

**MINUTES OF THE 8th EXPERT APPRAISAL COMMITTEE (INDUSTRY-2) MEETING HELD
DURING 30-31 May, 2019**

Venue: Indus Hall, Ground Floor, Jal Wing, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, JorBagh Road, New Delhi-3

Time: 10:30 AM

8.1 Opening Remarks by the Chairman

8.2 Confirmation of Minutes of the 7th Meeting of the EAC (Industry-2) held during 6-8 May, 2019 at Indira Paryavaran Bhawan, New Delhi.

The EAC, having taken note that no comments were offered on the minutes of its 7th meeting held during 6-8 May, 2019 at New Delhi, confirmed the same.

Day One: 30th May, 2019

8.3 Environmental Clearance

Agenda No.8.3.1

Manufacturing of synthetic resin adhesive (Total Qty: 1650 MT/M) at S.No. 873, Opp. Anand Health Care, Ranchhodpura Road, Village Santej, Taluka Kalol, District Gandhinagar (Gujarat) by M/s Jyoti Resins & Adhesives Ltd - Environmental Clearance

[IA/GJ/IND2/92467/2017, J-11011/429/2017-IA-II (I)]

The project proponent and the accredited consultant M/s Green Circle, Inc, made a detailed presentation on the salient features of the project.

8.3.1.1 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for expansion of Synthetic Resin Adhesive Manufacturing from 750 TPM to 1650 TPM by M/s Jyoti Resins & Adhesive Ltd in an area of 7016 sqm located at S.No.873, Village Santej, Taluka Kalol, District Gandhinagar (Gujarat).

The details of products are as under:

S. No	Product	Existing (TPM)	Proposed (TPM)	Total (TPM)
1	Synthetic Resin Adhesive (PVAA)	600	900	1500
2	Adhesive SH (By mixing process)	150	-	150
	Total	750	900	1650

The project/activity is covered under category A of item 5(f) 'Synthetic Organic Chemicals' of schedule to the Environment Impact Assessment (EIA) Notification, 2006, and requires appraisal at central level by the EAC in the Ministry.

Standard Terms of Reference for the project was granted on 29th September, 2017. Public hearing for the project has been exempted vide ToR amendment dated 7th May, 2018.

Existing land area is 7016 sqm. No additional land will be required for the proposed expansion. Industry will develop greenbelt in an area of 2519 sqm, covering 33% of total project area. The estimated project cost is Rs.2.80 crores including existing investment of Rs. 2 crores. Total capital cost earmarked towards environmental pollution control measures is Rs.12 lakhs and the recurring cost (operation and maintenance) will be about Rs. 5.5 Lakhs per annum. Employment will be for 95 persons directly & indirectly after expansion.

Thol Bird Sanctuary is located at 5.45 km (WNW) from the project site. Sabarmati river is flowing at a distance of 14 km in ESE direction.

Total water requirement is estimated to be 38.225 cum/day, proposed to be met from tanker supply.

Effluent of 2.44 cum/day will be treated through septic tank & soak pit. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

Power requirement after expansion will be 180 KVA, which will be met from UGVCL. Existing unit has 1 DG sets of 62.5 KVA capacity, used as standby during power failure. There is no process emission in the proposed unit.

Ambient air quality monitoring was carried out at 8 locations during October to December 2017 and the baseline data indicates the ranges of concentrations as: PM10 (65.71-80.7 µg/m³), PM2.5 (30.11-37.31 µg/m³), SO₂ (7.89-11.3 µg/m³) and NO₂ (15.39-25.8 µg/m³). AAQ modeling study for point source emissions indicates that the maximum GLCs after the proposed project would be 80.879 µg/m³, 11.386 µg/m³ and 25.87 µg/m³ with respect to PM10, Sox and NOx. The resultant concentrations are within the National Ambient Air Quality Standards.

Earlier, the SEIAA Gujarat has issued EC vide letter no. SEIAA/GUJ/EC/5(f)/417/2016 dated 28th June, 2016 to the project for Manufacturing of Synthetic Organic Chemicals (Resins) in favour of M/s Jyoti Resins & Adhesive Ltd. Monitoring report on compliance status of the EC conditions forwarded by the Ministry's Regional Office (site visit on 15th June, 2018) vide letter dated 2nd November, 2018, which was incomplete and not found to be satisfactory.

8.3.1.2 *The EAC, after deliberations, asked for clarifications and inputs in respect of the following:-*

- *One season baseline data and prediction for air quality to be carried out by recognized labs/institution.*
- *Action taken report on observations of the Regional Office during their site visit on 15th June, 2018 and as per the monitoring report dated 2nd November, 2018.*
- *Details of different pollution control measures and detailed justification for their efficacy and adequacy.*
- *Details of effluent treatment plan/scheme as to achieve ZLD.*
- *Status of wildlife clearance.*
- *Wildlife conservation management and air quality monitoring in ESZ.*
- *Socio-economic action plan.*
- *Compliance of TOR point 6 (ii) shall be done by setting up one Air Quality monitoring station in Sensitive receptor zone since Thol Sanctuary is extremely nearby i.e. within 6 Km. Therefore PP is advised to resubmit at least one month AAQ monitoring data of all the stations within 10 Km radius.*

- Results of Faecal Coliform and E. Coli has been reported ABSENT in surface water sample in Table 3.19 of EIA whereas contrary to this under sub head of “Observation on Surface Water Quality” page 86 of EIA it is mentioned that “faecal coliform are observed high at all locations.....” This need to be reanalyzed and resubmitted.
- Biodiversity Index is required to be mentioned against TOR Point 6 (X) once the Flora fauna studies are carried out.
- Predicted GLC of PM 10, SO₂, NO_x has been reported “0.00” for AAQ station no.2,3,4,6 & 7 which is not matching with the given wind rose. This need to be resubmitted.
- Project proponent shall be required to submit an original analysis reports for AAQ monitoring & Modeling results of GLC in respect to AAQ station no.2,3,4,6 & 7 including analysis report of surface water sample.

The proposal was deferred for the needful on the above lines.

Agenda No.8.3.2

Integrated Project of Sugar Plant Expansion (5000 to 7500 TCD), Ethanol Plant Expansion (30 to 100 KLPD) with Incineration Boiler/TG /Auxiliaries for ZLD & Cogeneration Power Plant (44 MW) at village Nagnathannanagar, Tal Walwe, Distt. Sangli (Maharashtra) by M/s PadmabhushanKrantiveer Dr NagnathannaNayakawadiHutatmaKisanAhir SSK Ltd - Environmental Clearance

[IA/MH/IND2/98116/2013, J-11011/197/2013-IA-II(I)]

The project proponent and their accredited consultant M/s MITCON Consultancy & Engineering Services Ltd made a detailed presentation on the salient features of the project.

8.3.2.1 During deliberations, the Committee noted the following:

The proposal is for environmental clearance to the project for expansion of Sugar plant from 5000 to 7500 TCD, Distillery from 30 KLPD to 100 KLPD (ENA/RS/AA/Ethanol) and Cogeneration Power Plant from 24 to 44 MW by M/s PadmabhushanKrantiveer Dr NagnathannaNayakawadiHutatmaKisanAhir SSK Ltd in a total area of 263575 located at Village Nagnathannanagar, Taluka Walwe, District Sangli (Maharashtra).

The project/activity is covered under category A of item 5 (g) ‘Distilleries’, 5 (j) ‘Sugar Industry’ and 1(d) ‘Thermal Power Plants’ of the Schedule to the Environment Impact Assessment Notification, 2006 and requires appraisal at central level by the sectoral EAC in the Ministry.

Standard Terms of Reference for the project was issued on 11th March, 2018. Public Hearing for the project has been conducted by the State Pollution Control Board on 12th October, 2018. The main issues raised during the public hearing are related to water pollution, air pollution, ash disposal and its management, etc.

Existing land area is 1, 83,935 sqm. Additional, 79,640 sqm land will be used for proposed expansion. Industry will develop greenbelt in an area of 84000 sqm, covering 33% of total project area. The estimated project cost is Rs.574.38 crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 10.5 crores and the recurring cost (operation and maintenance) will be about Rs. 37.3 lakhs per annum. Employment opportunity will be for 200 persons directly and indirectly after expansion.

There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves and Wildlife Corridors etc. within 10 km from the project site. Krishna River is flowing at a distance of 2.2 km in West direction.

Total water requirement is estimated to be 5582 cum/day, which includes fresh water requirement of 1140 cum/day proposed to be met from Krishna River.

Effluent (Sugar & Cogen.) of 679 cum/day quantity will be treated through ETP. Total spent wash generation will be 840 cum/day. Existing spent wash is treated through Biogas unit followed by Multi effect evaporator (MEE) and bio -composting. Spent wash from the proposed unit will be concentrated in MEE and incinerated in 40 TPH boiler. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

Power requirement will be 9.3 MW, proposed to be met from own cogeneration power plant. Existing unit has 1000 kVA X 1 DG set and additional 2 X 1000 kVA DG sets will be installed as standby during power failure, with stack (8 m) as per CPCB norms.

Existing unit has 50 TPHX1 and 28 TPHX 2 TPH boilers (Existing boiler shall be demolished). Additional, 220 TPH (sugar) and 40 TPH (Incineration boiler- Distillery) will be installed. Electrostatic precipitator with 72 m stack height will be installed for controlling of particulate emission within statutory limit of 115 mg/Nm³ for the proposed boilers.

Ambient air quality monitoring was carried out at nine locations during March to May, 2018 and the baseline data indicates the ranges of concentrations as:PM10 (36.9 to 54.6 µg/m³), PM2.5 (18.2 to 32.6 µg/m³), SO₂ (6.1 to 14.1 µg/m³) and NO₂ (9.6 to 19.4 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.18 µg/m³, 6.0 µg/m³ and 1.71 µg/m³ with respect to PM 10, SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards.

Earlier, the SEIAA issued environmental clearance vide letter dated 22nd June, 2007 to the project for expansion of sugar unit from 2500 TCD to 3500 TCD, and Ministry issued EC vide letter dated 17th September, 2007 to the project for Molasses based distillery of 30 KLPD, expansion of sugar unit from 2500 TCD to 3500 TCD and to set up co-generation power plant of 18 MW in favour of M/s HutatmaKisanAhirSahakariSakharKarkhana Ltd located at Walve, District Sangli (Maharashtra), the validity of the said EC was extended vide letter dated 12th October, 2015. Ministry vide letter dated 22nd February, 2017 has granted EC for expansion of sugar capacity from 3500 TCD to 5000 TCD and establishment of 24 MW Co-generation plant at Village & Tehsil Walva, District Sangli (Maharashtra) in favour of M/s PadmabhushanKrantiveer
Dr
NagnathannaNayakawadiHutatmaKisanAhirSahakariSakharKarkhana Ltd.

Monitoring report on compliance status of the EC conditions was forwarded by the Ministry's Regional Office at Nagpur (after conducting site visit on 11th November, 2018) vide letter dated 31st January, 2019.

8.3.2.2 *The EAC, after deliberations, desired for clarification/inputs in respect of the following:-*

- *Details of existing products and utilities commissioned/not commissioned as per the existing ECs.*
- *Action Taken Report on non complied points reflected in the certified compliance report, to be forwarded by the Regional Office of the Ministry.*
- *Approval from PESO for the site and layout plan for storage facilities.*
- *Plan for achieving ZLD for the entire unit, with Incineration route*

- *Plan for Corporate Environment Responsibility.*

The proposal was deferred for the needful.

Agenda No.8.3.3

Manufacturing of 159 TPM of Dye and Pigment Intermediates at Plot No. B-31/2, Paithan MIDC by M/s Crystal Surfactants and Chemicals - Environmental Clearance

[IA/MH/IND2/82242/2018, IA-J-11011/66/2018-IA-II(I)]

The project proponent has requested for consideration of the proposal in the next EAC meeting, due to their consultant presently under assessment for NABET/QCI accreditation.

The proposal was therefore not considered.

Agenda No.8.3.4

Drug and Intermediates Manufacturing Unit at Sy Nos.632 (PART), 633 (PART), 635, 636 (PART), 637 (PART), 638 (PART) and 642 (PART), Peddapally Village, Jadcherla Mandal, Mahabunanagar District (Telangana) by M/s Emmennar Pharma Pvt Ltd (UNIT-V) - Environmental Clearance

[IA/TG/IND2/71286/2017, IA-J-11011/557/2017-IA-II(I)]

The project proponent and their accredited consultant M/s Team Labs and Consultants, made a detailed presentation on the salient features of the project.

8.3.4.1 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for Setting up Bulk Drug and Intermediates manufacturing unit of capacity 960 TPM by M/s Emmennar Pharma Pvt Ltd (Unit V) in an area of 45 acres located at Sy. Nos. 632 (Part), 633 (Part), 635, 636 (Part), 637 (Part), 638 (Part) & 642 (Part) Village Peddapally, Mandal Jadcherla, District Mahabubnagar (Telangana). The proposal also involves manufacture of R&D products of capacity 50 kg/day and installation of co-generation power plant of 5 MW capacity.

The details of products and by-products are as under:-

S.No	Product	CAS No.	Capacity	
			TPM	TPD
1	(2-Nitro-1-(Methylamino)-1-(Methylthio) ethane (NMSM)	61832-41-5	90	3
2	Cyclopropylamine	765-30-0	60	2
3	Methyl Ester	556-61-6	210	7
4	Levetiracetam	102767-28-2	120	4
5	Omeprazole	73590-58-6	60	2
6	Meta Chloroanisole	2845-89-8	210	7
7	Meta Chloro Nitrobenzene	121-73-3	210	7
	Total		960	32
8	R&D and Validation Products		50 Kg/day	

9	Co-Generation Power Plant		5 MW
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By-Products

S. No	Product	Stage	By Product	Quantity (Kg/day)
1	Methyl Ester	I	Sulfur	3068.5
2	Levetiracetam	I	Tartaric acid	4041.5
		I	Hydrochloric acid (35%)	89.3
3	Omeprazole	II	Hydrochloric Acid (30%)	952
		II	Ammonium Sulfate	2144
4	Meta Chloroanisole	I	Sodium hydroxide (48%)	4091
5	Meta Chloro Nitrobenzene	I	Hydrochloric Acid (35%)	5587
			P - Chloro Nitrobenzene	873.3
			O - Chloro Nitrobenzene	873.3

The project/activity is covered under category A of item 5(f) 'Synthetic Organic Chemicals' of schedule to the Environment Impact Assessment (EIA) Notification, 2006, and requires appraisal at central level by the sectoral EAC in the Ministry.

The Terms of Reference for the project was granted on 25th January, 2018. Public hearing for the project has been conducted by the Telangana State Pollution Control Board on 28th December, 2018. The main issues raised during the public hearing are related to employment, pollution control measures and village development.

The land available for the project is 45 acres. Industry will develop Greenbelt in an area 15 acres covering 33.33% of total project area. The estimated project cost is Rs.45 crores. Total capital cost earmarked towards environmental pollution control measures is Rs.10.7 crores and the recurring cost (operation and maintenance) will be about Rs.19.43 crores per annum. Employment opportunity will be for 450 persons directly and 250 persons indirectly.

There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves and Wildlife Corridors etc within 10 km distance from the project site. Dindi stream is flowing from northwest to northeast direction at a distance of 9 km in northeast direction.

The total water requirement is estimated to be 1017.5 cum/day, which includes fresh water requirement of 549.5 cum/day, proposed to be met from ground water. Application in this regard has been submitted to Government of Telangana on 14th March, 2019.

Effluent of 496.6 cum/day will be treated through effluent treatment system. High COD/TDS stream of 286.6 cum/day is segregated and sent to stripper followed by multiple effect evaporators (MEE), and agitated thin film dryer (ATFD). Condensate from stripper is sent to cement plants for co-incineration, while condensate from MEE and ATFD is mixed with low TDS/COD from utility blow downs and domestic wastewater of 210 cum/day in biological treatment plant followed by Reverse Osmosis. The treated wastewater of 468 cum/day is reused for cooling towers make-up/process. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

Power requirement will be met by AP Transco and co-generation power plant. DG sets of capacity 2 x 1010 kVA, 3 x 720 kVA and 2 x 320 kVA is proposed to cater to the energy requirement during load shut down. Stack height will be provided as per CPCB norms to the proposed DG sets.

Coal fired boilers of 30 TPH&10 TPH and 4 x2 Lac K.cal/hr thermic fluid heater will be installed. Electrostatic precipitator (ESP) and Bag filters will be installed for controlling the particulate emissions.

Ambient air quality monitoring was carried out at eight locations during March to May 2018 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (33-54 µg/m³), PM_{2.5} (14-30 µg/m³), SO₂ (9-13 µg/m³) and NO₂ (9-13 µg/m³) respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLC_S after the proposed project would be 1.53 µg/m³, 4.2 µg/m³, and 6.1 µg/m³ with respect to PM₁₀, SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards.

The expenditure towards CER for the project would be 3% of the project cost as committed by the project proponent.

The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. Issues raised during public hearing have been properly addressed by the project proponent.

8.3.4.2 *The EAC, after deliberations, recommended the project for grant of environmental clearance, subject to compliance of terms and conditions as under: -*

- *Necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, shall be obtained from the State Pollution Control Board.*
- *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.*
- *Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.*
- *National Emission Standards for Bulk drugs Manufacturing Industry issued by the Ministry vide G.S.R.149(E) dated 4th March, 2009 and amended from time to time shall be followed. Fugitive emissions shall be controlled at 99.98% with effective chillers.*
- *Health & Risk assessment shall be conducted and the mitigating measures shall be implemented.*
- *No raw material/solvent prohibited by the concerned regulatory authorities from time to time, shall be used.*
- *To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.*
- *Solvent management shall be carried out as follows:*
 - (a) *Reactor shall be connected to chilled brine condenser system.*
 - (b) *Reactor and solvent handling pump shall have mechanical seals to prevent leakages.*
 - (c) *The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.*
 - (d) *Solvents shall be stored in a separate space specified with all safety measures.*
 - (e) *Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.*
 - (f) *Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.*
 - (g) *All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.*

- *Total fresh water requirement shall not exceed 549.5 cum/day, proposed to be met from ground water. Prior permission in this regard shall be obtained from the concerned regulatory authority/CGWA.*
- *Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system.*
- *Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps.*
- *Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.*
- *The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.*
- *Maximum storage of raw materials viz. Dichloromethane, Toluene and Methanol shall be limited to 20 Tons at any point of time.*
- *Fly ash should be stored separately as per CPCB guidelines so that it may not adversely affect the air quality. Direct exposure of workers to fly ash and dust should be avoided.*
- *The company shall undertake waste minimization measures as below:-*
 - (a) *Metering and control of quantities of active ingredients to minimize waste.*
 - (b) *Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.*
 - (c) *Use of automated filling to minimize spillage.*
 - (d) *Use of Close Feed system into batch reactors.*
 - (e) *Venting equipment through vapour recovery system.*
 - (f) *Use of high pressure hoses for equipment clearing to reduce wastewater generation.*
- *The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.*
- *All the commitments made regarding issues raised during the public hearing/ consultation meeting shall be satisfactorily implemented.*
- *At least 3% of the total project cost shall be allocated for Corporate Environment Responsibility (CER) and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.*
- *For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.*
- *The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.*
- *Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.*
- *Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.*
- *Process safety and risk assessment studies shall be further carried out using advanced models, and the mitigating measures shall be undertaken accordingly.*
- *The company shall employ person having Post graduate in Environmental Sciences/Environmental Engineering for supervision of environmental management measures.*

Agenda No.8.3.5

Setting up Active Pharmaceutical Ingredients and intermediates manufacturing unit at Plot No.23, KIADB Industrial Area, 2nd Phase, Gauribidanur, Chikkabidanur, District Chikkaballapura (Karnataka) by M/s Dynarx Technology (India) Ltd - Environmental Clearance

[IA/KA/IND2/82014/2018, IA-J-11011/313/2018-IA-II(I)]

The project proponent and their consultant M/s Environ India, made a detailed presentation on the salient features of the project.

8.3.5.1 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for setting up Active Pharmaceutical Ingredients (APIs) and Specialty Chemicals manufacturing unit of capacity 774 TPA by M/s Dynarx Technology (India) Limited in an area of 4 acres located at Plot No.23, KIADB Industrial Area, 2nd Phase, Gauribidanur, District Chikkaballapura (Karnataka).

The details of products are as under:-

S. No	Product	Quantity (TPA)
1	3,5-Diiodosalicylic Acid	35
2	Chloriodomethane	2
3	Diiodo methane	5
4	Iodobenzene	12
5	2-Benzoyl benzoic acid	5
6	Iodine monochloride	50
7	5-Amino-2,4,6-Triiodoisophthalic Acid	50
8	5-Amino-2,4,6-Triiodoisophthaloyl Dichloride	
9	L - Threonine methyl ester hydrochloride	20
10	Starch Dialdehyde	5
11	Diphenyl sulfide	300
12	5-Iodo-2-Methyl benzoic acid	30
13	5-Iodo-2-Chlorobenzoic acid	30
14	5-Bromo-2-Chlorobenzoic acid	30
15	L-Valine methyl ester hydrochloride	50
16	PDHP	50
17	2-Butyl Benzofuran (BBF-I)	100
18	2-Butyl-3-(3,5-Diiodo-4-Hydroxy benzoyl) Benzofuran (BBF-II)	
	Total	774

The project/activity is covered under category B of item 5(f) 'Synthetic Organic Chemicals' of schedule to the Environment Impact Assessment (EIA) Notification, 2006, and requires appraisal at State level by the concerned SEAC/SEIAA. Due to applicability of general condition (interstate boundary of Andhra Pradesh within 5 km), the proposal requires appraisal at central level by the sectoral EAC in the Ministry.

Standard Terms of Reference for the project was granted on 18th November 2018. Public hearing is exempted as the project site is located inside the notified industrial area.

Land area available for the project is 4 acres. Industry will develop greenbelt in an area 1.32 acres covering 33% of total project area. The estimated project cost is Rs. 8.55 crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 75.5 lakhs and the recurring cost (operation and maintenance) will be about Rs.12.65 lakh per annum. Employment opportunity will be for 50 persons directly & indirectly.

There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves and Wildlife Corridors etc within 10 km distance from the project site. Pennur stream is flowing at a distance of 1.4 km in West direction.

Total water requirement is estimated to be 54.82 cum/day, which includes freshwater requirement of 32 cum/day, proposed to be met from KIADB water supply. Effluent of 18 cum/day quantity will be treated through ETP and RO and the treated water will be reused. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

Power requirement will be 400KVA and will be met from Karnataka Power Transmission Corporation Limited (KPTCL). Unit proposes to have 2 DG sets of 160 KVA capacity, with stack (height 6m ARL) as per CPCB norms.

Briquets/wood fired boiler of 1.5 Tons/Hr capacity will be installed with Multi cyclone separator/bag filter, and with a stack of height of 30 m for controlling the particulate emissions within the statutory limit of 115 mg/Nm³.

Ambient air quality monitoring was carried out at 9 locations during October 2018 to January 2019 and the baseline data indicates the ranges of concentrations as: PM10 (40.33-68.09µg/m³), PM2.5 (14.9-35.1µg/m³), SO₂ (4.3- 31.5µg/m³) and NO₂ (10.5-30.1µg/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.6µg/m³ and 2.4 µg/m³ with respect to PM10, SO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

The expenditure towards CER for the project would be 4 % of the project cost as committed by the project proponent.

The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components.

8.3.5.2 *The EAC, after deliberations, recommended the project for grant of environmental clearance, subject to compliance of terms and conditions as under: -*

- *Necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, shall be obtained from the State Pollution Control Board.*
- *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.*
- *Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.*

- *National Emission Standards for Bulk drugs Manufacturing Industry issued by the Ministry vide G.S.R.149(E) dated 4th March, 2009 and amended from time to time shall be followed. Fugitive emissions shall be controlled at 99.98% with effective chillers.*
- *No raw material/solvent prohibited by the concerned regulatory authorities from time to time, shall be used.*
- *To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.*
- *Solvent management shall be carried out as follows:*
 - (h) Reactor shall be connected to chilled brine condenser system.*
 - (i) Reactor and solvent handling pump shall have mechanical seals to prevent leakages.*
 - (j) The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.*
 - (k) Solvents shall be stored in a separate space specified with all safety measures.*
 - (l) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.*
 - (m) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.*
 - (n) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.*
- *Total fresh water requirement shall not exceed 32 cum/day, proposed to be met from KIADB water supply. Prior permission in this regard shall be obtained from the concerned regulatory authority.*
- *Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system.*
- *Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps.*
- *Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.*
- *The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.*
- *Fly ash should be stored separately as per CPCB guidelines so that it may not adversely affect the air quality. Direct exposure of workers to fly ash and dust should be avoided.*
- *The company shall undertake waste minimization measures as below:-*
 - (g) Metering and control of quantities of active ingredients to minimize waste.*
 - (h) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.*
 - (i) Use of automated filling to minimize spillage.*
 - (j) Use of Close Feed system into batch reactors.*
 - (k) Venting equipment through vapour recovery system.*
 - (l) Use of high pressure hoses for equipment clearing to reduce wastewater generation.*
- *The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.*
- *At least 4% of the total project cost shall be allocated for Corporate Environment Responsibility (CER) and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.*

- For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
- The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.
- Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

Agenda No.8.3.6

Synthetic organic chemicals industry (dyes & dye intermediates) by M/s SNF Flopam India Pvt Ltd at Survey No.141/1/2 and 142/1 National Highway 8A, Varsana, PO: Gopalpuri, Gandhidham Kutch (Gujarat) - Environmental Clearance

[IA/GJ/IND2/62913/2017, IA-J-11011/74/2017-IA-II(I)]

The project proponent and accredited consultant M/s Eco Care Solutions, made a detailed presentation on the salient features of the project.

8.3.6.1 The proposal was earlier considered by the EAC in its meetings held on 25-27 June, 2018 and 24-26 September, 2018, wherein the EAC, in its last meeting, insisted for correction in public hearing proceedings to include the survey numbers 139/1 and 147/1 with the total area as 70 acres.

In response, the project proponent has informed that, as per the Form 1 and Terms of Reference granted by the Ministry, total area of the project is 70.33 acre (2,84,615 sqm). Public hearing has been conducted by the State Pollution Control Board with the same ToR. Inadvertently, Sy.Nos.139/1 and 147/1 were not mentioned in the Form 1, which was later corrected while submitting the EIA report and Form 2. There is no change in area, ie. 70.33 acres due to inclusion of Sy.Nos. 139/1 and 147/1.

8.3.6.2 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for setting up Dyes & Dye Intermediates manufacturing unit of capacity 2,58,000 TPA by M/s SNF Flopam India Pvt Ltd in an area of 2,84,615 sqm located at Survey No.141/1, 139/P, 139/P1 of Village Varsana and 147/1, 138/1/P2, 143/P1, 139/1 & 140/P of Village Padana, Taluka Anjar&Gandhidham, District Kutch (Gujarat).

The details of proposed products are as under:

S. No	Product	Quantity (TPA)
1	Acrylamide (100 %)	1,20,000
2	Poly Acrylamide Powder	60,000
3	Poly Acrylamide Liquid	42,000
4	Poly Acrylamide Emulsions	36,000
	Total	2,58,000

The project/activity are covered under category A of item 5(f) 'Synthetic organic chemicals industry' of the Schedule to the Environment Impact Assessment Notification, 2006, and requires appraisal at central level by the sectoral EAC in the Ministry.

Standard ToR for the project was granted on 7th July, 2017. Public hearing for the project has been conducted by the State Pollution Control Board on 6th February, 2018. The main issues raised during the public hearing are related to disposal of waste water, CSR activities, job, air pollution, greenbelt, environmental health and safety, etc.

Land available for the project is 2,84,615 sqm (70.33 acre). Industry will develop greenbelt in an area of 94,000 sqm, covering 33% of total project area. The estimated project cost is Rs. 400 crore. Total capital cost earmarked towards environmental pollution control measures is Rs.250 lakhs and the recurring cost (operation and maintenance) will be about Rs. 41 lakhs per annum. Employment opportunity will be 125 persons directly & 125 persons indirectly.

There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors, etc within 10 km distance from the project site. Sang river is flowing at a distance of 9.8 km in W direction.

Total water requirement is estimated to be 3530 cum/day, which includes fresh water requirement of 2945 cum/day, proposed to be met from Gujarat Water Infrastructure Limited supply.

Effluent of 621 cum/day will be treated through ETP and RO and treated water of 350 cum/day will be re-used in the process, and 235 cum/day (including treated sewage of 24 cum/day) will be used for plantation within premises. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

Power requirement will be 16300 KW, proposed to be met from Paschim Gujarat Vij Company Ltd. DG sets of 3x550 KVA and 2x250 KVA will be used as standby during power failure, with adequate stack height as per CPCB norms. Natural gas fired boiler of 10 TPH and 2 TPH will be installed, with a stack of height of 12m.

Ambient air quality monitoring was carried out at 8 locations during March to May, 2017 and the baseline data indicate ranges of concentrations as: PM10 (62.09-70.37 µg/m³), PM2.5 (30.55-36.04 µg/m³), SO₂ (14.40-20.34 µg/m³) and NO₂ (22.22-30.01 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 4.03132 µg/m³, 8.30908 µg/m³ with respect to PM, Ammonia. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

The expenditure towards CER for the project would be 2% of the project cost as committed by the project proponent.

The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. Issues raised during the public hearing have been duly addressed by the project proponent. Additional information submitted by the project proponent found to be satisfactory.

8.3.6.3 *The EAC, after deliberations, recommended the project for grant of environmental clearance, subject to compliance of terms and conditions as under: -*

- *Necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, shall be obtained from the State Pollution Control Board.*

- *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.*
- *Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.*
- *No raw material/solvent prohibited by the concerned regulatory authorities from time to time, shall be used for production of resins.*
- *National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21st July, 2010 and amended from time to time, shall be followed.*
- *To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.*
- *Solvent management shall be carried out as follows:*
 - (i) Reactor shall be connected to chilled brine condenser system.*
 - (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 shall be provided with breather valve to prevent losses.*
 - (vii) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.*
- *Total fresh water requirement shall not exceed 2945 cum/day to be met through Gujarat Water Infrastructure Limited supply. Prior permission in this regard shall be obtained from the concerned regulatory authority.*
- *Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system.*
- *Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps.*
- *Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.*
- *The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.*
- *The company shall undertake waste minimization measures as below:-*
 - (a) Metering and control of quantities of active ingredients to minimize waste.*
 - (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.*
 - (c) Use of automated filling to minimize spillage.*
 - (d) Use of Close Feed system into batch reactors.*
 - (e) Venting equipment through vapour recovery system.*
 - (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.*
- *The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.*
- *All the commitments made during public hearing/consultation shall be satisfactorily implemented.*

- At least 2% of the total project cost shall be allocated for Corporate Environment Responsibility (CER) and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.
- For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
- The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.
- Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

Agenda No.8.3.7

Expansion of Chemicals and APIs production unit at Village FatehgarhChanna on Mansa Road Tehsil and District Barnala (Punjab) by M/s IOL Chemicals and Pharmaceuticals Limited - Environmental Clearance

[IA/PB/IND2/86998/2018, J-11011/976/2008-IA-II(I)]

The project proponent and their accredited consultant M/s EQMS India Pvt Ltd, made a detailed presentation on the salient features of the project.

8.3.7.1 The proposal was earlier considered by the EAC in its meeting held on 8-9 April, 2019, the Committee noted that the treated water of 741 cum/day is proposed to be discharged on land for irrigation/plantation in an area of 24 acres. The Committee expressed concern over such a huge quantity of water not proposed for recycling to reduce fresh water consumption, and accordingly desired for clarification/inputs. Clarifications sought by the EAC and the responses of the PP are as under:

S. No.	Clarifications/inputs sought by the EAC	Reply by the PP
1	Revised water balance with reduction in fresh water input.	Revised water balance submitted. Fresh water requirement is reduced to 807 cum/day
2	Commitment not to discharge the treated industrial water to the canal passing through the unit.	Letter of commitment in this regard has been submitted
3	Schematic diagram of domestic waste water treatment in STP, and plan for utilizing for green belt development.	Schematic diagram has been submitted
4	Detailed effluent treatment scheme along with plan for achieving zero liquid discharge system, and to use treated water in the process to the maximum.	ZLD plan submitted with maximum utilization of recycled water.

8.3.7.2 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for expansion of chemicals and API manufacturing unit from 526.45 TPD to 654.95 TPD by M/s IOL Chemicals & Pharmaceuticals

Limited in an area of 250154.21 sqm located at Village Fatehgarh Channa on Mansa Road, Tehsil & District Barnala (Punjab).

The details of existing and proposed products are as under:-

S. No.	Product	Existing (TPD) [after change in product mix]	Proposed (TPD)	Total (TPD)
1	Acetic Acid	0	0	0
2	Ethyl Acetate	300	0	300
3	Acetic Anhydride	70	0	70
4	Ibuprofen	29	16	45
5	Monochloroacetic Acid	40	0	40
6	Acetyl Chloride	32	0	32
7	Iso Butyl benzene	40	20	60
8	Rabiprazole Sodium	0	0	0
9	Diclofenac Sodium	3.5	3.5	7
10	Metformin Hydrochloride	10	30	40
11	Fenofibrate	0.25	0.5	0.75
12	Clopidogrel Bisulphate	0.5	0.5	1
13	Amlodipine	0.25	0	0.25
14	Lamotrigine	0.1	0	0.1
15	Phineramine Base	0.1	0	0.1
16	Ibuprofen Lysinate	0.5	0	0.5
17	Ursodeoxycholic Acid	0.25	0	0.25
18	Quetiapine	0	3	3
19	Dex - Ibuprofen	0	0.5	0.5
20	Gabapentene	0	5	5
21	Pentaprazole	0	1	1
22	losartan Potassium	0	1	1
23	Fexofenadine	0	0.5	0.5
24	Ibuprofen Sodium	0	2	2
25	CMIC Chloride	0	2	2
26	DCMIC Chloride	0	0.5	0.5
27	FCMIC Chloride	0	0.5	0.5
28	MIBT	0	10	10
29	Propyl Acetate	0	20	20
30	Intermediate Products			
	1) HEEP	0	1	1
	2) Methyl-2-amino-3-chloropropionate HCl	0	0.5	0.5
	3) 2-(2-(Aminothiazole-4-yl)-2-[2-(terbutoxycarbonyl) isopropoxyimino] acetic acid (ATTBA) Ceftazidime intermediate	0	0.25	0.25
	4) 2-chloro-3-cyanopyridine Mirtazipine intermediate	0	0.25	0.25
	5) 4'-methyl-2-cyanobiphenyl (OTBN)	0	1	1

	6) m-Phenoxybenzaldehyde	0	2	2
	7) 4-aminobenzamide	0	2	2
	8) p-nitrobenzoyl chloride	0	3	3
	9) Vanillin	0	2	2
	Total	526.45	128.5	654.95
31	Cogeneration	17 MW		17MW

The project/activity is covered under category A of item 5(f) 'Synthetic Organic Chemicals' of schedule to the Environment Impact Assessment (EIA) Notification, 2006, and requires appraisal at central level by the sectoral EAC in the Ministry.

Standard Terms of Reference for the project was granted on 1st June 2018. Public Hearing for the project has been conducted by the State Pollution Control Board on 26th October 2018. The main issues raised during the public hearing are related to employment of local peoples, CSR and environmental aspects.

Existing land area is 206617.21sqm. Additional, 43537 sqm land will be added to the project used required for proposed expansion. Industry has developed greenbelt in an area of 97124sqm, covering 33% of project area. Additionally, 24,280.8 sqm area will be developed as greenbelt. The estimated project is Rs. 205 crores. Total capital cost earmarked for environmental pollution control measures will be Rs.6.90 crores and the recurring cost (operation and maintenance) will be about Rs. 4.83 crores per annum. Employment opportunity will be for 650 persons.

There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves and Wildlife Corridors, Rivers etc within 10 km distance from the project site.

Total water requirement after expansion is estimated to be 1800 cum/day, which includes fresh water requirement of 807 cum/day, proposed to be met from surface water sources. The existing fresh water requirement is met through ground water. Approval from CGWA for ground water extraction of 900 cum/day has been obtained vide letter dated 12th February, 2018 and permission for withdrawal of surface water of 2500 cum/day has been obtained from Department of Irrigation, Punjab vide letter dated 2nd November, 2018.

Low TDS effluent of 751 cum/day will be treated in ETP consisting of four stages treatment viz equalization, anaerobic digestion, MBBR, aerobic digestion, tertiary treatment followed by UF and two stage RO system. High TDS (process +RO reject) effluent of 204 cum/day will be sent to MEE/MVR for evaporation. Total 993 cum/day water will be recycled in the process after RO and MEE/MVR. Domestic effluent of 73 cum/day will be treated in sewage treatment plant and the treated water will be used for green belt plantation. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

The unit has 13 MW and 4 MW power cogeneration plant, which is sufficient to cater the power requirement. The unit has 2 X 1000 KVA and 1 X 625 KVA DG sets, additional, one DG set of 1000 KVA capacity will be installed with stack height as per CPCB norms.

The existing unit has rice husk fired boilers of capacities 80 TPH, 32 TPH and 14 TPH and six thermic fluid heater/furnace (1500000, 2x2000000, 3x200000 KCal/Hour) and additionally two Furnace/ Thermic Fluid Heater of 200000 Kcal/hour is proposed. ESP/ Trema Cyclone will be installed to control the particulate emission along with stack as per the CPCB norms.

Ambient air quality monitoring was carried out at 8 locations during March to June 2018 and the baseline data indicates the pollutants concentrations range as: PM₁₀ (85 – 93 µg/m³), PM_{2.5} (42

– 48µg/m³), SO₂(10.9-12.7 µg/m³) and NO₂ (21.1– 27.4 µg/m³). AAQ modelling study for point source emissions indicates that the maximum predicted incremental GLCs after the proposed project for PM, SO₂, NO_x &HCL would be 0.95, 0.64, 3.1, 0.23 µg/m³ respectively. The resultant concentrations are expected to be within the National Ambient Air Quality Standards (NAAQS).

The Ministry, had issued EC earlier vide letter dated 24th August, 2009 to the project for expansion of existing and additional of new products at Village Dhaula, District Sangrur (Punjab) in favour of M/sIOL Chemicals and Pharmaceuticals Limited. Change in product mix has been obtained from Punjab SPCB for a capacity of 543.5 TPD, vide Letter dated 13th February, 2018. The monitoring report on compliance status of EC conditions forwarded by the Regional Office vide their letter dated 29th February, 2016, was found to be satisfactory.

The expenditure towards CER for the project would be 2% of the project cost as committed by the project proponent.

The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. Issues raised during public hearing has been properly addressed by the project proponent. Additional information submitted by the project proponent found to be satisfactory and addressing the concerns raised by the Committee.

Consent to Operate for the existing products/utilities has been obtained from the Punjab PCB vide letter dated 6th August, 2018, which is presently valid up to 31st March, 2020.

8.3.7.3 *The EAC, after deliberations, recommended the project for grant of environmental clearance, subject to compliance of terms and conditions as under: -*

- *Necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, shall be obtained from the State Pollution Control Board.*
- *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises. Effluent shall not be discharged into the land area/adjointing canal.*
- *Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.*
- *National Emission Standards for Bulk drugs Manufacturing Industry issued by the Ministry vide G.S.R.149(E) dated 4th March, 2009 and amended from time to time shall be followed. Fugitive emissions shall be controlled at 99.98% with effective chillers.*
- *No raw material/solvent prohibited by the concerned regulatory authorities from time to time, shall be used.*
- *To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.*
- *Solvent management shall be carried out as follows:*
 - (a) *Reactor shall be connected to chilled brine condenser system.*
 - (b) *Reactor and solvent handling pump shall have mechanical seals to prevent leakages.*
 - (c) *The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.*
 - (d) *Solvents shall be stored in a separate space specified with all safety measures.*
 - (e) *Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.*

- (f) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.
- (g) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.
- Total fresh water requirement shall not exceed 807 cum/day, proposed to be met from surface water sources. Prior permission in this regard shall be obtained from the concerned regulatory authority. No ground water shall be used for the industrial purpose.
 - Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system.
 - Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps.
 - Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.
 - The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.
 - Fly ash should be stored separately as per CPCB guidelines so that it may not adversely affect the air quality. Direct exposure of workers to fly ash and dust should be avoided.
 - The company shall undertake waste minimization measures as below:-
 - (a) Metering and control of quantities of active ingredients to minimize waste.
 - (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
 - (c) Use of automated filling to minimize spillage.
 - (d) Use of Close Feed system into batch reactors.
 - (e) Venting equipment through vapour recovery system.
 - (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.
 - The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.
 - All commitments made during public consultation/hearing shall be properly implemented by the project proponent.
 - At least 2% of the total project cost shall be allocated for Corporate Environment Responsibility (CER) and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.
 - For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
 - The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.
 - Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
 - Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

Agenda No.8.3.8

Setting up API Manufacturing Unit of 500 TPA at Village Bhagwanpur, Tehsil Derabassi, District SAS Nagar (Punjab) by M/s United Biotech Pvt Ltd - Environmental Clearance

[IA/PB/IND2/83229/2018, IA-J-11011/159/2018-IA-II(I)]

The project proponent and their accredited consultant M/s VardanEnvironet, made a detailed presentation on the salient features of the project.

8.3.8.1 The proposal was earlier considered by the EAC in its meeting held during 26-28 February, 2019. The Committee expressed serious concerns over the prevailing air quality, which would increase further considerably due to the proposed project. Further, the Committee in view of the public hearing report mentioning contamination of ground water due to various industrial activities in the area, desired for a detailed effluent treatment plan to achieve ZLD. The Committee also noted that many hazardous chemicals are proposed in the unit without any safety and risk assessment. Additional information sought by the Committee and response by the project proponent is as under:

S. No.	Clarifications/inputs sought by the EAC	Reply by the PP
1	Considering critical air quality and ground water quality of the region, comments of SPCB to allow setting up such polluting units in the area.	As per letter dated 11.04.2019 from Chief Environmental Engineer, Punjab Pollution Control Board (PPCB) a)- The project site confirms to the citing guidelines as per the policy of Punjab Pollution Control Board (PPCB). b)- Punjab Pollution Control Board (PPCB) recommended for the grant of Environmental Clearance.
2	Details on proposed emissions control measures to achieve 99.99% efficiency.	No emissions from the proposed project shall be discharged in to atmosphere without its proper treatment. The company has also allotted a budget of approx. Rs. 216 lakhs for EMP & annually Rs. 60 lakhs will be spent as the maintenance cost.
3	Health & Risk assessment in in view of the sensitive chemical handling.	The risk has been evaluated for Setting up of API Manufacturing Unit by M/s. United Biotech Pvt. Ltd in PHAST & PHAST Risk. The Overall Maximum Risk contours generated for combined worst case (Catastrophic Rupture) scenario are in the range of 1×10^{-4} to 1×10^{-8} . The maximum risk to persons working in is 8.43 E-004 per year which is in the upper part of ALARP triangle.
4	Hazardous substance management plan in conformity with the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016.	All Hazardous waste shall be disposed to the vendor's authorized by SPCB/PPCB. Company identified the following spent solvent purchasers for disposal of spent solvent

		<ol style="list-style-type: none"> 1. C.R. Chemicals Rohani Delhi. 2. Salasar Chemicals Sultaripur road Delhi. 3. Star paints and industries Meerut (UP) 4. Avad Refinery Pvt Ltd kavinagar Ghaziabad
5	Revised water balance with the proposed reduction in fresh water requirement.	Revised water balance with has been worked out with the reduction of 30KLD of fresh water.
6	Detailed Effluent treatment plan and commitment to achieve zero liquid discharge system.	Company is committed to achieve the ZLD and plan is submitted.
7	Response and commitment on the issues raised during public hearing	<p>Three points were raised during the public hearing there are-</p> <ul style="list-style-type: none"> Pollution Employment Marriage of poor girls of local community. <p>Details are submitted.</p>
8	Plan for Corporate Environment Responsibility.	<p>Company shall spend total of Rs. 2 crore under the CER as per CER notification 2018</p> <p>The CER budget shall be utilized for providing the following facilities in the area-</p> <ol style="list-style-type: none"> 1. Drinking water facility 2. Heath Care Facility 3. Education development 4. Infrastructure development 5. Employment Opportunity 6. Sanitation &Hygiene Facility 7. Community development 8. Marriage of poor girls of the community

8.3.8.2 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for setting up APIs manufacturing unit of capacity 500 TPA by M/s United Biotech Pvt Ltd in a total area of 44000 sqm located at Village Bhagwanpur, Tehsil Derabassi, District SAS Nagar (Punjab).

The details of products and capacity as under:

S. No	Product Category	Quantity (TPA)
1.	Oncology API	43.555
2.	Generals	28.459
3.	Penicillin API	300
4.	Penems API	26.700
5.	Macrolide	36.450
6.	Cephalosporin API	44
7.	Hormones	20.281
	Total	499.445

Details of products

S.N.	Product	Quantity/Annum
ANTICANCER		
1.	Imatinib base	2 TON
2.	Thalidomide base	1 TON
3.	Vinblastin base	300 KG
4.	Vincristine	150 KG
5.	Mitomycin C	15 KG
6	Melphalan hydrochloride	50 KG
7	Irinotecan hydrochloride	25 KG
8	Paclitaxel	200 KG
9	Docetaxel	100 KG
10	Pemetrexed sodium	50 KG
11	Letrozole	50 KG
12	Gefitinib	500 KG
13	Topotecan hydrochloride	10 KG
14	Temozolomide	200 KG
15	Doxorubicin	400 KG
16	Daunorubicin	400 KG
17	Epirubicin	150 KG
18	Methotrexate	400 KG
19	Aprepitant	100 KG
20	Bicalutamide	100 KG
21	Bortezomib	15 KG
22	Capecitabine	10 TON
23	Carboplatin	500 KG
24	Cisplatin	400 KG
25	Dacarbazine	200 KG
26	Estrarnustine	50 KG
27	Bendamustine	10 KG
28	Fludarabine Phosphate	10 KG
29	Gemcitabine Hydrochloride	500 KG
30	Lapatinib	200 KG
31	Lenalidomide	100 KG
32	Lomustine	100 KG
33	Oxaliplatin	50 KG
34	Procarbazine	2 TON
35	Zoledronic Acid	50 KG
36	Cyclophosphamide	2 TON
37	Ifosfamide	4 TON
38	Chlorombucil	10 KG
39	Busulfan	5 KG
40	6-Mercapeopurine	1 TON
41	Amifostine	200 KG
42	Cytosine Arabinoside	200 KG
43	Pamidronate	50 KG
44	Etoposide	500 KG
45	Idarubicin	10 KG
46	Dactinomycin	5 KG
47	Bleomycin	10 KG

48	L-Asparaginase	20 KG
49	Leucovorin Ca	1000 KG
50	Polanestron	10 KG
51	Tamoxifen citrate	10 TON
52	Megastrol acetate	3 TON
53	Thioguanine	20 KG
54	Abiraterone	20 KG
55	Mitoxantrone	20 KG
56	Anstrazole	20 KG
57	Sunitinib	200 KG
58	Dasatinib	200 KG
59	Vinorlbine	10 KG
60	Sevelamer	500 KG
61	Exemestane	200 KG
62	Polanestron	10 kg
Total		43.555 TON
General		
1	Azathioprine	2 TON
2	Cyclosporine	1 TON
3	Mycophenolate	3 TON
4	Tacrolimus	100 KG
5	Sirolimus	10 KG
6	Deferoxamine	100 KG
7	Dimercaprol	2 KG
8	Pralidoxime chloride	50 KG
9	Naloxone	2 KG
10	Deferasirox	100 KG
11	Metadoxine	100 KG
12	Citicoline	2500 KG
13	Propofol	500 KG
14	Midazolam	300 KG
15	Succinyl Choline Chloride	300 KG
16	Isoflurane	300 KG
17	Vecuronium Bromide	250 KG
18	Ketamine	500 KG
19	Thiopintone sodium	2 TON
20	Pancuronium	250 KG
21	Fentanyl	50 KG
22	Terlipressin	50 KG
23	Dopamine	500 KG
24	Eptifibatide	90 KG
25	Tirofiban	50 KG
26	Enoxaparine	400 KG
27	Heparine	2000 KG
28	Protamine	500 KG
29	Protamine	50 KG
30	Alprostadil	5 KG
31	Sodium antimony gluconate	200 KG
32	Dobutamine	500 KG
33	Capreomycin	1000 KG
34	Cycloserine	1 TON
35	Ethionamide	500 KG

36	Amikacin	2 TON
37	Tobramycin	1 TON
38	Netlimicin	1 TON
39	Tigecycline	500 KG
40	Amphotericin B	500 KG
41	Voriconazole	1 TON
42	Caspofungin	100 KG
43	Ganciclovir	500 KG
44	Valganciclovir	500 KG
45	Ribavirin	500 KG
Total		28.459 Ton
Penicillin		
1	Piperacillin	60 TON
2	Tazobactam	20 TON
3	Ticarcilline	75 TON
4	Sulbactam	75 TON
5	Clavulanate	20 TON
6	Amoxicilline	50 TON
Total		300 TON
Penems		
1	Meropenem	18 TON
2	Feropenem	500 KG
3	Ertapenem	2 TON
4	Doripenem	200 KG
5	Imipenem	3 TON
6	Cilastatin	3 TON
Total		26.700 TON
Macrolides		
1	Vancomycin	4 TON
2	Teicoplanin	2 TON
3	Lincomycin	2 TON
4	Clindamycin	10 TON
5	Clarithromycin	10 TON
6	Aztreonam	5 TON
7	Colistimethate	3.3 TON
8	Polymyxin B	150 KG
Total		36.450 TON
Cephalosporin		
1	CefeximeTrihydrate	4 TON
2	Ceftazidime	2 TON
3	Cefotaxime	5 TON
4	Cefepime	2 TON
5	Cefoperazone	2 TON
6	Cefpirome	2 TON
7	Cefuroxime	10 TON
8	Ceftriaxone sodium	10 TON
9	Cefazolin	5 TON
10	Ceftizoxime	2 TON
Total		44 TON
HARMONES		
1	Human Chorionic Gonadotropin(HCG)	3 KG

2	Desmopressin	4 KG
3	Follicle Stimulating Hormone (FSH)	500 G
4	Human menopausal gonadotropin (HMG)	500 G
5	Vasopressin	3 KG
6	Octreotide	3 KG
7	Somatostatin	3 KG
8	Methyl prednisolone	1010 KG
9	Milrinone lactate	50 KG
10	Noradrenaline	200 KG
11	Salmon calcitonin	5 KG
12	Hydrocortisone	5.0 ton
13	L-Ornithine L-Aspartate)	12 Ton
14	Calcium Polystyrene Sulfonate	2 Ton
Total		20.281 TON

The project/activity is covered under category A of item 5(f) 'Synthetic Organic Chemicals' of schedule to the Environment Impact Assessment (EIA) Notification under category 'A' and requires appraisal at central level by sectoral Expert Appraisal Committee in the Ministry.

Standard ToR for the project was granted on 1st June 2018. Public hearing was conducted by the State Pollution Control Board on 17th September, 2018. The main issues raised during public hearing are related to water pollution and employment.

Total land area available for the is 44000 sqm (4.4 ha). Industry will develop greenbelt in an area of 14520 sqm (1.452 ha) covering 33 % of total project area. The estimated project cost is Rs 100 crores. Total capital cost earmarked towards environmental pollution control measures is Rs 2.15 crores and the recurring cost (operation and maintenance) will be about Rs 60 Lakhs per annum. Total employment opportunity will be for 150 persons directly and 350 persons indirectly.

There are no National parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km from the project site. Ghaggar river is flowing at a distance of 6 km in North-West direction.

Total water requirement is estimated to be 500 cum/day, which includes fresh water requirement of 200 cum/day, proposed to be met from Borewell. Application in this regard has been submitted with CGWA.

Industrial effluent of 300 cum/day will be treated through ETP comprising of primary treatment, Multi effect Evaporator, Biological treatment, Tertiary Treatment, Reverse Osmosis and the permeate will be reused in cooling tower. Unit will install STP of 30 cum/day capacity for treatment of domestic sewage. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

Total power requirement will be 2000 KVA which will be sourced from the Punjab State Power Corporation Limited. Four DG sets of 500 KVA each will be setup for power back up. Stack (height 5m above the roof level of D.G. Set) will be provided as per CPCB norms to the proposed DG sets.

Three briquette fired boilers of 5 TPH capacity each will be installed in the proposed unit. Multi cyclone separator/ bag filter with a stack height of 30 m will be installed for controlling the particulate emissions within the statutory limit.

Ambient air quality monitoring was carried out at 8 locations during 1st March, 2018 to 31st May, 2018 and the baseline data indicates the ranges of concentrations as: PM10 (78.1 - 97.2 µg/m³), PM2.5 (37.5 - 57.1 µg/m³), SO₂ (5.2 - 13.4 µg/m³) and NO₂ (16.1 - 31.5 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project are reported to be 97.35 µg/m³, 13.68 µg/m³ and 31.52 µg/m³ with respect to PM10, SO_x and NO_x, which are not within the National Ambient Air Quality Standards.

8.3.8.3 *The EAC, during deliberations, observed that M/s Vardan Environet, one of the NABET accredited consultant, was engaged for preparation of the EIA/EMP report for the project. The EIA Coordinator was, however, not present during the meeting. The Consultant, presenting the proposal, was not having accreditation for the projects covered under item 5(f). The Committee also desired that the product list and capacity shall be uniform and consistent.*

The proposal was, therefore, not taken forward.

8.4 Any other

Agenda No.8.4.1

Expansion Project of Active Pharmaceuticals Ingredients (APIs) with R&D Facility at Sy. No.11, 12, 13 of Yawapur & 233, 233 E2, 261, 261AAE, 262, 262 AAE, 267, 267 A2, 267E, 276, 276AA, 276 E, 276/A/1, 278, 279 AA, 280, 280A, 281, 281AA, 281 VU, 285, 285E, 287, 287A1, 288, 288A, 289, 290, 290/VU, 291 & 291/A of Maddikunta village, Sadasivpet (M), District Sangareddy (Telangana) by M/s AVR Organics Pvt Ltd - Amendment in Environmental Clearance

[IA/TG/IND2/60745/2016, J-11011/380/2016-IA.II(I)]

8.4.1.1 The proposal is for amendment in the environmental clearance (EC) granted by the Ministry vide letter dated 9th January, 2019 to the project for manufacturing Active Pharmaceutical Ingredients and its intermediates (73 nos of products) along with R&D products of total capacity 1728 TPA (any 16 products at a time on campaign basis) in favour of M/s AVR Organics Pvt Ltd at Sy. No.11, 12, 13 of village Yawapur and Sy Nos. 233, 233 E2, 261, 261AAE, 262, 262 AAE, 267, 267 A2, 267E, 276, 276AA, 276 E, 276/A/1, 278, 279 AA, 280, 280A, 281, 281AA, 281 VU, 285, 285E, 287, 287A1, 288, 288A, 289, 290, 290NU, 291 & 291/A at Village Maddikunta, Sadasivpet (M), District Sangareddy (Telangana).

8.4.1.2 The project proponent has requested for amendment in the EC with the details are as under;

S. No.	Para of EC issued by MoEF&CC	Details as per the EC	To be revised read as	Justification / reasons
1.	Page No. 4 – Line 1 for condition (e)	Coal/Lignite shall not be used as fuel in the boiler.	50% of Coal containing <0.5% Sulphur and 50% Briquettes to be used as fuel in Boilers	Coal is necessary as fuel in boiler at least for 50% of fuel required since retention of heat is longer by coal compared to briquettes. Availability of Briquettes in required quantities is low (i.e. 102 TPD of fuel is required).

S. No.	Para of EC issued by MoEF&CC	Details as per the EC	To be revised read as	Justification / reasons
				<p>As suggested by the EAC Committee, Coal with <0.5% Sulphur will be utilized in the boilers.</p> <p>During 41st EAC meeting held on 25th September, 2018, Hon'ble Chairman, EAC and EAC members have deliberated in detail about the usage of Coal in Boilers. We requested the Hon'ble Chairman and EAC members to allow the Boilers with 50% Coal containing <0.5% Sulphur content and 50% Briquettes as the fuel instead of 100% usage of coal as mentioned in our proposal. Though it was accepted in the EAC meeting, the same was not reflected in the Minutes of EAC meeting and EC Copy.</p>

8.4.1.3 *The EAC, after deliberations, reiterated its recommendations made during the meeting held on 24-26 September, 2018 for not using coal/lignite as fuel in the boilers, which was accepted by the Ministry and stipulated as one of the conditions in the environmental clearance granted on 9th January, 2019.*

The proposal was, therefore, not accepted by the Committee.

Agenda No.8.4.2

Grain based Distillery plant (2 X 60 KLPD) along with Cogeneration Power Plant (2 X 2.5 MW) in phased manner at Village Titerikata, Post Ramvikata, Tehsil Harabhanga, District Boudh (Odisha) by M/s Boudh Distillery Pvt Ltd - Amendment in Environmental Clearance

[IA/OR/IND2/27922/2015, J-11011/160/2015-IA-II(I)]

8.4.2.1 The proposal is for amendment in the environmental clearance granted by the Ministry vide letter dated 28th October, 2016 to the project for Grain Based Distillery Plant (2X60 KLPD) along with Cogeneration Power Plant (2X2.5 MW) located at Village Titerikata, Tehsil Harabhanga, District Boudh (Odisha) in favour of M/s Boudh Distillery Private Limited.

8.4.2.2 The project proponent has requested for amendment in the EC with the details are as under:-

S. No.	Para of issued MoEF&CC	EC by	Details as per the EC	To be revised/ read as	Justification/ reasons
1.	Paragraph 2.0 (Table for Units/ Products /By Products)	no	Distillery Plant (Rectified Spirit/ENA/ Pharma Alcohol/Industrial Alcohols)	Distillery Plant (Rectified Spirit/ENA/ Pharma Alcohol/ Industrial Alcohols/ Ethanol)	Our Product by Phase is Distillery Plant (Rectified Spirit/ENA/ Pharma Alcohol/ Industrial Alcohols), Quantifying Phase 1 & 2 as 60 KLPD each, also covers Ethanol , as a matter of fact we would like to sell Ethanol to Petroleum Industries which is not defined in Product Category. The unspecification of Ethanol, in EC Letter may restrict us in Tender Participation. We request you to amend specifically Ethanol , comes under this Environment Clearance Letter.

8.4.2.3 The EAC, after deliberations, recommended for inclusion of 'Ethanol' in the product list, with the additional condition as under:

- Prior approval shall be obtained from the Petroleum & Explosives Safety Organization (PESO) for the site and layout plan submitted to this Ministry along with the proposal for EC. In case of any change therein post PESO approval, the proposal shall require fresh appraisal by the sectoral EAC.

Agenda No.8.4.3

Distillery unit of 64 KLPD capacity along with co-generation plant at Vengur village, Thirukoyilur Taluk, District Villupuram (Tamil Nadu) by M/s Bannari Amman Sugars Limited - Extension of validity of Environment Clearance

[IA/TN/IND/5666/2011, J-11011/566/2010-IA.II(I)]

8.4.3.1 The proposal is for extension of validity of environmental clearance granted by the Ministry vide letter dated 20th April, 2012 to the project for Distillery Unit [Molasses/Grain based Distillery Unit- 64 KLPD, Malt Spirit (Malt Base) – 3.7 KLPD, Grape Spirit (Grape base) – 3.7 KLPD] along with Co-gen plant (25 MW) and Captive Power Plant (3 MW) located at Village Vengur, Taluk Thirukoyilur, District Villupuram (Tamil Nadu) granted in favour of M/s Madras

Sugars Ltd, which was later amended and transferred in favour of M/s Bannari Amman Sugars Limited vide letter dated 6th November, 2017.

8.4.3.2 The project proponent has now requested for extension of the validity of the environmental clearance to complete the work as per scope of the project. It was informed that co-generation unit was established. The erstwhile M/s Madras Sugars Limited has been merged with M/s Bannari Amman Sugars Limited as per the Order of the Hon'ble High Court of Judicature at Madras dated 15th November, 2016, and the implementation of the project got delayed. The Ministry has granted amendment and transfer of the EC vide letter dated 6th November, 2017. It has been informed that they are in process of establishing the distillery plant and requested for extension of the validity for a period of three years.

8.4.3.3 *The EAC, after deliberations, recommended for extension of validity of environmental clearance dated 20th April, 2012 for a period of three years i.e. till 20th April, 2022 for completion of the project, with all other terms and conditions stipulated therein shall remain unchanged.*

Agenda No.8.4.4

Expansion of the petrochemical complex plant by adding Gas Sweetening Plant (GSU, 21.12 MMSCMD) and C2/C3 Recovery Unit (21.72 MMSCMD) at Vijaipur, District Guna (MP) by M/s GAIL (India) Ltd - Amendment in Environment Clearance

[IA/MP/IND/3010/2011, J-11011/168/2011-IA.II(I)]

8.4.4.1 The proposal is for amendment in the environmental clearance granted by the Ministry vide letter dated 2nd March, 2012 to the project for Expansion of the Petrochemical Complex plant by adding Gas sweetening Plant (GSU, 21.12 MMSCMD) and C2/C3 recovery unit (21.72 MMSCMD) located at Vijaipur, District Guna (Madhya Pradesh) by M/s GAIL (India) Ltd.

8.4.4.2 The project proponent has requested for amendment in the EC with the details are as under:

S. No.	Para of EC issued by MoE FCC	Details as per existing EC	To be revised as	Justification / reasons
1.	Subject	Expansion of the Petrochemical Complex plant by adding Gas sweetening Plant (GSU, 21.12 MMSCMD) and C2/C3 recovery unit (21.72 MMSCMD) located at Vijaipur, District Guna, MP by M/s GAIL (India) Ltd	Environment Clearance for Gas Processing Unit at Vijaipur, District Guna (MP) by M/s GAIL (India) Limited.	Only Gas Processing Units exist at Vijaipur.

2.	Para 2.0	<p>The Ministry of Environment & Forests have examined your application. It is noted that proposal is for expansion of the petrochemical complex plant by adding Gas sweetening Plant (GSU, 21.12 MMSCMD) and C2/C3 recovery Unit (21.72 MMSCMD) at Vijapur, District Guna (MP) by M/s GAIL (India) Ltd. Total project cost is Rs. 2214.21 crores. Total plot areas of the existing complex is 324.9 Ha and expansion will be done within existing complex. No national park/sanctuary/reserve forests/ecological sensitive areas/reserve forest are located within 10 Km. Following are the details of existing and proposed units:</p> <table border="1" data-bbox="341 1113 682 1596"> <thead> <tr> <th>Existing unit</th> <th>Proposed Units</th> </tr> </thead> <tbody> <tr> <td>LPG Unit (2no.)</td> <td>Gas Sweetening Unit (GSU); 21.12 MMSCMD</td> </tr> <tr> <td>Utilities, offsites, Storages and ETP</td> <td>C2/C3 Recovery Unit, 21.72 MMSCMD</td> </tr> <tr> <td></td> <td>Utilities, offsites, Storages</td> </tr> </tbody> </table>	Existing unit	Proposed Units	LPG Unit (2no.)	Gas Sweetening Unit (GSU); 21.12 MMSCMD	Utilities, offsites, Storages and ETP	C2/C3 Recovery Unit, 21.72 MMSCMD		Utilities, offsites, Storages	<p>The Ministry of Environment & Forests have examined your application. It is noted that proposal is for Gas Processing Unit consisting of LPG units (2 Nos. 15 MMSCMD), Gas sweetening Plant (GSU, 21.12 MMSCMD) and C2/C3 recovery Unit (21.72 MMSCMD) at Vijapur, District Guna (MP) by M/s GAIL (India) Ltd. Total cost is Rs. 3206.21 Cr (includes 2214.21 Cr. For C2C3-GSU unit). Total plot areas of the existing complex is 324.9 ha and expansion will be done within existing complex. No national park/sanctuary/reserve forests/ecological sensitive areas/reserve forest are located within 10 Km. Following are the details of existing and proposed units:</p> <table border="1" data-bbox="706 735 1144 1228"> <thead> <tr> <th>Existing unit</th> <th>Proposed Units</th> </tr> </thead> <tbody> <tr> <td>LPG Unit (2no.)</td> <td>LPG Unit (2no.) (15 MMSCMD) Gas Sweetening Unit (GSU); 21.12 MMSCMD</td> </tr> <tr> <td>Utilities, offsites, Storages and ETP</td> <td>C2/C3 Recovery Unit, 21.72 MMSCMD</td> </tr> <tr> <td></td> <td>Utilities, offsites, Associated Storages of the plants above.</td> </tr> </tbody> </table>	Existing unit	Proposed Units	LPG Unit (2no.)	LPG Unit (2no.) (15 MMSCMD) Gas Sweetening Unit (GSU); 21.12 MMSCMD	Utilities, offsites, Storages and ETP	C2/C3 Recovery Unit, 21.72 MMSCMD		Utilities, offsites, Associated Storages of the plants above.	<p>To restart LPG Unit 2 Nos. (15 MMSCMD). Existing LPG Unit 2 Nos. (15 MMSCMD) will be restarted. Along with it gas sweetening unit (21.12 MMSCMD), C2/C3 recovery unit (21.72 MMSCMD) and utilities offsites, storages associated with the above plants will be kept running.</p>
Existing unit	Proposed Units																			
LPG Unit (2no.)	Gas Sweetening Unit (GSU); 21.12 MMSCMD																			
Utilities, offsites, Storages and ETP	C2/C3 Recovery Unit, 21.72 MMSCMD																			
	Utilities, offsites, Storages																			
Existing unit	Proposed Units																			
LPG Unit (2no.)	LPG Unit (2no.) (15 MMSCMD) Gas Sweetening Unit (GSU); 21.12 MMSCMD																			
Utilities, offsites, Storages and ETP	C2/C3 Recovery Unit, 21.72 MMSCMD																			
	Utilities, offsites, Associated Storages of the plants above.																			
		<p>C2/C3 recovered from the various units will be sent to Pata petrochemical complex in Uttar Pradesh. Equipments namely gas turbine driven compressors (6 Nos.), Fire Heaters (2 Nos.), Boiler (1 No.) and</p>	<p>C2/C3 recovered from various units will be sent to Pata petrochemical complex in Uttar Pradesh. Equipments namely gas turbine driven compressors (6 Nos.), Fire Heaters (2 Nos.), Boiler (1 No.) and Cooling towers (2 Nos.) form the existing LPG units will be in operation. Also new equipments namely gas turbine driven lean gas compressor with heat recovery steam generator (HRSG) facility</p>	<p>All equipment in LPG unit (2 Nos.), Gas Sweetening Unit and C2/C3 Recovery Unit will be</p>																

	<p>Cooling towers (2 Nos.) form the existing plant will be shut down after completion of the proposed expansion facility. In place of shut down equipments energy efficient new equipments namely gas turbine driven lean gas compressor with heat recovery steam generator (HRSG) facility (3 Nos. 15 MW), fire heater (1 No) and cooling tower (1 No) will be installed.</p>	<p>(3 Nos.), fire heater (1 No) and cooling tower (1 No) will be in operation.</p>	<p>running.</p>
3	All other Paras 3 to 10 shall remain same.		

8.4.4.3 The EAC, after detailed deliberations, recommended for correction and amendment in the environmental clearance dated 2nd March, 2012, with the details as under:

(i) **Subject** shall be read as under:

“Setting up Gas Processing Unit at Vijaipur, District Guna (MP) by M/s GAIL (India) Limited”.

(ii) **Para 2** shall be read as under:

“..... It is noted that the proposal is for setting up Gas Processing Unit, consisting LPG units (2 x15 MMSCMD), Gas sweetening Plant (21.12 MMSCMD) and C2/C3 recovery Unit (21.72 MMSCMD) at Viajipur, District Guna (MP) by M/s GAIL (India) Ltd.....”. Following are the details of existing and proposed units:

Existing unit	Proposed Units
LPG Unit (2no.)	LPG Unit (2x15 MMSCMD); Gas Sweetening Unit (21.12 MMSCMD); C2/C3 Recovery Unit (21.72 MMSCMD)
Utilities, offsites, Storages and ETP	Utilities, offsites, Associated Storages

“C2/C3 recovered from various units will be sent to Pata Petrochemical Complex in Uttar Pradesh. Equipments namely gas turbine driven compressors (6 Nos.), Fire Heaters (2 Nos.), Boiler (1 No.) and Cooling towers (2 Nos.) form the existing LPG units will be in operation. Gas turbine driven lean gas compressor with heat recovery steam generator (HRSG) facility (3 Nos.), fire heater (1 No) and cooling tower (1 No) will be installed.

(iii) All other terms and conditions in the said EC shall remain unchanged

Day Two: 31st May, 2019

Agenda No.8.5.1

Grain based Distillery (2x45 KLPD) and Co Generation Power Plant (2x3 MW) and IMFL/IMIL bottling (2x8000 cases/day) at Survey No. 244,249 ton 251, 253 to 262, 295 to 298,300 to 302, 314,317,319,322,32 at Village Goud- Sargiguda, Taluka Junagarh, District Kalahandi (Odisha) by M/s Starlight Energy Limited - Environmental Clearance

[IA/OR/IND2/69696/2014, J-11011/298/2014 IA II (I)]

The project proponent and their accredited consultant M/s VardanEnvironet, made a detailed presentation on the salient features of the project.

8.5.1.1 During deliberations, the Committee noted the following:

The proposal is for environmental clearance to the project for setting up grain based distillery (2x45 KLPD) and co-generation power plant (2x3 MW) and IMFL/IMIL bottling (2x8000 cases/day) by M/s Starlight Energy Limited in an area of 68 acres at Village Goud-Sargiguda, Taluka Junagarh, District Kalahandi (Odisha).

The project/activity is covered under category A of item 5 (g) 'Distilleries' of the Schedule to the Environmental Impact Assessment Notification, 2006 and requires appraisal/approval at Central level in the Ministry.

Terms of Reference for the project was issued on 23rd January, 2015. Further, the extension of validity of the ToR was granted on 23rd May, 2018 providing extension of validity of ToR upto 23rd January, 2019. Public hearing for the proposed distillery project has been conducted by the Odisha Pollution Control Board on 1st November, 2018. Main issues raised during the public hearing include pollution, odour problem, area development and employment for locals etc.

Total area requirement for the proposed project is estimated to be 68 acres (27.5 Ha.). The total land acquired by the proponent is 91.48 acres (37.02 Ha.). Green belt will be developed in an area of 24 acres (9.7 ha) i.e. 35 % of total area of the project. The estimated project cost is Rs.40 crores. Total capital cost earmarked towards environmental pollution control measures is 4.55 crore and the recurring cost (O&M) will be about Rs.2 crore per annum. Total employment generation will be 100 persons in each phase as direct & 200 persons indirect.

There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves and Wildlife Corridors etc. within 10 km from the project site. Hatti River flows at 2.5 km in East direction.

Total fresh water requirement will be 445 m³/day proposed to be met from Hatti River.

Spent wash will be treated in the MEE (Multiple effect evaporators) followed by the Effluent Treatment Plant. The treated water will be used back in the process and will be used for the green belt. The semisolid waste from MEE (Multiple Effect Evaporator) will be sent in specially designed boiler for incineration. Condensate will be treated in condensate polishing unit and will be used as make-up water in cooling tower. Domestic wastewater will be disposed of through septic tank followed by soak pit system. The plant will be based on Zero Liquid discharge system (ZLD).

Rice husk fired boiler of 30 TPH capacity will be installed. Electro-static Precipitator (ESP) and CO₂ scrubber with stack of height of 36 m will be installed to control the particulate emissions within the statutory norms.

Ambient air quality monitoring was carried out at different locations during 1st Jan, 2015 to 31st March, 2015 and the baseline data indicates the ranges of concentrations as: PM₁₀ (50.3–78.9 µg/m³), PM_{2.5} (6.9–40.8 µg/m³), SO₂ (7–18.7 µg/m³) and NO₂ (15.2–26.9 µg/m³). There would not be any NO_x formation in the combustion process resulting from the operation of the plant; its modeling for GLC analysis is not required. Thus, modeling for GLC analysis of SPM and SO₂ has been done. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 8 µg/m³ and 3.5 µg/m³ with

respect to SPM (PM10& PM2.5) and SOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

The expenditure towards CER for the project would be 2% of the project cost as committed by the project proponent.

8.5.2.2 *The EAC, in the first instance, observed that base line data for preparation of EIA/EMP report, was collected during 1st January, 2015 to 31st March, 2015 and proposal for environmental clearance was submitted on 8th January, 2019 after conducting public hearing on 1st November, 2018. In view of the Ministry's OM dated 29th August, 2018, providing base line data collection not to be more than three years old, the proposal was found not conforming to the extant norms/guidelines.*

The proposal was therefore not taken forward, and the project proponent was asked for submission of the proposal after conducting fresh EIA/EMP studies.

Agenda No.8.5.2

Manufacturing of technical grade pesticides 500 TPA at plot number: E-23A SKS Industrial Area Reengus District Sikar (Rajasthan) by M/s Central Insecticide and Fertilizers - Environmental Clearance

[IA/RJ/IND2/95983/2015, J-11011/08/2016-IA-II(I)]

The project proponent and the consultant M/s EQMS India Pvt Ltd, made a detailed presentation on the salient features of the project.

8.5.2.1 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for setting up Pesticide Technical manufacturing unit of capacity 500 TPA by M/s Central Insecticide and Fertilizers in an area of 3770 sqm at Plot No.E-23A, SKS Industrial Area, Reengus, Tehsil & District Sikar (Rajasthan).

The details of proposed/by-products are as under:-

S. No.	Product	Capacity (MT/Annum)
1	Thiram	400
2	Ziram	100
	Total	500

The project/activities are covered under category A of item 5(b) 'Pesticides industry and Pesticide specific intermediates' of the schedule to the EIA Notification, 2006, and requires appraisal/approval at central level in the Ministry.

The Terms of Reference for the project was granted on 5th April, 2016. Public Hearing for the project was conducted by the State Pollution Control Board on 29th August, 2017. The main issues raised during the public hearing are related to existing pollution load, existing industries not following 'ZLD' pattern & drinking water Problem etc.

Total land requirement is estimated to be 3770 sqm. Green belt will be developed in an area of 33% i.e., 1244.1 sqm out of total area of the project. The estimated project cost is Rs.6 crore. Total capital cost earmarked towards environmental pollution control measures is Rs.54 Lacs and the recurring cost (O&M) will be about Rs 6 Lac per annum.

There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors, Rivers etc. within 10 km from the project site. Mendha River flows at 1.46 km in North West.

Total water requirement is estimated to be 6 cum/day proposed to be met from RIICO water supply.

Effluent of 2.5 cum/day will be treated through Effluent Treatment Plant. Treated effluent will be reused in the plant. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

Power requirement will be 300 kVA proposed to be met from electricity board. DG set of capacity 300 kVA will be used as standby with stack of 12 m as per CPCB norms.

Ambient air quality monitoring was carried out at 8 locations during 15th March, 2016 to 15th June, 2016 and the baseline data indicates the ranges of concentrations as: PM₁₀ (39-80 µg/m³), PM_{2.5} (15-33 µg/m³), SO₂ (5.0-9.0 µg/m³) and NO₂ (9.6-17.8 µg/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.0047 µg/m³, 0.0000 µg/m³ and 0.0000 µg/m³ with respect to PM₁₀, SO₂ and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

The expenditure towards CER for the project would be 2% of the project cost as committed by the project proponent.

The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. Issues raised during public hearing have been addressed by the project proponent.

8.5.2.2 *The EAC, after deliberations, recommended the project for grant of environmental clearance, subject to compliance of terms and conditions as under: -*

- *Necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, shall be obtained from the State Pollution Control Board.*
- *Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.*
- *National Emission Standards for Pesticides Manufacturing Industry issued by the Ministry vide G.S.R.446(E) dated 13th June, 2011, as amended from time to time, shall be followed.*
- *No pesticides/chemicals banned by the Ministry of Agriculture and Farmers Welfare, or having LD₅₀<100 mg/kg shall be produced. Also, no raw material/solvent prohibited by the concerned regulatory authorities from time to time, shall be used for production of pesticides.*
- *To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.*
- *Solvent management shall be carried out as follows:*
 - (i) *Reactor shall be connected to chilled brine condenser system.*
 - (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 shall be provided with breather valve to prevent losses.
- (vii) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.
- Total fresh water requirement shall not exceed 6 cum/day to be met from RIICO water supply. Prior permission in this regard shall be obtained from the concerned regulatory authority.
- Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system
- Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps.
- Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.
- The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act, 1989.
- The company shall undertake waste minimization measures as below:-
 - (i) Metering and control of quantities of active ingredients to minimize waste.
 - (ii) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
 - (iii) Use of automated filling to minimize spillage.
 - (iv) Use of Close Feed system into batch reactors.
 - (v) Venting equipment through vapour recovery system.
 - (vi) Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.
- As committed, funds allocation for the Corporate Environment Responsibility (CER) shall be 2% of the total project cost. Item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.
- Safety and visual reality training shall be provided to employees.
- For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
- The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.
- Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.
- Process safety and risk assessment studies shall be further carried out using advanced models, and the mitigating measures shall be undertaken accordingly

Agenda No.8.5.3

Expansion of Grain Based Distillery from 100 KLPD to 130 KLPD at Plot No. B-1, M.I.D.C. Lonand, Taluka Khandala, District Satara (Maharashtra) by M/s Privilege Industries Limited- Environmental Clearance

[IA/MH/IND2/97531/2010, J-11011/381/2007/-IA-II(I)]

The project proponent and their accredited consultant M/s Sri SaiManasa Nature Tech Pvt Ltd, made a detailed presentation on the salient features of the project.

8.5.3.1 During deliberations, the Committee noted the following:

The proposal is for environmental clearance to the project for expansion of grain based distillery from 100 KLPD to 130 KLPD by M/s Privilege Industries Limited in an area of 80710 sqmat Plot No.B-1, MIDC, Lonand, Taluka Khandala, District Satara (Maharashtra).

The project/activity is covered under category A of item 5 (g) 'Distilleries' of the Schedule to the Environmental Impact Assessment Notification, 2006 and requires appraisal/approval at Central level in the Ministry.

Standard terms of reference for the project was granted on 5th August 2018. Public hearing for the project was conducted by the Maharashtra Pollution Control Board on 5th January 2019. The main issues raised during the public hearing are related to Employment and CER Activity, etc.

Existing land area is 80710 sqm and no additional land will be required for proposed expansion. Industry has already developed greenbelt in an area of 33% i.e. 26725 sqm out of 807100 sqm total area of the project. The estimated project cost is Rs.215 crores including existing investment of Rs.190 crores. Total capital cost earmarked towards environmental pollution control measures is Rs.18.94 Crores and the recurring cost (O&M) will be about Rs.2.15 Crores per annum. Total Employment will be 120 persons as direct & 135 persons indirect after expansion.

There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves and Wildlife Corridors etc. within 10 km from the project site. Nira River flows at 7.5 km in North.

Total fresh water requirement will be 1150cum/day proposed to be met from MIDC Lonand.

Spent wash will be Treated in MEE. MEE evaporation condensate further will be treated in ETP and used for process and generated DWGS will be sold as cattle feed. The plant will be based on Zero Liquid discharge system (ZLD).

Power requirement after expansion will be 4 MW proposed to be met from Captive Power Plant. Existing unit has DG sets of 3 x 500 kVA and 1 x 1500 kVA capacity and will be used as standby during power failure. Stack of 4.5 m will be provided as per CPCB norms.

Existing unit has 32 TPH coal fired boiler. No additional boiler is required for proposed project. ESP with a stack of height of 50 m has been installed to control the particulate emissions within the statutory norms.

Ambient air quality monitoring was carried out at 8 locations during December 2017 to February 2018 and the baseline data indicates the ranges of concentrations as: PM10 (50.2-81.3 µg/m³), PM2.5 (22.8-42.3 µg/m³), SO₂ (10.1-20 µg/m³) and NO₂ (18-30.4 µg/m³). AAQ modeling study for point source emissions indicates that the maximum GLCs after the proposed project

would be 81.8 µg/µg/m³, 20.93 µg/µg/m³ and 31.4 µg/µg/m³ with respect to PM₁₀, SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards.

Ministry has issued EC vide letter dated 24th January, 2011 to the project for grain based distillery plant (RS and ENA 100 KLD) with CPP (4 MW) in favour of M/s Privilege Industries Limited.

The expenditure towards CER for the project would be 0.75% of the project cost as committed by the project proponent.

The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. Issues raised during the public hearing have been duly addressed by the project proponent. The Committee also found additional information submitted by the project proponent to be satisfactory.

8.5.3.2 *The EAC, after deliberations, noted that the EIA report was prepared by the EIA Consultant M/s Sri Sai Manasa Nature Tech Pvt Ltd. As per the certificate of accreditation dated 7th December, 2018 issued by the QCI-NABET, the Consultant is having accreditation for category B projects of item 5(g), and cannot prepare/present EIA report for category A projects of item 5(g).*

The proposal was thus found not conforming to the extant norms/guidelines, and not taken forward. The project proponent was asked for submission of the proposal after conducting fresh EIA/EMP studies through the consultant having accreditation for category A projects of item 5(g).

Agenda No.8.5.4

Expansion of Chlor-Alkali Plant and inclusion of synthetic organic chemicals manufacturing unit at sy. no. 132, 133, 134 and 137, Saggonda Village, Gopalapuram Mandal, District West Godavari (Andhra Pradesh) by M/s The Andhra Sugars Ltd (Chemicals and Fertilizers Division)-Environmental Clearance

[IA/AP/IND2/97871/2017, J-11011/83/2017-IA II (I)]

The project proponent and their accredited consultant M/s Team Labs and Consultants, made a detailed presentation on salient features of the project

8.5.4.1 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for expansion of Chlor Alkali plant (Caustic Soda from 400 TPD to 800 TPD using Membrane Cell Technology) and setting up synthetic organic chemicals manufacturing @ 167 TPD (Chloromethanes 127 TPD, Mono Chloro Acetic Acid 20 TPD & Chlorinated Paraffin Wax 20 TPD) by M/s The Andhra Sugars Ltd (Chemicals and Fertilizers Division) in existing area of 320 acres located at Sy.No.132, 133, 134 & 137, village Saggonda, Mandal Gopalapuram, District West Godavari (Andhra Pradesh).

The details of existing and proposed products/ by-products are as under:

S.No.	Product Name	Capacity (TPD)		
		Existing	Proposed	Total after expansion

I. Chlor-Alkali Plant				
1	Caustic Soda	400	400	800
2	Caustic Soda Flakes	140	140	280
3	Caustic Potash	--	100	100
4	Liquid Chlorine	240	4	244
II. Chloromethanes				
1	Methyl Chloride		10	10
2	Methylene Chloride		61	61
3	Chloroform		56	56
III. Synthetic Organic Chemicals				
1	Mono Chloro Acetic Acid	--	20	20
2	Chlorinated Paraffin Wax (52%)	--	20	20
IV. Non – EC Products				
1	Sulphuric Acid	300	--	300
2	Poly Aluminum Chloride	90	--	90

By-Products				
I. Chlor-Alkali Plant				
1	Hydrochloric Acid (33%)	600	400	1000
2	Hydrogen Gas (bottling)	2.83	1	3.83
3	Liquid Hydrogen	1	1	2
4	Sodium Hypochlorite	20	20	40
5	Sodium Chlorate	--	60	60
II. Chloromethanes				
1	Carbon tetrachloride*		7.6	7.6
2	Hydrochloric Acid		65.8	65.8
III. Synthetic Organic Chemicals				
1	Hydrochloric Acid (33%) from Chlorinated Paraffin Wax (52%)	--	30	30
2	Hydrochloric Acid (33%) from Monochloro Acetic Acid	--	33	33

*Carbon Tetrachloride (CCl₄) generated will be sold as a feed stock to Authorized users/excess will be incinerated.

The project/activity is covered under category A of item 5(f) 'Synthetic organic chemicals industry' and category B of item 4(d) 'Chlor-alkali industry' of the schedule to the EIA Notification, 2006, and requires appraisal/approval at central level in the Ministry.

The ToR for the project was granted on 31st May, 2017. Public hearing was conducted by the Andhra Pradesh Pollution Control Board on 29th January, 2019. The main issues raised during the public hearing are related to employment, pollution control measures and village development.

Existing land area is 320 acres and no additional land will be required for proposed expansion. The estimated project cost for proposed expansion is Rs.800 crores. Total capital cost earmarked towards environmental pollution control measures is Rs.24 crores and the recurring cost (O&M) will be about Rs.12 crores per annum. Total employment generation will be 2000 persons as direct and 400 persons indirect after expansion.

There are no National parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors etc lies within 10 km distance. Godavari Riverflows at 3.7 km in east.

Total water requirement is estimated to be 8308 cum/day, which includes fresh water requirement of 6951.5 cum/day, proposed to be met from Godavari River. Necessary permission in this regard has been obtained to abstract 15 MLD water from Godavari River.

Effluent of 1356.5 cum/day will be treated in Effluent Treatment Plant followed by Reverse Osmosis and treated wastewater will be reused for process and greenbelt development. Rejects from RO will be used for brine saturation. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

Power requirement after expansion will be 120 MW including existing 45 MW and will be met from AP Transco and captive power plant. No additional DG sets are proposed for expansion. Existing unit has standby DG sets of capacity 1 x 4750 kVA and 3 x 1000 kVA.

Existing unit has 1 x 15 TPH, 1 x 10 TPH husk fired boilers, 1 x 6 TPH oil fired boiler and 1 x 5 TPH waste heat recovery boiler. Additionally, 1 x 25 TPH coal/husk fired boiler will be installed. Bag filters with a stack height of 40 m will be installed for controlling the Particulate emissions (within statutory limit of 115 mg/Nm³) for proposed boiler.

Ambient air quality monitoring was carried out at eight locations during March 2018 to May 2018 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (33-53 µg/m³), PM_{2.5} (14-22 µg/m³), SO₂ (9-15 µg/m³) and NO₂ (9-15 µg/m³) respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLCS after the proposed project would be 1.02 µg/m³, 2.33 µg/m³ and 2.98 µg/m³ with respect to PM₁₀, SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Ministry has issued EC vide letter dated 8th February, 2006 to the project for expansion of Caustic Soda plant from 200 to 400 TPD based on membrane cell Technology in favour of The Andhra Sugars Ltd. The monitoring report on compliance status of EC conditions forwarded by the Regional Office vide their letter dated 27th August, 2018, was found to be satisfactory.

The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. Issues raised during the public hearing has been appropriately addressed by the project proponent.

As committed by the project proponent, CER shall be 2% of the project cost.

Consent to Operate for the existing products/utilities has been obtained from the Andhra Pradesh PCB vide letter dated 20th November, 2015, which is presently valid up to 30th November, 2019.

8.5.4.2 *The EAC, after deliberations, recommended the project for grant of environmental clearance, subject to compliance of terms and conditions as under: -*

- *Necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, shall be obtained from the State Pollution Control Board.*
- *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.*

- *Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.*
- *National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R.608(E) dated 21st July, 2010 and amended from time to time shall be followed.*
- *No raw material/solvents prohibited by the concerned regulatory authorities from time to time, shall be used.*
- *To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines. Fugitive emissions shall be controlled at 99.5% with effective chillers.*
- *Solvent management shall be carried out as follows:*
 - (a) *Reactor shall be connected to chilled brine condenser system.*
 - (b) *Reactor and solvent handling pump shall have mechanical seals to prevent leakages.*
 - (c) *The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.*
 - (d) *Solvents shall be stored in a separate space specified with all safety measures.*
 - (e) *Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.*
 - (f) *Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.*
 - (g) *All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.*
- *Total fresh water requirement shall not exceed 6951.5 cum/day, proposed to be met from Godavari River. Prior permission in this regard shall be obtained from the concerned regulatory authority.*
- *Industrial/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/RO to meet the prescribed standards.*
- *Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system.*
- *Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps.*
- *Coal less than 0.5% shall be used as boiler fuel. ESP shall be used to control particulate emissions.*
- *Sensors for chlorine detection shall be installed within the premises.*
- *Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.*
- *The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act, 1989.*
- *Fly ash should be stored separately as per CPCB guidelines so that it may not adversely affect the air quality. Direct exposure of workers to fly ash and dust should be avoided.*
- *The company shall undertake waste minimization measures as below:-*
 - (a) *Metering and control of quantities of active ingredients to minimize waste.*
 - (b) *Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.*
 - (c) *Use of automated filling to minimize spillage.*
 - (d) *Use of Close Feed system into batch reactors.*
 - (e) *Venting equipment through vapour recovery system.*

- (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.
 - All the commitments made regarding issues raised during the public hearing/consultation meeting shall be satisfactorily implemented.
 - Pucca road shall be maintained in the plant premises and nearby villages to minimize dust pollution.
 - As committed, funds allocation for the Corporate Environment Responsibility (CER) shall be 2% of the total project cost. Item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.
 - Safety and visual reality training shall be provided to employees.
 - For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
 - The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.
 - Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
 - Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.
 - Process safety and risk assessment studies shall be further carried out using advanced models, and the mitigating measures shall be undertaken accordingly.

Agenda No.8.5.5

Exploratory drilling of three wells in Badarpur ML and Cachar District ML, Assam by M/s Oil and Natural Gas Corporation Ltd - Environmental Clearance

[IA/AS/IND2/56473/2016, J-11011/172/2016- IA II(I)]

The project proponent and their accredited consultant M/s ABC Techno Labs made a detailed presentation on the salient features of the project.

8.5.5.1 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for onshore exploration and development of oil & gas from three wells in 2 PML blocks in Assam and Assam Arakan Basin (A&AA Basin) falling in Districts Cachar and Hailakandi (Assam).

The project/activity is covered under category A of item 1(b) 'Offshore and onshore oil and gas exploration, development & production' of schedule to the Environment Impact Assessment (EIA) Notification, 2006 and requires appraisal at central level by sectoral Expert Appraisal Committee in the Ministry.

Total area of the block is 724.70sq km. The estimated project cost is Rs.120 crore. Total capital cost earmarked towards environmental pollution control measures is Rs 0.5286 Crores and the recurring cost (O&M) will be about Rs.0.8493 Crores per annum. Total Employment generation will be 30 persons

There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves and Wildlife Corridors etc within 10 km from the project site. Barak River flows through the block area.

The ToR for the project was granted on 25th November, 2016 and amendment in ToR on 8th March, 2019. Public Hearing for the project was conducted by the State Pollution Control Board on 5th February, 2019 at Cachar district and on 6th February, 2019 at Hailakandi district. The main issues raised during the public hearing are related to preventive measures to control pollution and employment generation, etc.

Total fresh water requirement is 25 m³/day proposed to be met from tanker supply. Effluent of 15 m³/day quantity will be treated through mobile ETP system. The project will be based on Zero Liquid discharge system.

Power requirement will be met from three DG sets of 750 kVA capacity each. One DG set of 750 kVA will be used as standby during power failure. Stack height will be provided as per CPCB norms.

Ambient air quality monitoring was carried out at 8 locations during summer season of 2018 and the baseline data indicates the ranges of concentrations as: PM₁₀ (43.6-91.7 µg/m³), PM_{2.5} (19.2-52.3 µg/m³), SO₂ (5.1-8.8 µg/m³) and NO_x (9.9-24.8 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.063 µg/m³, 0.00854 µg/m³ and 0.35011 µg/m³ with respect to PM₁₀, SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. Issues raised during the public hearing have been duly addressed by the project proponent.

As committed, the expenditure towards CER for the project would be 2.5% of the project cost as committed by the project proponent.

8.5.5.2 *The Committee, after deliberations, recommended the project for grant of environmental clearance, subject to compliance of terms and conditions as under: -*

- *Necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, shall be obtained from the State Pollution Control Board.*
- *Waste water shall be treated by an effective onsite ETP coupled with RO so as to reduce fresh water foot print on daily basis. Size of the waste pit shall be kept minimum in such way so that it can only accommodate volume of discarded mud and volume of drill cuttings. Storm water shall not be allowed to reach waste water pit.*
- *To control source and fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.*
- *Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.*
- *Ambient air quality shall be monitored at the nearest human settlements to ensure conformity with the National Ambient Air Quality Emission Standards issued by the Ministry vide GSR No. 826(E) dated 16th November, 2009 for PM₁₀, PM_{2.5}, SO₂, NO_x, CO, CH₄, HC, Non-methane HC etc.*

- *During exploration, production, storage and handling, the fugitive emissions of methane, if any, shall be monitored using Infra-red camera/ appropriate technology.*
- *The project proponent shall ensure trapping/storing of the CO₂ generated, if any, during the process and handling.*
- *Approach road shall be made pucca to minimize generation of suspended dust.*
- *The company shall make all arrangements for control of noise from the drilling activity. Acoustic enclosures shall be provided for the DG sets along with the adequate stack height as per CPCB guidelines.*
- *Total fresh water requirement shall not exceed the proposed quantum of 25 cum/day proposed to be met through tankers.*
- *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.*
- *Drill cuttings separated from drilling fluid shall be adequately washed and disposed in HDPE lined pit. Waste mud shall be tested for hazardous contaminants and disposed according to HWMH Rules, 2016. No effluent/drilling mud/drill cutting shall be discharged/disposed off into nearby surface water bodies. 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.*
- *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.*
- *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.*
- *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.*
- *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 Regional Office.*
- *Blow Out Preventer 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.*
- *Emergency Response Plan shall be based on the guidelines prepared by OISD, DGMS and Govt. of India.*
- *After completion of drilling process, suitable measures shall be taken for well plugging and secured enclosures, and drilling site shall be restored to the original condition. In case of the hydrocarbon not found economically viable, a full abandonment plan shall be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations.*
- *All the commitments made during public consultation/hearing shall be satisfactorily implemented.*
- *At least 2.5% of the total project cost shall be allocated for Corporate Environment Responsibility (CER) and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.*
- *Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.*

- Oil content in the drill cuttings shall be monitored by some Authorized agency and report shall be sent to the Ministry's Regional Office.
- 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.
- Company shall have own Environment Management Cell having qualified persons with proper background.
- Company shall prepare operating manual in respect of all activities, which would cover all safety & environment related issues and 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.
- Process safety and risk assessment studies shall be further carried out using advanced models, and the mitigating measures shall be undertaken accordingly.

Agenda No.8.5.6

Expansion of fertilizer plant at Plot No.96, Sector A, Sirgitti Industrial Area, Tehsil Bilha, District Bilaspur, Chhattisgarh by M/s BEC Fertilizers -Environmental Clearance

[IA/CG/IND2/27614/2015, J-11011/154/2015-IA-II(I)]

The project proponent gave a detailed presentation on the salient features of the project.

8.5.6.1 The proposal was earlier considered by the EAC in its meeting held during 23-24 August, 2016 and was deferred for additional information/inputs and clarifications on certain points. The project proponent has provided parawise reply to different observations the Committee with the details as under:-

Clarifications/inputs sought by the EAC	Reply by the PP
Wastewater treatment scheme needs to be assessed and rework	The project proponent has revised the water requirement and waste water treatment, where 243 KLD waste water generated from Sulphuric Acid Plant will be completely recycle in Single Super Phosphate (SSP) manufacturing process and 70 KLD effluent containing hydro Fluosilic acid generated from SSP Scrubber, will be reused in effluent treatment plant to produce Sodium Silico Fluoride by-product 70 KLD neutral water discharge will be completely recycled in Granulation plant.
Water conservation measures to be adopted such as rain water harvesting, recycle and reuse of waste water. Accordingly , revised water balance to be submitted	The project proponent informed that they have developed 6 Nos. roofs top water harvesting pit and 04 Nos. of surface rain water harvesting pit during 2016. In the year 2017, we have further developed 5 Nos. surface water harvesting pit. For domestic purpose, they will adopt bio-digester technology developed by DRDO, where all the solid wastes will be degraded into clean water by the consortium of bacteria (Inoculum) and discharged water will be odorless/colourless neutral which will be re-used for irrigation inside the factory premises. 100% waste water will be recycled and reused accordingly 15%

	water consumption will be reduced. The project proponent has submitted the revised water balance diagram.
Solid/hazardous waste generation and its management to be elaborated.	<p>a. Sulphur sludge in form of lump is generated as waste from Sulphuric Acid Plant manufacturing process during melting of raw Sulphur and it is pulverized with Rock Phosphate and used in SSP manufacturing process as a modifier.</p> <p>b. Spent Catalyst is generated after screening of acid plant converter catalyst during annual shut down and maintenance, which is first collected and filled in poly liner bag and stored in MS drum under roof. This is being sold back to the catalyst manufacturer or to the approved agency by MoEF / SPCB.</p> <p>c. Spent oil is generated from DG set engine and various gear boxes is collected and filled in drums. Some of the quantities will be utilized for lubrication of EOT Crane rope, chain drive equipment and open girth gear and support rollers of Granulation plant and other machineries and rest quantity is sold back to the agencies for recycling of the oil.</p>

8.5.6.2 During deliberations, the Committee noted the following:

The proposal is for environmental clearance to the project for expansion of fertilizer plant by M/s BEC Fertilizers in an area of 47.66 acres at Plot No.96, Sector A, Sirgitti Industrial Area, Tehsil Bilha, District Bilaspur (Chhattisgarh) by M/s BEC Fertilizers.

The details of existing and proposed products are as under:-

Products	Existing (TPA)	Proposed (TPA)
Sulphuric acid	40,000 TPA	1,40,000
Single Super Phosphate	1,40,000 TPA	4,40,000
Triple Super Phosphate	-	1,00,000
Boronated Single Super Phosphate	-	40,000
Granulated Fertilizer (SSP/TSP/NPK/Customized Fertilizer)	45000(NPK)	4,40,000

The project/activity is covered under category A of item 5 (a) 'Chemical fertilizers' of the schedule to the EIA Notification, 2006 and requires appraisal/approval at central level in the Ministry.

The ToR for the project was granted on 5th August, 2015. Public hearing is exempted as per para 7 (i). III Stage (3)(i)(b) of EIA Notification 2006, as project is located in the notified industrial area.

Existing land area is 47.66 acre. Proposed expansion will be carried out in 11.40 acres of land. Industry will develop green belt an area of 18.35 acres out of total area of the project. The estimated project cost is Rs.75 crores. Total capital cost earmarking towards environmental

pollution control measures is Rs.9.75 crores and the recurring cost (O&M) will be about Rs.2.03 crores per annum.Total Employment will be 100 persons as direct & 200 persons indirect after expansion.

There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves and Wildlife Corridors etc. within 10 km from the project site.

Total water requirement is estimated to be 1700 cum/day including fresh water requirement of 1337 cum/day proposed to be met from CSIDC water supply.

Effluent of 363cum/day will be treated in ETP. Treated water will be recycled/ reused in the process. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

Power requirement after expansion will be 3200 kWH proposed to be met from CG State power distribution corporation limited (CGSPDCL). Existing unit has 2 DG sets of 1070 capacity. One more TG set of 2500 kW will be used as standby during power failure. Stack of 8 m height will be provided as per CPCB norms.

Existing unit has 5.73 TPH waste heat boiler. Additionally 13.88 TPH WHB will be installed. Multi cyclone separator/ bag filter with adequate stack will be installed to control the particulate emissions within the statutory norms.

Ambient air quality monitoring was carried out at six locations during October, 2015 to December, 2015 and the baseline data indicates the ranges of concentrations as: PM10 (51-57 µg/m³), PM2.5 (25-30 µg/m³), SO₂ (12 to 14µg/m³) and NO₂ (20 to 25µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.944µg/m³,4.532µg/m³ and 0.204µg/m³ with respect to PM10, SO_xandNO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

As committed, the expenditure towards CER for the project would be 5% of the project cost as committed by the project proponent.

The existing unit was established in the year 1985 i.e. before the EIA Notification, 1994/2006.

The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee also found additional information submitted by the project proponent to be satisfactory.

Consent to Operate for the existing products/utilities has been obtained from the Andhra Pradesh PCB vide letter dated 13th May, 2019, which is presently valid up to 30th April, 2024.

8.5.6.3 *The EAC, after deliberations, recommended the project for grant of environmental clearance, subject to compliance of terms and conditions as under:-*

- *Necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, shall be obtained from the State Pollution Control Board.*
- *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.*

- Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.
- The gaseous emissions (SO₂, NO_x, NH₃ and HC) and particulate matter from various process units shall conform to the norms prescribed by the CPCB/SPCB from time to time. At no time, the emission levels shall go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Stack emissions shall be monitored regularly.
- To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines. Fugitive emissions shall be controlled at 99.5% with effective chillers.
- Total fresh water requirement shall not exceed 1337 cum/day, proposed to be met from CSIDC water supply. Prior permission in this regard shall be obtained from the concerned regulatory authority.
- Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system.
- Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps.
- The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act, 1989.
- Fly ash should be stored separately as per CPCB guidelines so that it may not adversely affect the air quality. Direct exposure of workers to fly ash & dust should be avoided.
- The company shall undertake waste minimization measures as below:-
 - (a) Metering and control of quantities of active ingredients to minimize waste.
 - (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
 - (c) Use of automated filling to minimize spillage.
 - (d) Use of Close Feed system into batch reactors.
 - (e) Venting equipment through vapour recovery system.
 - (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.
- As committed, funds allocation for the Corporate Environment Responsibility (CER) shall be 5% of the total project cost. Item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.
- Safety and visual reality training shall be provided to employees.
- For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
- The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.
- Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the

unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

- Process safety and risk assessment studies shall be further carried out using advanced models, and the mitigating measures shall be undertaken accordingly.

Agenda No.8.5.7

Proposed expansion for manufacturing of Bulk Drugs at Survey No. (Old) 60 & 61/ (revise) 76 & 77, Opp. Suzuki Synthetic, Chhatral-Kadi Road, Village Ankhol, Taluka Kadi, District Mehsana (Gujarat) by M/s Nebula Health Care - For Environmental Clearance

[IA/GJ/IND2/88808/2017, J-11011/220/2017-IA-II(I)]

The project proponent and the accredited consultant M/s San Envirotech Pvt Ltd, made a detailed presentation on the salient features of the project.

8.5.7.1 The proposal was earlier considered by the EAC in its meeting held during 8-9 April, 2019, wherein the EAC, especially in view of the project site/area identified as over-exploited zone, insisted for not using the ground water any more, but to explore other resources to meet the projected fresh water requirement of 73.6 cum/day. The Committee also opined to consider the proposal, in case permission is granted by CGWA to abstract ground water, as requested on 16th April, 2018.

The project proponent has informed that the fresh water requirement will be met from the surface water from Narmada Canal through village Panchayat of Ankhol.

8.5.7.2 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for expansion of bulk drugs manufacturing unit from 240 TPM to 717 TPM by M/s Nebula Health Care in an area of 22050sqm located at Survey No. (Old) 60 & 61/ (Revised) 76 & 77, Opp. Suzuki Synthetic, Chhatral-Kadi Road, Village Ankhol, Taluka Kadi, District Mehsana (Gujarat).

The details of existing and proposed products are as under:

S. No.	List of Products	Quantity (TPM)		
		Existing	Proposed	Total
1.	Paraben Products			
a.	Propyl Paraben	10	400	490
b.	Methyl Paraben	20		
c.	Sodium Propyl Paraben	20		
d.	Sodium Methyl Paraben	40		
	Total	90	400	490
2.	Niacin amide	50	50	100
3.	Metformin	100	00	100
New Products				
4.	Niacin (Nicotinic acid)	0	25	25
5.	Steroid Products			
a.	BeclomethasoneDipropionate	0	2	2
b.	Betamethasone Acetate			

c.	Betamethasone Dipropionate			
d.	Betamethasone Sodium Phosphate			
e.	Betamethasone 17 Valerate			
f.	Clobetasole 17 Propionate			
g.	Clobetasole Butyrate			
h.	Dexamethasone Sodium Phosphate			
i.	Hydrocortisone Hemi Succinate			
j.	Hydrocortisone Acetate			
k.	Methyl Prednisolone Acetate			
l.	Methyl Prednisolone Hemi succinate			
m.	Prednisolone Acetate			
n.	Prednisolone Sodium Phosphate			
o.	Methyl Coblamine			
6.	Steroid products (Single stage process/IP Grade)			
a.	Betamethasone IP	0	1	1
b.	Dexamethasone IP			(Non-EC product)
c.	Methylprednisolone IP			
d.	Prednisolone IP			
e.	Hydrocortisone IP			
	Total	240	477	

The project/activity is covered under category A of item 5(f) 'Synthetic organic chemicals' of schedule to the Environment Impact Assessment (EIA) Notification under category 'A' and requires appraisal at central level by sectoral Expert Appraisal Committee (EAC) in the Ministry.

The Terms of Reference (ToR) for the project was granted on 16th August, 2017. Public hearing for the project has been conducted by the State Pollution Control Board on 12th June, 2018. The main issues/suggestions raised during the public hearing are related to Greenbelt development, pollution management, CSR and women empowerment classes, etc.

Existing land area is 9394 sqm, additional land requirement for the proposed expansion will be 12656 sqm. Green belt will be developed in an area of 7277 sqm, covering 33% of total project area. The estimated total project cost will be Rs. 23.5Crore including existing investment of Rs. 20Crore. Total capital cost earmarked towards environmental pollution control measures will be Rs.50Lakhs and the Recurring cost (O&M) will be about Rs.30Lakhs per annum. Total employment generation including direct and indirect after expansion will be 30 persons.

There are National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors, rivers etc. within 10 km distance from the project site.

Ambient air quality monitoring was carried out at 8 locations during October, 2017 to December, 2017 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (58.5-69.9 µg/m³), PM_{2.5} (29.1-36.9 µg/m³), SO₂ (14.5-18.8µg/m³) and NO_x(18.1-21.3 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs from the proposed project would be 4.569µg/m³, 2.449µg/m³, 1.310µg/m³, 0.360 µg/m³ with respect to SPM, SO₂, NO_x and NH₃. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total water requirement is estimated to be 95.6 cum/day, which includes fresh water requirement of 73.6 cum/day, proposed to be met through surface water from Narmada Canal through village Panchayat of Ankhol.

Industrial effluent of 24.5m³/day will be passed through RO and process effluent (concentrated stream) along with wastewater of washing, lab, scrubber and RO reject will be taken to ETP and later passed through MEE. MEE condensate of 15 cum/day and RO permeate of 7 cum/day will be reused in the utilities. There will be no discharge of treated/untreated waste water from the unit, and thus conforming to Zero Liquid Discharge.

Power requirement will be increased from 75 kVA to 250 kVA proposed to be met from Uttar Gujarat Vij Company Ltd. (UGVCL). Existing unit has one stand by D.G set of 25 kVA capacity, additionally one D.G set of 125 kVA capacity will be used as stand by during power failure. Stack (height 11 meters) will be provided as per CPCB norms to the proposed DG set.

Existing unit has one bio fuel fired boiler of 0.5 TPH capacity and one Agro waste/ briquette fired Thermic Fluid Heater of 6 lakhs kcal/hr capacity. After expansion unit has proposed to install 2 nos. of Agro waste/ briquette fired Boilers (1 and 2 TPH) and one Agro waste/ briquette fired Thermic Fluid Heater (10 Lac Kcal/hr). Cyclone with stack height of 15 m and Cyclone & bag filter with stack height of 30 m to existing boiler & TFH is provided. Cyclone & bag filter with a stack of height of 30 m each will be provided to control the particulate emissions within the statutory limit of 150 mg/Nm³ for the proposed utilities.

The expenditure towards CER for the project would be 1 % of the project cost as committed by the project proponent.

Earlier, the Ministry had issued EC vide letter dated 31st March, 2011 for bulk drugs manufacturing unit of capacity 240 TPM in favour of M/s Nebula Health Care. The monitoring report on compliance status of EC conditions has been forwarded by the Regional Office at Bhopal vide their letter dated 15th October, 2018. The Certified compliance report was found to be satisfactory.

Consent to operate for the present industrial operations issued by the Gujarat PCB vide letter dated 31st December, 2018 is valid up to 26th December, 2023.

The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. Issues raised during the public hearing have been duly addressed by the project proponent. The Committee also found additional information submitted by the project proponent to be satisfactory.

8.5.7.3 *The EAC, after deliberations, recommended the project for grant of environmental clearance, subject to compliance of terms and conditions as under:-*

- *Necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, shall be obtained from the State Pollution Control Board.*
- *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.*
- *Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.*

- No raw material/solvent prohibited by the concerned regulatory authorities from time to time, shall be used for production of resins.
- National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21st July, 2010 and amended from time to time, shall be followed.
- Coal with sulphur content less than 0.5% or natural gas/lignite/bio-fuel/briquettes/bagasse/agro waste, shall be used as fuel in the boiler.
- To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.
- Solvent management shall be carried out as follows:
 - (a) Reactor shall be connected to chilled brine condenser system.
 - (b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages.
 - (c) The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.
 - (d) Solvents shall be stored in a separate space specified with all safety measures.
 - (e) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.
 - (f) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.
 - (g) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.
- Total fresh water requirement shall not exceed 73.6 cum/day to be met from Narmada Canal (surface water). Prior permission in this regard shall be obtained from the concerned regulatory authority/CGWA.
- Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system.
- Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps.
- Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.
- The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.
- Fly ash shall be stored separately as per CPCB guidelines so that it may not adversely affect the air quality. Direct exposure of workers to fly ash and dust should be avoided.
- The company shall undertake waste minimization measures as below:-
 - (a) Metering and control of quantities of active ingredients to minimize waste.
 - (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
 - (c) Use of automated filling to minimize spillage.
 - (d) Use of Close Feed system into batch reactors.
 - (e) Venting equipment through vapour recovery system.
 - (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.
- All the commitments made to the public during public hearing/consultation shall be satisfactorily implemented.

- At least 1% of the total project cost shall be allocated for Corporate Environment Responsibility (CER) and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.
- For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
- The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.
- Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

Agenda No.8.5.8

Proposed plant of pesticide technicals & pesticide intermediates products by M/s Tagros Chemical India Ltd at Plot No.133 & 134, GIDCEstate, Ankleshwar, District Bharuch (Gujarat) - Environmental Clearance

[IA/GJ/IND2/70565/2017, IA-J-11011/521/2017-IA-II(I)]

8.5.8.1 The proposal was earlier considered by the sectoral EAC in its meeting held during July 29-31 January, 2019, wherein the Committee recommended the project for grant of environmental clearance. However, during processing the case, discrepancy was observed in respect of address of the unit and water balance. As per the record, the exact address of company is M/s Tagros Chemicals India Ltd at Plot No.133 & 134, GIDCEstate, Ankleshwar, District Bharuch (Gujarat).

The project proponent has also submitted the revised details of water balance.

8.5.8.2 During deliberations, the Committee noted the following:

The proposal is for environmental clearance to the project for setting up of pesticides and pesticide specific intermediates manufacturing unit of capacity 1650 TPM by M/s Tagros Chemical India Ltd in an area of 33,160 m² at Plot No.133 & 134, G.I.D.C. Estate, Ankleshwar, District Bharuch (Gujarat). The project also envisages manufacturing bio-pesticides @165 TPM.

The details of the proposed products and capacity are as under:-

S. NO.	Product	Capacity (MT/MONTH)	Category	CAS Nos.	LD₅₀
Pesticides Technical & Intermediates					
1	DV Acid Chloride	250	5(b)	52314-67-7	4123 mg/kg
2	Trans CMAC	150	5(b)	52314-67-7	4123 mg/kg
3	Cypermethrin	200	5(b)	52315-07-8	>2000 mg/kg
4	Permethrin	100	5(b)	52643-53-1	4000 mg/kg
5	Alphamethrin	50	5(b)	67375-30-8	> 2000

					mg/kg
6	Pyriproxypane	100	5(b)	95737-68-1	> 5000 mg/kg
7	Tefluthrin	50	5(b)	79538-32-2	> 5000 mg/kg
8	Propoxer	100	5(b)	114-26-1	2400 to 5000 mg/kg
9	Imidacloprid	100	5(b)	138261-41-3	> 5000 mg/kg
10	Acetamiprid	100	5(b)	135410-20-7	> 2000 mg/kg
11	Meta Phenoxy Benzaldehyde	250	5(b)	39515-51-0	1222 mg/kg
12	Meta Phenoxybenzyl Alcohol	100	5(b)	13826-35-2	2040 mg/kg
13	ClodinafopPropargyl	50	5(b)	105512-06-9	2000 mg/kg
14	Deltamethrin Tech	50	5(b)	52918-63-5	2940 mg/kg
15	Bio Pesticides	165	5(b)	-	-
TOTAL		1815			
Inorganic Products (Not covered under EIA Notification, 2006)					
16	Sodium Sulfite Powder	632.19	-	7757-83-7	820 mg/kg
17	Sodium Fluoride	6.25	-	7681-49-4	52 mg/kg
18	KCl Powder	138	-	7447-40-7	3020 mg/kg
19	Ammonium chloride	137.5	-	12125-02-9	1300 mg/kg
20	SS CMA	24.5	-	59042-49-8	-
21	ChloroBromo Acid	5.5	-	21739-92-4	-
22	Poly Aluminium Chloride (powder)	392	-	1327-41-9	2000 mg/kg
Total		1335.94			
23	Formulation	5475	-	-	-
Total		5475			
By-Products					
1	Cupric Chloride	2.63	-	7447-39-4	-
2	HCl	237.52	-	7647-01-0	238-277 mg/kg
3	AlCl ₃ Sol ⁿ /PAC Sol ⁿ	813.75	-	7446-70-0	1990 mg/kg
Total		1053.9			

The project/activities are covered under category A of item 5(b) 'Pesticides industry and Pesticide specific intermediates' and item 5(f) 'Synthetic Organic Chemicals industry' of the Schedule to the Environment Impact Assessment Notification, 2006, and requires appraisal/approval at central level by the sectoral EAC in the Ministry.

Total land area is 33,160 m². Green belt will be developed in an area of 33.32% i.e.11,050 m² out of total area of the project. The estimated project cost is Rs.355 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs.20 Crores and the recurring cost (operation and maintenance) will be about Rs.7.3 Crores per annum.

There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves and Wildlife Corridors etc within 10 km distance from the project site.

The Standard Terms of References (ToR) for the project was granted on 17th December, 2017. Public Hearing is exempted as the project site is located inside the notified industrial area.

Total water requirement will be 1107.36 m³/day of which fresh water requirement of 877.86 cum/day will be met from GIDC water supply department.

Effluent of 457 m³/day will be generated, out of which High COD effluent will be treated in MEE and Low COD effluent will be treated in ETP followed by RO. Part of treated water after ETP treatment will be sent to RO plant (i.e. 282 m³/day), from which RO permeate (i.e. 229.5 m³/day) will be recycled back to Cooling Tower and RO reject (i.e. 52.5 m³/day) will be sent to MEE and other part of treated effluent i.e. 175 m³/day will be sent FETP (i.e. NCTL/BEAIL) for final disposal to deep sea via pipeline.

Three Coal/Bio Mass (Briquettes) fired boiler of 10 TPH capacity each & one Thermopack of 5 Lakh Kcal/Hr capacity will be installed. ESP with a stack height of 30 m will be installed to control the particulate emissions within the statutory limit of 150 mg/Nm³.

The expenditure towards CER for the project would be 1.5% of the project cost as committed by the project proponent.

8.5.8.3 *The Committee, after deliberations, reiterated its earlier recommendations for grant of environmental clearance to the project during its meeting held on 29-31 January, 2019, subject to compliance of same set of conditions with minor changes therein as under:-*

'Total fresh water requirement shall not exceed 877.86 cum/day to be met from GIDC water supply. Prior permission in this regard shall be obtained from the concerned regulatory authority.'

8.6 Any Other

Agenda No.8.6.1

Expansion of Ammonia/urea plant of capacity at village and post piprola, Shahjahanpur (Uttar Pradesh) by M/s KRIBHCO Shyam Fertilizers Ltd - For Amendment in Environment Clearance

[IA/UP/IND2/99751/2008, J-11011-53-2008-IA-II(I)]

8.6.1.1 The proposal is for amendment in environmental clearance granted by the Ministry vide letter dated 11th June, 2008 to the project for expansion of expansion of Ammonia/Urea plant in favour of M/s KRIBHCO Shyam Fertilizers Limited located at Village and Post Piprola, Shahjahanpur (Uttar Pradesh).

8.6.1.2 It is proposed to install additional storage tank for Ammonia of capacity 5000 MT as standby in the existing premises to meet exigencies and/or to ensure uninterrupted supply of

raw material for production of Urea. Accordingly, amendment in the said environmental clearance has been sought.

8.6.1.3 *The EAC, after deliberations, recommended the proposal for amendment in environmental clearance dated 11th June, 2008 as proposed by the project proponent.*

The Committee also observed that name of the company has been changed from M/s KRIBHCO Shyam Fertilizers Limited to M/s KRIBHCO Fertilizers Ltd. The Committee suggested the project proponent to submit separate proposal for transfer of environmental clearance.

Agenda No.8.6.2

Expansion of Refinery by Debottlenecking (6 MMTPA to 7.8 MMTPA crude Processing) at village Agasode, Tehsil Bina, District Sagar (MP) by M/s Bharat Oman Refineries Limited- Amendment in Environment Clearance

[IA/MP/IND2/62848/2015, J-11011/135/2013/IA II (I)]

8.6.2.1 The proposal is for amendment in environmental clearance dated 28th November, 2014 granted by the Ministry in favour of M/s Bharat Oman Refineries Limited for expansion of refinery capacity from 6 MMTPA to 7.8 MMTPA by debottlenecking existing facilities at Agasode in District Sagar (MP).

8.6.2.2 The project proponent has requested for amendment in the Environment Clearance with the details are as under:

S. No.	Para of EC	Details as per the EC	To be revised/read as	Justification/reasons
1	Point No. A-XXii of EC letter	At least 5 % of the total cost of the project shall be earmarked towards the Enterprise social responsibility based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional office at Bhopal. Implementation of such	At least 0.25% of the total project cost shall be earmarked towards the Enterprise social responsibility and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.	We wish to inform that BORL is implementing Debottlenecking project to upgrade fuels to BS VI standards & Kerosene Hydrodesulphurization unit to meet the new BIS specifications from 1 st April 2020. The overall approved cost of the project is Rs. 3000 crores. It also includes creeping capacity expansion of the Refinery from 6.0 to 7.8 MMTPA to overcome the company's weak financial position. After commissioning of greenfield refinery in 2011, company continues to have accumulated losses and the debottlenecking project was undertaken to improve the financials of the company. As per Environmental clearance granted for this project, at least 5 % of the total cost of the project is to be earmarked towards the Enterprise Social Responsibility (ESR/CER).

		<p>program shall be ensured accordingly in a time bound manner.</p>		<p>After receipt of Environmental clearance for the project, BORL had represented to MoEFCC vide our letter BORL/MOEF/EC/2014/12 dated September 22, 2014 to waive off this condition to make the project financially viable and acceptable to our investors in line with the environmental clearances granted to other similar projects.</p> <p>We wish to bring to your kind notice that, as per point no 6 (ii) of MoEFCC Memorandum dated May 1, 2018, the ESR (CER) expenditure shall be 0.25% of capital investment for brownfield project of our size.</p> <p>Considering the nature of project, company financial conditions and recent notifications, the Honourable Expert Appraisal Committee (EAC) is requested to consider our submission favourably.</p>
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8.6.2.3 *The Committee, after deliberations, suggested that the Ministry may take a view on the proposal as per the extant norms and guidelines in this regard, and as per the decisions taken in similar other cases.*

Agenda No. 8.6.3

Proposed Bulk Drugs and Intermediates Manufacturing unit (85.5 TPM) at Sy No. 235, village and Mandal Kuderu District Anantpur (Andhra Pradesh) by M/s Siflon Drugs Pvt. Ltd - Validity extension of Environmental Clearance

[IA/AP/IND2/98331/2012, J-11011/246/2010-IA.II (I)]

8.6.3.1 The proposal is for extension of validity of environmental clearance granted by the Ministry vide letter dated 3rd April, 2012 in favour of M/s Siflon Drugs Pvt Ltd for their project bulk drugs and intermediates unit (85.5 TPM) located at Sy. No. 235, village and Mandal Kuderu District Anantpur (Andhra Pradesh).

The project proponent has informed that due to financial problem the project could not be implemented and requested to extend the validity.

8.6.3.2 *The Committee, after deliberations, recommended for extension of validity of the EC dated 3rd April, 2012 for a period of three years i.e. till 3rd April, 2022.*

Agenda No.8.6.4

Expansion of existing ethylene capacity with new product diversification at Tehsil Sutamata -1, Haldia, District East Medinipur (West Bengal) by M/sHaldia Petrochemicals Limited - Amendment/Bifurcation of EC

[IA/WB/IND2/67219/2016, IA/WB/IND2/54367/2016]

8.6.4.1 The proposal is for amendment in the environmental clearance dated 20th March, 2018 granted by the Ministry in favour of M/s Haldia Petrochemicals Limited for expansion of Naphtha cracking facility and petrochemical products at Tehsil Sutahata-I, Haldia, District East Medinipur (West Bengal).

8.6.4.2 The project proponent has requested for amendment/bifurcation of EC for the following reasons:

- M/s HPL has incorporated a wholly owned subsidiary in the name of M/s Advanced Performance Materials Private Limited (AdPerMa) in July 2017 to explore new opportunities downstream of HPL, which will help to de-risk HPL's cash flows by driving business in performance chemicals with flexibility to venture with technology partner and/or other value added partners (equity, trading or specialist distributors);
- Butene -1 Project will be the initial project that will be transferred to AdPerMa; and
- HPL has no objection in transferring applicable part of the EC to AdPerMa for Butene -1 plant along with associated infrastructure like storage and pipelines.
- The bifurcation/amendment would include the following:

Description	Existing Conditions		Proposed bifurcation of products and infrastructure			
			HPL		AdPerMa	
Products as per EC dated 20 th March, 2018	Name of Product	KTA	Name of Product	KTA	Name of Product	KTA
1.	Ethylene	770	Ethylene	770	-	-
2.	Propylene	385	Propylene	385	-	-
3.	Polypropylene	341	Polypropylene	341	-	-
4.	High Density Poly Ethylene (HDPE)	494	High Density Poly Ethylene (HDPE)	494	-	-
5.	Linear Low Density Poly Ethylene (LLDPE)	386	Linear Low Density Poly Ethylene (LLDPE)	386	-	-
6.	Butadiene	111	Butadiene	111	-	-
7.	Benzene	175	Benzene	175	-	-
8.	Butene-1	30.2			Butene-1*	30.2
9.	MTBE	98.6			MTBE*	98.6
10.	C4 Raffinate	-	C4 Raffinate	126 ^{Note-1}		
11.	Vinyl Acetate Ethylene (VAE)	60	Vinyl Acetate Ethylene (VAE)	60	-	-
12.	Mixed Butane	126 ^{Note-2}	Mixed Butane	126 ^{Note-2}	-	-
13.	Cyclo Pentane	8.2	Cyclo Pentane	8.2	-	-
14.	Pyrolysis Gasoline	200	Pyrolysis Gasoline	200	-	-
15.	Motor Spirit (MS) Euro IV	300	Motor Spirit (MS) Euro IV	300	-	-
16.	Phenol	200	Phenol	200	-	-

17.	Acetone	123	Acetone	123	-	-
18.	Carbon Black Feedstock (CBFS)	100	Carbon Black Feedstock (CBFS)	100	-	-
19.	Poly Butylene Terephthalate (PBT)	70	Poly Butylene Terephthalate (PBT)	70	-	-
20.	Tetrahydrofuran (THF)	16	Tetrahydrofuran (THF)	16	-	-
21.	C6 Raffinate	64	C6 Raffinate	64	-	-
Additional Hazardous Chemical Storage Tank	Name of Product (No. of tanks)	Storage Quantity	Name of Product (No. of tanks)	Storage Quantity	Name of Product (No. of tanks)	Storage Quantity
1.	Naphtha (1)	28,632	Naphtha (1)	28,632	-	-
2.	Motor Spirit (1)	6,160	Motor Spirit (1)	6,160	-	-
3.	Hydrogenated Py-Gas (1)	3,560	Hydrogenated Py-Gas (1)	3,560	-	-
4.	MS Blending Tank (1)	932	MS Blending Tank (1)	932	-	-
5.	Butadiene (1)	1,271	Butadiene (1)	1,271	-	-
6.	Fuel Grade Naphtha (1)	9,380	Fuel Grade Naphtha (1)	9,380	-	-
7.	LPG (1)	10,000	LPG (1)	10,000	-	-
8.	Methanol (2)	7,128			Methanol (2)	4500
9.	MTBE (2)	7,400			MTBE (2)	5000
10.	MTBE (1)	2,072			MTBE (1)	2800
11.	Phenol (3)	16,050	Phenol (3)	16,050	-	-
12.	Acetone (2)	7,910	Acetone (2)	7,910	-	-
13.	Butanediol (2)	6,324	Butanediol (2)	6,324	-	-
14.	THF (2)	3,556	THF (2)	3,556	-	-
15.	VAM (2)	10,274	VAM (2)	10,274	-	-
16.	VAE (2)	7,520	VAE (2)	7,520	-	-
17.	NaOH 50% (Caustic Soda) (2)	795	NaOH 50% (Caustic Soda) (2)	795	-	-
18.	H ₂ SO ₄ 98% (1)	478	H ₂ SO ₄ 98% (1)	478	-	-
Land (ha)	453		451.48		1.519	
Manpower (Permanent)	40-50		40-50		Currently, since AdPerMa does not have License, HPL is carrying out all operations of Butene -1 Plant taking AdPerMa assets on lease (since Butene 1 assets have all	
Manpower (Contractual)	100-150		100-150			

			<p>been transferred in Capital Work In Progress (CWIP) mode) - Refer "Lease Rental Agreement".</p> <p>Once AdPerMa has license, it will get HPL to do Operation and Maintenance of its Plant - Refer O & M Contract. Hence, 28 HPL employees will work one shift on rotational basis per day for AdPerMa and 36 HPL contractual laborers will work per day for AdPerMa. Cost of the same is part of the O&M cost. Welfare amenities for the above employees will be provisioned at AdPerMa by HPL. The sanitary waste generated at AdPerMa will be treated and disposed by HPL.</p>
Power (MW)	19	18.24	0.76
Steam (TPH)	172.25	148.55	23.7
Power and Steam Source	Additional 1X35 MW CSTG and 3X120 TPH Coal Fired Boiler in existing Captive Power Plant	Additional 1X35 MW CSTG and 3X120 TPH Coal Fired Boiler in existing Captive Power Plant	Sourced from HPL
Water (MGD)	10 (Sourced from Geonkhali Water Supply System)	9.842 (Sourced from Geonkhali Water Supply System)	0.158 (Sourced from HPL)
Effluent (m ³ /day)	1000 (Effluent discharged will be treated in Integrated Wastewater Treatment Plant of HPL)	937.6 (Effluent discharged will be treated in Integrated Wastewater Treatment Plant of HPL)	62.4 (Effluent discharged will be treated in Integrated Wastewater Treatment Plant of HPL)

Catalysts MT/3-5 years (Hazardous waste)	150 (To be handled by HPL)	104.32 (To be handled by HPL)	45.68 (To be handled by HPL)
Project Cost in Crores (INR)	4310	4080	230

Note-1: In EC approved by MoEFCC on 20th Mar 2018, C4 Raffinate from Naphtha Cracker Associated Unit was considered transferred as feedstock to Butene-1 plant to produce Butene-1 and MTBE. Accordingly, C4 Raffinate was not shown in the product slate of HPL. After proposed bifurcation of EC, HPL would produce and transfer C4 Raffinate to AdPerMa as feedstock to Butene-1 plant. Thus, HPL's product slate shall include C4 Raffinate as product.

Note-2: Maximum production in case Butene-1 plant is non-operational. Normal production would be 33 kTA.

8.6.4.3 *The Committee, in the first instance observed that the EIA Notification, 2006, read with subsequent amendments, was not having any provisions for the proposed bifurcation/amendment of environmental clearances on the above lines. Further, in view of M/s Advanced Performance Materials Private Limited (AdPerMa) being a wholly owned subsidiary of M/s HPL, the Committee opined to discourage such bifurcations aimed at financial gains only, which would recur at subsequent stages and ultimately result in compliance of the EC conditions more difficult and complex.*

The Committee also took note of absence of representative of M/s Advanced Performance Materials Private Limited (AdPerMa) during the meeting.

The proposal was therefore not taken forward.

Agenda No.8.6.5

Requirement of Environment clearance for stand-alone ammonia plant at Talaja MIDC, Maharashtra by M/s Performance Chemiserve Pvt Ltd - Clarification of EC

8.6.5.1 The proposal is for seeking clarification for the requirement of prior environment clearance for stand-alone ammonia plant located at Talaja MIDC (Maharashtra).

8.6.5.2 M/s Performance Chemiserve Pvt Ltd presented the proposal for requirement of Environment clearance for stand-alone ammonia plant and informed the following:-

- (i) Ammonia is a versatile Intermediate Inorganic Chemical used for manufacture of Nitric Acid, Various types of Amines, Ammonium Nitrate, Acrylo nitrile etc
- (ii) Ammonia is also used as feedstock for manufacture of nitrogenous Fertilizers and other small application like refrigerant gas/water purifn.
- (iii) Ammonia is NOT a fertilizer as per Fertilizer Control Order (FCO) 1985
- (iv) Ammonia (HS code 2814) is classified as Chemical under Chapter 28 of harmonious International Trade Classification whereas Fertilizers are listed under chapter 31.
- (v) Same classification is used by Directorate General of Foreign Trade (DGFT)
- (vi) Fertilizer Projects are classified under schedule A as per 2006 EIA notification and prior EC is required for all fertilizer projects

- (vii) However, Ammonia being an intermediate inorganic chemical, prior EC should not be applicable as per the 2006 EIA notification.
- (viii) Therefore, PCL Project being standalone Ammonia Plant should be exempted from prior EC

8.6.5.3 During deliberations, the EAC noted the existing provisions in the EIA Notification, 2006 in respect of chemical fertilizers, as under:-

Project or Activity		Category with threshold limit		Conditions if any
		A	B	
Mining, extraction of natural resources and power generation (for a specified production capacity)				
(1)	(2)	(3)	(4)	(5)
5(a)	Chemical fertilizers	All projects including all Single Super Phosphate with H ₂ SO ₄ production except granulation of chemical fertilizers.	All Single Super Phosphate without H ₂ SO ₄ production and granulation of chemical fertilizers.	General condition shall apply. Note: 1. Granulation of single super phosphate powder is exempt. 2. Neem coating of fertilizers is exempt provided that the total production does not exceed the sanctioned capacity in EC plus the weight of the coating material used. 3. Fortification of fertilizers is exempt provided that the total production does not exceed the sanctioned capacity in EC plus the weight of the fortification material used.”.

8.6.5.4 The EAC, in the first instance, observed that Ammonia is a feed stock for manufacturing different Nitrogenous fertilizers namely, Anhydrous ammonia, Aqua ammonia, Ammonium nitrate, Ammonium Sulphate, Ammonium Nitrate/Sulfate and Urea. Further, considering the risk involved and in view of pollution aspects, manufacturing of Ammonia may be considered under item 5(a) 'Chemical fertilizers' of the schedule to the EIA Notification, 2006.

The Committee was of the view that stand-alone ammonia plant needs to be covered under the ambit of the EIA Notification, 2006 for obtaining prior environmental clearance.

Items at Agenda No.8.6.6&8.6.7 were considered by the EAC with the permission of the Chair.

Agenda No.8.6.6

Proposed exploratory drilling of 13 wells by M/s ONGC Ltd in PML area of SAS block in Sarupathar Tehsil, District Golaghat(Assam)- Amendment in Environment Clearance

[IA/AS/IND2/27496/2015, J-11011/111/2015-IA II (I)]

8.6.6.1 The proposal is for amendment in the environmental clearance dated 31st March, 2017 granted by the Ministry in favour of M/s ONGC Ltd to the project for exploratory drilling of 13 wells in PML area of SAS block in Sarupathar Tehsil, District Golaghat (Assam).

8.6.6.2 The project proponent has requested for amendment in the EC with the details as under:

S. no.	Para of EC issued by MoEF&CC	Details as per the EC	To be revised/ read as	Justification/ reasons
1.	Page:1 of EC no.J-11011/1111/2015-IA II (I) letter dated March 31, 2017 (refer to SI -2 ,12 & 13)	NL-2 (26° 02' 40.70"N, 93° 55' 40.32"E)	NRAI (26° 02' 41.02"N, 93° 53' 28.38"E) <i>Distance Shifted by 3.6 km in same district Golaghat.</i>	Based on recent Geological & Geophysical interpretations, it has been observed that the points NRAI (in place of NL-2), DPAA (in place of NL-13) and DPAD (in place of NL-14) are better suited and prospective from hydrocarbon point of view.
2.		NL-13 (26° 16' 41.59"N, 93° 56' 40.08"E)	DPAA (26° 12' 48.99"N, 93° 58' 09.40"E) <i>Distance Shifted by 7 kmin same district Golaghat.</i>	
3.		NL-14 (26° 14' 54.88"N, 93° 56' 02.58"E)	DPAD (26° 13' 16.13"N, 94° 00' 38.57"E) <i>Distance Shifted by 8.22 kmin same district Golaghat.</i>	

8.6.6.3 The Committee, after deliberations, recommended for amendment in the environmental clearance dated 31st March, 2017, proposed by the project proponent as above (change of drilling location of three wells in the same District), with all terms and conditions stipulated therein remaining the same.

Agenda No.8.6.7

Onshore exploration, development and production of oil & gas by M/s ONGC Ltd in 21 onshore PML blocks in Upper Assam North, A & AA Basin at District Sivsagar (Assam) - Environmental Clearance

[IA/AS/IND2/75479/2018, J-11011/206/2018-IA-II(I)]

The project proponent M/s ONGC, made a detailed presentation on the salient features of the project and informed that:

8.6.7.1 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for Onshore exploration, development and production of oil & gas in 21 onshore PML blocks in Upper Assam North, A & AA Basin at District Sivasagar (Assam) by M/s ONGC Ltd.

The project/activity is covered under category A of item 1(b) 'Offshore and onshore oil and gas exploration, development & production' of schedule to the Environment Impact Assessment (EIA) Notification under category 'A' and requires appraisal at central level by sectoral Expert Appraisal Committee (EAC) in the Ministry.

The project cost is estimated to be Rs. 3500 crore. Total capital cost earmarked towards environmental pollution control measures is Rs. 93.60 lakhs and the recurring cost (O&M) will be about Rs. 13.5 lakhs per annum.

Panidihing Bird Sanctuary is at 2.3 km North. Reserved forests namely Diroi, Sola, Abayapur, Singhphan, Geleki and Tiruhill are present within ML area. Dikhu river/ Nanga river, Disang river, Jhanji river, Brahmaputra river, Burhidihing river, Diroinadi and Dimavnadi are present in ML areas.

The ToR for the project was granted on 27th July, 2018. Public Hearing for the project was conducted by the State Pollution Control Board on 30th March, 2019 at Sivasagar district. The main issues raised during the public hearing are related to pollution control measures and local employment, etc.

Total fresh water requirement is 25 m³/day proposed to be met from tanker supply. Effluent of 15 m³/day quantity will be treated through mobile ETP system. The project will be based on Zero Liquid discharge system.

Power requirement will be met from three DG sets of 1166 kVA capacity each. One DG set of 1166 kVA will be used as standby during power failure. Stack height will be provided as per CPCB norms.

Ambient air quality monitoring was carried out at 24 locations during summer season of 2018 and the baseline data indicates the ranges of concentrations as: PM₁₀ (39.2-86.4 µg/m³), PM_{2.5} (19.2-52.1 µg/m³), SO₂ (5-15.7 µg/m³) and NO₂ (5-23.9 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.03361 µg/m³, 0.67214 µg/m³ and 0.30022 µg/m³ with respect to PM₁₀, SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. Issues raised during the public hearing have been duly addressed by the project proponent.

As committed, the expenditure towards CER for the project would be 2.5% of the project cost as committed by the project proponent.

8.6.7.2 *The Committee, after deliberations, recommended the project for grant of environmental clearance, subject to compliance of terms and conditions as under: -*

- *Necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, shall be obtained from the State Pollution Control Board.*
- *Waste water shall be treated by an effective onsite ETP coupled with RO so as to reduce fresh water foot print on daily basis. Size of the waste pit shall be kept minimum*

such way so that it can only accommodate volume of discarded mud and volume of drill cuttings. Storm water shall not be allowed to reach waste water pit.

- To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.
- Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.
- Ambient air quality shall be monitored at the nearest human settlements to ensure conformity with the National Ambient Air Quality Emission Standards issued by the Ministry vide GSRNo.826(E) dated 16th November, 2009 for PM₁₀, PM_{2.5}, SO₂, NO_x, CO, CH₄, HC, Non-methane HC etc.
- During exploration, production, storage and handling, the fugitive emissions of methane, if any, shall be monitored using Infra-red camera/ appropriate technology.
- The project proponent also to ensure trapping/storing of the CO₂ generated, if any, during the process and handling.
- Approach road shall be made pucca to minimize generation of suspended dust.
- The company shall make all arrangements for control of noise from the drilling activity. Acoustic enclosure shall be provided for the DG sets along with the adequate stack height as per CPCB guidelines.
- Total fresh water requirement shall not exceed 25 cum/day proposed to be met through tankers.
- 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.
- Drill cuttings separated from drilling fluid shall be adequately washed and disposed in HDPE lined pit. Waste mud shall be tested for hazardous contaminants and disposed according to HWMH Rules, 2016. No effluent/drilling mud/drill cutting shall be discharged/disposed off into nearby surface water bodies. 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.
- 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.
- 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.
- 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.
- 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 Regional Office.
- Blow Out Preventer 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.
- Emergency Response Plan shall be based on the guidelines prepared by OISD, DGMS and Govt. of India.

- After completion of drilling process, suitable measures shall be taken for well plugging and secured enclosures, and drilling site shall be restored to the original condition. In case of the hydrocarbon not found economically viable, a full abandonment plan shall be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations.
- All the commitments made to the public during public consultation/hearing shall be satisfactorily implemented.
- At least 2.5% of the total project cost shall be allocated for Corporate Environment Responsibility (CER) and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.
- Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.
- Oil content in the drill cuttings shall be monitored by some Authorized agency and report shall be sent to the Ministry's Regional Office.
- Company shall prepare operating manual in respect of all activities, which would cover all safety & environment related issues and 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.
- Process safety and risk assessment studies shall be further carried out using advanced models, and the mitigating measures shall be undertaken accordingly.

List of the Expert Appraisal Committee (Industry-2) members attended the meeting

S. No.	Name and Address	Designation
1.	Dr. J. P. Gupta	Chairman
2.	Dr. Y.V. Rami Reddy	Member
3.	Dr Tudilndrasen Reddy	Member
4.	Dr J S Sharma	Member
5.	Shri S C Mann	Member
6.	Shri Dinabandhu Gouda	Member
7.	Dr T K Joshi	Member
8.	Ms. SaloniGoel	Member
9.	Shri S.K. Srivastava	Member Secretary