 m³ /day from process & washing will be reused back in process and 12.0 m³ /day Domestic Wastewater will be disposed off in septic tank & soak pit.

Discarded Bag / Plastic Gunny bag will be Collected, Stored, transported as per Hazardous waste management rules and finally be disposed by selling to authorized recycler. Used oil will be sold to the authorized dealer.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I (as referred on Ministry's web site) for preparation of EIA-EMP report.

A. Specific TOR

1. Details on solvents to be used, measures for solvent recovery and for emissions control.
2. Details of process emissions from the proposed unit and its arrangement to control.
3. Ambient air quality data should include VOC, other process-specific pollutants* like NH₃*, chlorine*, HCl*, HBr*, H₂S*, HF*, etc., (* - as applicable)
4. Work zone monitoring arrangements for hazardous chemicals.
5. Detailed effluent treatment scheme including segregation of effluent streams for units adopting 'Zero' liquid discharge.
6. Action plan for odour control to be submitted.
7. A copy of the Memorandum of Understanding signed with cement manufacturers

- indicating clearly that they co-process organic solid/hazardous waste generated.
8. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
 9. Action plan for utilization of MEE/dryers salts.
 10. Material Safety Data Sheet for all the Chemicals are being used/will be used.
 11. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
 12. Details of incinerator if to be installed.
 13. Risk assessment for storage and handling of hazardous chemicals/solvents. Action plan for handling & safety system to be incorporated.
 14. Arrangements for ensuring health and safety of workers engaged in handling of toxic materials.

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. ZLD system to be adopted with reuse-recycling of wastewater.

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

19th January, 2015 (Day 2)

3.6 Environmental Clearance

3.6.1 Development Drilling of (406 nos.) of wells in oil Field of Ahmedabad Asset at Kheda, Gandhinagar and Ahmedabad District of Gujarat by M/s ONGC- reg 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 34th & 28th Meeting of the Expert Appraisal Committee (Industry) held during 13th-14th April, 2015 & 1st-2nd December, 2014 respectively for preparation of EIA-EMP report. All the Offshore and Onshore oil and gas exploration, development and production projects are listed at S.N. 1(b) under Category 'A' and appraised at the Central level.

M/s ONGC has proposed for development drilling of (406 nos.) of wells in oil Field of Ahmedabad Asset at Kheda, Gandhinagar and Ahmedabad District of Gujarat. Ahmedabad Asset is one of the major onshore Asset of ONGC operating in four revenue districts of Gujarat. Operation area of Ahmedabad Asset is divided four areas, area I to area IV. Area I and area III are geographically located in Mehsana and Gandhinagar Districts, while area II and area IV are falling within Kheda, Ahmedabad and Gandhinagar Districts. Operational areas for the Ahmedabad Asset include a Mining Lease (ML) area of 1649.917 Km². The Asset currently produces approximately 3725 TPD of crude oil and 5.8 Lakh m³ of natural gas on a daily basis. Mining Leases of Area II & IV of the Ahmedabad Asset are spread over three districts covers: Four Taluka of Ahmedabad District; Three Taluka in Gandhinagar District; Seven Taluka of Kheda District. Existing CTF, GGSs, EPS, GCP, water injection well and ETPs within area II and area IV are located. It is reported that no forest land is involved in the proposed project. Thol lake bird sanctuary is present within study area, ONGC will not drill any well in the ecosensitive zone of the Thol Lake Bird Sanctuary. However, the Committee noted that PP has not mentioned the distance of Thole Lake Bird Sanctuary from the proposed drilling site. Sabarmati, Khari, Meswo&Vatrak River are flowing through the study area. Cost of project is Rs. 1752 Crores. Depth of drilling wells will be in the range of 800 m to 2000m.

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 10 locations during summer season 2013 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (46 µg/m³ to 98 µg/m³), PM_{2.5} (24 µg/m³ to 57 µg/m³), SO₂ (8.0 µg/m³ to 10.4 µg/m³) and NO_x (10.0 µg/m³ to 31.6 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.54323 µg/m³, 0.54323 µg/m³ and 58.406 µg/m³ with respect to PM, SO₂ and NO_x. The resultant concentrations are within the NAAQS. Adequate stack height with acoustic enclosure will be provided to DG set. Total fresh water requirement for drilling activity will be 35 m³/day. Water based mud (fluid) will be used for drilling operation. Main constituents of the fluid are Bentonite and barites, both of which are natural minerals. Wastewater generation will be 9 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.

During development operation, produced water generated during processing of crude oil at existing GGS/EPS will be treated in the associated ETP. After flow of newly drilled wells, the burden of about 70 m³/day will be added. As a result, the total quantity of effluent generation in area II & IV will rise to 1500 m³/day. Present treatment capacity of ETP in area

II and IV is 2600 m³/day. Present treatment capacity of all ETPs of Ahmedabad Assets is 11600 m³/day.

The Committee also discussed the compliance status report dated 6th July, 2015 on the conditions stipulated in the existing environmental clearance, which were monitored by the Ministry's Western regional office, Bhopal. It is reported that most of the conditions are being complied and certain conditions are partially complied and non complied. However, PP agreed to comply with the partially complied condition and non complied conditions as reported by the Regional Office.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 4th July, 2015 for Gandhi Nagar District; on 8.07.2015 for Kheda District; on 07.07.2015 for Ahmedabad. The issues were raised regarding land acquisition, payment against the land lease; anticipation regarding oil spillage; local employment; pipeline replacement; Overflow of contaminated water in the agriculture area; etc. The Committee took the matter seriously and advised them to use latest pollution control equipment with proper monitoring system. After detailed deliberation, 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 found the final EIA/EMP report adequate and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i. The environmental clearance is subject to obtaining prior clearance from Wildlife angle including clearance from the Standing Committee of the National Board for Wildlife as applicable.
- ii. Gas produced during testing shall be flared with appropriate flaring booms. The flare system shall be designed as per good oil field practices and Oil Industry Safety Directorate (OISD) guidelines. The stack height shall be provided as per the regulatory requirements and emissions from stacks will meet the MOEF/CPCB guidelines.
- iii. 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.
- 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 from ground water source shall not exceed 35 m³/day/well and prior permission should be obtained from the Competent Authority.
- 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. No effluent/drilling mud/drill cutting shall be discharged/disposed off into nearby surface water bodies.
- xi. Produced water (1500 m³/day) shall be treated in ETP. Treated produced water shall be disposed off through injection well as per CPCB/MoEF guidelines.
- xii. Good sanitation facility shall be provided at the drilling site. Domestic sewage shall be disposed off through septic tank/ soak pit.
- xiii. Oil spillage prevention and mitigation 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.
- xiv. 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.
- xv. 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.
- xvi. 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.

- xvii. 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 Bhopal.
- xviii. Blow Out Preventor (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.
- xix. Emergency Response Plan (ERP) shall be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- xx. 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 the area 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.
- xxi. All the commitments made to the public during public hearing/public consultation meeting held on 4thJuly, 2015 for Gandhi Nagar District; on 8.07.2015 for Kheda District; on 07.07.2015 for Ahmedabad district shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xxii. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing Issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.
- 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 (for exploratory drilling) is established, the Company shall prepare a detailed plan for development of oil and gas fields and obtain fresh environmental clearance from the Ministry.
- xxv. Restoration of the project site shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office at Bhopal.
- xxvi. 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.
- xxvii. 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.

- xxviii. Company shall have own Environment Management Cell having qualified persons with proper background.
- xxix. 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. Remote monitoring of site should be done.
- xxx. On completion of drilling, the company has to plug the drilled wells safely and obtain certificate from environment safety angle from the concerned authority.

3.6.2 Exploratory Drilling of 22 Nos. of Wells in NELP-IX Blacks GEI-ONN- 201011 ,CB-ONN-201 0/6 &CB-ONN-201019 at Banaskantha, Gandhinagar and Ahmedabad District , Gujarat by M/s ONGC Ltd – reg 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 12th Meeting of the Expert Appraisal Committee (Industry) held during 30th September, 2013-1st October, 2013 for preparation of EIA-EMP report. All the Offshore and Onshore oil and gas exploration, development and production projects are listed at S.N. 1(b) under Category 'A' and appraised at the Central level.

M/s ONGC Ltd. has proposed for exploratory drilling of 22 Nos. of Wells in NELP-IX Blocks CB-ONN-2010/1, CB-ONN-2010/6 & CB-ONN-2010/9 at Banaskantha, Gandhinagar and Ahmedabad Districts, Gujarat. Blocks CB-ONN-2010/1, 6 & 9 are awarded under NELP-IX bidding. Blocks are part of Cambay basin. Area of blocks CB-ONN-2010, 6 & 9 are 782, 39 and 120 km². Blocks are located in Banaskantha, Gandhinagar and Ahmedabad Districts. PSC was signed in March, 2012. PEL was signed in March, 2013. Total cost of project is Rs. 350 Crore. It is reported that no forest land /national park/ wildlife sanctuary/reserve forest/eco-sensitive and CRZ area located in area of interest. Well will be drilled upto depth of 3000 m. Following wells will be drilled:

S.N.	Name of Block	Area of Block	Wells already Drilled	Wells proposed to be drilled	Target depth of wells in meter
1	CB-ONN-2010/1	782	2	10	3000
2	CB-ON-2010/6	39	5	7	2500
3	CB-ONN-2010/9	120	3	5	2500

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 10 locations during summer season 2013 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (46 µg/m³ to 98 µg/m³), PM_{2.5} (24 µg/m³ to 57 µg/m³), SO₂ (8.0 µg/m³ to 10.4 µg/m³) and NO_x (10.0 µg/m³ to 31.6 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.54323 µg/m³, 0.54323 µg/m³ and 58.406 µg/m³ with respect to PM, SO₂ and NO_x. The resultant concentrations are within the NAAQS. Adequate stack height with acoustic enclosure will be provided to DG set. Total fresh water requirement for drilling activity will be 35 m³/day. Water based mud (fluid) will be used for

drilling operation. Wastewater generation will be 3m³/day. Drill cuttings (150-200 MT/Well) will be generated. 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 the authorized recyclers. Spent oil will be sent to authorized recyclers/ re-processors.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 6th June, 2015 for Gandhi Nagar District; on 17.06.2015 for Banaskantha District; on 19.06.2015 for Ahmedabad. The issues were raised regarding land compensation, dust emission due to vehicular movement; local employment; CSR funds etc. After detailed deliberation, 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 found the final EIA/EMP report adequate and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i. This EC is only for Exploratory Drilling. In case Development Drilling is to be done in future, prior clearance must be obtained from the Ministry.
- ii. Ambient air quality should be monitored near the closest human settlements as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for PM10, PM2.5, SO2, NOX, CO, methane & Non-methane HC etc.
- 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 should be provided as per CPCB guidelines.
- vi. Total water requirement shall not exceed 35 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 and land. Separate drainage system shall be created for oil contaminated and non-oil contaminated water. 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 company have to plug the drilled wells safely and obtain certificate from environment safety angle from the concerned authority.
- xv. Blow Out Preventer (BOP) system shall be installed to prevent well blowouts during drilling operations. BOP measures during drilling shall focus on maintaining well bore hydrostatic pressure by proper pre-well planning and drilling fluid logging etc.
- xvi. Emergency Response Plan (ERP) shall be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- xvii. The company shall take measures after completion of drilling process by well plugging and secured enclosures, decommissioning of rig upon abandonment of the well and drilling site shall be restored to the original condition. In the event that no economic quantity of hydrocarbon is found a full abandonment plan shall be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations.
- xviii. All the issues raised during the public hearing/consultation meeting held on 6th June, 2015 for Gandhi Nagar District; on 17.06.2015 for Banaskantha District; on 19.06.2015 for Ahmedabad shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- 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 Shillong.
- 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 Shillong.
- xxiv. 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.
- 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. A social audit shall be carried out for the whole operation area with the help of reputed institute like Madras Institute of Social Science etc.
- xxvii. All personnel including those of contractors should be trained and made fully aware of the hazards, risks and controls in place.
- xxviii. Company shall have own Environment Management Cell having qualified persons with proper background.
- xxix. 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.

3.6.3 Construction of Additional Storage Tanks in existing terminal at Port Exim Park Area, Visakhapatnam, Andhra Pradesh by M/s East India Petroleum Pvt. Ltd. – reg EC.

The project proponent and their consultant (M/s Development Consultants Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 28th& 36th Meeting of the Expert Appraisal Committee (Industry) held during 1st-2nd December, 2014 and 16th-17th March, 2015 respectively for preparation of EIA-EMP report. All isolated storage & handling of hazardous chemicals are listed at S.N. 6(b) under category 'B' and appraised at state level. However, the project proposal is treated under category 'A' project due to applicability of general condition i.e. location of project is within CPA " Visakhapatnam".

M/s East India Petroleum Pvt. Ltd has proposed for construction of Additional Storage Tanks in existing terminal at Port Exim Park Area, Visakhapatnam, Andhra Pradesh. The Proposed expansion will be within existing terminal area of 50 acres land leased from Visakhapatnam Port Trust and no new land requirement is envisaged. The total land (including the land required for proposed expansion) is under possession of EIPL under long lease from Visakhapatnam Port Trust. Cost of project is Rs. 66.64 Crore. It is reported that no areas protected under international conventions, national or local legislation for their ecological, landscape, cultural and other related value are located within 20 km from project site.

M/s EIPL proposes to build two numbers of MS Tanks of diameter 23 m and 20 m height to store Fire Water for 100% replacement of existing Earthen Reservoir for total prevention of water losses. The total capacity of proposed water tanks shall be 16,626 KL which will be of 63% excess than existing reservoirs capacity. EIPL proposes to build additional storage tanks and associated facilities in existing area to meet future business development requirements since there is a huge demand of storage space for storage of Petroleum Products and Liquid chemicals in Vizag Port for upcoming Pharma based industries and Public Sector companies in and around Visakhapatnam. The proposed project is an expansion project of the existing terminal with existing storage capacity 70,000 KL of Petroleum Products, 39,274 KL of Crude palm oil & Bio Diesel products and 9000 MT of LPG. After expansion, the combined storage capacity of different Petroleum products and Liquid Chemicals will be of 1, 66,601 KL and 9,000 MT of LPG as per the following table:

Name of Product	Existing Capacity (asper existing EC/CFE)	Proposed Capacity Expansion	Total Capacity after Expansion	Remarks
Petroleum Products and Liquid Chemicals	70,000 kL	57,327 kL	1,27,327 kL	New proposed tanks-15 no's
Conversion service of tanks of the existing Crude Palm oil & Bio diesel Products to store Petroleum Products & Liquid Chemicals	39,274 kL	-	39,274kL	Existing 8 no. of tanks will be utilized for conversion
Total Capacity after expansion			1,66,601kL	-
LPGStorage	9,000MT	NIL	9,000 MT	No Expansion

The Terminal has facilities for receipt, storage, handling and dispatch of different petroleum products, Bio fuels and LPG. The terminal is capable of receiving /dispatching products through pipeline/tank trucks. No chemical process is involved in the operations of the Terminal. Details of the expansion is as follows:

1. 2 x 23m dia x 20m height MS Storage Tanks for fire water storage for 100% replacement of existing earthen reservoir.

2. The Fire Water Pump house (10m x 41m) will be shifted to new location near to the above MS Tanks.
3. 3 no's x 16 m dia x 15m height MS Storage Tanks (Cone cum Float with IFR) for storage of Petroleum products and Liquid chemicals.
4. 12 no's x 16m dia x 20m height MS Storage Tanks (Cone cum Float with IFR) for storage of Petroleum products and Liquid chemicals.
5. 8 Bay Loading Gantry (40m x 10m) for Tank Truck loading.
6. Pump house (23m x 10m) for loading pumps installation.
7. Process Control Room of size 10m x 10m
8. Administrative Block of size 16m x 8m
9. Maintenance and Stores Building of size 10m x 10m
10. Conversion service of tanks of the existing Crude Palm oil & Bio diesel Products to store Petroleum Products & Liquid Chemicals (Tanks 117 to 124).

Additionally, PP informed the Committee that ambient air quality monitoring was carried out at 6 locations during January 2014-April, 2015 and submitted baseline data indicates that ranges of concentrations of PM10 (72.8 µg/m³ to 132 µg/m³), PM2.5 (30.2 µg/m³ to 68.2 µg/m³), SO₂ (7.1 µg/m³ to 26.2 µg/m³) and NO_x (21.5 µg/m³ to 58.2 µg/m³) respectively. PP informed that high concentration of PM10 in monitoring area can be attributed to existence of open pulverised coal dump located in VPT land opposite to the main gate of EIPL. The resultant concentrations are within the NAAQS except PM10. Fresh water requirement from Greater Visakhapatnam Municipal Corporation will increase from 27 m³/day to 29 m³/day after expansion. Wastewater generation will be increased from 7.3 to 9.3 m³/day after expansion and treated in the ETP. Existing ETP will be upgraded by introducing a bio-ETP. Storm water will be passed through oil interceptor. Bottom sludge will be collected in the secured, covered impermeable sludge pit located within terminal.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 28th August, 2015. The issues were raised regarding female employment; safety; CSR policy; greenbelt development; etc. After detailed deliberation, the Committee noted that issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

After deliberation, the Committee sought following additional information:

- (i) Confirm the implementation of the suggestions made by the MB Lal Committee in the existing storage tanks. A report from reputed Consultants to be submitted.

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

3.6.4 Proposed expansion of pesticide (25 MTPM to 345 MTPM) unit at Plot no. A-2/2214 & 2215, 3rd phase, GIDC Vapi, District Valdad, Gujarat by M/s Heranba Industries Limited (Unit-II)- reg EC.

The project proponent and their consultant (M/s Eco-Chem Sales & Services) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 30th Meeting of the Expert Appraisal Committee (Industry) held during 22nd – 23rd December, 2014 for preparation of EIA-EMP report. All technical grade pesticides and pesticide specific intermediates are listed at S.N. 5(b) under category 'A' and appraised at Central level.

M/s Heranba Industries Limited (Unit-II) has proposed for expansion of pesticide (25 MTPM to 345 MTPM) unit at Plot no. A-2/2214 & 2215, 3rd phase, GIDC Vapi, District Valdad, Gujarat.Total plot area is 3584.8 m². Out of which, area earmarked for greenbelt is 1185 m². It is reported that no national parks, wildlife sanctuaries etc are located within 10 km distance. Daman Ganga river is flowing at a distance of 5 km. Following products will be manufactured:

S.N.	Product	MTPM		
		Existing	Proposed Additional	Total after proposed expansion
1	Cypermethric Acid Chloride	10	170	180
2	Cypermethrin technical	5	95	100
3	Alpha Cypermethrin technical	5	55	60
4	Permethrin technical	5	0	5
	Total	25	320	345
	By-products			
1	Ammonium Chloride Powder (85%)	5.08	86.36	91.44
2	Sodium Sulphite Powder (80%)	22.4	380.8	4.3.2
3	Hydro Chloric Acid solution (80%)	18.765	290.7	309.465
4	Sodium Sulphate powder (80%)	17.22	292.74	309.96

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 6 locations during December, 2014 – February, 2015 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (85.2 µg/m³ to 97.8 µg/m³), PM_{2.5} (41.8 µg/m³ to 57.7 µg/m³), SO₂ (27.8 µg/m³ to 36.2 µg/m³) and NO_x (36.6 µg/m³ to 47.7 µg/m³) respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.17 µg/m³, 0.32 µg/m³ and 0.11µg/m³with respect to PM₁₀, SO₂ and NO_x.Two stage water scrubber followed by alkali will be provided to control process emissions viz. HCl& SO₂. Stack of adequate height will be provided to additional furnace/natural gas fired boiler.

The fresh water requirement will increase from 82.8 m³/day to 217 m³/day after expansion, which shall be provided by GIDC Vapi from the river Damanganga. Wastewater

generation will be increased from 50 m³/day to 120.18 m³/day after expansion. Effluent will be segregated into high TDS/COD effluent stream and low TDS/COD effluent stream. High TDS/COD effluent stream will be evaporated in the MEE. Low TDS/COD effluent stream will be treated in ETP comprising primary, secondary and tertiary treatment units and thereafter treated effluent confirming the treated water discharge norms laid by GPCB will be sent to CETP for final treatment. Final effluent from CETP at GIDC will be disposed to Arabian Sea through Vapi Effluent Channel line. ETP sludge, process residue and MEE salt will be sent to TSDF for landfill. Used oil, discarded container and Spent catalyst or spent oil will be sent to the authorized recycler/re-processors.

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

- i. National Emission Standards for Pesticide Manufacturing and Formulation Industry issued by the Ministry vide G.S.R. 46(E) dated 3rd February, 2006 and amended time to time shall be followed by the unit.
- ii. Stack of adequate height shall be provided to furnace/gas fired boiler to control particulate emissions.
- iii. Scrubber shall be provided to control process emissions viz. HCl & SO₂. The scrubbed water should be sent to ETP for further treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. Scrubbers vent shall be provided with on-line detection and alarm system to indicate higher than permissible value of controlled parameters. At no time, the emission levels shall go beyond the prescribed standards. The system should be interlocked with the pollution control equipments so that in case of any increase in pollutants beyond permissible limits, plant should be automatically stopped.
- iv. Chilled brine circulation system should be provided to condensate solvent vapors and reduce solvent losses. It should be ensured that solvent recovery should not be less than 95%.
- v. Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits stipulated by GPCB.
- vi. All necessary steps should be taken for monitoring of chlorine, HCl and HBr as well as VOCs in the proposed plant.
- vii. A proper Leak Detection and Repair (LDAR) Program for pesticide industry shall be prepared and implemented as per the CPCB guidelines.

- viii. Alarm for chlorine leakage if any in the liquid chlorine storage area is provided alongwith automatic start of the scrubbing system.
- ix. Total water requirement from GIDC water supply should not exceed 217 m³/day and prior permission should be obtained from the Competent authority.
- x. Effluent generation shall not exceed 120.18 m³/day and segregated into High COD/TDS and Low COD/TDS effluent streams. Effluent will be segregated into high TDS/COD effluent stream and low TDS/COD effluent stream.High TDS/COD effluent stream will be evaporated in the MEE. Low TDS/COD effluent streamwill be treated in ETP comprising primary, secondary and tertiary treatment units and thereafter treated effluent confirming the treated water discharge norms laid by GPCB will be sent to CETP for final treatment. Domestic sewage should be treated in STP.
- xi. Treated effluent should be passed through guard pond. Online pH meter, flow meter and TOC analyzer should be installed.
- xii. The Company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans boundary movement) Rules, 2008 for management of hazardous wastes and prior permission from SPCB should be obtained for disposal of solid / hazardous waste in the TSDF. The concerned company should undertake measures for fire fighting facilities in case of emergency.
- xiii. As proposed, greenbelt should be developed at least 1185 m² 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. Selection of plant species should be as per the CPCB guidelines.
- xiv. All the recommendations made in the risk assessment report should be satisfactorily implemented.
- xv. Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

3.6.5 Expansion by adding Solvent and Acid Dyes Products in existing Unit located at Plot No.191,P-2/P-1, ChhatralKadi Road, Village Karanagar, Taluka Kadi, District Mehsana, Gujarat by M/s Arbuda Plastochem Pvt. Ltd. – reg EC.

The project proponent and their consultant (M/s Bhagwati Enviro Care 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 13th Meeting of the Expert Appraisal Committee (Industry) held during 18th–

20th November, 2013 for preparation of EIA-EMP report. All the Synthetic Organic Chemical plants are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Arbuda Plastochem Pvt. Ltd. have proposed for expansion by adding Solvent and Acid Dyes Products at Plot No.191,P-2/P-1, ChhatralKadi Road, Village Karanagar, TalukaKadi, District Mehsana, Gujarat. Total plot area is 4167 m² of which area earmarked for greenbelt is 1250 m². Cost of project is Rs. 153.11 lakhs. No national park/wildlife sanctuary/reserve forest is located within 10 Km. Following products will be manufactured:

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

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 6 locations during January, 2014 – March, 2014 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (63.66 µg/m³ to 79.28 µg/m³), PM_{2.5} (27.70 µg/m³ to 40.84 µg/m³), SO₂ (8.26 µg/m³ to 17.24 µg/m³) and NO_x(14.2 µg/m³ to 42.21 µg/m³) respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 3.34 µg/m³ and 2.13 µg/m³

with respect to SPM and NOx. PP informed that wood/gas fired boiler/thermic fluid heater will be installed. The Committee suggested them that wood shall not be used as fuel. PP confirmed that no process gas emission from existing as well as proposed manufacturing activity.

Non IBR steam boiler, thermic fluid heater (2 Lakhs Kcal/Hr.) and hot air generator will be installed. Wood and gas will be used as fuel. In process ice will be used @ 3600 kgs/day as a result process effluent quantity will be higher than the process water consumption. Industrial effluent will be treated in ETP. Water requirement from ground water source will be increased from 2.1 m³/day to 6.1 m³/day after expansion. Effluent generation will be increased from 1.4 m³/day to 5.45 m³/day after expansion and treated in the ETP. Treated effluent will be sent to CETP Kalol for further treatment. Distillation residue will be sent to CHWIF. ETP waste /evaporator residue and process waste/residue will be sent to TSDF.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 5thDecember, 2014. Issues raised during meeting were disposal of generated wastewater; ETP waste etc. The Committee noted that information sought through representation have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

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

- i) Stack of adequate height shall be gas fired boiler to disperse the air emissions.
- ii) Scrubber shall be provided to control process emissions. The scrubbing media shall be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. At no time, the emission levels shall go beyond the prescribed standards.
- iii) Total fresh water requirement from ground water source shall not exceed 6.1 m³/day and prior permission shall be obtained from the CGWA/SGWA.
- iv) Effluent generation shall not exceed 5.45 m³/day. Effluent shall be treated in ETP and treated effluent shall be discharged to CETP after conforming the standard prescribed by the SPCB.
- v) Treated effluent should be passed through guard pond. Online pH meter, flow meter and TOC analyzer should be installed.
- vi) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- vii) As proposed, process organic residue and spent carbon shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF. The ash from boiler shall be sold to brick manufacturers/cement industry.
- viii) As proposed, green belt over 1250 m² 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.

- ix) All the issues raised during the Public Hearing/consultation meeting held on 5th December, 2014 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- x) At least 2.5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.

3.6.6 Drilling of Development wells (40 nos.) and Exploratory / Appraisal wells (5 Wells) in the Kharsang Oil Field at district Changlang, Arunachal Pradesh by M/s Geo Enpro Petroleum- reg EC.

The project proponent and their consultant (M/s GeoEnpro Petroleum) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 34th Meeting of the Expert Appraisal Committee (Industry-2) held during 17th – 19th February, 2015 for preparation of EIA-EMP report.

M/s GeoEnpro Petroleum has proposed for Drilling of Development wells (40 nos.) and Exploratory / Appraisal wells (5 Wells) in the Kharsang Oil Field at district Changlang, Arunachal Pradesh. In 1995, for further development of the field, Government of India (GOI) awarded the Kharsang Oil Field to a Consortium comprising of the partners namely Oil India Limited (40%), Geopetrol International Inc (25%), Jubilant Energy Pvt. Ltd. (25%) and GeoEnpro Petroleum Ltd. (10%) under a Production Sharing Contract (PSC) dated 16th June, 1995. Total mining lease area is 11 km². Cost of project is Rs. 720 Crore. Kharsang oil field is situated in the reserve forest area. Present production rate of oil and gas is around 1500 BOPD and 50,000 m³/day respectively. 94.712ha forest land is involved. It is reported that no ecologically and /or sensitive area within 10 km and 15 km radius. Depth of the well varies from 600 m to 1600 m.

Details of proposed wells are as below:

Location Name	Latitude	Longitude	Break-up of the required land	Total land required (in Hectares)
NL 01	27°24'21"N	96°01'25"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - 12m x 10m - 120 sqm	3.012
NL 02	27°24'01"N	96°01'26"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - 350m x 10m - 3500 sqm	3.35
NL 03	27°23'42"N	96°01'26"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - 300m x 10m - 3000 sqm	3.30
NL 04	27°23'22"N	96°01'27"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - 950m x 10m - 9500 sqm	3.95
NL 05	27°24'21"N	96°01'47"E	Drilling Plinth - 150m x 200m - 30000 sqm	3.05

			Approach Road - 50m x 10m - 500 sqm	
NL 06	27°24'02"N	96°01'48"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - 50m x 10m - 500 sqm	3.05
NL 07	27°23'42"N	96°01'48"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - 400m x 10m - 4000 sqm	3.40
NL 08	27°23'23"N	96°01'49"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - 600m x 10m - 6000 sqm	3.60
NL 09	27°24'22"N	96°02'09"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - 120m x 10m - 1200 sqm	3.12
NL 10	27°24'02"N	96°02'10"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - NIL	3.0
NL 11	27°23'43"N	96°02'10"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - 200m x 10m - 2000 sqm	3.2
NL 12	27°23'23"N	96°02'11"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - 720m x 10m - 7200 sqm	3.72
NL 13	27°23'04"N	96°02'11"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - 1950m x 10m - 19500 sqm	4.95
NL 14	27°24'03"N	96°02'31"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - NIL	3.0
NL 15	27°23'43"N	96°02'32"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - NIL	3.0
NL 16	27°23'24"N	96°02'32"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - 700m x 10m - 7000 sqm	3.7
NL 17	27°24'03"N	96°02'53"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - 100m x 10m - 1000 sqm	3.10
NL 18	27°23'44"N	96°02'54"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - 450m x 10 m - 4500 sqm	3.45
NL 19	27°23'24"N	96°02'54"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - 850m x 10 m - 8500 sqm	3.85
NL 20	27°24'04"N	96°03'15"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - 650m x 10 m - 6500 sqm	3.65
NL 21	27°23'44"N	96°03'16"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - 990m x 10 m - 9900 sqm	3.99
NL 22	27°23'25"N	96°03'16"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - 500m x 10 m - 5000 sqm	3.50
NL 23	27°23'03"N	96°01'38"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - 750m x 10 m - 7500 sqm	3.75
NL 24	27°23'04"N	96°02'38"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - 850m x 10 m - 8500 sqm	3.85
NL 25	27°23'05"N	96°03'11"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - 800m x 10 m - 8000 sqm	3.80
NL 26	27°24'22"N	96°02'42"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - 750m x 10 m - 7500 sqm	3.75
NL 27	27°24'23"N	96°03'04"E	Drilling Plinth - 150m x 200m - 30000 sqm Approach Road - 620m x 10 m - 6200 sqm	3.62
			Total	94.712 Hec.

The remaining 18 wells shall also be drilled from the identified locations, depending upon the production testing results of the 27 wells and additional studies planned to be carried out in the future to target deeper prospects. All 45 wells (40 development and 5

exploratory/appraisal) shall be taken up for drilling under different drilling campaigns in a phase-wise manner. All wells to be drilled from the identified 27 locations, for which Forest Clearance has already been applied.

Processing facilities for crude oil and gas production already exist at Kharsang Oil Field. During operation phase, the crude oil extracted from the proposed wells will be treated in the existing facilities to separate oil, water and gas. For the proposed drilling activity at Kharsang oil field in a phased manner, additional pipeline to connect the producing wells to OCS shall be laid. Produced water will be treated in the existing ETP of capacity 200 m³/day. Treated effluent will be discharged into nallah. Adequate stack height with acoustic enclosure will be provided to DG set. During drilling operation, total fresh water requirement for drilling activity will be 50 m³/day. Water based mud (fluid) will be used for drilling operation. Main constituents of the fluid are Bentonite and barites, both of which are natural minerals. Wastewater generation will be 35 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 the authorized recyclers. Oil sludge of 120-130 MTPA is generated from the existing operations and an estimated amount 3-4 MTPA /well of oil sludge will be generated from the proposed wells and will be collected in the concrete sludge handling facility and sold to authorized recyclers.

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 8 locations during March, 2015 – May, 2015 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (19.1 µg/m³ to 59.4 µg/m³), SO₂ (5.0 µg/m³ to 6.97 µg/m³) and NO₂(10.21µg/m³ to 12.25 µg/m³) respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 6.543 µg/m³, 1.118 µg/m³ and 1.425 µg/m³ with respect to PM₁₀, SO₂ and NO₂.

Public hearing was exempted as 7 (ii) of EIA Notification, 2006.

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

- i. Forest clearance shall be obtained.
- ii. Ambient air quality should be monitored near the closest human settlements as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for PM₁₀, 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 should be provided as per CPCB guidelines.
- vi. Total water requirement shall not exceed 35 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 and land. Separate drainage system shall be created for oil contaminated and non-oil contaminated water. 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. Produced water (200 m³/day) shall be treated in ETP. Treated produced water shall be disposed off through injection well as per CPCB/MoEF guidelines.
- 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 Shillong.
- 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 Shillong.
- xxiv. 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.
- 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 should 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.

3.6.7 Bulk Drug Manufacturing Unit located at Plot No. F-13, MIDC Chincholi, Tehsil Mohol, District Solapur, Maharashtra by M/s MVL Medisynth Pvt. Ltd, - reg EC.

The project proponent and their consultant (M/s Equinox Environments (I) 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 15th Meeting of the Expert Appraisal Committee (Industry) held during 29th – 30th January, 2014 for preparation of EIA-EMP report. All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B' and appraised at State level. However, applicability of general condition due to project location within 10 Km from bird sanctuary, proposal is treated as category 'A' and appraised at Central Level.

M/s MVL Medisynth Pvt. Ltd has proposed for setting up of Bulk Drug Manufacturing Unit at plot no. F-13, MIDC Chincholi, Tehsil Mohol, District Solapur, Maharashtra. Plot area is 1.63 ha of which greenbelt will be developed in 0.33 ha. Cost of project is Rs. 10.30 crores. It is reported that Great Indian Bustard Bird Sanctuary is located at a distance of 1.5 km from the project site. River Sina is flowing at a distance of 6.4 km. The following products will be manufactured:

S.N.	Product	Quantity (Kg/Yr)
1	Meropenam	12000
2	Carboplatin	48
3	Cisplatin	24
4	Famicyclovir	50400
5	ImbatinibMesylate	4800
6	Azacitidine	48
7	Efavirenz	24600
8	Tenofovir	49800
9	Travoprost	12
10	Latanoprost	12
11	Bimatoprost	12
12	Erlotinib	47.88
13	Impenam	12000
14	CaffeicacidPhenethylester	39513.6
15	Curcumin	50232
16	Pterostibene	39600
17	Reserveratrol	36000

List of By-products

S.N.	Product	Quantity (Kg/Month)
1	Potassium Chloride	24.9
2	HBr	3640
3	Ammonium Chloride + Acetic Acid	4219.6
4	Triethyl Amine HCl Salt	600
5	HydroxyBenzotriazole	520
6	Bute – 1,3-Diene	1845
7	MgBr	1845
8	Imidazole	2050
9	4-Methylbenzenesulfonic Acid	3320
10	Bromo Ethane	2573
11	DBUHI	10.1
12	Potassium Bromide	6.8
13	Sodium Sulphate	8314.7
14	Aluminium Hydroxide	5068
15	Pyridine. HCl	966
16	Potassium Carbonate	3000
17	Phosphorodibromidous Acid	4727
18	Diethyl Phosphate Sodium	3250
19	3, 4- dihydro-2H-pyran	2000
20	Tetrabutyl Ammonium Carbonate	73.311
21	Piperidine Hydrochloride	840
22	Sodium Chloride	1535
23	Silver Iodide	13.9

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 6 locations during March, 2014 – May, 2014 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (35.9 µg/m³ to 65.5 µg/m³), PM_{2.5} (8.8 µg/m³ to 15.5 µg/m³), SO₂ (9.7 µg/m³ to 18.6 µg/m³) and NO_x(11.0 µg/m³ to 20.6 µg/m³) respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.5 µg/m³, 0.1 µg/m³ and 0.6 µg/m³ with respect to PM₁₀, PM_{2.5} and SO₂. The resultant concentrations are within the NAAQS. Bagfilter will be provided to bagasse fired boiler (4 TPH) to control particulate emissions. Scrubber will be provided to control process emissions viz. Cl₂, H₂SO₄, HBr and SO₂. Mist collector will be provided to control acid mist. Solvent recovery system and scrubbers will be provided. Total water requirement will be 62 m³/day. Out of which, fresh water requirement from MIDC water supply will be 32 m³/day and remaining water requirement (30 m³/day) will be met from treated effluent. Industrial effluent generation will be 32.5 m³/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS/COD effluent stream will be treated in effluent treatment plant (ETP) comprising primary, secondary and tertiary treatment. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted. Distillation residue, process residue and ETP sludge will be sent to CHWTSDF. Used/spent oil, spent carbon and spent solvent will be sent to authorised reprocesses/recyclers.

Public hearing was exempted as per para 7(i) III Stage (3)(i)(b) of EIA Notification, 2006.

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

- i) Bag filter with stack of adequate height shall be provided to bagasse to control the particulate emissions.
- ii) Scrubber shall be provided to control process emissions viz. Cl₂, H₂SO₄, HBr and SO₂. The scrubbing media shall be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. At no time, the emission levels shall go beyond the prescribed standards.
- iii) Total fresh water requirement from ground water source shall not exceed 32 m³/day and prior permission shall be obtained from the CGWA/SGWA.
- iv) Trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD shall be passed through stripper followed by MEE. Low TDS effluent stream shall be treated in ETP and then passed through RO system. Condensate and recover water will be recycled/reused within factory premises. 'Zero' effluent discharge shall be adopted and no effluent will be discharged outside the premises.
- v) No effluent from the plant shall be discharged outside the factory premises and 'Zero' effluent discharge concept shall be followed.
- vi) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.

- vii) As proposed, process organic residue and spent carbon shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF. The ash from boiler shall be sold to brick manufacturers/cement industry.
- viii) As proposed, green belt over 0.33 ha 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.
- ix) At least 2.5 % 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 Nagpur. Implementation of such program shall be ensured accordingly in a time bound manner.

3.6.8 EIA for Development/ Exploratory Wells, Group Gathering Station and pipeline laying from KSAC to Borholla GGS at Kasomarigaon, Assam by M/s ONGC- reg EC.

The project proponent and their consultant (M/s ONGC 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) held during 16th-17th February, 2012 respectively for preparation of EIA-EMP report. All the Offshore and Onshore oil and gas exploration, development and production projects are listed at S.N. 1(b) under Category 'A' and appraised at the Central level.

M/s ONGC has proposed for Development/ Exploratory Wells, Group Gathering Station and pipeline laying from KSAC to Borholla GGS at Kasomarigaon, Assam. Kasomarigaon is 20 square kilometer area lying in the Gomariguri Block of Golaghat District, Assam. The Block is located in the South of River Brahmaputra in the Dhansiri watershed, close to Nagaland Hills. Two development wells ISK-KSDA and ISK-KSDB are proposed to be drilled in this Block. KSAB and KSAG which has already been drilled as exploratory wells will be converted to development wells. Another two exploratory cum development wells (KSAD and KSAE) are proposed to be drilled at two new locations. The proposed activities are located at Dayang reserve Forest where the forest lands are presently used for agricultural practices.

It is reported that ONGC has already applied for the diversion of 9 hectares of Forest Land for constructing GGSKSAG and KSAB. Applications for the diversion of forest land for the new exploratory sites KSAD, KSAE and pipeline is made. Land for drilling site of KSAC, KSAG and KSAB is available with ONGC. 2.25 hectare of land is required for each exploratory drill sites – KSAD and KSAE. Further 9 ha of land is required for construction of GGS. The Project activity basically involves:

- a) Construction of access roads and drill sites
- b) Well drilling and testing
- c) Site Closure and Well decommissioning
- d) Construction of GGS
- e) Laying of pipeline

Construction of GGS and Laying of pipeline includes Separator - Separation of liquid (oil and water) and gas will take place; Liquid storage facility; Pumping of liquid (oil and water) to Borholla GGS through a eight feet, twenty five kilometer pipeline; Flare system; Power generation system; Associate Utility.

S.N.	Well Name	Type of Well	Well Location					
			Latitude (N)			Longitude €		
			Degree	Minutes	Second	Degree	Minutes	Second
1	ISK-1-KSDA	Development	26	17	56	94	03	28
2	ISK-2-KSDB	Development	26	17	55	94	03	25
3	KSAG	Development	26	17	38	94	02	48
4	KSAD	Exploratory & Development	26	16	57	94	02	05
5	KSAE	Exploratory & Development	26	18	0.73	94	02	16
6	KSAB	Development	26	17	31.89	94	03	10.76

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 7 locations during April, 2013 – June, 2013 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (55.29 µg/m³ to 79.14 µg/m³), SO₂ (<4 µg/m³) and NO_x(21.07 µg/m³ to 24.71 µg/m³) respectively.

The drilling of the wells is expected to be upto a depth of 2500m. Water based mud will be used for drilling. Drill cuttings generated will be collected and separated using a solid control system and temporarily stored on-site in HDPE lined pits. Drilling and wash wastewater generated will also be stored at an onsite HDPE lined pit. The water will be adequately treated in a mobile ETP to ensure conformance to the CPCB onshore oil and gas extraction industry effluent standards before disposal. 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 20th September, 2014. Issues raised during meeting were regarding local employment, csr, loss due to waste gas burning etc. The Committee noted that information sought through representation have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

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

- i. Forest clearance shall be obtained.
- ii. Ambient air quality should be monitored near the closest human settlements as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for PM10, PM2.5, SO2, NOX, CO, methane & Non-methane HC etc.
- 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 should be provided as per CPCB guidelines.
- vi. Total water requirement shall not exceed 35 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 and land. Separate drainage system shall be created for oil contaminated and non-oil contaminated water. 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. Produced water shall be treated in ETP. Treated produced water shall be disposed off through injection well as per CPCB/MoEF guidelines.
- 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 off 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 Shillong.
- 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 Shillong.
- xxiv. 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.
- 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 should 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.

3.6.9 Proposed 30 development wells, GCS and pipeline laying from Bhuratoli to Palatana in Tripura by M/s ONGC – reg EC.

The project proponent and their consultant (M/s SENSE) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 3rd Meeting of the Expert Appraisal Committee (Industry) held during 3rd-5th December, 2012 respectively for preparation of EIA-EMP report. All the Offshore and Onshore oil and gas exploration, development and production projects are listed at S.N. 1(b) under Category 'A' and appraised at the Central level.

M/s ONGC has proposed to develop 30 wells across six gas fields -Boramura, Konaban, Agartala Extension Dome II, Manikynagar, Sundalbari and Gojalia in Tripura. A GCS and a pipeline (54.15 Km) connecting the GCS to ONGC Tripura Power Company, Palatana is to be constructed. Cost of drilling project is Rs. 639 Crore. Cost of GCS and pipeline laying is Rs. 119 crore. Proposed project is located in five districts of Tripura i.e. West Tripura District, Sepahijala District, Khowai District, south Tripura District and Gomati District. Depth of wells vary from 2500 – 3000 m. Following wells will be drilled:

S.N.	Location	District	Well Name	Latitude	Longitude
1	AGARTALA DOME	West Tripura	ADDL	23°45'21.57"	91°18'10.33"
2		Sepahijola	ADDQ	23°44'50.48"	91°19'54.18"
3			ADDN	23°42'47.19"	91°21'32.45"
4			ADDP	23°43'44.10"	91°21'00.90"
5			TRAD-11	23°44'35.45"	91°19'52.64"
6			TRAD- 12	23°44'02.09"	91°21'06.41"
7			West Tripura	TRAD -13	23°44'50.99"
8		Sepahijola	TRAD -14	23°43'27.24"	91°20'31.57"
9	BARAMURA	West Tripura	B MDF	23°49'30.29"	91°33' 40.79"
10		West Tripura	BMDG	23°48'56.70"	91°33'47.14"
11		Khowai	BMDH	23°50'03.92"	91°33'

					48.09"
12			BMDI	23°52'25.71"	91°33'37.85"
13			13 BM-16 (SUB)	23°51'22.5"	91°33'45.00"
14	SUNDALBARI	Gomati	SDDA	23°28'11.14"	91°24'42.29"
15	KONABON	Sepahijola	ROD I	23°42'0.62"	91°10'08 .71"
16			RODM	23°42'39.29"	91°10' 45.05"
17			TRKN-16	23°41'42.00"	91°10'15.00"
18			TRKN-17	23°41'41.00"	91°10'49.60"
19			TRKN -18	23°42'12.00"	91°10'30.00"
20			TRKN-19	23°42'10.52"	91°09'23.52
21			TRKN-20	23°41'41.00"	91°10' 49.60"
22			TRKN-21	23°44'25.43"	91°10'17.75"
23			TRKN-22	23°43'0.13"	91°10'33.8"
24	MANIKYANAGAR		Sepahijola	RODK	23°39'6.15"
25		RODN		23°32'51.76"	91°15'23. 54"
26		TRSN-1		23°31'05.44"	91°16'23. 09"
27	GOJALIA	South Tripura	TRGO	23°16'46.75"	91°30'18.31"
28			GODA "	23°05'24.61"	91°35'18.20
29			GODB	23°02'08.18"	91°36'12.89"
30			GODC	23°00'43.6"	91°36'24.11"

A GCS facility will be located in Bhuratoli village in Gojalia Block. A total of 44.96 acres of land has been acquired of which 24.74 acres is a government Khas land and 20.22 acres is private agricultural land. The wells ADDL, ADDN, ADDP, ADDQ, TRAD-11, 12, 13 and 14 wells in the Agartala Dome Ext II are located within the 10 km radius of Sepahijala WLS. The proposed wells TRGO-1 and SDDA in Gojalia and Sundalbari gas field and a stretch of pipeline in Gojalia is located within 10 km radius of Trishna WLS. Another stretch of the pipeline traverses through the Trishna Wildlife Sanctuary. PP informed that ONGC will take necessary wildlife clearance from National Board of Wildlife (NBWL) and forest.

A stretch of 3.9 Km of pipeline passes through forest. It is reported that PCCF, Tripura Forest Dept. has issued clearance letter alongwith the map wherein proposed ONGC's location are far away from the ESZ. However, ESZ has not yet been notified. 9 wells + 50.1 km pipeline is not falling under forest land involving as well as no ESZ area. 10 wells are falling ESZ of WLS. One well fall under reserve forest. 10 wells are falling under reserve forest + unclassified Govt. forest land. 3.5 km pipeline passing through reserve forest. New development wells in Agartala Dome, Konaban, Baramura will be connected to the existing GCS. 4 new wells at Gojalia will be connected to proposed GCS at Gojalia. This GCS will be equipped with two ETPs having capacity of 50 m³/day.

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 10 locations during pre-monsoon, 2014 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (38.8 µg/m³ to 77.1 µg/m³), SO₂ (<7 µg/m³) and NO_x(8.83 µg/m³ to 20.67 µg/m³) respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.28 µg/m³, 0.28 µg/m³ and 25.08 µg/m³ with respect to PM₁₀, SO₂ and NO_x.

Adequate stack height with acoustic enclosure will be provided to DG set. Total fresh water requirement for drilling activity will be 20 m³/day. Water based mud (fluid) will be used for drilling operation. Main constituents of the fluid are Bentonite and barites, both of which are natural minerals. Wastewater generation will be 7 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 the authorized recyclers.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Tripura Pollution Control Board on 11th, 12th, 13th, 16th and 18th February in West Tripura, Sepahijala, Khowai, South Tripura and Gomti district respectively. Issues raised during meeting were odour generated from the existing GCS; complained of discharge of untreated effluent; distribution of gas through pipeline, CSR, cracks developed in the mud houde etc. The Committee noted that information sought through representation have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

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

- i. Forest clearance shall be obtained.
- ii. Ambient air quality should be monitored near the closest human settlements as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for PM₁₀, 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 should 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 and land. Separate drainage system shall be created for oil contaminated and non-oil contaminated water. 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. Produced water shall be treated in ETP. Treated produced water shall be disposed off through injection well as per CPCB/MoEF guidelines.
- 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. 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 Commitment (ESC), sufficient budgetary provision shall be made for health improvement, education, water and electricity supply etc. in and around the project.
- 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 should 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.

3.6.10 Development drilling of one location BMDE at Baramura field, Tripura by M/s ONGC – reg EC.

The project proponent and their consultant (M/s SENSE) 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 respectively for preparation of EIA-EMP report. All the Offshore and Onshore oil and gas exploration, development and production projects are listed at S.N. 1(b) under Category 'A' and appraised at the Central level.

M/s ONGC has proposed for development drilling of one location BMDE at Baramura field, Tripura. Baramura, is a producing field of ONGC. A total of 1.7ha of land is required for drilling each development well. Land belonging to the Forest department is acquired for diversion through necessary permission i.e forest clearance. Coordinates of the well are as given below:

Sl No	Location	Well Name	Latitude	Longitude
1	Boramura Field	BMDE	23°49'30.29"	91 ° 33' 40.79"

Approximately 5 KLD water will be required for construction and 3KLD for workers during construction phase. The daily water consumption during drilling and testing of wells will be 28 m³/day. A total of 15m³/d will be used for mud preparation, 10m³/d for rig washing and 3m³/d will be used for domestic purposes including drinking.

It is estimated that the wells will be drilled till a minimum depth of 2400- 2500m for which 900-1000m³ water will be consumed; 250-300m³ of drill cutting and 1000- 1250 m³ of drilling fluid will be generated. It has been decided that uniform water-based mud system will be used during drilling of the wells. Eco-friendly synthetic based mud will be used only where water-based mud will not be suitable. Cuttings will then be stored in the HDPE lined pits and after completion of the drilling activities, cuttings will be tested for the content of hazardous nature. Based on nature of the drill cuttings, final disposal pathway will be finalized by ONGC. Drill cuttings and drill mud will be treated as per G.S.R 546 (E) dated 30th August 2005 to render them harmless.

The Committee noted that as per certified compliance report of the Regional Office at Shillong, Environmental Clearance has been accorded for exploratory drilling of one well viz. KUAD. However, It is noted that PA have already developed the well and has started commercial production without obtaining another prior clearance for development of well, which is treated as violation of specific condition No xvi. The matter will be taken up as per prevailing rules, dealing violation cases.

3.6.11 Construction of Ennore installation for storing and transportation o petroleum products at Vallur & Athipattu village, near Ennore, Thiruvallur district, Tamilnadu by M/s BPCL – reg EC .

The project proponent and their consultant (M/s Hubert Enviro Care System (P) 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 by SEIAA vide their letter no SEIAA-TN/F.2433/TVLR/M-LX/TOR-190/2014 dated 17.10.2014 for preparation of EIA-EMP report. All the Isolated Storage & Handling of Hazardous Chemicals are listed at S.N. 6(b) under Category 'B' and appraised at the Central level due to integrated project of pipeline.

Bharat Petroleum Corporation Limited (BPCL), a Govt. of India undertaking under the aegis of Ministry of Petroleum and Natural Gas has proposed to set up a Coastal Terminal for petroleum storage and distribution at Ennore (Vallur and Athipattu village), Ponneri Taluk, Thiruvallur District of Tamilnadu as existing Tondiarpet Installation has become too congested and has no further space for expansion. Plot area is 100 acres. Following will be the storage capacity of the tankages :

Products and Capacities	MS:56620 KL, HSD:60115 KL, Ethanol :200 KL Slop :100 KL, Total : 1,17,035 KL
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Water requirement will be 5.5 m³/Day from the existing pipeline from CPCL desalination plant. All the vents & drains shall be connected in a closed loop system. Any liquid effluent generated due to any leakage etc. shall be suitably treated in Effluent Treatment Plant /OWS. Hazardous waste (sludge) generated after cleaning of tanks in future (once in 5 years) shall be disposed through authorized vendors with the assistance of Pollution control Board / Neutralized by way of bio-remediation. The capital cost of the project is Rs.369 Crores including land cost and the estimated project completion time is 24 months from date of receipt of EC. There is no environmental sensitive area within 10 Km radius of the project. The nature of land selected is salt pan and has been allocated to BPCL from Salt Department. The nature of land use is Special and Hazardous Industrial use. The project falls in CRZ area. CRZ clearance has been obtained from district ,state coastal zone management, vide letter no. Proc. No.P1/525/2015 dated 26.06.2015. Also EAC at MOE&F during their 153rd meeting has granted CRZ approval on 20.12.2015. There is no forest area within 10 Km radius. The inland water bodies within 10 Km radius are as below:

- Ennore Creek – 1.45 Km
- Lake in Jayalalitha Nagar – 3.1 Km
- KadapakkamPanchayath Lake - 6.96Km
- Periyathopu Lake -9.46 Km

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Tamil Nadu in Thiruvallur District. 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 found the final EIA/EMP report adequate and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i) SCZMA recommendation shall be followed..
- ii) Adequate buffer zone around the oil tankages, as may be required as per OISD or other statutory requirements.
- iii) Regular online monitoring of VOC and HC in the work zone area in the plant premises should be carried and data be submitted to Ministry's Regional Office at Bhopal, CPCB and State Pollution Control Board.
- iv) Total fresh water requirement from ground water source shall not exceed 5.5 m³/Day and prior permission should be obtained from the concerned Authority.
- v) The company shall construct the garland drain all around the project 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 streams. During rainy season, the storm water drains shall be connected to oil water separator and passed through guard pond. Water quality monitoring of guard pond shall be conducted and ensured that monitoring parameters shall not exceed the prescribed standards.
- vi) The oil draw off shall be treated in ETP. The treated effluent will be used for gardening/horticulture purpose. Oily sludge will be disposed off through approved TSDF facilities. No effluent shall be discharged outside the premises.
- vii) Storm water should pass through efficient oil and grease catchers to trap leaked oil and grease
- viii) Oil Industry Safety Directorate guidelines regarding safety against fire, spillage, pollution control etc. shall be followed. Company should ensure no oil spillage occur during loading / unloading of petroleum products.
- ix) The project authorities shall strictly comply with the provisions made in Manufacture, Storage and Import of Hazardous Chemicals Rules 1989, as amended in 2000 and the Public Liability Insurance Act for handling of hazardous chemicals etc. All the hazardous waste shall be properly treated and disposed of in accordance with the Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules 2008 and its subsequent amendments.
- x) Necessary approvals from Chief Controller of Explosives must be obtained before commission of project. Requisite On-site and Off-site Disaster Management Plans will be prepared and implemented.
- xi) The company shall obtain all requisite clearances for fire safety and explosives and shall comply with the stipulation made by the respective authorities.
- xii) All storage tanks shall be provided with design features based on applicable OISD standards.
- xiii) Fully automated tank farm management system (TFMS) will be provided for accounting of products & reconciliation.
- xiv) Emergency Response Plan shall be based on the guidelines prepared by OISD, DGMS and Govt. of India. Mock drill shall be conducted once in a month.

- xv) Bottom oil sludge shall be handled, stored and disposed as per CPCB/ MoEF guidelines.
- xvi) Occupational health surveillance of worker shall be done on a regular basis and records maintained as per the Factory Act.
- xvii) At least 10 meter wide thick green belt shall be developed on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xviii) The Company shall harvest surface as well as rainwater from the rooftops of the buildings proposed in the project and storm water drains to recharge the ground water and use the same water for the various activities of the project to conserve fresh water.
- xix) All the recommendations mentioned in the EMP/DMP shall be implemented.
- xx) All the commitment made regarding issues raised during the public hearing/ consultation meeting shall be satisfactorily implemented. Adequate budgetary provision to be kept for implementation.
- xxi) Under Corporate Social Responsibility (CSR), sufficient budgetary provision shall be made for health improvement, education, water and electricity supply etc. in and around the project.
- xxii) Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

3.6.12 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. EC

The project proponent 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) awarded during the 26th Meeting of the Expert Appraisal Committee (Industry) held during 29th – 30th October, 2014 respectively for preparation of EIA-EMP report. All the Offshore and Onshore oil and gas exploration, development and production projects are listed at S.N. 1(b) under Category 'A' and appraised at the 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 54.0 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). It is reported that no national park/wildlife sanctuary/reserved forest/protected forest/wetland is located

within 10 km distance. Seasonal Rivers Khairi and PushpawatiGorpurTalav are located within 10 km distance. Followings are the coordinates of the blocks.

Pt.	Longitude	Latitude
A	72°07'	23°42'30"
B	72°09'35"	23°43'33"
C	72°10'30"	23°41'40"
D	72°11'4.98"	23°41'53.82"
E	72°12'21.93"	23°39'5.52"
F	72°14'12"	23°39'48"
G	72°14'12"	23°38'48"
H	72°12'38"	23°38'06"
I	72°12'40"	23°37'08"
J	72°12'03"	23°37'08"
K	72°11'41"	23°38'49"
L	72°11'23.48"	23°38'39.51"
M	72°10'	23°39'29.9"
N	72°09'1.11"	23°40'22.76"
O	72°07'52"	23°40'38"

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 10 locations during December, 2014 – March, 2015 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (32.8 µg/m³ to 84.3 µg/m³), PM_{2.5} (16.5 µg/m³ to 42.8 µg/m³), SO₂ (4.3 µg/m³ to 10.3 µg/m³) and NO_x(14.3 µg/m³ to 25.2 µg/m³) respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.1 µg/m³, 0.6 µg/m³ and 4.0 µg/m³ with respect to PM₁₀, SO₂ and NO_x.

Adequate stack height with acoustic enclosure will be provided to DG set. Total fresh water requirement for drilling activity will be 25 m³/day. Water based mud (fluid) will be used for drilling operation. Main constituents of the fluid are Bentonite and barites, both of which are natural minerals. Wastewater generation will be 10 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 3rd July, 2015. Issues raised during meeting were water scarcity; source water supply; vibration from

drilling; benefits; land acquisition etc. The Committee noted that information sought through representation have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

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

- i. Ambient air quality should be monitored near the closest human settlements as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for PM10, PM2.5, SO2, NOX, CO, methane & Non-methane HC etc.
- 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 should be provided as per CPCB guidelines.
- v. Total water requirement shall not exceed 25 m³/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 and land. Separate drainage system shall be created for oil contaminated and non-oil contaminated water. 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 bhopal.
- 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 off 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. Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.
- xix. 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.
- xx. Restoration of the project site shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office at Bhopal.
- 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 Bhopal.
- 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 should 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.

3.7 Terms of Reference (TOR)

3.7.1 Additional 03 exploratory wells at Kangra Mandi PEL Block, Kangra Recess, Himalayan Foothills, Himachal Pradesh, Frontier Basin at Tehsil Khundian, District Kangra 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 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 ONGC Ltd. has proposed for additional 03 exploratory wells at Kangra Mandi PEL Block, Kangra Recess, Himalayan Foothills, Himachal Pradesh, Frontier Basin at Tehsil Khundian, District Kangra. As per Form-1, it is reported that no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. However, protected forest land is involved. Total cost of project is Rs. 105 Crores. Drilling will be done at depth of 1600 mts. It was informed that detailed geological and geophysical studies, mostly 2D-seismic mapping have been carried out to finalize these locations, keeping in mind the results of previously drilled wells.

The exploratory locations proposed for Environmental Clearance are located within the state of Himachal Pradesh and grouped under three clusters comprising of 01 priority well and 02 subsequent wells (to be drilled in subsequent years depending on results of priority well) in each cluster, thus totalling One priority well and two subsequent wells making a grand total of three exploratory wells in the present proposal. The three clusters lie within the administrative boundaries of Kangra district.

In the Kangra cluster of 10 km radius, one priority well B-JMI-11 is proposed to depth of 1600m for testing the hydrocarbon prospectively of an amplitude anomaly in the

hanging wall of the Jawalamukhi Thrust comprising of Upper Dharamshala and Lower Siwalik formations. Water based mud will be used in drilling process.

The block is spread over 1828 km². ONGC has not given coordinates of proposed wells despite that the survey has been completed and locations are informed to be defined in the feasibility report.

D.G. sets will be used during drilling operation. Acoustic enclosures will be provided to D.G. sets. Consumption of fuel (HSD) during drilling operations will be approximately 3-4 KL/day

About 15-20 m³/day of water will be required for drilling operation. Waste water will be collected in impervious HDPE lined pits. Water based mud (drilling fluid) will be used for drilling operation. Main constituents of the fluid are Bentonite and Barites, both of which are natural minerals. Storage of Chemicals and additives will be required for proposed activities. All quantities will be below specified thresholds for storage permits under the MSIHC Rules. Precautionary measures will be taken as per The Hazardous Wastes (Management, Handling and Trans-boundary Movement) Amendment Rules, 2009.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure (Refer Ministry's web site) for preparation of EIA-EMP report:

A. Standard TOR

1. Executive summary of a project.
2. Project description, project objectives and project benefits.
3. Cost of project and period of completion.
4. Site details within 1 km of the each proposed well, any habitation, any other installation/activity, flora and fauna, approachability to site, other activities including agriculture/land, satellite imagery for 10 km area. All the geological details shall be mentioned in the Topo sheet of 1:40000 scale, superimposing the well locations and other structures of the projects. Topography of the project site.
5. Details of sensitive areas such as National Park, Wildlife sanctuary and any other eco-sensitive area alongwith map indicating distance.
6. Approval for the forest land from the State/Central Govt. under Forest (Conservation) Act, 1980 as project involves forest land.
7. Distance from nearby critically/severely polluted area as per Notification, if applicable. Status of moratorium imposed on the area.
8. Does proposal involve rehabilitation and resettlement? If yes, details thereof.
9. Environmental considerations in the selection of the drilling locations for which environmental clearance is being sought. Present any analysis suggested for minimizing the foot print giving details of drilling and development options considered.
10. Baseline data collection for air, water and soil for one season leaving the monsoon season in an area of 10 km radius with centre of Oil Field as its centre covering the area of all proposed drilling wells.
11. Climatology and Meteorology including wind speed, wind direction, temperature rainfall relative humidity etc.
12. Details of Ambient Air Quality monitoring at 8 locations for PM_{2.5}, PM₁₀, SO₂, NO_x, CO, VOCs, Methane and non-methane HC.

13. Soil sample analysis (physical and chemical properties) at the areas located at 5 locations.
14. Ground and surface water quality in the vicinity of the proposed wells site.
15. Measurement of Noise levels within 1 km radius of the proposed wells.
16. Vegetation and land use; flora/fauna in the block area with details of endangered species, if any.
17. Incremental GLC as a result of DG set operation, flaring etc.
18. Potential environmental impact envisaged during various stages of project activities such as site activation, development, operation/ maintenance and decommissioning.
19. Actual source of water and 'Permission' for the drawl of water from the Competent Authority. Detailed water balance, wastewater generation and discharge.
20. Noise abatement measures and measures to minimize disturbance due to light and visual intrusions.
21. Details on wastewater generation, treatment and utilization /discharge for produced water/ formation water, cooling waters, other wastewaters, etc. during all project phases.
22. Details on solid waste management for drill cuttings, drilling mud and oil sludge, produced sand, radio active materials, other hazardous materials, etc. including its disposal options during all project phases.
23. Disposal of spent oil and lube.
24. Storage of chemicals and diesel at site. Hazardous material usage, storage and accounting.
25. Commitment for the use of water based mud (WBM) only
26. Oil spill emergency plans for recovery/ reclamation.
27. H2S emissions control.
28. Produced oil/gas handling, processing and storage/transportation.
29. Details of control of air, water and noise pollution during production phase.
30. Measures to protect ground water and shallow aquifers from contamination.
31. Whether any burn pits being utilised for well test operations.
32. Risk assessment and disaster management plan for independent reviews of well designed construction etc. for prevention of blow out. Blowout preventer installation.
33. Environmental management plan.
34. Total capital and recurring cost for environmental control measures.
35. Emergency preparedness plan.
36. Decommissioning and restoration plans.
37. Documentary proof of membership of common disposal facilities, if any.
38. Details of environmental and safety related documentation within the company including documentation and proposed occupational health and safety Surveillance Safety Programme for all personnel at site. This shall also include monitoring programme for the environmental.
39. A copy of Corporate Environment Policy of the company as per the Ministry's O.M. No. J-11013/41/2006-IA.II(I) dated 26th April, 2011 available on the Ministry's website.
40. Any litigation pending against the project and or any direction/order passed by any court of law against the project. If so details thereof.

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. Coordinates of wells should be defined in EIA-EMP report.

3. Forest clearance to be obtained.

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

3.7.2 Additional 06 exploratory wells at Kangra Mandi PEL Block, Kangra Recess, Himalayan Foothills, Himachal Pradesh, Frontier Basin at Tehsil Dharmpur (S.T) District Mandi, Hamirpur, Himachal 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 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 ONGC Ltd. has proposed additional 06 exploratory wells at Kangra Mandi PEL Block, Kangra Recess, Himalayan Foothills, Himachal Pradesh, Frontier Basin at Tehsil Dharmpur (S.T) District Mandi, Hamirpur, Himachal Pradesh. As per Form-1, it is reported that no national parks, wildlife sanctuaries, Reserve Forest (RF)/ Protected Forests (PF), Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. Total cost of project is Rs. 396 Crores. Drilling will be done at depth range from 1600 mts to 4500 mts. The block is spread over 1828 km². ONGC has not given coordinates of proposed wells despite that the survey has been completed and locations are informed to be defined in the feasibility report.

The exploratory locations proposed for Environmental Clearance are located within the state of Himachal Pradesh and can be grouped under three clusters comprising of 02 priority well and 04 subsequent wells (to be drilled in subsequent years) depending on results of priority wells in each cluster, thus totalling two priority wells and four subsequent wells making a grand total of six exploratory wells in the present proposal. The three clusters lie within the administrative boundaries of Hamirpur and Mandi districts. In the Hamirpur cluster of 10 km radius, one priority well B-PLI-1 is proposed to a depth of 4500m for testing the hydrocarbon prospectively of a sub Jawalamukhi Thrust fault closure within the Triangle Zone comprising of Upper Dharamsala and Lower Dharamsala formations.

In the Mandi cluster of 10 km radius, one priority well B-MKI-1 is proposed to a depth of 1600m for testing the hydrocarbon prospectivity of Subathu and Bilaspur Formations in the upthrust of the Palampur Thrust. Water based mud will be used.

D.G. sets will be used during drilling operation. Acoustic enclosures will be provided to D.G. sets. Consumption of fuel (HSD) during drilling operations will be approximately 3-4 KL/day

About 15-20 m³/day of water will be required for drilling operation. Waste water will be collected in impervious HDPE lined pits. Water based mud (drilling fluid) will be used for drilling operation. Main constituents of the fluid are Bentonite and Barites, both of which are natural minerals. Storage of Chemicals and additives will be required for proposed activities. All quantities will be below specified thresholds for storage permits under the MSIHC Rules. Precautionary measures will be taken as per The Hazardous Wastes (Management, Handling and Trans-boundary Movement) Amendment Rules, 2009.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure (Refer Ministry's web site) for preparation of EIA-EMP report:

B. Standard TOR

1. Executive summary of a project.
2. Project description, project objectives and project benefits.
3. Cost of project and period of completion.
4. Site details within 1 km of the each proposed well, any habitation, any other installation/activity, flora and fauna, approachability to site, other activities including agriculture/land, satellite imagery for 10 km area. All the geological details shall be mentioned in the Topo sheet of 1:40000 scale, superimposing the well locations and other structures of the projects. Topography of the project site.
5. Details of sensitive areas such as National Park, Wildlife sanctuary and any other eco-sensitive area alongwith map indicating distance.
6. Approval for the forest land from the State/Central Govt. under Forest (Conservation) Act, 1980 as project involves forest land.
7. Distance from nearby critically/severely polluted area as per Notification, if applicable. Status of moratorium imposed on the area.
8. Does proposal involve rehabilitation and resettlement? If yes, details thereof.
9. Environmental considerations in the selection of the drilling locations for which environmental clearance is being sought. Present any analysis suggested for minimizing the foot print giving details of drilling and development options considered.
10. Baseline data collection for air, water and soil for one season leaving the monsoon season in an area of 10 km radius with centre of Oil Field as its centre covering the area of all proposed drilling wells.
11. Climatology and Meteorology including wind speed, wind direction, temperature rainfall relative humidity etc.
12. Details of Ambient Air Quality monitoring at 8 locations for PM_{2.5}, PM₁₀, SO₂, NO_x, CO, VOCs, Methane and non-methane HC.
13. Soil sample analysis (physical and chemical properties) at the areas located at 5 locations.
14. Ground and surface water quality in the vicinity of the proposed wells site.
15. Measurement of Noise levels within 1 km radius of the proposed wells.
16. Vegetation and land use; flora/fauna in the block area with details of endangered species, if any.
17. Incremental GLC as a result of DG set operation, flaring etc.
18. Potential environmental impact envisaged during various stages of project activities such as site activation, development, operation/ maintenance and decommissioning.
19. Actual source of water and 'Permission' for the drawl of water from the Competent Authority. Detailed water balance, wastewater generation and

- discharge.
20. Noise abatement measures and measures to minimize disturbance due to light and visual intrusions.
 21. Details on wastewater generation, treatment and utilization /discharge for produced water/ formation water, cooling waters, other wastewaters, *etc.* during all project phases.
 22. Details on solid waste management for drill cuttings, drilling mud and oil sludge, produced sand, radio active materials, other hazardous materials, *etc.* including its disposal options during all project phases.
 23. Disposal of spent oil and lube.
 24. Storage of chemicals and diesel at site. Hazardous material usage, storage and accounting.
 25. Commitment for the use of water based mud (WBM) only
 26. Oil spill emergency plans for recovery/ reclamation.
 27. H₂S emissions control.
 28. Produced oil/gas handling, processing and storage/transportation.
 29. Details of control of air, water and noise pollution during production phase.
 30. Measures to protect ground water and shallow aquifers from contamination.
 31. Whether any burn pits being utilised for well test operations.
 32. Risk assessment and disaster management plan for independent reviews of well designed construction *etc.* for prevention of blow out. Blowout preventer installation.
 33. Environmental management plan.
 34. Total capital and recurring cost for environmental control measures.
 35. Emergency preparedness plan.
 36. Decommissioning and restoration plans.
 37. Documentary proof of membership of common disposal facilities, if any.
 38. Details of environmental and safety related documentation within the company including documentation and proposed occupational health and safety Surveillance Safety Programme for all personnel at site. This shall also include monitoring programme for the environmental.
 39. A copy of Corporate Environment Policy of the company as per the Ministry's O.M. No. J-11013/41/2006-IA.II(I) dated 26th April, 2011 available on the Ministry's website.
 40. Any litigation pending against the project and or any direction/order passed by any court of law against the project. If so details thereof.

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. Coordinates of wells should be defined in EIA-EMP report.

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

3.7.3 Setting up of Technical Grade Pesticides Unit at Village Begampur, Tehsil Chhachhrauli, District Yamunanagar, Haryana by M/s Oriyo Organics Pvt. 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 along with the draft Term of References for the preparation of EIA-EMP. All units producing technical grade pesticides are listed at S.N. 5(b) under category 'A' and appraised at Central level.

M/s Oriyo Organics Pvt. Ltd. has proposed for setting up of technical grade pesticides unit at Village Begampur, Tehsil Chhachhrauli, District Yamuna nagar, Haryana. It is reported that no wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. Western Yamuna Canal- 0.45 km (NW), Hydrel Channel- 0.19 km (SE), Yamuna River- 6.06 km (E), Pathrala River- 5.12 km (W) and Somb River- 8.59 km (SW) are at their respective distance from the project. Following National Park, Reserve Forest and Protected Forest falls within 10 km radius from the proposed project:

- Kalesar National Park: 9.32 km (NE)
- Deodar Protected Forest: 0.07km (W)
- Chuaharpur Protected Forest: 1.9 km (NE)
- Bir Ganauli Protected Forest: 9 km (W)
- Bhurch Bali Protected Forest: 5.01 km (E)
- Bir Chhachhrauli Reserve Forest: 8.67 km (W)

After deliberation, the Committee observed that PP has not explored the alternate site, particularly in the industrial zone to set up such highly polluting Industries. Therefore, the Committee was of the view that option analysis of site to be done from environmental angle. The Committee did not agree with existing proposal and recommended to work on alternate sites.

3.7.4 Expansion of Synthetics Filaments Yarns (i.e, Partially Oriented Yarn , Polyester Filament Yarn,(POY) Textured Yarn and Twisted Yarn) (from 45 MTD to 300 MT/Day) at Survey no.255/1/16 & 255/1/17P, B/h IPCA Labs, Industrial Zone, Village- Athal, Naroli, U.T. of Dadra and Nagar Haveli by M/s Geelon Industries Pvt. 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 along with the draft Term of References for the preparation of EIA-EMP. All manmade fibres manufacturing other than rayon are listed at S.N. 5(d) under category 'B'. However, due to location of the project within 5 km of the interstate boundary (Gujarat and Maharashtra- distance 2.5 km) and applicability of general condition, proposal is appraised at Central level.

M/s Geelon Industries Pvt. Ltd. has proposed for Expansion of Synthetics Filaments Yarns (i.e, Partially Oriented Yarn, Polyester Filament Yarn,(POY) Textured Yarn and Twisted Yarn) (from 45 MTD to 300 MT/Day) at Survey no.255/1/16 & 255/1/17P, B/h IPCA

Labs, Industrial Zone, Village- Athal, Naroli, U.T. of Dadra and Nagar Haveli . The existing plant was established vide CTE no. PCC/DDD/O-2098/AT/AA/701 dated 27.03.2004. PP has submitted the clarification letter no DNHPDA/GNL/105(53)/2013/13 dated 14.01.2016 from Planning & Development Authority mentioning the proposed land is in the Industrial Zone. However, notification from the State Govt. has not been provided that area is declared as notified industrial zone prior to EIA, Notification 2006. It is noted that industry has never conducted public hearing in the zone. The Committee was of the view to go for public hearing.

Damanganga River is flowing at a distance of 4.8 Km. It is reported that no National Parks, Wildlife Sanctuaries, Protected Forests (PF), Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. However, Forestry patches of reserve forest are at distance of 3.5 to 4.5 km.

Total cost of proposed project is 118.71 Crore of which 1.52 Crore will be used for environmental pollution control measures and Rs. 27 crore per annum will be the recurring cost comprising the Environmental Safety management arrangements. Plot area is 15147.96 m². Following products to be manufactured:

Sr. No.	Name of the Products (Existing, Proposed & After Expansion Scenario)	Quantity (MT/Day)
Existing		
1.	Synthetics filaments yarn (i.e., Partially Oriented Yarn (POY), Texturised and Twisted Yarn)	45.00
Proposed Expansion Scenario		
2.	Synthetics filaments yarn (i.e, Partially Oriented Yarn(POY), Polyester Filament Yarn (PFY), Textured Yarn and Twisted Yarn)	255.00
After Expansion Scenario (Total)		
3.	Synthetics filaments yarn (i.e, Partially Oriented Yarn(POY), Polyester Filament Yarn (PFY), Textured Yarn and Twisted Yarn)	300.00

PP did not mention the development of green within the premises. The Committee suggested to develop the 33% of land or adequate green belt within th existing premise.

Existing power requirement is 2400 KVA and after expansion additional power of 2400 KVA will be sourced from the Electricity department. Capacity of existing DG set (1000 KVA) will also be enhanced by installing another DG set of 1000 KVA capacity. As reported no boiler will be used.

Quantity of fresh water will increase from 122.50 m³/day to 270 m³/day which will be sourced from ground water. Quantity of wastewater will increase from 29.50 m³/day to 78 m³/day which will be treated in the existing ETP. Treated effluent will disposed to GEPIL site, Randha for final disposal. The committee suggested for zero liquid discharge method to be employed by the unit. Yarn waste will be recycled. Hazardous waste such as Used oil, empty drums will be reused and finally sold to authorized dealer.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I (Refer Ministry's web site) for preparation of EIA-EMP report.

1. Details on requirement of raw materials (monomers, solvents, catalysts, *etc.*), its source and storage at the plant.
2. Details on raw material preparation for polymer production process.
3. Details on polymer production process – polymerization, polymer recovery, finishing, polymer spinning and other process in case of specific end-product applications, *etc.*
4. Details of the proposed methods of water conservation and recharging.
5. Details on air emission (SO_x, NO_x, VOC, CO, CO₂, *etc.*) sources – point sources, fugitive emission sources, continuous air emission sources, intermittent air emission sources, *etc.*
6. Details on chemical releases – acetonitrile, CS₂, ethylene, ethylene glycol, HCl, methanol, *etc.*, and its management.
7. Details on existing ambient air quality and expected, emissions for PM₁₀, PM 2.5, SO₂^{*}, NO_x^{*}, CO₂^{*}, CO^{*}, CS₂^{*}, VOC^{*}, H₂S, *etc.*, and evaluation of the adequacy of the proposed pollution control devices to meet standards for point sources and to meet AAQ standards. (* - As applicable).
8. Risk assessment should also include leakages & proposed measures for risk reduction.
9. Details of sodium sulphate recovery.

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. Detailed plan for green belt development
3. Plan for zero liquid discharge

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

3.7.5 Expansion of chemical manufacturing unit at Plot No 17- D, Phase -1, I.D.A Patancheru, District Medak, Telangana by M/s FMC India Private Limited- reg. 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 Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under

category 'A' and appraised by Expert Appraisal Committee (I). However, due to location of CPA within 5 km from the project site, the project is treated as category A.

M/s FMC India Private Limited has proposed for expansion of chemical manufacturing unit at Plot No 17- D, Phase -1, I.D.A Patancheru, District Medak, Telangana. The project was established prior to EIA, Notification 2006 and obtained CFO vide letter dated 15.04.2003. It is reported that no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. Water bodies Chaki Cheruvu – 1.5 Km, Timmakka Cheruvu – 1.9 Km, Pedda Cheruvu – 2.0 Km, ICRISAT Lake – 3.5 Km, Gopicheruvu- 6. 7 Km, Nallagandla Cheruvu - 6.5 km and Danara Cheruvu are located at respective distance. Danara Cheru Reserved Forest – 7.4km, Kodakanchi Reserved Forest - 9.3km, Kazipally – 9.5 km Reserved Forest falls at their respective distance from the proposed project.

Total plot area is 16297 m², of which an area earmarked for greenbelt is 5377 m² (33%). Total project cost including existing facilities is Rs. 1.75 Crore. Following are details of existing and proposed products;

S. No.	Product Name	Production Capacity	
		Kg/Month	Kg/Day
	Group-A		
1	N-Butyl Lithium (n-BuLi)	10000.00	333.33
	Total	10000.00	333.33
	Group-B		
1	Lithium hexamethyldisilazide (LHS)	10000.00	333.33
	Total	10000.00	333.33
	Group-C		
1	N-Butyl Lithium (n-BuLi)	1700.00	56.66
2	Lithium hexamethyldisilazide (LHS)	500.00	16.66
3	Hexyl lithium (HexLi)	500.00	16.66
4	Lithium tri-tert-butoxyaluminum hydride (TBLAH)	500.00	16.66
5	Lithium hexamethyldisilazide (LHS)	6000.00	200.00
6	Lithium diisopropylamide (LDA)	100.00	3.33
7	Methyl Lithium (MeLi)	100.00	3.33
8	Phenyl Lithium (PhLi)	100.00	3.33
9	Al-200-2CE	500.00	16.66
	Total	10000.00	333.33
	Group-D		
1	N-Butyl Lithium (n-BuLi)	6000.00	200.00
2	Lithium hexamethyldisilazide (LHS)	500.00	16.66
3	Hexyl lithium (HexLi)	500.00	16.66
4	Lithium tri-tert-butoxyaluminum hydride (TBLAH)	500.00	16.66
5	Lithium hexamethyldisilazide (LHS)	1700.00	56.66
6	Lithium diisopropylamide (LDA)	100.00	3.33
7	Methyl Lithium (MeLi)	100.00	3.33

S. No.	Product Name	Production Capacity	
8	Phenyl Lithium (PhLi)	100.00	3.33
9	Al-200-2CE	500.00	16.66
	Total	10000.00	333.33
	Group-E		
1	N-Butyl Lithium (n-BuLi)	5000.00	166.66
2	Lithium hexamethyldisilazide (LHS)	5000.00	166.66
	Total (Sum of Any one Group)	10000.00	333.33

LIST OF PROPOSED PRODUCTS

S. No.	Product Name	CAS No's	Production Capacities	
			Kgs/Month	Kgs/Day
	Group-A			
1	N-Butyl Lithium (n-BuLi)	109-72-8	50,000.00	1666.67
	Total		50,000.00	1666.67
	Group-B			
1	Lithium hexamethyldisilazide (LHS)	4039-32-1	50,000.00	1666.67
	Total		50,000.00	1666.67
	Group-C			
1	N-Butyl Lithium (n-BuLi)	109-72-8	8500.00	283.33
2	Lithium hexamethyldisilazide (LHS)	4039-32-1	30000.00	83.30
3	Hexyl lithium (HexLi)	21369-64-2	950.00	31.67
4	Lithium tri-tert-butoxyaluminum hydride (TBLAH)	17476-04-9	960.00	32.00
5	Lithium tetrahydridoborate	16949-15-8	2500.00	1000.00
6	Lithium diisopropylamide (LDA)	4111-54-0	500.00	16.63
7	Methyl Lithium (MeLi)	917-54-4	500.00	16.63
8	Phenyl Lithium (PhLi)	591-51-5	500.00	16.63
9	Secondary-Butyl Lithium	598-30-1	1100.00	36.67
10	Di-Butyl Magnesium	1191-47	2500.00	83.33
11	Al - 200-2CE		2000.00	66.66
	Total		50,000.00	1666.67
	Group-D			
1	N-Butyl Lithium (n-BuLi)	109-72-8	8500.00	283.00
2	Lithium hexamethyldisilazide (LHS)	4039-32-1	30000.00	46.5.00
3	Hexyl lithium (HexLi)	21369-64-2	2500.00	83.30
4	Lithium tri-tert-butoxyaluminum hydride (TBLAH)	17476-04-9	2500.00	83.30
5	Lithium tetrahydridoborate	16949-15-8	1400.00	1000.00
6	Lithium diisopropylamide (LDA)	4111-54-0	500.00	16.67
7	Methyl Lithium (MeLi)	917-54-4	500.00	16.67
8	Phenyl Lithium (PhLi)	591-51-5	500.00	16.67

S. No.	Product Name	CAS No's	Production Capacities	
9	Secondary-Butyl Lithium	598-30-1	1100.00	36.67
10	Di-Butyl Magnesium	1191-47	2500.00	83.333
	Total		50,000.00	1666.67
	Group-E			
1	N-Butyl Lithium (n-BuLi)	109-72-8	25,000.00	833.33
2	Lithium hexamethyldisilazide (LHS)		25,000.00	833.34
	Total (Sum of Any one Group)		50,000.00	1666.67

Additional DG set having capacity of 550 KVA alongwith existing DG sets (82.5 KVA and 200 KVA) will be installed. Thermic fluid heater (diesel fired) of 2 lakh KCal is already existing and new Thermic fluid heater (diesel fired) having capacity of 4 Lakh K Cal will be installed.

Fresh water requirement of the project will increase upto 39.0 m3/day which will be met through TSIC supply. Against this 7.8 m3/day of wastewater will be generated. The wastewater from utilities will be sent to ETP comprising neutralization tank and then passed to RO plant for reuse. RO reject/salt will be sent will be sent to TSDF for secure land fill.

RO salt, Sand contaminated Lithium Chloride, Used Gaskets, Used Cotton, Used paints, Waste insulation wool will be send to TSDF. Used Oil used within premises as a lubricant and lead acid battery will be sold to registered recycler.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I (as referred on Ministry's web site) for preparation of EIA-EMP report.

B. Specific TOR

1. Details on solvents to be used, measures for solvent recovery and for emissions control.
2. Details of process emissions from the proposed unit and its arrangement to control.
3. Ambient air quality data should include VOC, other process-specific pollutants* like NH₃*, chlorine*, HCl*, HBr*, H₂S*, HF*, etc., (* - as applicable)
4. Work zone monitoring arrangements for hazardous chemicals.
5. Detailed effluent treatment scheme including segregation of effluent streams for units adopting 'Zero' liquid discharge.
6. Action plan for odour control to be submitted.
7. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they co-process organic solid/hazardous waste generated.
8. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
9. Action plan for utilization of MEE/dryers salts.
10. Material Safety Data Sheet for all the Chemicals are being used/will be used.
11. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
12. Details of incinerator if to be installed.
13. Risk assessment for storage and handling of hazardous chemicals/solvents. Action plan for handling & safety system to be incorporated.

14. Arrangements for ensuring health and safety of workers engaged in handling of toxic materials.

B. Additional TOR

1. Public hearing is exempted as per para 7(i) III Stage (3)(i)(b) of EIA Notification, 2006 for preparation of EIA/EMP Report, being site is located in the Notified industrial area.
2. Recommendation of SPCB to be obtained for expansion.

It was recommended that 'TORs' without 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.

3.7.6 Additional Drilling & Testing of Hydrocarbons at 7 (seven) locations under Dibru-Saikhowa National Park Area, North-West of Baghjan PML, District Tinsukia, Assam by M/s Oil India Ltd. (IOL)– reg. TOR

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

3.7.7 Proposed expansion of Pesticides industry and pesticide specific intermediates (excluding formulations) from 17562 MTA to 26572 MTA at Plot No. 306/3, Phase II, GIDC Estate, District Valsad, Gujarat by M/s Bayer Vapi Private Limited.– reg. 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 units producing technical grade pesticides are listed at S.N. 5(b) under category 'A' and appraised at Central level.

M/s Bayer Vapi Private Limited has proposed for expansion of pesticides industry and pesticide specific intermediates (excluding formulations) from 17562 MTA to 26572 MTA at Plot No. 306/3, Phase II, GIDC Estate, District Valsad, Gujarat. Ministry has issued EC vide letter no J-11011/526/2008-IA.II(I) dated 22.09.2008. Daman Ganga River and Kalok River is flowing at a distance of 4.22 km (SW) and 4.80 km (N) from the project. It is reported that no National Parks, Wildlife Sanctuaries, Reserve Forest (RF)/ Protected Forests (PF), Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. 1263 persons will be employed.

Cost of proposed project is Rs. 582.46 Crore. Plot area is 347768 m², of which 96920m² of land will be developed as greenbelt. Following products will be manufactured:

Sr No	Name of Products	Category	Capacity (MT/Annum)		
			Existing	Proposed	Total Proposed after

					Expansion
1	Cypermethrin	Insecticides	2496	0	2496
2	Alphamethrin	Insecticides	480	0	480
3	Deltamethrin	Insecticides	504	0	504
4	Permethrin	Insecticides	1374(Either individual or total production of 2 products)	0	1374 (Either individual or total production of 2 products)
5	Transfluthrin	Insecticides			
6	D Trans Allethrin	Insecticides	180	-180	0
7	Acrinathrin	Insecticides	45	0	45
8	Imidacloprid	Insecticides	720	0	720
9	Beta Cyfluthrin	Insecticides	982.32 (Either individual or total production of 2 products)	0	982.32 (Either individual or total production of 2 products)
10	Cyfluthrin	Insecticides			
11	Ethofumesate	Herbicide	1560 (Either individual or total production of 2 products)	1740 (Either individual or total production of 2 products)	3300 (Either individual or total production of 3 products)
12	NC 9770	Intermediate			
13	Aclonifen	Herbicide	0	3300	
14	Triafamone	Herbicide	0	180 (Either individual or total production of 2 products)	180 (Either individual or total production of 2 products)
15	Sulphonyl Indole	Intermediate			
16	MetaphenoxyBenzaldehyde	Intermediate	3000	0	3000
17	NaCMTS	Intermediate	1200	0	1200
18	Cypermethric Acid Chloride (CMAC)/ Cypermethric Acid (CMA)	Intermediate	2400	0	2400
19	Cypermethric Acid Chloride from DV Ester	Intermediate	600 (Either individual or total production of 2 products)	0	600 (Either individual or total production of 2 products)
20	Acid Chloride Preparation	Intermediate			
21	Metaphenoxy Benzyl Alcohol	Intermediate	1200	0	1200
22	Becisthemic Acid	Intermediate	180	0	180
23	Chrysanthemic Acid	Intermediate	180 (Either individual or total production of 2 products)	0	180 (Either individual or total production of 2 products)
24	Allethrolones	Intermediate			
25	TCA	Intermediate	410.4 (Either individual or total production of 2 products)	129.6	540 (Either individual or total production of 2 products)
26	RTCMA	Intermediate			

27	DM Base	Intermediate	50.4	0	50.4
28	Fipronil	Insecticides	0	540	540
29	Ethiprole	Insecticides	0	1020	1020
30	Fluopyram	Fungicide	0	3000 (Either individual or total production of 2 products)	3000 (Either individual or total production of 2 products)
31	PYACN	Intermediate			
32	Tembotrione	Herbicide	0	1020	1020
33	Pyrasulfotle	Herbicide	0	300	300
34	Amid Chloride	Intermediate	0	1020	1020
35	Flumethrin	Insecticides	0	60	60
36	R & D Products	Not Specified	0	180	180
Total Capacity			17562.12	9009.6	26571.72

Power requirement of 33000 KVA will be sourced from Dakshin Gujarat Vij Company Ltd. Two numbers of DG sets having 1500 KVA capacity will be installed as standby arrangement. Natural Gas or Furnace Oil has been proposed to be used. There are 4 boilers having 10TPH capacity and additional boiler of 15 TPH is proposed. Committee suggested for use of natural gas in place of FO.

Water requirement was informed to be reduced from 3219.9 m³/day to 3049.2 m³/day due to recycling of water. Effluent generation will reduce from 949 m³/day to 945 m³/day. Effluent will be treated in the existing ETP with RO treatment, ATDF plant to recover water for recycling and reuse. Effluent will be sent to CETP for final treatment. The Committee observed that large volume of wastewater is being sent CETP and industry should have own treatment system rather contributing to CETP. Therefore the committee was of the view of site visit at the EIA-EMP stage taking into consideration the area is under CPA.

ETP sludge, distillation residue, ash from incineration will be disposed of to TSDF. Process residue will be sent for common incineration. Used oil as lubricant will be sold to registered reprocessor. Discarded containers/ bag will be sent to the authorized recycler.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I for preparation of EIA-EMP report:

A. Specific TOR

- 1 Commitment that no banned pesticides will be manufactured.
- 2 Details on solvents to be used, measures for solvent recovery and for emissions control.
- 3 Details of process emissions from the proposed unit and its arrangement to control.
- 4 Ambient air quality data should include VOC, other process-specific pollutants* like NH₃*, chlorine*, HCl*, HBr*, H₂S*, HF*, CS₂ etc., (* - as applicable)
- 5 Work zone monitoring arrangements for hazardous chemicals.
- 6 Detailed effluent treatment scheme including segregation for units adopting 'Zero' liquid discharge.

- 7 Action plan for odour control to be submitted.
- 8 A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they co-process organic solid/hazardous waste generated.
- 9 Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
- 10 Material Safety Data Sheet for all the Chemicals are being used/will be used.
- 11 Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
- 12 Details of incinerator if to be installed.
- 13 Risk assessment for storage and handling of hazardous chemicals/solvents. Action plan for handling & safety system to be incorporated.
- 14 Arrangements for ensuring health and safety of workers engaged in handling of toxic materials.

B. Additional TOR

- i Public hearing is exempted as per para 7(i) III Stage (3)(i)(b) of EIA Notification, 2006 for preparation of EIA/EMP Report, being site is located in the Notified industrial area.
- ii 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.
- iii Recommendation and justification of SPCB to be obtained for discharge of effluent to CETP and on other environmental implications

It was recommended that '**TORs**' **without 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.

3.7.8 Expansion of Bulk Drugs and Intermediates Manufacturing Unit (From 10.5 TPM to 152 TPM) at Sy.No. 501, 506 and 507, Village Koyalagudem, Mandal Choutuppal, District Nalgonda, Telangana by M/s S.V. Labs Pvt. 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 along with the draft Term of References for the preparation of EIA-EMP. All Synthetic Organic Chemicals Industry (Bulk drug and intermediate) located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised by Expert Appraisal Committee (I).

M/s S.V. Labs Pvt. Ltd. has proposed for expansion of bulk drugs and intermediates manufacturing unit (From 10.5 TPM to 152 TPM) at Sy. No. 501, 506 and 507, Village Koyalagudem, Mandal Choutuppal, District Nalgonda, Telangana. Ministry has issued the Environmental Clearance vide letter no. J-11011/302/2007-IA II(I) dated 12.09.2007. It is reported that no national parks, wildlife sanctuaries, Protected Forests (PF), Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. Following Reserve forests

- Lakkaram RF – 2.2 km (NE)
- Choutuppal RF – 5 km (NE)

- Malkapuram RF – 2.3 km(W)
- Hafizpura RF – 5.1 km (SW)
- Rajkonda RF – 7.5 km (S)
- Meharnagar RF – 9.4 km (NW)

Total plot area is 6 acres, of which an area earmarked for greenbelt is 2 acres. Total project cost including existing facilities is Rs. 20 Crore. Following products will be manufactured after proposed expansion:

S. No	Name of the Product	Capacity	
		Kg/day	TPM
1	Cetirizine Dihydrochloride	100	3.0
2	Carvedilol	100	3.0
3	Terbinafine Hydrochloride	100	3.0
4	Omeprazole	100	3.0
5	Fluconazole	100	3.0
6	Cis-Bromo Benzoate	200	6.0
7	4 Amino-1-Methyl-3n-Propyl Pyrazole5- Carboxamide	83	2.5
8	Trityl Tetrazole Bromomethyl Biphenyl	300	9.0
9	Thionordiazepam	50	1.5
10	Tetralone	1500	45
11	Citalopram Hydrobromide	150	4.5
12	Losartan Potassium	150	4.5
13	CBX	100	3.0
14	SSB	300	9.0
15	2-Acetyl Thiophene	100	3.0
16	Bosentan	100	3.0
17	Dapagliflozin propanediol	100	3.0
18	Ponatinib	100	3.0
19	Pozaconazole	35	1.1
20	Vidagliptin	35	1.1
21	Abacavir Sulfate(CHN)	35	1.1
22	Sumatriptan(KSM)	100	3.0
23	Amlodipine Maleate	100	3.0
24	4-BBFA	200	3.0
25	Ezetimibe-1	100	3.0
26	Methyl 2- (2-Chlorophenyl) Aceetate	700	21.0
27	Trityl Chloride	1000	30.0
28	Atorvatatin Calcium	100	3.0
29	Pregabalin	100	3.0
30	Rosuvastatin Clacium	100	3.0
31	Rabeprazole Sodium	30	0.9
32	Sildenafil Citrate	100	3.0
33	Quetiapine Fumerate	100	3.0
34	Darunavir Ethanolate	350	10.5
	Total (Worst Case 12 Products)	5050	152

List of By product

Name of bye product	Name of product	Capacity	
	Tetralone	Kg/day	TPM
Aluminum Hydroxide Solution (6.4%)		6632.2	198.9
Hydrochloric Acid (35%)		1534	46

Capacity of the existing coal fired boiler i.e. 4 TPH will increase to 6 TPH. It is proposed to connect with multicyclone separator with adequate stack height. The committee suggested to for bag filter in place of multicyclone. In the existing plant two DG set (380 KVA and 250 KVA) are installed and additional DG set having 1000 KVA will be provided.

Fresh water requirement will increase from 84.2 m³/day to 190.9 m³/day. Quantity of wastewater will increase from 23.13 m³/day to 84.2 m³/day. The wastewater shall be treated in stripper followed by MEE and ATFD. Stripper Condensate sent to cement plant for co-incineration. MEE and ATFD condensate sent to biological treatment followed by RO. RO reject sent to MEE and permeate is reused in cooling towers and boiler make up. The Committee suggested the plant should be ZLD with these treatments.

Solid/ Hazardous waste will be segregated and stored in suitable containers/ HDPE bags and place in elevated covered platform with leachate collection system before sending to authorized agencies. ETP Sludge and Evaporation residue will be sent to TSDF. Used Oil used within premises as a lubricant / sold to registered recycler. Ash from boiler will be sent brick manufacturers. Organic residue, solvent residue and stripper distillate will be sent to TSDF/Cement industries.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I (as referred on Ministry's web site) for preparation of EIA-EMP report.

A. Specific TOR

1. Details on solvents to be used, measures for solvent recovery and for emissions control.
2. Details of process emissions from the proposed unit and its arrangement to control.
3. Ambient air quality data should include VOC, other process-specific pollutants* like NH₃*, chlorine*, HCl*, HBr*, H₂S*, HF*, etc., (* - as applicable)
4. Work zone monitoring arrangements for hazardous chemicals.
5. Detailed effluent treatment scheme including segregation of effluent streams for units adopting 'Zero' liquid discharge.
6. Action plan for odour control to be submitted.
7. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they co-process organic solid/hazardous waste generated.
8. Authorization/Membership for the disposal of liquid effluent in CETP and

- solid/hazardous waste in TSDF, if any.
9. Action plan for utilization of MEE/dryers salts.
 10. Material Safety Data Sheet for all the Chemicals are being used/will be used.
 11. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
 12. Details of incinerator if to be installed.
 13. Risk assessment for storage and handling of hazardous chemicals/solvents. Action plan for handling & safety system to be incorporated.
 14. Arrangements for ensuring health and safety of workers engaged in handling of toxic materials.

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. A Copy of certified compliance report to the environmental conditions prescribed in the existing EC. Action taken report/ detailed action plan on the partly/non-compliance conditions reported by the MoEF&CC Regional Office.
3. ZLD system to be adopted with reuse-recycling of wastewater.

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

3.7.9 Expansion in existing products from 380 MTA to 1395 MTA in the segment of API (Bulk drug and intermediates) and new By-products to the tune of 5580 MTA Plot No. 24 at M.1.D.C Area Dhatav, Raigad, Maharashtra by M/s BEC Chemicals Pvt. 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 along with the draft Term of References for the preparation of EIA-EMP. All Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised by Expert Appraisal Committee (I).

M/s BEC Chemicals Pvt. Ltd. has proposed for Expansion in existing products from 380 MTA to 1395 MTA in the segment of API (Bulk drug and intermediates) and new By-products to the tune of 5580 MTA Plot No. 24 at M.1.D.C Area Dhatav, Raigad, Maharashtra. It is reported that no national parks, wildlife sanctuaries, Reserve Forest (RF)/ Protected Forests (PF), Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. It is reported in the presentation that Kundalika River is flowing at a distance of 950 mt. However it is not mentioned in Form-1. PP informed that SEAC-I, Maharashtra in their 106th meeting held in July 2015 had already considered the

proposal of TOR. However, formal letter for award of TOR has not been issued by the State, SEIAA.

Further, it was informed that as per draft Notification of MoEF&CC vide ref. no. S.O. 2435 date 4th September 2015, Dhatav village, where proposed project located, is declared as an Eco Sensitive Area. However, final the notification has not been issued. Taking into consideration that final TOR is withheld by the SEIAA, Maharashtra and notification w.r.t. eco-sensitive has not been finalized, the Committee was of the view that till the finalization of Notification, the project can not be considered as A category and advised, SEIAA, Maharashtra for award of TOR as it has been recommended by the SEAC. Therefore, the project is returned with the remarks that proposal at this stage should be considered as B category till the final decision on eco-sensitive is taken.

3.7.10 Proposed manufacturing of Synthetic Organic dyes (capacity - 20 MTM) at Plot No. 1 Sikandar Market, Opp. Style wash, EM Process Gali, Danilimda, Ahmedabad, Gujarat by M/s I M Dye Chem Pvt. 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 along with the draft Term of References for the preparation of EIA-EMP. All Synthetic Organic Chemicals Industry (bulk drugs and intermediates) located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level Expert Appraisal Committee (I).

M/s I M Dye Chem Pvt. Ltd. has proposed for Proposed manufacturing of Synthetic Organic dyes (capacity - 20 MTM) at Plot No. 1 Sikandar Market, Opp. Style wash, EM Process Gali, Danilimda, Ahmedabad, Gujarat. It is reported that the Great Indian Bustard is located within 5 km from the proposed project site. No national parks, Reserve Forest (RF)/ Protected Forests (PF), Biosphere Reserves, Tiger/Elephant Reserves, lies within 10 km distance. River Sabarmati is flowing at distance of 1.3 km in NW direction.

Total plot area is 800 m² of which greenbelt will be developed in the area of 340 m² (42%). Cost of project is Rs. 80 lakh . 20 persons will be employed on the project. The industry will manufacture SO dye only with capacity of 20 MT/month. It was informed to installed 0.3 TPH boiler using wood. Committee pointed out for not using wood in the boiler and replace with other fuel. DG set of 65 KVA will be installed as stand by.

Fresh water requirement of 29 m³/day will be sourced from ground water. Against this wastewater of 6 m³/day will be generated. The wastewater will be treated in ETP with RO system. The committee suggested to go for zero liquid discharge and no effluent to be discharged outside the premises. ETP sludge, used oil/spent oil will be collected, stored, transported as per requirement of hazardous waste management rules and finally disposed to TSDF site. Discarded container and bags will be sold to authorized dealer.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I (refer Ministry's web site) for preparation of EIA-EMP report:

A. Specific TOR:

1. Details on solvents to be used, measures for solvent recovery and for emissions control.
2. Details of process emissions from the proposed unit and its arrangement to control.
3. Ambient air quality data should include VOC, etc.,
4. Work zone monitoring arrangements for hazardous chemicals.
5. Detailed effluent treatment scheme including segregation of effluent streams for units adopting 'Zero' liquid discharge.
6. Action plan for odour control to be submitted.
7. Details of Incinerator alongwith pollution control device to be provided.
8. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they co-process organic solid/hazardous waste generated.
9. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
10. Material Safety Data Sheet for all the Chemicals are being used/will be used.
11. Authorization/Membership for the disposal of solid/hazardous waste in TSDF are being used/will be used.
12. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
13. Risk assessment for storage and handling of hazardous chemicals/solvents. Action plan for handling & safety system to be incorporated.
14. Arrangements for ensuring health and safety of workers engaged in handling of toxic materials.

B. Additional TOR

- i 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.
- ii Boiler fuel should be without wood

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.

3.7.11 Laying of 340 kms (10.75") pipeline from Jaipur to Panipat with carrying capacity of 800 TMTA by M/s IOCL – 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. Oil and gas transportation pipeline (crude and refinery/petrochemical products), passing through national parks/sanctuaries./coral reefs /ecologically sensitive areas including LNG Terminal is listed at S.N. 6(a) under category 'A' and appraised at Central level.

M/s IOCL has proposed for Laying of 340 kms (10.75") pipeline from Jaipur to Panipat with carrying capacity of 800 TMTA. It is reported that Nahargarh, wildlife sanctuary (Rajasthan) is 1.5 km from the alignment and Jamwa Ramgarh wildlife sanctuary (Rajasthan) and Bindwas wildlife sanctuary (Haryana) are at distance of 14 km and 8.3 km respectively. No national parks, Reserve Forest (RF)/ Protected Forests (PF), Biosphere Reserves, Tiger/Elephant Reserves, lies within 10 km distance. PP did not mention details of water bodied and river crossing under the project.

Total cost of the proposed project is estimated as Rs. 611.53 Crore including foreign exchange of Rs 18.85 Crore, at 2014 price level.The project broadly covers the followings;

- Utilizing existing 20 km long, 18" ODx 0.25" WT, API 5L X65 grade pipeline section of KSPL in between Mohanpur and Sanganer
- Laying of 340 km long 10.75" OD0.25" WT, API 5Lx 46 grade pipeline from Sanganer to Panipat.
- 3 motor-driven MLPUs at Mohanpura
- Scrapper facilities at Mohanpura (Jaipur), Sanganer (Jaipur) and Rewari
- 2 line Balancing Tanks (LBTs), each of 21000kl nominal capcity at Mohanpura
- Multi product pumping facilities and receipt facility at Mohanpura and panipat

The proposed pipeline would originate at Mohanpura (Jaipur) and would utilize existing Mohanpura-Sanganer Pipeline section of KSPL. After Sanganer, the pipeline would run parallel to Sanganer-Panipat section of existing Mundra-Panipat crude oil pipeline up to Rewari station for a length of approximately 180 kms. Thereafter, the proposed pipeline would follow the existing Right of way of Panipat-Rewari product pipeline for about 160 kms. Only 10 M strip of new RoW, adjacent to the existing RoW for about 300 km has been considered for acquisition. The pipeline would be provided with motor operated sectionalizing block valves at regular intervals all along the pipeline route. Additional sectionalizing valves would also be provided on one side of each major river / canal crossings with a provision of non-return valves on the other side

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR for preparation of EIA-EMP report.

A. Specific Standard TOR:

1. Justification of the project
2. Route map indicating project location
3. Details of land to be acquired. Details of projects vis-à-vis ESAs and approvals thereof.
4. Project location along with map of 1 km area (500 meters on either side of the pipeline from centerline) and site details providing various industries, surface water bodies, forests etc.
5. Analysis of alternative sites and Technology.
6. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
7. Recommendation of SCZMA /CRZ clearance for the proposed pipeline.
8. Present land use based on satellite imagery for the study area of 10 km radius.
9. Details of applications filed for forest clearance to be obtained for the project for the forest land involved in the project along with details of the compensatory afforestation.
10. Process Description along with Process Flow Diagram.
11. Details of water consumption and source of water supply, waste water generation, treatment and effluent disposal.
12. Detailed solid & Hazardous waste generation, collection, segregation, its recycling and reuse, treatment and disposal.
13. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
14. Site-specific micro-meteorological data for temperature, relative humidity, hourly wind speed and direction and rainfall for one season at one location.
15. At total of 30 locations, ambient air quality monitoring within the study area of 500 m along the pipeline route and around the pumping station and delivery station for PM10, SO₂, NO_x, CO, HC, VOC for one season(Non Monsoon) taking into account the pre-dominant wind direction at the representative locations covering population zone and sensitive receptors including reserved forests.
16. Determination of atmospheric inversion level and assessment of ground level concentration of pollutants. Air quality modelling for proposed project.
17. At about 10 locations, water monitoring will be conducted including surface & ground water for one season (Non Monsoon)
18. At 15 locations, Soil sample analysis within the study area for one season (Non Monsoon).
19. At 30 locations, noise Monitoring will be taken up for one season (Non Monsoon)
20. Demography & socio-economics of the study area.
21. Ecological features (terrestrial & Aquatic) of the study area for one season (Non Monsoon)
22. Assessment of impact on air, water, soil, solid/hazardous waste and noise levels.
23. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
24. Details of proposed preventive measures for leakages and accident.
25. Risk assessment including Hazard identification, Consequence Analysis, Risk Assessment and preparation of Disaster Management Plan as per Regulations.
26. Corrosion Management of Pipeline
27. Details of proper restoration of land after laying the pipelines.
28. Details of proposed Occupational Health Surveillance program for the employees and other labour
29. Detailed Environment management Plan (EMP) with specific reference to Energy conservation and natural resource conservation, details of air pollution control

system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure will be provided.

30. Public hearing to be conducted in three districts through which the pipeline passes. Pointwise comments/reply to the issues raised during Public Hearing / Public Consultation

A. Additional TOR:

1. Since the project falls within 10km of Nahargarh, wildlife sanctuary (Rajasthan) and Bindwas wildlife sanctuary (Haryana), a copy of application submitted to Standing Committee of the NBWL for Wildlife clearance shall be furnished.
2. Public hearing to be conducted in respective districts 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.

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 respective State Pollution Control Boards for public hearing in three districts. The issues emerged and response to the issues shall be incorporated in the EIA report.

3.7.12 Expansion of polymers (2260 MTPM to 24000 MTPM) at Survey No. 377/1 (16 A), village Kachigam, Zari Cause Way Road, Behind Stone Quarry, Kachigam, Daman (U.T.) by M/s Jesons Industries Ltd. (Unit-3)- reg 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 Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level Expert Appraisal Committee (I). The project also attract general condition due to interstate boundary less than 5 km.

M/s Jesons Industries Ltd. (Unit-3) Expansion of polymers (2260 MTPM to 24000 MTPM) at Survey No. 377/1 (16 A), village Kachigam, Zari Cause Way Road, Behind Stone Quarry, Kachigam, Daman (U.T.). River Damanganga flows approximately 1.33 km away from the site. Patches of reserved forest fall in the UT of Daman. Protected areas/Sanctuaries are not within the periphery. There are no eco-sensitive zones within the 10km radial periphery. PP vide letter dated 11/01/2015 has obtained clarification from the Town and Country department regarding industrial zone. However, no notification prior to

2006 issued by the State is submitted. The unit was established prior to 2006 and hence no was obtained.

Total plot area is 2063.12 m². PP did not mention about development of green belt. Cost of proposed expansion is Rs. 32 lakh. Total 50 persons will be employed on the project. Following products will be manufactured;

Sr. No.	Product	Existing Scenario Qty (MT/Year)	Proposed Scenario Qty (MT/Year)
Existing Products			
1.	Polymers of Vinyl Acetate	600.00	600.00
2.	Vinyl co-polymers	600.00	600.00
3.	Acrylic Polymers	960.00	22700
4.	Polyvinyl Alcohol Solution	100.00	100.00
TOTAL		2260.00	24000.00

The existing power requirement is 100 KVA and after proposed expansion total power requirement will be 200 KVA which will be sourced from Daman Electricity Department. In existing operations two Boilers of 600 Kg/Hr is installed. One of them is for standby arrangement. LDO is used as fuel in Boiler. One D.G. Set having capacity of 100 kVA has installed in existing operation. After proposed expansion D.G. Set of 100 kVA will be replaced by installing new 200 KVA DG Set. Diesel will be used as fuel in D.G. Set.

In Existing operations, water requirement for the plant is 6.7 m³/day. Total water consumption after proposed expansion will be 44.8 m³/day. The water will be sourced from the Bore well or Tanker water supply. In existing operations Industrial Effluent @ 1.4 m³/day is treated in effluent treatment plant and then utilized for gardening purpose. Reject water from RO is evaporated in evaporator. After proposed expansion Industrial Effluent @ 4.6 m³/day reject water from RO, blow-down from cooling, boiler and DM and washing water from plant will be treated in the modified ETP. Treated effluent from ETP will be sent to Evaporator and evaporation condensate water from evaporator will be reused for cooling & gardening purpose. There will be no discharge of treated effluent outside the company premises.

Used oil to be reused as lubricant in plant operations. Discarded containers to be reused for packing/ sold to the authorized dealer. ETP and process waste will be disposed of to CSWD site of GEPIL, Mota Randha, Silvassa

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I (refer Ministry's web site) for preparation of EIA-EMP report:

A. Specific TOR:

1. Details on solvents to be used, measures for solvent recovery and for emissions control.
2. Details of process emissions from the proposed unit and its arrangement to control.
3. Ambient air quality data should include VOC, etc.,

4. Work zone monitoring arrangements for hazardous chemicals.
5. Detailed effluent treatment scheme including segregation of effluent streams for units adopting 'Zero' liquid discharge.
6. Action plan for odour control to be submitted.
7. Details of Incinerator alongwith pollution control device to be provided.
8. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they co-process organic solid/hazardous waste generated.
9. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
10. Material Safety Data Sheet for all the Chemicals are being used/will be used.
11. Authorization/Membership for the disposal of solid/hazardous waste in TSDF are being used/will be used.
12. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
13. Risk assessment for storage and handling of hazardous chemicals/solvents. Action plan for handling & safety system to be incorporated.
14. Arrangements for ensuring health and safety of workers engaged in handling of toxic materials.

B. Additional TOR

- (i) Public hearing to be conducted and issues raised and commitments made by 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.
- (ii) Permission to be obtained from ground water board for drawing water.

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.

3.7.13 Proposed 60 KLPD Molasses/grain based distillery at Village- Abdul purmunna Tehsil- Bijnor, Uttar Pradesh by M/s Centurion Industries Pvt. Ltd (CIPL) – reg 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 molasses based distillery are listed at S.N. 5(g) (i) under category 'A' and appraised at Central level. All Grain based distillery (> 60 KLPD) are listed at S.N. 5(g) (ii) under category 'A' and appraised at Central level.

M/s Centurion Industries Pvt. Ltd (CIPL) has proposed to set up 60 KLPD Molasses/grain based distillery at Village- Abdulpurmunna Tehsil- Bijnor, Uttar Pradesh. There is no National Park, Wildlife Sanctuary, Tiger/Elephant or Biosphere Reserve within

the distance of 10km from the project site. River Ganga is flowing at a distance of 15 km from the project site.

Total cost of the project is Rs. 70.42 crore. The total requirement of labour and supervisory staff for the plant is estimated to be 30.

The requirement of power for the plant and other proposes has been estimated at 1.5 MW. Provision for Turbine of 2 MW has been made. The fresh water requirement at the plant is around 10 KL per kiloliter of alcohol produced. The water will be sourced from Tube well. Spent wash generation is 8 KL/KL of Alcohol production. The industry would install multiple effect evaporators for the treatment of spent wash based on ZLD . The spent less and MEE condensate would be reused in the process. PP did not mention specific details of boiler. At air pollution control equipment in the form of ESP will be installed before stack. Stack of 40 m height will help to provide maximum dispersion and dilution of air pollutants into the ambient air. PP has been issued with standard TOR on 06..08.2015 electronically.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I (Refer Minsitry's website) for preparation of EIA-EMP report:

A. Specific TOR

1. List of existing distillery units in the study area along with their capacity and sourcing of raw material.
2. Number of working days of the distillery unit.
3. Details of raw materials such as molasses/grains, their source with availability.
4. Details of the use of steam from the boiler.
5. Surface and Ground water quality around proposed spent wash storage lagoon, and compost yard.
6. Plan to reduce spent wash generation within 6-8 KL/KL of alcohol produced.
7. Proposed effluent treatment system for molasses/grain based distillery (spent wash, spent lees, condensate and utilities) as well as domestic sewage and scheme for achieving zero effluent discharge (ZLD).
8. Proposed action to restrict fresh water consumption within 10 KL/KL of alcohol production.
9. Details about capacity of spent wash holding tank, material used, design consideration. No. of peizometers to be proposed around spent wash holding tank.
10. Action plan to control ground water pollution.
11. Details of solid waste management including management of boiler ash, yeast, etc. Details of incinerated spent wash ash generation and its disposal.
12. Details of bio-composting yard (if applicable).
13. Action plan to control odour pollution.
14. Arrangements for installation of continuous online monitoring system (24x7 monitoring device)

B. Additional TOR

- i 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.

- ii Treatment scheme for spent wash should be followed as per CPCB guidelines formulated for Ganga Basin.

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.

3.7.14 Proposed expansion of phosphoric acid plant and Hydrogen Peroxide and new Chloromethane plant at plot no. 3, GIDC Dahej, Taluka Vagra, district Bharuch, Gujarat by M/s Gujarat Alkalies and Chemical 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 along with the draft Term of References for the preparation of EIA-EMP. All Chemical Fertilizer units are listed at S.N. 5(a) under category 'A' and appraised at Central level. Project also involve manufacturing chemicals , which also to be appraised at Central level if the unit is located outside the notified industrial area/estate and listed at S.N. 5(f) under category 'A'.

M/s Gujarat Alkalies and Chemical Ltd. has proposed expansion of phosphoric acid plant and Hydrogen Peroxide and new Chloromethane plant at plot no. 3, GIDC Dahej, Taluka Vagra, district Bharuch, Gujarat. It is reported that no national parks, wildlife sanctuaries, Reserve Forest (RF)/ Protected Forests (PF), Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. The Dahej Forest reserve is located at the distance of 7.3 km towards NW and Narmada Estuary is located at the distance of 3 km towards S direction. For Construction phase ~250 persons will be employed and for Operational phase ~175 persons will be employed.

Total plot area is 99.38 ha , of which an area earmarked for greenbelt will be 33% of project area. Total project cost including existing facilities is Rs. 1611.50 Crore. Following products will be manufactured:

S. No.	Products	Existing capacity (MTPM)	Additional Proposed (MTPM)	Total after expansion (MTPM)
A	Phosphoric Acid Plant (Expansion)			
1	Phosphoric Acid (100% P ₂ O ₅ basis)	1725	2783	4508
2	Phosphoric Acid (85% H ₃ PO ₄ basis)	2790	4500	7290
3	High Boiling Material	6	9.67	15.67
4	Calcium Chloride	17400	0	17400

S. No.	Products	Existing capacity (MTPM)	Additional Proposed (MTPM)	Total after expansion (MTPM)
B	Hydrogen Peroxide (100%) (Expansion)	2493	1200	3693
C	Chloromethane Plant (New)			
1	Total Chloromethane	--	18000	18000
2	Methylene Chloride	--	14400	14400
3	Chloroform	--	2700	2700
4	Carbon Tetra Chloride	--	900	900

Production Capacity of Existing (No Expansion) Products:

S. No.	Products	Existing capacity (MTPM)
D	Poly Aluminum Chloride Plant	
1	Poly Aluminum Chloride (18%)	3750
2	Poly Aluminum Chloride (30%)	1080
E	Anhydrous Aluminum Chloride Plant	
1	A.A.C (Granules/Powder)	1890
2	Sodium hypochlorite (10-13% Cl ₂ basis)	755
3	Non- Ferrous Alum	6
F	Stable Bleaching Powder	1250
G	Sodium Chlorate Plant	
1	Sodium Chlorate Solid (MT)	1860
2	Sodium Chlorate Solution (M ³)	3400
H	Caustic Soda Plant	
1	Caustic Soda (100%) Lye/Prills/Flakes	23550
2	Chlorine Gas	20784
3	Hydrochloric acid	7260
4	Hydrogen Gas	695.1
5	Sodium Hypochlorite	1019
6	Dilute Sulphuric acid (78-80%)	589
7	Gypsum	780

Details of Natural Gas Based Captive power Plant (CPP)

S. No.	Plant	Existing capacity (MW)
1	Power	70,560 MWH/M
2	Steam	120 TPH HP and 24 TPH IP

For the proposed expansion project, raw materials will be sourced locally and in-house. Water requirement of 6250 m³/day will be supplied from GIDC. The power requirement will be met from 29 MW from DGVCL/Wind, 30 MW from GUVNL and 25 MW from GSEC PP. For emergency the demand will be met from existing 5 nos. D.G sets of 1 MW. The anticipated air emissions from the proposed project are HCl, HF and HC. Water scrubbers, chilled water circulation, activated carbon adsorption will be provided for control of gaseous emissions.

About 2149 m³/day of treated effluent shall be disposed off into deep sea by means of sub sea pipelines. The hazardous waste generated will be carbon waste, tar pot heavies, chemical sludge, spent activated carbon, contaminated alumina, spent catalysts and waste drums. Non-Hazardous waste includes spent alumina catalyst, uncontaminated runnel and other inorganic solid waste.

The solid and hazardous waste will be disposed off into owned landfill or will be sent to common landfill sites and Incineration facilities as per the requirement.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I (as referred on Ministry's web site) for preparation of EIA-EMP report.

C. Specific TOR

1. Details on requirement of energy and water alongwith its source and authorization from the concerned department.
2. Energy conservation in ammonia synthesis for urea production and comparison with best technology.
3. Details of ammonia storage and risk assessment thereof.
4. Measures for control of urea dust emissions from prilling tower.
5. Measures for reduction of fresh water requirement.
6. Details of proposed source-specific pollution control schemes and equipments to meet the national standards for fertilizer.
7. Details of fluorine recovery system in case of phosphoric acid plants and SSP to recover fluorine as hydrofluoro silicic acid (H₂SiF₆) and its uses.
8. Management plan for solid/hazardous waste including storage, utilization and disposal of bye products viz., chalk, spent catalyst, hydro fluoro silicic acid and phosphor gypsum, sulphur muck, etc.

9. Details on existing ambient air quality for PM10, PM2.5, Urea dust*, NH3*, SO2*, NOx*, HF*, F*, Hydrocarbon (Methane and Non-Methane) etc., and expected, stack and fugitive emissions and evaluation of the adequacy of the proposed pollution control devices to meet standards for point sources and to meet AAQ standards. (*as applicable)
10. Details on water quality parameters in and around study area such as pH, Total Kjeldhal Nitrogen, Free Ammonical Nitrogen, free ammonia, Cyanide, Vanadium, Arsenic, Suspended Solids, Oil and Grease, *Cr as Cr⁶⁺, *Total Chromium, Fluoride, etc.
11. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they co-process organic solid/hazardous waste generated.
12. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
13. Material Safety Data Sheet for all the Chemicals are being used/will be used.
14. Details of incinerator if to be installed.
15. Risk assessment for storage and handling of hazardous chemicals/solvents. Action plan for handling & safety system to be incorporated.
16. Arrangements for ensuring health and safety of workers engaged in handling of toxic materials.
17. Details on solvents to be used, measures for solvent recovery and for emissions control.
18. Details of process emissions from the proposed unit and its arrangement to control.
19. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
20. Action plan for utilization of MEE/dryers salts.
21. Material Safety Data Sheet for all the Chemicals are being used/will be used.

B. Additional TOR

- i 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.
- ii 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.
- iii CRZ clearance is to be obtained.

- iv Impact of effluent on marine life.

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.

3.8 Any Other

3.8.1 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 Asurle-Porle, Tehsil Panhala, District Kolhapur, Maharashtra by M/s Shri DattaSakharKarkhana (M/s Dalmia Bharat Sugar & Industries Ltd- reg. amendment in EC.

MoEF&CC vide letter no J-11011/277/2013- IA II (I) dated 4.02.2015 has issued EC to M/s Shri DattaSakharKarkhana (M/s Dalmia Bharat Sugar & Industries Ltd for 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 with operational period of 270 days per annum.

Now, PP informed that spent wash treatment technology as incineration has been adopted instead of bio-composting. Therefore, PP has requested to change the operation days from 280 days to 330 days.

After deliberation, based on the treatment technology adopted by PP using incineration, the Committee recommended the amended above the amendment to change the operation from 280 days to 330 days

3.8.2 Development Drilling of 66 Wells in 7ML/NELP Block Onshore in District Cuddalore, Nagapattinam, Tiruvarur and Tanjavar, Tamil Nadu by M/s ONGC- Exemption from public hearing reg.

The project authorities 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 11th Expert Appraisal Committee (Industry 2) meeting held during 26th -27th August, 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 Ltd. have proposed for development drilling of 66 Wells in 7ML/NELP Block Onshore in District Cuddalore, Nagapattinam, Tiruvarur and Tanjavar, Tamil Nadu. It

is reported that project proposal does not attract CRZ clearance. No forest land is involved. Cost of the project is Rs. 264 Crore. Following are the Mining Block and lease area:

S.N.	M L Block Name	Block area (Sq. Km)	Proposed Wells
1	Bhuvanagiri	14.00	20
2	Madanam	16.40	10
3	Pallivaramangalam	2.00	10
4	Vijayapuram	49.00	5
5	Periyakudi	12.75	10
6	Tulsihattinam	3.70	3
7	Pundi	1.00	8

The production installations like GGS, GCS, EPS and ETP are in close proximity to most of the proposed drilling locations i.e. within radius of 5 Km range. The water requirement in a drilling rig for preparation of drilling mud and domestic will be 25 m³/day. Water based mud will be used. Effluent generated will be treated at ETP NRM (1300 m³) and ETP KMP (500 m³). The quantity present effluent generation is only 720 m³/day.

The Committee exempted the public hearing under 7 (ii) of EIA Notification, 2006 as public hearing was conducted in the earlier project in the same district.

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

- i. As proposed, no forest land shall be used for the proposed facilities/ activities.
- ii. Ambient air quality should be monitored near the closest human settlements as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for PM10, PM2.5, SO₂, 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 should be provided as per CPCB guidelines.
- vi. Total water requirement shall not exceed 25 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 and land. Separate drainage system shall be created for oil contaminated and non-oil contaminated water. 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 Chennai.

- ix. Produced water shall be treated in ETP. Treated produced water shall be disposed off through injection well as per CPCB/MoEF guidelines.
- 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. Restoration of the project site shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office at Chennai.
- 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 Chennai.
- xxiii. 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.
- 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 should 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.

3.8.3 Development Plan of CBM Block BK-CBM-2001/1 of Bokaro, Jharkhand by M/s ONGC- reg EC.

The project authorities 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 28th Expert Appraisal Committee (Industry 2) meeting held during 17th -18th October, 2011 for preparation of EIA/EMP report. All the projects related to offshore and onshore Oil and Gas exploration, development and production are listed in para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at central level.

M/s ONGC has proposed for Development Plan of CBM Block BK-CBM-2001/1 of Bokaro, Jharkhand. The Bokaro CBM Block (BK-CBM-2001/1) was awarded to ONGC-IOC consortium in 2002 and the Petroleum Exploration License (PEL) was granted by the Government of Jharkhand w.e.f. 21.2.2003 ('Effective Date'). 2 exploratory wells and eight core holes/ boreholes were drilled as per the committed MWP of Exploratory Phase (Phase-I) during 2½ years, with an extension of 6 months beyond original duration of 2 years (i.e. up to 20.8.2005). The Bokaro Block, extending over an area of 75 km², consists of three disconnected sectors, viz. Central Patch (Patch-A covering 48 km² area), Western Patch (Patch-B covering 16 km² area), and Eastern Patch (Patch-C covering 11 km² area). The total prospective area works out to approximately 64 km² (48 km² in Patch-A and 16 km² in

Patch-B). ONGC has planned to drill vertical wells. For processing of and collecting the gas and water to be produced from these wells, gas collecting stations are planned to be constructed. Land required for development wells are in process of permanent acquisition through Government. It is reported that no forest land is involved in this project. It is also reported that no wildlife sanctuary is located within 10 km distance. Following wells will be developed:

141 Development Wells and 05 Assessment wells

ONE Gas Collecting Station (GCS)

- Peak gas production of ~ 7.6 LCMD, Max Water 1550 SCMD
- Water production will reduce to ~ 70 SCMD at the 20th year

TWO Early Production System (EPS)

- Peak gas production of ~ 0.75 LCMD, Max Water 500 SCMD for each
- Water production will reduce to ~120 SCMD at the 20th year for each

Cost of project is Rs.1629 Crores. Well will be drilled with the average depth 1000m, Max: 1500m. Public hearing was held on 05.10.2015 for Bokaro district and 28.10.2015 for Ramgrah district.

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

- i. As proposed, no forest land shall be used for the proposed facilities/ activities.
- ii. Compensation for the land acquisition to the land oustees, 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.
- 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. Mercury shall also be analyzed in air, water and drill cuttings twice during drilling period.
- vi. The flare system shall be designed as per good oil field practices and Oil Industry Safety Directorate (OISD) guidelines. The company shall take necessary measures to prevent fire hazards and soil remediation as needed. At the place of ground flaring, the flare pit shall be lined with refractory bricks and efficient burning system. In case of overhead flare stacks, the stack height shall be provided as per the regulatory requirements and emissions from stacks shall meet the MOEF/CPCB guidelines.
- vii. The company shall make the arrangement for control of noise from the drilling activity and DG sets by providing necessary mitigation measures such as proper acoustic enclosures to DG sets and meet the norms notified by the MoEF. Height of all the stacks/vents shall be as per the CPCB guidelines.
- viii. The company shall comply with the guidelines for disposal of solid waste, drill cutting and drilling fluids for onshore drilling operation notified vide GSR. 546(E) dated 30th August, 2005.
- 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. The produced water shall be stored onsite HDPE lined pit for solar evaporation and reuse in drilling of new wells and fire hydrant system. Domestic effluent shall be disposed off through septic tank followed by soak pit.
- x. Water produced during drilling shall be reused in drilling of other core/test wells.
- 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 Bangalore.
- 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 (oily 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 Preventor (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. Company shall adopt Corporate Environment Policy as per the Ministry's O.M. No. J-11013/41/2006-IA.II(I) dated 26th April, 2011 and implemented.
- xxv. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

3.8.4 Exploratory Drilling of 23 wells in onshore Block of L-II of Cauvery Basin, Tamil Nadu by M/s Oil and Natural Gas Corporation- Environment Clearance.

The project authorities and their consultant gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during 12th and 13th reconstituted Expert Appraisal Committee (Industry) held during 26th -27th August, 2013 (20 wells), 18th -20th Nov, 2013 (2 wells) and 22nd EAC Meeting dated 28-29th Aug 2014 for one well viz. B-CY-EOT-1 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.

The block is located in Tiruvarur, Nagapattinam and Thanjavur Districts of Tamil Nadu. The total area of block is 1545.02 Sq.Km. Eleven(11) proposed exploratory wells fall in Tiruvarur District, Nine(9) of proposed wells fall in Thanjavur District and 3 of proposed wells fall in Nagapattinam District. Following wells will be drilled.

Sl.No.	No. of Wells	Location Name	Target Depth in M	District
1	11	NL-5, NL-6, NL-7, NL-8, NL-9, NL-10, NL-11, NL-15, NL-16, NL-17, NL-18	1750-6000/Basement	Tiruvarur
2	9	NL-1, NL-2, NL-3, NL-4, NL-19, NL-20, NL-21, NL-22, NL-23		Thanjavur
3	3	NL-12, NL-13, NL-14		Nagapattinam

It is reported that no wild life sanctuary, National Park or eco sensitive area exists in the proposed exploratory area of the block. No forest land exists in the block. ONGC proposes drilling of 23 exploratory wells with target depths around 1750-6000m. Cost of project is INR 460 crores for 23 new additional wells. About ~25m³/day of water will be required for drilling operation of a single well. Water for drilling operation will be sourced

through tankers. The water requirement for domestic and wash use is very less 4kl. Three DG sets of 1250 KVA each (one stand by) will be used during drilling operation. Consumption of fuel (HSD) during drilling operation will be 3-6kl/day. Non-hazardous waste of drill cuttings of around ~225m³/well will be generated. Used oil - 100 lit/well. Use of water based mud system has been planned. The mud will be recycled and reused to maximum extent. Drill Cuttings (DC) will be tested for presence of oil and grease by an approved laboratory under EP Act. Drill cuttings generated in the drilling process are naturally occurring earth materials comprising of chips and sandstone, shale, sand and lumps of clay. Drill cuttings, thoroughly washed and separated from WBM and shall be collected in a HDPE lined pit and shall be treated as per GSR 546(E) for disposal. Used oil will be collected and sent to central stores for disposal to TNPCB authorised waste oil recyclers.

ONGC has conducted the Public Hearing for development wells covering following districts.

- i. Thanjavur (PH conducted 10.07.2014)
- ii. Nagapattinam (PH conducted 20.06.2014)
- iii. Tiruvarur (PH Conducted 27.06.2014)

In the second Expert Appraisal Committee (Industry-2) meeting held during 16th -17th December 2015, the committee recommended for exemption of PH for the above 23 wells.

Now after detailed deliberation, the committee recommended the proposal of drilling 23 exploratory wells for Environmental Clearance.

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

- i. Ambient air quality should be monitored near the closest human settlements as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for PM10, PM2.5, SO2, NOX, CO, methane & Non-methane HC etc.
- 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 should be provided as per CPCB guidelines.
- v. Total water requirement shall not exceed 25 m³/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 and land. Separate drainage system shall be created for oil contaminated and non-oil contaminated water. 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 Chennai.
- 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. Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.
- xix. 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.
- xx. Restoration of the project site shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office at Chennai.
- 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 Chennai.
- 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 should 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.

3.8.5 Exploratory Drilling of 35 Wells in L-1 PML, Kuthalam PML, Kali & Greater Kali PML, Bhuvangiri PML and Neyveli PML in Cauvery Basin, Tamilnadu by M/s ONGCF- reg EC.

The project proponent and their consultant (M/s ONGC 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 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 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 vide letter no. ONGC/CHSE/TOR-EC /2015 dated 19th May, 2015 has requested for exemption of public hearings as PH has been already conducted

	No. of Locations	Location Name	Target Depth In M	District
1	14	NL-1, NL-2, NL-3, NL- 4, NL-5,NL-6, NL- 7,NL-8, NL-9, NL-27, NL-28, NL-29, NL-30,NL-31	3000-5200m/ Basement	Cuddalore
2	9	NL-15, NL-16, NL - 20, NL-21,NL-22,NL- 23,NL-24,NL-33,NL-34		Nagapattinam
3	6	NL-10,NL-11, NL-12, NL-13,NL- 14,NL-32		Ariyalur
4	5	NL- 17,NL- 18,NL-19 NL-26,NL-35		Thanjavur
5	1	NL-25		Tiruvarur
S.N.				
1				against ed vide J-3 IA II (I) dated 27.09.2013
2	Nagapattinam		20.06.2014	PH conducted against the EC issued vide letter no. J-11011/2502011 IA II (I) dated 08.07.2015
3	Tanjavur		10.07.2014	
4	Tiruvarur		On 27.06.2014	
5	Cuddalore			Application submitted on 10.11.2014 (Tamil Nadu Fixed date on 08.07.2015)

in four districts and inordinate delay on the part of TNPCB in conducting PH at Cuddalore

Now, they have again requested to consider the case for PH exemption in all the districts and environmental clearance as EIA report of the said project is submitted.

Details of tentative locations of wells district wise is as given below

PP informed the Committee that ambient air quality monitoring was carried out at 24 locations during April, 2014 - May, 2014 and submitted data indicates PM25 (18-38 ug/m3), PM10 (41-73 ug/m3), SO2 (6-12ug/m3) and NOx (11- 19 ug/m3). Water based mud will be

used. Water requirement will be 25 m³/day. Drilling and wash water generation will be 15 m³/day and stored in HDPE lined pit. Domestic effluent will be treated in septic tank followed by soak pit. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted. Drill cutting (DC) will be separated from water based mud (WBM) and washed properly and unusable drilling fluids (DF) will be disposed of 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 sold to authorized recyclers. Acoustic enclosures will be provided to D.G. sets. 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 was of the view that Public hearing has been already conducted in four districts viz. *Nagapattinam, Ariyalur, Thanjavur and Tiruvarur* . Therefore, the Committee recommended for PH exemption in the above referred four districts and for Environmental Clearance of 21 exploratory wells. However, the Committee noted that public hearing for Cuddalore district is pending with the SPCB. The same was not informed to the Ministry. In this context reference is drawn to sub para (iv) of para III stage (3)- Public Consultation" of EIA Notification, 2006, wherein it is prescribed that in case the SPCB or the Union Territory PCC concerned does not undertake and complete the public hearing within the specified period, and/or does not convey the proceedings of the public hearing within the prescribed period directly to the regulatory authority concerned as above, the regulatory authority shall engaged another public agency or authority which is not subordinate to the regulatory authority, to complete the process within a further period of forty five days. Therefore, the Committee recommended that Ministry shall take a view to engage public agency to coordinate the public consultation process.

In view of the above, the project should be considered in a totality rather in piece meal manner as TOR has been granted for complete project as per the procedures laid down in the EIA report.

3.8.6 Exploration Drilling of 10 Wells (On-shore) in NELP-VIII Block CB-ONN-2009/4 in Western Basin in Vadodara, District Gandhinagar, Gujarat by M/s Oil and Natural Gas Corporation Ltd. (ONGCL)– Amendment in Environmental Clearance reg.

MoEF&CC vide letter no J-11011/1/2011 IA II (I) dated 25th September, 2013 has granted EC to M/s ONGC for the above project proposal for the following wells :

Well No.	Latitude (N)	Longitude (E)	Location Details (Nearest Habitation)
1.	23°33'21.9"	72° 38'0.8"	MeraliVihar Village (Taluka kalol& District Gandhinagar) at 0.58 km in SE direction from well

2.	23° 32'19.6"	72° 38'39.23"	Vihar Village (Taluka Mansa' District Gandhinagar) at 0.76 km in E direction from well
3.	23° 31'10.61"	72° 38'32.59"	Bilodra Village (Taluka Mansa' District Gandhinagar) at 0.73 km in NE direction from well
4.	23° 30'49.44"	72° 38'21.87"	Bilodra Village (Taluka Mansa' District Gandhinagar) at 1.31km in NE direction from well
5.	23° 30'40.81"	72° 38'47.55"	Bilodra Village (Taluka Mansa' District Gandhinagar) at 1.08 km in NNE direction from well
6.	23° 30'7.37"	72° 39'57.92"	Dilwara Village (Taluka Mansa' District Gandhinagar) at 1.5 km in E direction from well
7.	23° 29'24.3"	72° 39'59.46"	Charada Village (Taluka Mansa' District Gandhinagar) at 0.63 km in W direction from well
8.	23° 29'24.09"	72° 40'15.02"	Charada Village (Taluka Mansa' District Gandhinagar) at 1.05 km in W direction from well
9.	23° 7'50.83"	72° 41'11.85"	Ridrol Village (Taluka Mansa' District Gandhinagar) at 0.74 km in SW direction from well
10.	23° 27'6.4"	72° 41'15.53"	Ridrol Village (Taluka Mansa' District Gandhinagar) at 0.94 km in SW direction from well

Further, on the basis of revised interpretation, ONGC seeks an approval for relocation of three wells listed in the original EC as Well No. 3, Well 7 and Well 10. The new co-ordinates of the finalized three locations area as below:

S.N.	Name of the Well	Latitude (N)	Longitude (E)
1	CRAG	23° 32'37.37"	72° 37'37.72"
2	CRAH	23° 27'20.09"	72° 39'23.47"
3	CRAI	23° 26'11.09"	72° 40'04.52"

After detailed deliberation, the Committee recommended the proposal for amendment in the EC.

3.8.7 Expansion of Single Point Mooring (SPM), Crude Oil Terminal (COT), the pipeline connecting SPM to COT at Mundra Port and Crude Oil Pipeline from Mundra Coast in Gujarat to Bathinda in Punjab from 9 MMTPA to 11.25 MMTPA by upgrading 2 nos. intermediate pigging stations into pumping stations.

MoEF&CC vide letter no J-11011/25/98-IA II dated 24th April, 2000 has issued environmental clearance to M/s HPCL for crude oil pipeline project (9.0 MMTPA) from Mundra Coast in Gujarat to Bhatinda in Punjab.

MoEF&CC vide letter no. 10-5/08-IA III dated 23.12.2008 has granted CRZ clearance to HMPL setting up a Single Point Mooring (SPM), Crude Oil Terminal (COT), and the connecting pipeline from SPM to COT at Mundra Port”.

Now, PP has submitted the proposal for expansion of Single Point Mooring (SPM), Crude Oil Terminal (COT), the connecting pipeline from SPM to COT at Mundra Port and Mundra-Bhatinda pipeline from 9 MMTPA to 11.25 MMTPA by converting 2 of its existing 4 intermediate pigging stations into pumping station.

PP informed the followings:

1. Crude Oil Pipeline from Mundra coast in Gujarat to Bathinda in Punjab which was set up as per approval vide Environmental Clearance number F. no. J. 11011/25/98-IA II dated 24.04.2000 under EIA Notification dated 27.01.1994, and is operational, does not pass through any national park or sanctuary or coral reef or ecologically sensitive area.
2. The two intermediate pigging stations (one among IPS-1 & IPS-2 and one among IPS-4 & IPS-5) proposed to be converted into intermediate pumping stations to enhance the capacity of the Crude Oil Pipeline from Mundra coast in Gujarat to Bathinda in Punjab do not fall within 10 Km of any national park or sanctuary or coral reef or ecologically sensitive area.
3. No changes will be made to SPM, COT and the offshore pipeline connecting SPM to COT which were set up at Mundra Port as per approval vide Environmental Clearance number F. no. 10-5/08-IA-III dated 23.12.2008 and are operational.
4. No changes will be made to Crude Oil Pipeline from Mundra coast in Gujarat to Bathinda in Punjab which was set up as per approval vide Environmental Clearance number F. no. J. 11011/25/98-IA II dated 24.04.2000 under EIA Notification dated 27.01.1994, and is operational.

After detailed deliberation, the Committee recommended the proposal for amendment in Environmental Clearance.

3.8.8 Expansion of Fertilizer Plant by adding Ammonia (2200 TPD) and Urea (3850 TPD) at Village Piprola/Kanth, Tehsil Sadar, District Shahjahanpur, Uttar Pradesh by M/s KRIBHCO Shyam Fertilizers Ltd.- reg EC.

The aforesaid proposal was considered by the Reconstituted Expert Appraisal Committee (EAC) for industry-2 (item no. 46.3.1) in its 46th meeting held during 20-21st August 2015 for consideration of Environmental Clearance. As per the minutes, it was *decided that subcommittee of EAC should visit the project site to assess the environmental compliance by the existing unit and any related issues to be addressed as public hearing was exempted due to the location of project within industrial area. The Committee suggested that till the site is visited, the water balance to be rechecked and efforts to be made for reduction. Tie-up /agreement may be entered with farmers for use of treated effluent. The proposal was deferred till the above desired information is submitted. The above information shall be provided with the uploading of minutes on the website.*

As per the recommendation of the EAC, a Sub-committee of EAC comprising Sh. J. P. Gupta, Chairman, EAC and Sh. Shashank Shekhar, Member EAC along with Representative from MoEF Sh. Lalit Bokolia , Additional Director visited the site during 23-24th December 2015. PP has submitted the information vide their letter dated 26.12.2015 in connection to the observation made by the EAC.

During the site visit of the Sub-Committee following officials were present from M/s KRIBCO Shyam Fertilizer Ltd. :

1. Sh. O.P. Gupta, Sr. Vice President (works)
2. Sh. B.K. Shukla, Joint General Manager (P & IR)
3. Sh. N. K. Agarwal, Joint General Manager (Production)
4. Sh. R. K. Misra, Joint General Manager (Process)
5. Sh. Abdul Rub, Dy General Manager (Tech. Services)
6. Sh. S.P. Singh, Dy. General Manager (Off site Plan)
7. Sh. S.B. Singh, Dy. General Manager (Ammonia Plant)
8. Sh. Sanjay Srivastva, Asstt. General Manger (Urea Plant)
9. Sh. A.K. Singh, Asstt. General Manager (R &QC)
10. Sh. M.B. Singh, Chief Manager (Urea Plant)

(A) From Expert Appriaisal Committee (I), MoEF

1. Sh. J.P. Gupta, Chairman
2. Sh. Shashank Shekhar, Member

(B) From MoEF

1. Shri Lalit Bokolia Additonal Director

At the outset, M/s KRIBHCO Shyam gave the detailed presentation within the plant campus before the Sub-Committee and outlined the existing facilities and proposed expansion activities. During presentation, it was briefed in context of layout plan about the location of various unit in the campus namely Power generation and steam Generation Plant, Ammonia Plant and process condensate stripper and Recovery unit, Urea Plant and Prilling Tower, Effluent Treatment Plant, Ammonia storage, packaging etc. and nearest habitant to industry.

The company has obtained the Environmental Clearances of existing facility vide Ministry letter no J-11011/15/90/IA. II dated 01.03.1993 and J-11011/53/2008 –IA II (I) dated 11.06.2008. It was informed that the company has also obtained amendment of EC to use of the Naptha as alternate feedstock vide this Ministry letter no. J-11011/15/90IA. II (I) dated 21.08.1997. The Regional Office, Lucknow inspected the site on 16.02.2015 and submitted the compliance report to the head quarter. With regard to meet water requirement, it was informed that the bore wells are being used within the plant and more wells be dug to meet proposed requirements. The current water requirement is 873 m³/hr which will be increased upto 1122 m³/hr. Though the project has been conceptualized but the DPR for the project has not been finalized. It was informed that trails have been attempted for onsite and off-site emergency management with help of local administration, nearby industry and local residents. Subsequently the subsequently the sub-committee visited the following sites;

1. Power generation and steam Generation Plant (Off-site Plans)
2. Ammonia Plant and process condensate stripper and Recovery unit
3. Urea Plant and Prilling Tower (top tower)
4. Effluent Treatment Plant, etc Generation
5. Final discharge area of treated effluent
6. Ammonia Storage Tank

During site visit, following observations are made:

- i. On the whole, plant area housekeeping was found satisfactory. Adequate, storm water drainage system and separate process effluent lines has been laid all along the road side. It is also seen that rain water collection lagoon has been provided.
- ii. Point wise Compliance report of the existing EC was also discussed and found to be complied w.r.t major conditions such as interlocking of plant with treatment system, continuous online monitoring system in stack and wastewater treatment, monitoring of fugitive emission in work zone, use of low NO_x burner to limit No_x, separate outlets for storm water, wastewater and process effluent.

- iii. A balance pond having capacity of 30,000 m³ is provided for balancing and equalizing the effluent coming from DM plant, cooling tower blow-down water and Ammonia steam stripper outlet.
- iv. The balance pond water overflows to guard pond-having capacity of 5000 m³. Treated effluent from guard pond is pumped to stabilization pond. From stabilization pond the treated effluent is pumped for irrigation of green belt area/ final discharge.
- v. During the site visit, Separate lines for the recycling and disposal treated effluent was seen. However, data regarding quantity is being reused and discharge for final disposal was not maintained. At the final effluent point, treated effluent from the Garriah nala was seen to be pumped by villagers for agricultural purposes.
- vi. On query with project authority, it is noted that a tie up or agreement, as suggested in 46th EAC meeting in August 2015, has not been initiated. Apprehension with respect to management of distribution of wastewater was expressed by project authority. In this regard, the Committee advised to speed up with the same in consultation with Irrigation department and this will be the part of EC condition.
- vii. In the ammonia manufacturing process, steam is used in the various sections of the plant. As a result, various pollutants like ammonia and CO₂ gets dissolve in the condensate in ppm level & collected in the various separators. The condensate is sent to Ammonia process condensate stripper which is part of ammonia plant. After steam stripping, the condensate is sent to DM plant for polishing and after polishing it is recycled as boiler feed water.
- viii. At the ETP , ammonia steam stripper , as part of the treatment unit, has been installed within wastewater treatment plant to contain the NH₃ within the permissible limit. The online system was also seen to chek the values of NH₃ before discharge. The values was found to be in order of 23.5 28 mg/lit, which is less than standard value of 50 mg/lit.
- ix. It was noted that there is urgency for the installation of new ammonia tank , as existing one (5000 MT) is twenty year old tank, which needs to be subjected to extensive non-destructive tests.
- x. Ammonia storage tank was also seen. Adequate emergency arrangement was provided near storage area. It is observed that storage location is quit away from the habitats or nearby village. The new facility for proposed expansion of NH₃ will be placed near to this area.
- xi. The Committee also visit at top of Prilling tower, where bird eye view of the entire area indicates that adequate green belt has been developed all around the plant by using the treated effluent.

- xii. Though the company has obtained the amendment in EC in 1997 to use of Naptha as alternate feedstock but it was informed that the same has been discontinued and storage tank of Naptha will be dismantled soon.

The sub-Committee felt that expansion in capacity will give significant advantage towards savings in fixed costs, resulting into lowering down cost of production and enhanced profitability maintaining emission standards within laid down permissible limit. Further, taking into consideration compliance of existing environmental clearance and environmental performance of existing operation and general environmental scenario of the area, the Sub-committee recommended for the Environmental Clearance with following additional safeguards;

- 1) Mass balance of water should be worked out and unnecessary loss of water should be earmarked. In this regard, annual water audit should be conducted to explore the possibility of reuse and recycle of wastewater so that demand of fresh water from the ground could be minimized.
- 2) All efforts to be made particularly consumption of fresh water upto 6 m³/ton of urea production based on gas feedstock as has been exercised in other fertilizer plant.
- 3) To meet the extra requirement of water, the bore well should be drilled at sufficient distance as per the guidelines set by Ground Water Authority. Extra burden to withdraw water from one well should be avoided.
- 4) Though public hearing is exempted, at least 2.5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner.
- 5) In order to avoid traffic congestion on the road due to truck movements, all efforts to be made to adopt the rail route for distribution of finished products.

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

- i. The gaseous emissions (SO₂, NO_x, NH₃, HC and Urea dust) and particulate matter from various process units shall conform to the norms prescribed by the CPCB/SPCB from time to time. At no time, the emission levels shall go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Stack emissions shall be monitored continuously (24x7) as per CPCB guidelines.
- ii. Adequate stack height shall be provided to Ammonia plant reformer, Heat recovery steam generator (HRSG), NG/ RLNG fired gas turbine and Prilling Tower. Low NO_x burners shall be provided to control NO_x emissions.
- iii. In Urea Plant, particulate emissions shall not exceed 50 mg/Nm³. Monitoring of Prilling Tower shall be carried out as per CPCB guidelines.

- iv. Proposed fertilizer plant shall be designed for specific energy consumption of 5.0 Gcal/MT of urea.
- v. Ambient air quality data shall be collected as per NAAQES standards notified by the Ministry vide G.S.R. No. 826(E) dated 16th September, 2009. The levels of PM₁₀ (Urea dust), SO₂, NO_x, Ammonia, Ozone and HC shall be monitored in the ambient air and displayed at a convenient location near the main gate of the company and at important public places. The company shall upload the results of monitored data on its website and shall update the same periodically. It shall simultaneously be sent to the Regional office of MOEF, the respective Zonal office of CPCB and the SPCB.
- vi. In plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fugitive emissions shall be controlled by providing closed storage, closed handling & conveyance of chemicals/materials, multi cyclone separator and water sprinkling system. Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emissions should conform to the limits stipulated by the SPCB.
- vii. The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution.
- viii. Fresh water requirement from ground water should not exceed 6 m³ per MT of urea production and prior permission shall be obtained from CGWA/SGWA and a copy submitted to the Ministry's Regional Office at Lucknow.
- ix. Industrial wastewater shall be treated in the ETP. As proposed, Urea plant process condensate shall be treated in a deep hydrolyser followed by stripping. Ammonia plant process condensate (APC) shall be stripped with steam followed by activated carbon and demineralization. Treated condensate shall be recycled/reused in the process. Utilities wastewater shall be treated in the ETP and treated effluent shall be recycled/ reused. Treated effluent shall also be monitored for the parameters namely ammonical nitrogen, Nitrate, Fluoride, pH etc. No process effluent shall be discharged in and around the project site. Sewage shall be treated in STP.
- x. Treated effluent shall be passed through guard pond/holding pond before discharging outside the plant premises and Automatic /online monitoring system (24 x 7 monitoring devices) for flow, and relevant pollutants (i.e. pH, ammonical nitrogen, nitrate nitrogen etc) shall be provided with high level alarm system. The data to be made available to the respective SPCB and in the Company's website.
- xi. Regular monitoring of ground water by installing peizometric wells around the guard pond and sludge disposal sites shall be periodically monitored and report shall be submitted to the concerned Regional Office of the Ministry, CPCB and SPCB.
- xii. The company shall construct the garland drain all around the project site to prevent runoff of any chemicals containing waste into the nearby water bodies. Effluent shall be properly treated and treated wastewater shall conform to CPCB standards.
- xiii. 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.
- xiv. Spent catalysts and used oil shall be sold to authorized recyclers/re-processors only.
- xv. Remote operated valve placed on NH₃ line to avoid leakage/equipment check shall be performed to ensure that remote operated valve (ROV) is all time is functional.

- xvi. The company shall strictly follow all the recommendations mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP).
- xvii. Sufficient funds i.e 2.5% of the project cost shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted to the Ministry's Regional Office at Lucknow. Implementation of such program shall be ensured accordingly in a time bound manner.
- xviii. As proposed, green belt over 296 acres 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.
- xix. All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.

Annexure-I

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

1. **Executive Summary**
2. **Introduction**
 - i. Details of the EIA Consultant including NABET accreditation
 - ii. Information about the project proponent
 - iii. Importance and benefits of the project
3. **Project Description**
 - i. Cost of project and time of completion.
 - ii. Products with capacities for the proposed project.
 - iii. If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.
 - iv. List of raw materials required and their source along with mode of transportation.
 - v. Other chemicals and materials required with quantities and storage capacities
 - vi. Details of Emission, effluents, hazardous waste generation and their management.
 - vii. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract)

- viii. Process description along with major equipments and machineries, process flow sheet (quantities) from raw material to products to be provided
- ix. Hazard identification and details of proposed safety systems.
- x. Expansion/modernization proposals:
 - a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing /existing operation of the project from SPCB shall be attached with the EIA-EMP report.
 - b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.

4. Site Details

- i. Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.
- ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco-sensitive areas and environmentally sensitive places)
- iii. Details w.r.t. option analysis for selection of site
- iv. Co-ordinates (lat-long) of all four corners of the site.
- v. Google map-Earth downloaded of the project site.
- vi. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.
- vii. Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.
- viii. Landuse break-up of total land of the project site (identified and acquired), government/private - agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area)
- ix. A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area
- x. Geological features and Geo-hydrological status of the study area shall be included.
- xi. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects)
- xii. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.
- xiii. R&R details in respect of land in line with state Government policy

5. **Forest and wildlife related issues (if applicable):**

- i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable)
- ii. Landuse map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (*in case of projects involving forest land more than 40 ha*)
- iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.
- iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon
- v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area
- vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife

6. **Environmental Status**

- i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
- ii. AAQ data (except monsoon) at 8 locations for PM10, PM2.5, SO₂, NO_x, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
- iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQPM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
- iv. Surface water quality of nearby River (100m upstream and downstream of discharge point) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.
- v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC, if yes give details.
- vi. Ground water monitoring at minimum at 8 locations shall be included.
- vii. Noise levels monitoring at 8 locations within the study area.
- viii. Soil Characteristic as per CPCB guidelines.
- ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
- x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
- xi. Socio-economic status of the study area.

7. **Impact and Environment Management Plan**

- i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is

located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.

- ii. Water Quality modelling – in case of discharge in water body
- iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.
- iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.
- v. Details of stack emission and action plan for control of emissions to meet standards.
- vi. Measures for fugitive emission control
- vii. Details of hazardous waste generation and their storage, utilization and management. Copies of MOU regarding utilization of solid and hazardous waste in cement plant shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
- viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.
- ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.
- x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.
- xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.
- xii. Action plan for post-project environmental monitoring shall be submitted.
- xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.

8. Occupational health

- i. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers
- ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give

the details of the same. Details regarding last month analyzed data of above mentioned parameters as per age, sex, duration of exposure and department wise.

- iii. Details of existing Occupational & Safety Hazards. What are the exposure levels of hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
- iv. Annual report of health status of workers with special reference to Occupational Health and Safety.

9. Corporate Environment Policy

- i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
 - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
 - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
 - iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report
10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
11. Enterprise Social Commitment (ESC)
- i. Adequate funds (at least 2.5 % of the project cost) shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be included. Socio-economic development activities need to be elaborated upon.
12. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.
13. 'A tabular chart with index for point wise compliance of above TORs.
14. The TORs prescribed shall be valid for a period of three years for submission of the EIA-EMP reports.

The following general points shall be noted:

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

TORs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA-EMP report for the project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation shall be provided. The draft EIA-EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The Public Hearing shall be chaired by an Officer not below the rank of Additional District Magistrate. The issues raised in the Public Hearing and during the consultation process and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in a separate chapter and summarised in a tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

LIST OF PARTICIPANTS OF EAC (Industry-2) IN 3rd MEETING OF EAC (INDUSTRY-2)
HELD ON 18- 19th January , 2016

S.N.	Name	Designation	Attendance
1	<u>Dr. J. P. Gupta</u>	Chairman	P
2	<u>Sh. R. K. Singh</u>	Member	P
3	<u>Dr. Ahmed Kamal</u>	Member	A
4	<u>Prof. J.R. Mudakavi</u>	Member	P
5	<u>Dr. Ajay Gairola</u>	Member	P
6	<u>Dr. N. Nandini</u>	Member	P
7	<u>Prof. (Dr.) H.R. V Reddy</u>	Member	P
8	<u>Dr. Shashank Shekhar</u>	Member	A
9	<u>Ms. Saloni Goel</u>	Member	A
10.	<u>Shri Suhas RamchandraPharande</u>	Member	P
11.	<u>Shri G. C. Pati</u>	Member	P
12	<u>Dr. S. K. Peshin</u>	Member	P
MOEF Representatives			
13.	Shri Lalit Bokolia	Additional Director & MS Industry-(2)	P
14.	Shri A.N.Singh	Joint Director	P