

Minutes of the 39th Expert Appraisal Committee (Industry-2) Meeting held during 25-27 July, 2018 at Indira Paryavaran Bhawan, Jor Bagh Road, Ministry of Environment, Forest and Climate Change, New Delhi - 3

Day one - 25th July, 2018

39.1 Opening Remarks by the Chairman

39.2 Confirmation of minutes of the 38th meeting of the EAC (Industry-2) held on 25-27 June, 2018 at Indira Paryavaran Bhawan, New Delhi.

The EAC, having taken note that no comments were offered on minutes of its 38th meeting held on 25-27 June, 2018 at New Delhi, confirmed the same.

39.3 Environmental Clearance

Agenda No.39.3.1

Expansion of molasses based distillery from 35 KLPD to 65 KLPD by M/s Brima Sagar Maharashtra Distilleries Ltd at Shreepur, Taluka Malshiras, District Solapur (Maharashtra)

[IA/MH/IND2/67191/2017, J-11011/192/2017-IA-II (I)]

39.3.1.1 The project proponent and the accredited Consultant M/s Dr. Subbarao's Environment Center made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for environmental clearance to the project Expansion of existing molasses based distillery from 35 KLPD to 65 KLPD by M/s Brima Sagar Maharashtra Distilleries Ltd at Shreepur, Taluk Malshiras, District Solapur (Maharashtra).

(ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 13th meeting held during 19th November, 2013 and recommended Terms of References (ToR) for the Project. The ToR has been issued by Ministry vide letter No.J-11011/249/2013-IA.II(I) dated 31st January, 2014.

(iii) The project proponent applied for amendments in ToRs which were approved, vide F.No.J-11011/249/2013-IA.II(I) dated 8th May, 2015.

(iv) The project proponent submitted the EIA report for Environmental Clearance which was considered by the Expert Appraisal Committee (Industry-2) in its 24th meeting held during 14th to 16th June, 2017. The EAC did not approve the EIA Report as it was not submitted within the stipulated period of 3 years after the grant of the ToRs. The Committee recommended the Standard ToRs for preparation of EIA Report, and the additional ToRs were given as:

- Fresh baseline Data to be Submitted
- Public Hearing is exempted under the provision as per Para 7(ii) of the EIA Notification 2006

(v) All molasses based distillery projects are listed at S.N. 5(g) of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

- (vi) Ministry had issued EC earlier vide letter No. J-11011/68/2002-IA.II; dated 14th May, 2003 for Distillery unit in favour of M/s Brihan Maharashtra Sugar Syndicate Ltd, the name of which changed to M/s Brima Sagar Maharashtra Distilleries Ltd. Existing land area is 30.60 ha and no additional land would be required for proposed expansion. Industry has already developed greenbelt in an area of 33% i.e. 10 ha out of total area of the project.
- (vii) The estimated project cost is Rs.48 crores including existing investment of Rs.6 crore. Total capital cost earmarked for pollution control measures is Rs.9.46 crore and the recurring cost (operation and maintenance) will be about Rs.0.722 crore per annum. Total Employment will be 200 persons as direct & 200 persons indirect after expansion.
- (viii) There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km from the project site. Bhima river is flowing at 5 km in NE direction.
- (ix) Ambient air quality monitoring was carried out at 8 locations during 1st March, 2014 to 31st May 2014 and 16th Sept 2017 to 15th Dec 2017. The baseline data indicates the ranges of concentrations during 1st March 2014 to 31st May 2014 as PM₁₀ (34.87 to 70.35 µg/m³), PM_{2.5} (20.1-46.12 µg/m³), SO₂ (10.21-34.21 µg/m³) and NO₂ (18.22-52.94 µg/m³). And during 16th Sept 2017 to 15th Dec 2017 the baseline data indicates the ranges of concentrations of: (PM₁₀ (32.07-59.27 µg/m³), PM_{2.5} (17.71-36.64 µg/m³), SO₂ (21.62-42.12 µg/m³) and NO₂ (18.75-31.58 µg/m³). AAQ modeling study for point source and Line Source emissions indicates that the maximum incremental GLCs after the proposed project would be 60.09 µg/m³, 49.57 µg/m³ and 40.14 µg/m³ with respect to PM₁₀, SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).
- (x) Total water requirement is 1050 m³/day of which fresh water requirement of 715 m³/day will be met from Nira right bank canal. Effluent of 260 m³/d quantity will be treated through Bio-methanation followed by RO and Composting and will achieve Zero Liquid discharge.
- (xi) Power requirement after expansion will be 0.90 MW including existing 0.5 MW and will be met from its own cogeneration plant based on Bio-gas with H₂S Scrubber. Additionally 2 Nos of 380 KVA DG sets are used as standby during power failure. Stack height of 6.5 meters was provided as per CPCB norms to the proposed DG sets. DG sets of additional numbers will be require as standby during power failure.
- (xii) Existing unit has 10 TPH and 4 TPH Bio gas/ Coal/ pet coke/ bagasse fired boilers which were already in existence Multi cyclone separators with a stack of height of 35 m were installed for controlling the particulate emissions within the statutory limit of 150 mg/Nm³ for the existing 10 TPH and 4 TPH Boilers. No additional Boilers are required.
- (xiii) Process emissions are particulate matter and H₂S in Biogas. Multicyclone and H₂S Scrubber are provided as APC equipment.
- (xiv) Solid waste generated are digested sludge from anaerobic digester and yeast sludge from fermentation tanks which are around 100 MT/Month and composted along with spentwash.
- (xv) Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 2nd December, 2016. The one participant of the Public Hearing raised the issue related

to pollution due to spentwash and asked what actions has been taken by the MPCB for discharging Spent wash outside the factory. He has further suggested that spent wash should not be discharged into the river or nalla. All the remaining participants approved the proposed expansion of the Distillery capacity. Some participants told that factory is supplying drinking water due to scarcity of water in this region. However, they wanted RO water may be supplied for drinking purpose.

(xvi) Approved the Compliance of Environmental Clearance conditions for the existing 35 KLPD and suggested to increase the number of monitoring stations and regular submission of Six Monthly Report which were compiled by the industry.

(xvii) The details of products and capacity as under: MT/ annum

S. No	Product	Existing Quantity	Proposed Quantity	Total Quantity
1	Rectified Spirit	7560	6480	14040
2	ENA	2400	11000	13400
3	Malt Spirit	312	888	1200
4	Grape Spirit	600	600	1200
5	Potable Liquor	4000	5940	9940

39.3.1.2 During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for expansion of molasses based distillery from 35 KLPD to 65 KLPD by M/s Brima Sagar Maharashtra Distilleries Ltd in a total area of 30.60 ha at Shreepur, Taluk Malshiras, District Solapur (Maharashtra).

The project/activity is covered under category A of item 5 (g)(i) 'All Molasses based distilleries' of the Schedule to the Environmental Impact Assessment Notification, 2006 and requires appraisal at Central level by the sectoral EAC in the Ministry

ToR for the project was earlier granted on 31st January, 2014, followed by amendment on 8th May, 2015. Public hearing was conducted by the SPCB on 2nd December, 2016. Fresh ToR was issued on 31st July, 2017.

Present total water requirement is 1050 cum/day, out of which fresh water intake of 715 cum/day is being met from Nira right bank canal. The same is proposed to be brought down to 455 cum/day after the proposed expansion (7 kl/kL of alcohol).

Effluent of 260 cum/day (4 kl/kL of Alcohol) will be generated and treated by bio-methanation followed by RO and bio-composting. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

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.

Ministry had earlier issued EC vide letter dated 14th May, 2003 for existing distillery unit in favour of M/s Brihan Maharashtra Sugar Syndicate Ltd, the name of which changed to M/s Brima Sagar

Maharashtra Distilleries Ltd. The monitoring report on compliance status of EC conditions forwarded by the Regional Office vide their letter dated 10th August, 2016, was found to be satisfactory.

39.3.1.3 *The EAC, after deliberations, asked for additional information/inputs and clarifications in respect of the following:-*

- *Production during FY 2015-16 is 42.46 KLPD i.e. higher than the sanctioned capacity of 35 KLPD, which amounts to non-compliance of the existing EC conditions,*
- *The earlier EC dated 14th May, 2003 was issued in favour of M/s Brihan Maharashtra Sugar Syndicate Ltd, and should have been transferred in the name of M/s Brima Sagar Maharashtra Distilleries Ltd.*
- *Proposed fresh water requirement of 610 cum/day would be reduced to 455 cum/day. The water balance needs to be revised accordingly.*
- *STP to be installed for the treatment of domestic effluent.*
- *Plan for Corporate Environment Responsibility (CER) and the traffic management to be submitted.*
- *Fresh surface and ground water analysis, VOC and HC in the study area.*
- *Redressal of the issues raised during the public hearing.*

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

Agenda No.39.3.2

Manufacturing of Organic chemicals by M/s Arvee Laboratories (India) Pvt Ltd at Survey No.316, Navagam (Kardej), Bhavnagar-Sihor Road, Taluka & District Bhavnagar (Gujarat)

[IA/GJ/IND2/61830/2017, J-11011/26/2017-IA-II(I)]

39.3.2.1 The project proponent and the accredited Consultant M/s San Envirotech Pvt Ltd, Ahmedabad has made detailed presentation on the salient features of the project and informed that:

(i) The proposal is for environmental clearance for expansion of existing capacity of Isophthalic Acid derivatives and Thiopene Derivatives with addition of new products from 85.0 MT/month to 500.0 MT/month at Survey No. 316, Navagam (Kardej), Bhavnagar-Sihor road, Tal & District: Bhavnagar, Gujarat by M/s. Arvee Laboratories Pvt. Ltd. Total by-product recovery will be 861.66 MT/month.

(ii) The project proposal was considered by the Expert Appraisal Committee (Industry 2) in its 22nd meeting held during 17-18 April, 2017 and recommended Terms of References (ToR) for the Project. The ToR has been issued by Ministry vide letter No. J-11011/26/2017-IA-II (I) dated 30.05.2017.

(iii) All Synthetic Organic Chemicals Industries located outside the notified industrial area/estate are listed at S.N. 5(f) of Schedule of Environmental Impact Assessment (EIA) Notification under category 'A' and is appraised at Central Level by Expert Appraisal Committee (EAC).

(iv) Existing land area is 7183 m², Proposed expansion will be carried out in the existing premises. Thus, total land area after expansion will remain same i.e. 7183 m². Industry has already developed Greenbelt in an area of 450 m² out of 7183 m² of project area. After expansion unit will increasing the greenbelt area up to 2370 m² which will be 33% of the total area.

(v) The estimated project cost after proposed expansion will be Rs. 70.0 crore including existing investment of 20.0 crore. Total capital cost earmarked for pollution control measures will be Rs. 9.0 crore and the Recurring cost (operation and maintenance) will be about Rs. 2.5 crore per annum. Total employment including direct and indirect after expansion will be 280 persons.

(vi) There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within the 10 km of the project site.

(vii) Ambient air quality monitoring was carried out at 8 locations during March, 2017 to May, 2017 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (59.7-67.1 µg/m³), PM_{2.5} (28.3-33.6 µg/m³), SO₂ (11.6-14.7 µg/m³) and NO_x (13.7-18.7 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs from the proposed project would be 0.190 µg/m³, 0.123 µg/m³, 0.067 µg/m³, 0.027 µg/m³, 0.027 µg/m³, with respect to SPM, SO₂, NO_x, HCl, and HBr. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(viii) Total water requirement is 151.5 m³/day of which fresh water requirement is 54.5 m³/day and 97.0 m³/day will be recycled/treated water, which will be met from Bore well water/ surface water from Gujarat Water Infrastructure Ltd.

(ix) Total effluent generation will be tune around 106.0 KLD; out of which 22 KLD of domestic wastewater which will be treated in STP and reused in gardening purpose. Industrial effluent will be 84 KLD, which will be treated in ETP, later passed through MEE, condensate of MEE will be reused in the plant. Thus, it will achieve zero liquid discharge.

(x) Power requirement 1500 kVA will be met from PGVCL. Unit will install stand by D.G set of (500 kVA), which will be used only in case of emergency/power failure from the grid. Stack (height 11 meters) will be provided as per CPCB norms to the proposed DG set.

(xi) Existing unit has one boiler of 5 TPH and Thermic Fluid Heater (2.0 lakhs kcal/hr.). After expansion unit has proposed one Thermic Fluid Heater (4.0 Lac Kcal./hr.). Coal/ Briquettes and LDO are used as fuel in Boiler and TFH respectively, after proposed expansion Coal/Briquettes with the quantity of 3 MT/day will be used as fuel in TFH. Boiler & TFH is connected with stacks of adequate stack height of 31 m & 21 m respectively.

(xii) Existing Process emission is from vents attached to scrubber of Sulphonation vessel for which Alkali Scrubber is used as APCM which will be dismantled after expansion. Proposed process emissions generation is from process reactor- 1, 2 & 3. Water scrubber followed by alkali scrubber will be used as an APCM for process reactor-1, whereas alkali scrubbers will be used as an APCM for process reactor-2 & 3.

(xiii) Details of Solid waste/Hazardous waste generation and its management.

S. No	Type of Solid Waste	As per HWM Rules, 2016	Quantity Total After Expansion	Disposal method
1	ETP Sludge & MEE salt	35.3	50 + 25 = 75 MT/month	Collection, storage & disposal at TSDF site approved by GPCB.
2	Discarded containers/ drums/liners	33.1	2500 nos./year	Collection, storage and disposal by selling to approved recycler or traders.
3	Used lubricating Oil	5.1	500 lit/year	Collection, storage & use within premises as lubricant/sell to registered recycler.
4	Spent Carbon	28.3	1.1 MT/year	Collection, Storage, Transportation, Disposal at TSDF.
5	Spent Catalyst	28.2	1.2 MT/month	Collection, Storage, Transportation and sent back to supplier/ manufacturer for regeneration.
6	Spent Sulfuric Acid	29.6	740 MT/month	Collection, Storage, Transportation and sold to actual users.
7	Hydrochloric acid (25%)	26.3	4.16 MT/month	Collection, Storage, Transportation and sold to actual users.
8	Aluminum Chloride (20%)	26.3	34 MT/month	Collection, Storage, Transportation and sold to actual users.
9	Hydrogen Bromide (20%)	--	28 MT/month	Collection, Storage, Transportation and sold to actual users.

(xiv) Public Hearing for proposed expansion project has been conducted by the State Pollution Control Board on 23.03.2018.

(xv) Following is the list of existing & proposed products:

S. No	IUPAC Name	Quantity (MTPA)		
		Existing	Proposed	Total
Isophthalic Acid Derivatives				
1.	Dimethyl 5- Sodiosulfo Isophthalate	30	325	390
2.	5-Sodiosulfo Isophthalic Acid (Na-SIPA)	20		
3.	5-Lithosulfo Isophthalic Acid (Li-SIPA)	00		
4.	5-Hydroxy Isophthalic Acid (5-HIPA)	05		
5.	5-Sodio Sulpho-bis-(B-Hydroxy Ethyl) Isophthalate (Na-SIPHE)	00		
6.	5-Nitro Isophthalic Acid (5-NIPA)	00		
7.	Dimethyl 5-Nitro Isophthalate (DM 5-NIPA)	00		
8.	Mono Methyl 5-Nitroisophthalic Acid (MM 5-NIPA)	05		

9.	5-Amino Isophthalic Acid (5-AIPA)	05		
10.	Dimethyl 5-Amino Isophthalic Acid (DM-5-AIPA)	00		
11.	5-Amino Tri Iodo Isophthalic Acid (ATIPA)	00		
12.	5-Amino Tri Iodo Dichloride	00		
13.	5-Lithio Sulpho-bis-(B-Hydroxy ethyl) Isophthalate (Li-SIPHE)	00		
14.	5-Amino N-N-Bis (2-3 Dihydroxy Propyl) Isophthalamide HCl (ABA-HCl)	00		
15.	5-Amino N-N-Bis (2-3 Dihydroxy Propyl) 2,4,6 Trilodo Isophthalamide (ABATRIIODO)	00		
16.	5-Acetyl amino N-N-Bis(2-3 Dihydroxy Propyl) 2,4,6 Trilodo Isophthalamide (ACETRIIODO)	00		
Benzoic Acid Derivatives				
17.	3,5 Di Nitro Benzoic Acid (DNBA)	00	65	65
18.	3,5 Di Amino Benzoic Acid (DABA)	00		
19.	2-Chloro 5-Nitro Benzoic Acid	00		
20.	4-Chloro 3,5 Di Nitro Benzoic Acid (4Cl DNBA)	00		
21.	4-Chloro 3,5 Di Amino Benzoic Acid (4Cl DABA)	00		
22.	4-Chloro 3,5 Di Amino Benzoic Acid Isobutyl Ester (4Cl DABA)	00		
23.	3 Sulpho Benzoic Acid Sodium Salt	00		
Thiopene Derivatives				
24.	Thiopene 2-Aldehyde	05	10	30
25.	Thiopene 2-Acetyl	05		
26.	Thiopene 2-Methanol	05		
27.	Thiopene 2-Carbo Oxalyic Acid	05		
28.	4-Amino Pyridine (4AP)	00	05	05
29.	Bromo benzene	00	10	10
Total		85	415	500

List of By-Products

S. No.	By Products	Quantity (MTPA)		
		Existing	Proposed	Total
1	Sodium nitrate solution	00	22	22
2	Hydrochloric Acid 25%	00	4.16	4.16
3	Aluminium chloride solution	00	34	34
4	Sulfuric Acid (50 to 70%)	70	670	740
5	HBr solution	00	28	28
6	Sodium Bisulphate	00	8.5	8.5

	Solution			
7	Acetic Acid	00	19.0	19.0
8	IBA	00	6.0	6.0
Total		70	791.66	861.66

39.3.2.2 During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for expansion of synthetic organic chemical manufacturing from 85 TPM (Isophthalic Acid derivatives and Thiopene Derivatives) to 500 TPM by M/s Arvee Laboratories Pvt Ltd in a total area of 7183 sqm at Survey No. 316, Navagam (Kardej), Bhavnagar-Sihor road, Taluka & District Bhavnagar (Gujarat).

The project/activity is covered under category A of item 5 (f) 'Synthetic Organic Chemical Industry' of the Schedule to the Environmental Impact Assessment Notification, 2006 and requires appraisal at Central level by the sectoral EAC in the Ministry

The ToR for the project was granted on 30th May, 2017. Public hearing was conducted by the SPCB on 23rd March, 2018.

Total water requirement is estimated to be 151.5 cum/day, out of which fresh water intake of 54.5 cum/day proposed to be met from met from Bore well water/ surface water from Gujarat Water Infrastructure Ltd.

Effluent of 106 cum/day will be generated; out of which 22 KLD of domestic wastewater which will be treated in STP and reused in gardening purpose. Industrial effluent will be 84 KLD, which will be treated in ETP, later passed through MEE, condensate of MEE 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.

The unit is reported to have been established in the year 2005 i.e. prior to the EIA Notification, 2006 came into force, and thus no requirement of the prior EC for the existing operations. Accordingly, no rationale for compliance status of the existing EC conditions.

Consent to Operate for the present capacity of 85 TPM has been obtained from the State PCB vide letter dated 22nd December, 2014, which is presently valid up to 3rd November, 2019.

39.3.2.3 *The EAC, after deliberations insisted for firm commitment of the regulatory authority (M/s Gujarat Water Infrastructure Ltd) to meet the fresh water requirement of 54.5 cum/day after the proposed expansion. The Committee also asked for the Plan towards Corporate Environment Responsibility (CER), traffic management and redressal of the issues raised during the public hearing and the firm commitment.*

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

Agenda No.39.3.3

Molasses based distillery unit of 30 KLPD by M/s Dwarkadhish Sakhar Karkhana Ltd at village Sheware, Taluka Satana, District Nasik (Maharashtra)

[IA/MH/IND2/64803/2017, J-11011/256/2017 IA II(I)]

39.3.3.1 The project proponent and their accredited consultant M/s Vasantdada Sugar Institute made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for environmental clearance to the New Molasses based 30 KLPD Distillery project at Village Sheware, Taluka Satana, District Nashik, Maharashtra by M/s Dwarkadhish Sakhar Karkhana Ltd.

(ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 26th meeting held during 27-28 July 2017 and recommended Terms of References (ToR) for the project. The ToR has been issued by Ministry vide letter No. J-11011/256/2017-IA-II(I) dated 23rd August 2017.

(iii) All distillery projects are listed at S.N. 5(g) of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee(EAC).

(iv) Land area of 57,466 m² (14.2 acre) will be used for proposed project including main unit, wastewater, storage, treatment unit, and compost yard. Industry will be developing a greenbelt in an area of 35.75% i.e. 20,234 m² out of total area of the project.

(v) The estimated project cost is Rs.5746.15 lakhs. Total capital cost earmarked for pollution control measures is Rs.1700.50 lakh and the recurring cost (operation and maintenance) will be about Rs.77.87 lakh per annum. Total Employment will be 117 persons as direct & more than 500 persons indirect after operation of project. Industry proposes to allocate Rs.389 lakhs towards Corporate Social Responsibility.

(vi) There are no any national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km from the project site. River Mausam is flowing at 0.7 km in the South.

(vii) Ambient air quality monitoring was carried out at eight locations during 8 March 2017 to 13 June 2017 and the baseline data indicates the ranges of concentrations as: PM₁₀ (59.99 – 39.16 µg/m³), PM_{2.5} (29.99 - 14.58 µg/m³), SO₂ (14.04 - 4.68 µg/m³) and NO₂ (22.15 – 5.18 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 60.68 µg/m³, and 23.27 µg/m³ with respect to PM and SO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(viii) Total water requirement is 1,128m³/day of which fresh water requirement of 543 m³/day will be met from earthen pond (rainwater storage), and excess condensate from own sugar mill.

(ix) The Spentwash of 300 m³/day quantity will be treated primarily in biomethanation unit followed by MEE followed by composting. Condensate (250 m³/day) of MEE plant and spent lees (60 m³/day) along with other mild stream of ~ 40 m³/day will be treat separately in CPU/ETP. Treated water will be recycled/reused. Thus, the unit will be achieving Zero Liquid discharge system.

(x) Power requirement will be 710 kVA and will be met from captive power of sugar mill during season and from State power distribution corporation limited (MSEDCL). Existing sugar unit has two DG sets of 750 and 320 kVA capacity will be used as standby during power failure. Stack (height 5.5 and 4m respectively) is provided as per CPCB norms to the existing DG sets.

(xi) Existing sugar unit has two bagasse fired boiler boilers (45+55 TPH) of collective 90 TPH capacity. Out of which 10TPH steam will be used during cane crushing season. Additionally, 12 TPH bagasse and biogas fired boiler will be installed to fulfill the steam requirement during off-season. A stack of height of 45 m and having wet scrubber will be installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm³ for the proposed boiler.

(xii) Details of Process emissions generation and its management: Air pollutants like PM, SO₂, NO, CO, CO₂ will be emitted from proposed bagasse and biogas fired boiler, which will be controlled by installing wet scrubber with a stack of 45-m height. CO₂ scrubber will be used for emissions from fermentation process.

(xiii) Details of Solid waste/ Hazardous waste generation and its management: Solid waste generation from proposed projects includes boiler ash (2.33TPD), yeast sludge, sludge from CPU/ETP and bio-digester (4-5.5 TPD) will be used as a filler material for bio-composting and

(xiv) Public Hearing for the proposed project has been conducted by the Maharashtra State Pollution Control Board on 27th February 2018. The main issues raised during the public hearing are related to benefit of proposed project, employment generation, water, wastewater and solid waste management, air pollution control, safety in plant.

(xv) The details of products and capacity as under:

Product details	Quantity in KLD
Rectified spirit (28.5KLD) Impure spirit 5% (1.5KLD)	30
OR	
ENA (28.20 KLD) Impure spirit 6% (1.8 KLD)	30
OR	
Anhydrous alcohol (27.14 KLD) Impure spirit 5% (1.5 KLD)	28.64

39.3.3.2 During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for setting up molasses based distillery of 30 KLPD by M/s Dwarkadhish Sakhar Karkhana Ltd in a total area of 14.2 acres at Village Sheware, Taluka Satana, District Nashik (Maharashtra).

The project/activity is covered under category A of item 5 (g)(i) 'All Molasses based distilleries' of the Schedule to the Environmental Impact Assessment Notification, 2006 and requires appraisal at Central level by the sectoral EAC in the Ministry

The ToR for the project was granted on 23rd August 2017. Public hearing was conducted by the SPCB on 27th February, 2018.

Total water requirement is estimated to be 1128 cum/day, out of which fresh water intake of 543 cum/day proposed to be met from earthen pond (rainwater storage), and excess condensate from own sugar mill.

Effluent of 300 cum/day shall be generated and primarily treated in biomethanation unit followed by MEE and composting. Condensate (250 cum/day) of MEE plant and spent lees (60 cum/day) along with other mild stream of ~ 40 cum/day shall be treat separately in CPU/ETP. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

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.

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

- *Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.*
- *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.*
- *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.*
- *Total fresh water requirement shall not exceed 543 cum/day proposed to be met from earthen pond (rainwater storage), and excess condensate from own sugar mill. Prior permission shall be obtained from the concerned regulatory authority in this regard.*
- *The spent wash after evaporation shall be taken for bio-methanization and composted using press mud. The spent lees and evaporator condensate shall be provided physico chemical treatment for the treated water to be reused for dilution of molasses or in cooling tower as make up water.*
- *Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.*
- *Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm and the 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 5-10 m width shall be developed in more than 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 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.*
- *There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places.*
- *Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.*
- *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.*
- *CO₂ generated from the process shall be bottled and sold to authorized vendors.*
- *There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places.*

Agenda No.39.3.4

Setting up 5000 TCD Sugar cane crushing unit, Cogeneration plant of 30MW and Molasses based distillery of 60 KLPD by M/s Mellbro Sugar Pvt Ltd at Village Shirur, Taluk & District Bagalkot (Karnataka)

[IA/KA/IND2/75099/201, J-11011/380/2017-IA-II(I)]

39.3.4.1 The project Proponent and the accredited Consultant M/s Ultra Tech made a detailed presentation on the salient features of the project and informed that:-

(i) The proposal is for environmental clearance to the project - Establishment of Sugar Cushing Unit (5000 TCD Sugar Plant), Cogeneration Power Plant (30 MW) and Distillery unit (60 KLPD) by M/s Mellbro Sugars Pvt Ltd at Shirur village, Bagalkot Taluk and District, Karnataka

(ii) The project proposal was considered by the Expert Appraisal Committee (industry-2) in its 27th meeting held during 28-29th Aug 2017 and recommended Terms of References for the project. The ToR has been issued by the Ministry vide letter No. J-11011/380/2017-IA-II (I) dated 11th Sept 2017.

(iii) The project/Activity is covered under category A of item 5(g) Distillery and category B of item 5(j) Sugar industry and are appraised at Central Level by EAC(Expert Appraisal Committee)

(iv) Proposed land area is 408700 m². Industry will develop green belt an area of 33% i.e. 136800 M² out of the total area. The estimated project cost is Rs.331.26 crores. Total capital cost earmarking for pollution control measures is Rs. 15 crores and the Recurring cost (operation and maintenance) will be about Rs. 1.7 Cr Per annum. Total employment will be 270 persons as direct and 1000 indirect persons. Industry proposes to allocate Rs 16.56 crores towards Corporate Social Responsibility.

(v) There are no national parks, wild life sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km from the project site. Malaprabha River is flowing at 6 km in East to South East direction.

(vi) Ambient Air quality monitoring was carried out at 8 locations during October 2017 to December 2017 and the Baseline data indicates the range of concentrations as: PM₁₀ (58.75 µg/M³), PM_{2.5} (24.3 µg/M³), SO₂ (9.4 µg/M³), & NO₂ (17.3µg/M³). AAQ Model study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 6.63 µg/M³, 5.07 µg/M³) and 3.2 µg/M³, with respect to PM₁₀, SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards.

(vii) Total water requirement is 2448 M³/day of which fresh water requirement of 1220 M³/day will be met from Ghataprabha/Malaprabha River. Effluent of 470 M³ quantity from Sugar & distillery units, will be treated through 1000 M³ plant and 264 M³ effluent from distillery will be treated in 270 M³ Condensate Polishing Unit. Thus, Zero Liquid discharge System would be achieved.

(viii) Power requirement will be 9.25 MW (season) and will be met from in house cogeneration plant and excess 22.75 MW power will be supplied to Grid and during off season 4.25 MW is the requirement and 27.25 MW excess power will be supplied to Grid . Additionally DG sets 1000 KVA

(2 nos) are used as standby during power failure. Stack height will be provided as per CPCB norms to the proposed DG sets.

(ix) For the proposed unit 125 TPH Boiler, Bagasse and coal fired boiler will be installed. ESP/Bag filter with a stack height of 85 M will be installed for controlling the particulate emissions with the statutory limit of 115 mg/NM³ for the proposed boilers.

(x) Details of process emissions and its management

The major process emissions are from boilers. MSPL will implement the following measures from Day -1 of the plant operation to comply with the new National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009. The major emission is particulate matter from the plant complex due to use of bagasse and coal in boilers. MSPL will provide an Electro Static Precipitators (ESPs) for 125 TPH boiler and 22 TPH incineration boiler designed to meet an outlet concentration of less than 100 mg/Nm³.

As per CPCB norms, for control of SO₂ emissions, two stacks will be provided to exhaust the flue gases to atmosphere. Stack of height 85 m will be connected to 125 TPH boilers and 40 m height will be connected to 22 TPH incineration boiler. The stand by DG sets will be provided with adequate stacks as per CPCB norm.

(xi) Details of solid waste generation and its management

The solid waste generation from the plant are mainly from the following four areas

- a. Mill house - bagasse
- b. Process house - Press mud
- c. Boiler house - Ash
- d. Effluent Treatment Plant- Sludge

The quantity of solid waste generation from the sugar plant and Cogeneration Units is given below:

Solid Waste Generation (T/Day)

Source	Name	Quantity in MT/d	Mode of disposal
Cane Crushing Season			
Mill House	Bagasse	1600	Shall be used as boiler fuel
Process House	Press mud	200	Shall be given to farmers.
	Molasses	200	Shall be used as raw material for distillery
Boiler House-Cogen Plant	Ash	74.8	Shall be given to farmers.
Effluent treatment Plant	Sludge	1.3	Used as manure within premises

Apart from the above, Municipal Solid Waste of around 200 Kg/day will be generated and same will be segregated as organic and inorganic and organic will be converted as manure and used for gardening and inorganic will be resale to the authorized vendors.

(xii) Public hearing for the proposed project has been conducted by the Karnataka State Pollution Control Board on 14/03/2018. The main issues raised during the public hearing are related to undertake massive green belt development and adopt modern technologies to control dust pollution and also welcome the project to this area.

(xiii) The details of products and capacity as under.

Sugar -89600 MT, Cogen plant 30MW and Distillery plant 60KLPD Alcohol and 2MW power.

39.3.4.2 During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for setting up distillery unit of 60 KLPD, by M/s Mellbro Sugars Pvt Ltd in a total area of 408700 sqm at Shirur village, Taluk and District Bagalkot (Karnataka). The project also involves setting up Sugar Crushing Unit (5000 TCD Sugar Plant) and Cogeneration Power Plant (30 MW).

The project/activity is covered under category A of item 5 (g) 'All Molasses based distilleries' of the Schedule to the Environmental Impact Assessment Notification, 2006 and requires appraisal at Central level by the sectoral EAC in the Ministry.

The ToR for the project was granted on 11th September, 2017. Public hearing was conducted by the SPCB on 14th March, 2018.

Total water requirement is estimated to be 2448 cum/day, out of which fresh water intake of 1220 cum/day proposed to be met from Ghataprabha/Malaprabha river.

Effluent of 470 cum/day shall be generated from Sugar & distillery units and treated through ETP plant and 264 m³ from distillery shall be treated in separately in Condensate Polishing Unit. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

39.3.4.3 *The EAC, after deliberations, asked for additional information/inputs and clarifications in respect of the following:-*

- *Revised water balance, both for crushing season and the off season, to be submitted.*
- *Firm commitment of the regulatory authority (State Water Resources Department) to meet the presently proposed fresh water requirement of 1220 cum/day (both for sugar plant and the distillery),*
- *Plan for Corporate Environment Responsibility (CER) and the traffic management to be submitted. Traffic management plan to be duly certified by the concerned regulatory authority.*
- *Bagasse/slop/bio-gas to be used as a fuel for the proposed boilers of 125 TPH & 22 TPH.*

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

Agenda No.39.3.5

Agrochemical and Intermediates manufacturing plant by M/s Swarup Chemicals Pvt Ltd at Plot No. B-15 to B-22, UPSIDC, Tehsil Sandila, District Hardoi (Uttar Pradesh)

[IA/UP/IND2/58942/2016, J-11011/324/2016-IAII (I)]

39.3.5.1 The Project Proponent and the accredited Consultant M/s. EQMS India Pvt Ltd made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for environmental clearance to the project for Proposed Agrochemical and Intermediated Manufacturing Plant at Sandila II, Plot B, 15-22, UPSIDC, Industrial area, Tehsil Sandila , Hardoi, Uttar Pradesh by M/s Swarup Chemicals Pvt Ltd.

(ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 14th meeting held during 27th Oct 2016 and recommended Terms of References (ToR) for the Project. The ToR has been issued by Ministry vide letter No. J-11011/324/2016 -IA-II (I) dated 31st January 2017.

(iii) All Pesticide manufacturing plants are listed at S.N. 5(b) of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

(iv) The total plot area is 26930 m² out of which 33% will be developed as green belt. Industry will develop greenbelt in an area of i.e.5580 m² out of open area of the project. The estimated project cost is Rs.15 crore. Total capital cost earmarked for pollution control measures is Rs 2 crores and the recurring cost (operation and maintenance) will be about Rs 30 Lakhs per annum. Total Employment will be total 75 persons as direct & indirect for the proposed project.

(v) There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. River Bahca is flowing 7.6 km from the project site,.Loni nalla and sarda canal at 2.8 and 5.2 km respectively

(vi) Ambient air quality monitoring was carried out at 8 locations during 1st October 2016 to 31st December 2016 and the baseline data indicates the ranges of concentrations as: PM₁₀ (62-80 µg/m³), PM_{2.5} (32-43 µg/m³), SO₂ (6.1-8.0 µg/m³) and NO₂ (13.5- 17.6 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be ranges between 0.05-0.50 µg/m³, 0.01-1.0 µg/m³ and 0.005-0.180 µg/m³ with respect to PM₁₀, SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(vii) Total water requirement is 90 m³/day of which will be met from ground water.

(viii) Effluent of 55 KLD will be treated through 60 KLD capacity ETP. The plant will be based on Zero Liquid discharge system (if applicable).

(ix) Power requirement after expansion will be 800 KVA during operation phase and will be met from UP State electricity Board. Proposed unit has unit has 2 DG sets of 350 KVA capacity each. Stack (height 7.5 m) will be provided as per CPCB norms to the proposed DG sets.

(x) Proposed unit has 3 TPH HSD/Rice husk fired boiler. Bag filter with a stack of height of 27.5 m will be installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm³ for the proposed boilers.

(xi) Process emissions and control measures

S. No	Stack attached to	Stack Ht. (from ground) / Dia. (m)	Flow (Nm ³ /hr)/ Temp. °C	Control equipment
1	Boiler (3TPH)	30m/ 600mm	8000/ 170	Multiple cyclone separator & bag filter
2	Process stack	11m/ 800mm	4000/ ambient	Acid/Alkali Scrubber
3	Process stack	11m/ 800mm	4000/ ambient	Acid/Alkali Scrubber
4	Process stack	11m/ 800mm	4000/ ambient	Acid/Alkali Scrubber
5	Vent for Bag filter of Dryer-1	27.5m/ 800mm	30000/70	Acid/Alkali Scrubber
6.	Vent for Bag filter of Dryer-2	27.5m/ 800mm	30000/70	Acid/Alkali Scrubber

(xii) Solid waste/ Hazardous waste generation and its management :

Solid wastes will be generated from process, effluent treatment system, maintenance of equipment and raw material consumption. Process Residue be sent to cement plants for co-incineration or will be sent to common incineration facility/TSDF. Used oil will be sold to registered refiners or reused in plant as lubricant. ETP sludge & MEE/ATFD salt will be sent to TSDF. Discarded Containers will be sold to authorized re-conditioners.

(xiii) Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 30th Dec. 2017. The main issues raised during the public hearing are related to employment, effect of the plant on the agriculture crop and the pollution load that will arise due to the Plant.

(xiv) The details of products and capacity as under:

S. No	Product	Application	Capacity TPM
1	Kresoxym – Methyl	Agricultural Use	25
2	Dinotefuron	Agricultural Use	30
3	Difenthiuron	Agricultural Use	50
4	Pyriproxyfen	Agricultural Use	50
5	ZDC	Agricultural Use	100
6	Ziram	Agricultural Use	100
7	Thiram	Agricultural Use	100
8	Captan	Agricultural Use	100
9	Folpet	Agricultural Use	100
10	Metam sodium	Agricultural Use	200
11	Zineb	Agricultural Use	50
	Total		905
Intermediates			

S. No	Product	Application	Capacity MT/Month
12	Phthalide	Agricultural Use	100
13	N-N Dimethyl carbamoyl Chloride	Agricultural Use	50
14	N-N Dimethyl thiocarbamoyl Chloride	Agricultural & other Uses	50

39.3.5.2 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for setting up Agrochemical and Intermediated Manufacturing Plant of 905 TPM by M/s Swarup Chemicals Pvt Ltd in a total area of 26930 sqm at Sandila II, Plot B, 15-22, UPSIDC , Industrial area, Tehsil Sandila , Hardoi (Uttar Pradesh).

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

The ToR for the project was granted on 31st January 2017. Public hearing was conducted by SPCB on 30th December, 2017.

Total water requirement is estimated to be 90 cum/day proposed to be met from ground water.

Total effluent generated from different industrial operations is estimated to be 55 cum/day and shall be treated in ETP. There will be no discharge of treated/untreated waste water from the unit, and thus conforming to Zero Liquid Discharge.

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.

39.3.5.3 *The EAC, after deliberations, insisted for more inputs and clarifications in respect of the following:*

- *Revised water balance for the unit conforming to Zero Liquid Discharge.*
- *The product list having LD₅₀ less than 1000 mg/kg, which are reported to be highly toxic and thus need to be deleted. The remaining products need to be reviewed for the toxicity involved and biodegradability, to revise the product list accordingly.*
- *Considering the safety precautions, risk assessment study should be carried out using 3-D modelling.*

The proposal was deferred for the needful on the above lines

Agenda No.39.3.6

Installation of facilities of BS VI MS/HSD (ISOM -1100 TMTPA Indmax GDS- 1150 TMTPA HGU – 2 x 60 TMTPA Kero HDS – 300 TMTPA DHDT revamp) by M/s Indian Oil Corporation Limited at Paradip Refinery, Abhaychandrapur, Jagatsinghapur (Orissa)

[IA/OR/IND2/63183/2017, IA-J-11011/121/2017-IA-II(I)]

39.3.6.1 The project proponent and accredited Consultant M/s Engineers India Limited made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for installation of Ethylene Recovery Unit (ERU), Mono Ethylene Glycol Unit (MEG) & BS-VI Facilities Projects at Paradip Refinery cum Petrochemical Complex by M/s Indian Oil Corporation Limited (IOCL) and located at village Abhayachandrapur, Kujang tehsil, District – Jagatsinghpur, Odisha.

(ii) The ERU & MEG project proposal was considered earlier by the Expert Appraisal Committee (Industry-2) in its 17th EAC meeting held during 26-29 December, 2016 and recommended Terms of References (TOR) for the Project vide Ministry's letter no. J-11011/344/2016-IA-II(I) dated 28th February, 2017. Subsequently, EAC(Industry-2) considered IOCL's proposal of setting up BS:VI MS/HSD facilities at Paradip Refinery in its 23rd meeting held during 3rd to 5th May, 2017 and issued amended TOR for the combined projects of MEG/ERU and BS-VI facilities at Paradip Refinery vide Ministry's letter no. J-11011/344/2016-IA-II(I) dated 30th May 2017.

(iii) All Petroleum Refinery projects are listed at S.N. 4(a) and Petrochemical complex projects under 5(c) of Schedule of Environmental Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

(iv) Ministry has issued EC earlier vide letter no. J-11011/70/2007-IA-II (I) dated 06.07.2007 for Grass root Refinery cum Petrochemical Complex of 15 MMTPA at Abhayachandrapur village, District Jagatsinghpur, Odisha by M/s Indian Oil Corporation Limited. Further extension of validity of EC was issued vide letter no. J-11011/395/2012-IA-II (I) dated 18.09.2014. Further, amendment to EC was issued vide letter no. J-11011/395/2012-IA-II (I) dated 06.01.2015 to include Rapid Rail loading system (RRLS) for Pet coke evacuation and minor revision in secondary unit capacities without affecting the product mix.

(v) Existing land area is 1194 ha (Refinery cum Petrochemical area), additional no land will be required for proposed expansion. Industry is already developed Greenbelt in an area of 250 ha out of 1194 ha area of the project. Additionally 53 Ha has been planted in Refinery Township, CISF Colony, Balia (Jagatsinghpur) and Kisanagar (Cuttack).

(vi) Total estimated project cost for installation of ERU and MEG units is Rs. 3752 crores and for BS-VI fuel quality project is Rs.4049 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs.1.42 Crores and the Recurring cost (operation and maintenance) will be about Rs.0.35 crores per annum. Employment (Indirect) during construction phase is estimated at 1500-2000 persons and Industry proposes to allocate Rs 19.5 crores towards Corporate Environment Responsibility.

(vii) It is reported that as per Form-1 no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. Santra creek, one of the channels of Mahanadi River passes through the refinery cum petrochemical complex.

(viii) Ambient air quality monitoring was carried out at 9 locations during March to May 2017 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (31.4-51.9 µg/m³), PM_{2.5} (15.9–27.6 µg/m³), SO₂ (12.5–20.6 µg/m³) and NO₂ (15.1-23.4 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental resultant GLCs (including baseline concentration) after the proposed project would be 21.84 µg/m³ and 28.53 µg/m³ with respect to SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(ix) Additional water requirement for proposed project is 824 m³/hr. Total water requirement will be 3861 m³/ hr (Existing Complex + BS-VI Facilities & ERU/MEG Project) and will be met from existing raw water system from Mahanadi River Total allocated raw water quantity is 6014 m³/hr from Mahanadi river.

(x) Wastewater generation estimated at 52 m³/h will be treated in existing ETP Plant.

(xi) Power requirement for the BS-VI & MEG/ERU projects at 56 MW will be met from existing CPP & State Grid.

(xii) Emission release due to new units under BS-VI & ERU/MEG Projects have been estimated at 12.9 kg/hr. However, the total emission after proposed projects will be within 1000 Kg/hr (including MEG/ERU & BS VI project) as prescribed by MoEFCC.

(xiii) Hazardous waste will be disposed off in secured landfill inside refinery/ nearby authorized landfill agency. Spent catalysts will be sent back to the original supplier/ approved recycler for reprocessing.

(xiv) Public Hearing was exempted as per provisions contained in clause no. 7(ii) of EIA Notification 2006.

(xv) RO-MoEF certificate has been received from Eastern Regional Office, Bhubaneswar vide letter no.101-260/EPE dated 09.02.2018.

(xvi) The following proposed units are envisaged for BS-VI MS/HSD project and ERU/MEG petrochemical project

S.No.	Unit	Proposed capacity
1	Isomerization Unit (ISOM)	1100 TMTPA
2	Indmax Gasoline De-sulphurisation Unit	1150 TMTPA
3	Hydrogen Generation Unit (HGU)	2 X 60 TMTPA
4	Kero De-sulphurisation Unit	300 TMTPA
5	Diesel Hydro treating Unit (DHDT)	20% revamp
6	Mono-ethylene Glycol Unit (MEG)	332 KTA
7	Ethylene Recovery Unit (ERU)	180 KTA

Product yield pattern post BS VI/ERU/MEG projects is given below.

Streams	Product Pattern (Quantity in TMT/Year)	
	Pre Project	Post Project
Refinery Products		
Naphtha Exports	215	0
BS-IV MS	2076	0
BS-VI MS	0	3260
Reformate	1235	96
SKO	312	312
ATF Domestic	463	463
BS-IV HSD	5941	0
BS-VI HSD	0	6017
Sulphur	349	350
PetCoke	1262	1253
LPG	896	932
Poly-Propylene	678	678
Fuel & Loss	1574	1641
Petro-chemical Products		
Mono-Ethylene Glycol (MEG)	-	332 KTA
Associated Products:		
Di-ethylene Glycol	-	24 KTA
Tri-ethylene Glycol	-	1 KTA

39.3.6.2 The proposal was last considered by the EAC in its meeting held on 29-31 May, 2018, wherein the EAC desired for clarifications/inputs in respect of the following:

- Proposal to be restructured to make it consistent with the items listed in the Schedule to the EIA Notification, 2006.
- Product list to be revised to ensure uniformity/consistency with the EIA Notification, 2006.
- Necessary documents/maps as per the requirements contained in the CRZ Notification, 2011 shall be submitted to the Ministry. In fact, these documents were to be submitted by the project proponent to the Odisha State CZMA for seeking their recommendations from CRZ perspective.
- Firm commitment from the concerned regulatory authority to meet the requirement of fresh water from Mahanadi river shall be submitted.
- Adequate justification for exemption from public hearing for the project.

In response to the above observations, parawise replies submitted by the project proponent, are as under:-

S. No.	Clarifications/inputs sought by the EAC	Reply submitted by the project proponent
1.	Proposal to be restructured to make it consistent with the items listed in the Schedule to the EIA Notification, 2006	Proposal is restructured and the title is given below: "Installation of Ethylene Recovery Unit (ERU), Mono Ethylene Glycol Unit (MEG) & BS-VI Facilities Projects at Paradip Refinery cum Petrochemical Complex by

		M/s Indian Oil Corporation Limited (IOCL)”
2.	Product list to be revised to ensure uniformity/consistency with the EIA Notification, 2006	Revised product list has been submitted.
3.	Necessary documents/maps as per the requirements contained in the CRZ Notification, 2011 shall be submitted to the Ministry. In fact, these documents were to be submitted by the project proponent to the Odisha State CZMA for seeking their recommendations from CRZ perspective	The following documents submitted to OSCZMA for considerations and CRZ recommendations for the proposed Projects are submitted to EAC as desired: <ul style="list-style-type: none"> • Filled Form-1 • CRZ Maps of 1:4000 scale • LULC Map of 1:25000 scale • ORSAC Map of 1:25000 scale • Map showing land ownership of IOCL Paradip Refinery cum Petro Chemical Complex • EIA/RA Report • Google Earth Image of Project Site • Marine Impact Assessment Report • NOC(CTE) from SPCB, Odisha
4.	Firm commitment from the concerned regulatory authority to meet the requirement of fresh water from Mahanadi river shall be submitted	Water requirement of Paradip Refinery is met from Mahanadi River. Permission letter from Department of Water Resources, Government of Orissa vide letter Ref: Irr-II-WRC- 42/06/19672/WR dated 19/06/2006 is submitted.
5.	Adequate justification for exemption from public hearing for the project	Public Hearing for the subject proposal was exempted vide TOR dated 30/05/2017. This was based on request of IOCL Paradip Refinery cum Petrochemical complex to EAC (Industry-2) during the meeting dated 3/5/2017 for exempting the Public Hearing on the following grounds: <ul style="list-style-type: none"> • The proposed installation of facilities for MS/HSD quality up gradation to BS-VI standards is an environmental project for meeting mandatory requirement of fuel quality up-gradation to be made effective w.e.f. 1st April, 2020 requiring project completion target by September, 2019. • The capacity of the Paradip Refinery cum Petro-Chemical Complex shall remain unchanged at 15 MMTPA and the proposed emissions shall be within the stipulated limit provided by

		<p>MoEFCC for SO₂ emissions i.e. 1000 Kg/hr.</p> <ul style="list-style-type: none"> • EC was granted to Paradip Refinery cum Petrochemical Complex in 2007 and the proposed facilities of the BS-VI MS/HSD and ERU/MEG projects will be put up within the existing perimeters of the complex. The process configuration and products of the proposed projects are based on the intermediates of the existing Refinery. • IOCL facilitated SPCB for conducting Public Hearings at Paradip for the Projects and downstream Facilities associated with the Paradip Refinery cum Petro Chemical Complex viz. (a) Setting up of LPG Terminal at Paradip in November, 2011 (b) Establishing South Oil Jetty Facilities at Paradip in June, 2011. • Timeline for completion of the Fuel Quality Upgradation facilities are stringent and construction works shall be executed on priority in the existing operating Refinery.
--	--	--

39.3.6.3 During deliberations on the proposal, the EAC noted the following:

The proposal is for environmental clearance and CRZ clearance to the project 'Installation of Ethylene Recovery Unit (ERU), Mono Ethylene Glycol Unit (MEG) & BS-VI Facilities Projects at Paradip Refinery cum Petrochemical Complex by M/s Indian Oil Corporation Limited (IOCL) in a total area of 1194 ha at Village Abhayachandrapur, Tehsil Kujang, District Jagatsinghpur (Odisha).

The project/activity is covered under category A of item 4(a) 'Petroleum Refining Industry' and 5(c) 'Petrochemical complexes' of the Schedule to the Environmental Impact Assessment Notification, 2006, and requires appraisal at Central level by the sectoral EAC in the Ministry.

The ToR for the project was granted on 28th February, 2017 followed by amendment on 30th May 2017. Public hearing was exempted as per provisions under 7(ii) of the EIA Notification 2006.

Total water requirement is estimated to be 3861 cum/h (existing Complex + BS-VI Facilities & ERU/MEG Project). Additional water requirement for proposed project is 824 m³/h and shall be met from existing raw water system - Mahanadi river. Total allocated raw water quantity is 6014 m³/h from Mahanadi river.

Total effluent generated from different industrial operations is estimated to be 52 cum/h shall be treated in the existing Effluent Treatment Plant and 12 cum/h is proposed to be discharged into deep sea.

The Ministry had earlier issued EC vide letter dated 6th July, 2007 for Grass root Refinery cum Petrochemical Complex of 15 MMTPA at Abhayachandrapur village, District Jagatsinghpur, Odisha in favour of M/s Indian Oil Corporation Limited. Further extension of validity of said environmental clearance was granted vide letter dated 18th September, 2014. Also, the said environmental clearance was amended vide letter dated 6th January, 2015 to include Rapid Rail loading system (RRLS) for Pet coke evacuation and minor revision in secondary unit capacities without affecting the product mix.

The monitoring report on compliance status of EC conditions forwarded by the Regional Office at Bhubaneswar vide their letter dated 9th February, 2018.

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

- *Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.*
- *Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016 and 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.*
- *To control source and the fugitive emissions, suitable pollution control devices shall be installed with different stacks to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stacks of adequate height as per CPCB/SPCB guidelines.*
- *Total water requirement shall not exceed 4685 cum/hr to be met from Mahanadi River. Necessary 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. Storm water drain shall be passed through guard pond.*
- *Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer to be done 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 ash from boiler shall be sold to brick manufacturers/cement industry.*
- *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.*
- *Regular VOC monitoring to be done at vulnerable points.*
- *The oily sludge shall be subjected to melting pit for oil recovery and the residue shall be bio-remediated. The sludge shall be stored in HDPE lined pit with proper leachate collection system.*
- *Comprehensive water audit to be conducted on annual basis and report to the concerned Regional Office of MEF&CC. Outcome from the report to be implemented for conservation scheme.*
- *Oil catchers/oil traps shall be provided at all possible locations in rain/ storm water drainage system inside the factory premises.*
- *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 5-10 m width shall be developed in more than 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 0.25% 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.*
- *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. In case of the treated effluent to be utilized for irrigation/gardening, real time monitoring system shall be installed at the ETP outlet.*
- *Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.*
- *All terms and conditions stipulated by the State Coastal Zone Management Authority in their recommendation/NOC letter dated 4th September, 2017 shall be strictly adhered to.*
- *The National Emission Standards for Petroleum Oil Refinery issued by the Ministry vide G.S.R. 186(E) dated 18th March, 2008 and G.S.R. 595(E) dated 21st August, 2009 as amended from time to time shall be followed.*
- *The National Emission Standards for Petrochemical (Basic & Intermediates) issued by the Ministry vide G.S.R. 820 (E) dated 9th November, 2012 as amended time to time shall be followed.*

Agenda No.39.3.7

Expansion of specialty chemicals in existing unit of M/s Paushak Ltd at Plot No. 135, 136, 145, 146, 147, 229 & 230, Village Panelav, PO Tajpura, Taluka Halol, District Panchmahal (Gujarat)

[IA/GJ/IND2/60354/2016, IA-J-11011/19/2017-IA-II(I)]

39.3.7.1 The project proponent and accredited consultant M/s Aqua-Air Environmental Engineers Pvt. Ltd. made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for proposed expansion of Specialty Chemicals at 898 MT/Month to 2490 MT/Month by M/s Paushak Ltd. and located at Plot No. 135, 136, 145, 146, 147, 229 & 230, Village Panelav, PO Tajpura, Taluka Halol, District Panchmahal (Gujarat).

(ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 20th EAC meeting held during 27th - 28th February 2017 and recommended Terms of References (ToR) for the Project. The ToR has been issued by Ministry vide letter No. J-11011/19/2017-IA. II (I) dated 26th May, 2017

(iii) All Products are listed at S.N. 5(f) of Schedule of Environmental Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

(iv) Ministry has issued EC earlier vide letter no. J-11011/19/2010-IA II(I) dated 06th February 2013 for Expansion of Specialty Chemicals to M/s Paushak Ltd.

(v) Existing land area is 59,554 m², additional 59,554 m² land will be used for proposed expansion. Industry is already developed greenbelt in an area of 33% i.e., 65308.9 (54.8%) m² out of 119108 m² of area of the project. The estimated project cost is Rs.75.5 crores including existing investment of Rs.5.5 crores. Total estimated project cost is Rs.70 crores for expansion Project. Total capital cost earmarked towards environmental pollution control measures is Rs.10 crores and the recurring cost (operation and maintenance) will be about Rs.1.10 crores per annum.

(vi) Total Employment will be 260 persons (Existing – 230 + Additional – 30) as direct & indirect after expansion. Industry proposes to allocate Rs.20 Crores (approx.) in next 5 years @ 5/2.5 % (5.7%) towards Corporate Social Responsibility. As per Form-1, there are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance.

(vii) Ambient air quality monitoring was carried out at 12 locations during March, 2017 to May, 2017 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (70.65-81.60 µg/m³), PM_{2.5} (41.96-54.78 µg/m³), SO₂ (12.16-21.73 µg/m³) and NO₂ (10.23-18.06 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion project would be 0.06 µg/m³, 0.11 µg/m³ and 0.04 µg/m³ with respect to PM₁₀, SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(viii) Total water requirement is 344 m³/day (Existing: 144 m³/day + Additional: 200 m³/day) of which fresh water requirement of 344 m³/day and will be met from Ground Water Supply.

(ix) Treated effluent of 245 m³/day (Industrial: 185 KL/Day + Domestic: 60 KL/Day). Industrial wastewater generation will be 185 KL/Day (Existing: 65 KL/Day + Additional: 120 KL/Day) which shall be treated in ETP and Final treated effluent shall be disposed to CETP of M/s Enviro Infrastructure Co. Ltd., Umaraya, District Vadodara. Domestic wastewater generation will be 60 KL/Day (Existing: 30 KL/Day + Additional: 30 KL/Day) which shall be treated in own STP and then shall be used for land irrigation.

(x) Power requirement after expansion will be 3000 KW including existing 1200 KW and will be met from MGVCL. State power distribution corporation limited (SPDCL). Existing unit has 3 Nos.

DG sets of 620 KVA, 325 KVA & 125 KVA capacity, additionally 1 Nos. DG Sets of Capacity 1000 KVA are used as standby during power failure. Stack (height 15 m) will be provided as per CPCB norms to the proposed DG sets of 1000 KVA in addition to the existing DG sets of 620 KVA, 325 KVA & 125 KVA which will be used as standby during power failure.

(xi) Existing unit has 1 Nos. of 3 TPH & 1 Nos. of 10 TPH (Proposed) Coal fired boiler will be installed. DG Sets – 4 Nos (Existing (625 KVA, 320 KVA, 125 KVA) & Proposed (1000 KVA)) & Process Vents (2 Nos.). Final Caustic Scrubber & Central Scrubber (Alkali Scrubber). Adequate Stack Height & Electro Static Precipitator, Bag Filter, Silencer & Caustic Scrubber with a stack of height of 60 m will be installed for controlling the Particulate emissions (within statutory limit of 115 mg/Nm³) for Proposed 10 TPH --- fired boilers respectively.

(xii) Details of Process emissions generation and its management.

Details of Stacks & Vents (Existing):

S. No.	Source of Emission	Stack Height (meter)	Stack Diameter (meter)	Pollution Control Equipment	Air Pollutant	Concentration
1	3 TPH Boiler	30	1	Bag Filter	SPM	< 150 mg/Nm ³
					SO ₂	< 100 ppm
					NOx	< 50 ppm
2	Final Caustic Scrubber	15	0.4	Caustic Scrubber	Phosgene	---
	Central Scrubber (Alkali Scrubber)				HCl	20 mg/ Nm ³
					Cl ₂	9 mg/ Nm ³
3	DG Set – 625 KVA (Stand by)	10	0.3	Silencer	SPM SO ₂ NOx	< 150 mg/ Nm ³ < 100 ppm < 50 ppm
	DG Set – 320 KVA (Stand by)					
4	DG Set – 125 KVA (Stand by)	5	0.1	Silencer		

Details of Stacks & Vents (Total Proposed):

S. No.	Source of Emission	Stack Height (meter)	Stack Diameter (meter)	Pollution Control Equipment	Air Pollutant	Concentration
1	10 TPH Boiler	60	1	Electro Static Precipitator (ESP)	SPM	< 150 mg/ Nm ³
					SO ₂	< 100 ppm
					NOx	< 50 ppm
2	3 TPH Boiler (Stand by)	30	1	Bag Filter	SPM	< 150 mg/ Nm ³
					SO ₂	< 100 ppm
					NOx	< 50 ppm
3	Final Caustic Scrubber	15	0.4	Caustic Scrubber	Phosgene	---
					HCl	20 mg/ Nm ³

	Central Scrubber (Alkali Scrubber)				Cl ₂	9 mg/ Nm ³
4	DG Set – 320 KVA (Stand by)	10	0.3	Silencer	SPM SO ₂ NOx	< 150 mg/ Nm ³ < 100 ppm < 50 ppm
	DG Set – 625 KVA (Stand by)					
5	DG Set – 125 KVA (Stand by)	5	0.1	Silencer		
6	DG Set - 1000 KVA (Stand by)	15	0.3	Silencer		

(xiii) Details of Solid waste/ Hazardous waste generation and its management.

In Existing as well as Proposed Scenario, Hazardous waste generation is Used Oil @ 2 MT/Yr is Collected, Stored, Transported, and Disposed by Selling to Registered Refiner. ETP Sludge @ 150 MT/Yr, MEE Salt @ 250 MT/Y is Collected, Stored, Transported, Disposed at TSDf of NECL, Nandesari. Discarded Container (Drums / Bags) @ 1,500 Nos. /Yr & 24,000 Nos. /Yr is Collected, Stored, Transported & given to registered vendors. Spent Carbon @ 5 MT/Yr, Residue & Waste (from VCF Process) @ 20 MT/Yr, Distillation Residue @ 60 MT/Yr & Distillation Residue (from contaminated organic solvents) @ 135 MT/Yr is Collected, Stored, Transported, given for co-processing in cement industries/RSPL, Panoli or disposal at CHWIF of NECL, Nandesari. Toxic Metal residue (from water purification plant) @ 10 MT/Yr is Collected, Stored, Transported, Disposed at TSDf of NECL, Nandesari/RSPL, Panoli. Hydrochloric Acid (30 %) @ 1500 MT/M, FeCl₂ @ 18 MT/M, Recovered Mercury @ 7.2 MT/M & Recovered Mercury Chloride @ 7.2 MT/M is Collected, Stored, Transported & Sold to authorized end users.

(xiv) Public Hearing for the proposed expansion project has been conducted by the State Pollution Control Board on 16th February, 2018. The main issues raised during the public hearing are related to Local Employment.

(xv) Certified Compliance Report was given by RO, MoEF&CC Bhopal on 09th November, 2017.

(xvi) Following are the list of existing and proposed products:

S. No.	Product	Quantity (MT/Month)			CAS No.	LD ₅₀	LC ₅₀
		Existing	Additional	Total		mg/kg	ppm
1	Phosgene	400	800	1200	75-44-5	--	96
2	3,4,4 – Trichlorocarbanilide	50	-50	0	101-20-2	>34600	--
3	Carbamoyl Chloride	40	-12	28			
	1 Dimethyl Carbamoyl Chloride				79-44-7	1000	180
	2 Diphenyl Carbamoyl Chloride				83-01-2	1500	
	3 Diethyl Carbamoyl Chloride				88-10-8	750	

	4	N Ethyl N Methyl Carbamoyl Chloride				42252-34-6	--	--
	5	N Methyl Piperazine Carbamoyl Chloride				55112-42-0	--	--
	6	N, N Bis 2 Chloroethyl Carbamoyl Chloride				2998-56-3		>1540
	7	Morpholine Carbamoyl Chloride				15159-40-7	--	--
4	Chloroformates		250	150	400			
	1	Benzyl Chloroformate				501-53-1	3000	590
	2	Isobutyl Chloroformate				543-27-1	--	--
	3	N Pentyl Chloroformate				638-41-5	--	--
	4	N Hexyl Chloroformate				6092-54-2	--	--
	5	Phenyl Chloroformate				1885-14-9	44	800
	6	Methyl Chloroformate				79-22-1	40	0.06
	7	2 Ethyl Hexyl Chloroformate				24468-13-1	--	--
	8	Cetyl Chloroformate				26272-90-2	--	--
	9	Myristyl Chloroformate				56677-60-2	5000	--
	10	Tert-Butyl Cyclohexyl Chloroformate				42125-46-2	2000	0.72
	11	Sec Butyl Chloroformate				17462-58-7	--	--
	12	1 Chloro2 Methyl Propyl Chloroformate				92600-11-8	--	--
	13	Propyl Chloroformate				109-61-5	650	--
	14	Isopropyl Chloroformate				543-27-1	--	--
	15	Ethyl Chloroformate				541-41-3	270	0.64
5	Vinyl Chloroformates		1	0	1	5130-24-5	--	--
	1	Isopropenyl chloroformate						
6	4 Nitrophenyl Chloroformate		10	-5	5	7693-46-1	--	--
7	Urea		10	190	200			
	1	Diuron				330-54-1	1017	5.05
	2	3,4,4 Trichloro Carbanilide				101-20-2	>34600	--
	3	1,3 Diethyl Urea				96-31-1	4000	--
	4	Tetramethyl Urea				632-22-4	794	--
	5	Tetrabutyl Urea				4559-86-8	1700	700

8	Isocyanates		50	250	300			
	1	Trans 4 Methyl Cyclohexyl Isocyanate				32175-00-1	--	--
	2	2 Phenyl Ethyl Isocyanate				1943-82-4	--	--
	3	Cyclohexyl Isocyanate				3173-53-3	13	--
	4	2 Chloroethyl Isocyanate				1943-83-5	--	--
	5	Isopropyl Isocyanate (75% in Toluene)				1795-48-8	--	--
	6	4 Chloro -3 - (Trifluoromethyl) Phenyl Isocyanate				16588-69-5	--	--
	7	Phenyl Isocyanate				103-71-9	800	0.02
	8	Tert Butyl Isocyanate				1609-86-5	360	0.06
	9	3,4 Dichlorophenyl Isocyanate				102-36-3	91	2.7
	10	3,5 Dichlorophenyl Isocyanate				34893-92-0	7000	--
	11	4 Chloro Phenyl Isocyanate				104-12-1	138	0.11
	12	P - Toluene Sulfonyl Isocyanate				4083-64-1	2234	--
	13	Stearyl Isocyanate				112-96-9	100	--
	14	3 Chlorophenyl Isocyanate				2909-38-8	4200	--
15	4 Isobutoxybenzyl Isocyanate	--	--	--				
9	Carbonates		20	20	40			
	1	Chloromethyl Isopropyl Carbonate				35180-01-9	--	--
	2	Bis 4 Nitro Phenyl Carbonate				5070-13-3	--	--
	3	4,5-Dimethyl-1,3-Dioxolen-2-One				37830-90-3	--	--
	4	4-Chloromethyl-5-Methyl-1,3-Dioxol-2-One				80841-78-7	--	--
	5	4-(Hydroxy Methyl)-5-Methyl-1,3-Dioxol-2-One				91526-18-0	--	--
	6	2-Methyl Cryloxy Ethyl Vinyl Carbonate				145497-35-4	--	--
	7	Dimethyl Carbonate				616-38-6	5000	5.36
	8	Diphenyl Carbonate				102-09-0	1500	--

10	Benzimidazol		2	-2	0			
	1	2 Benzimidazol				51-17-2	2910	--
11	Forskoline Carbonate		0.5	-0.5	0	81826-81-5	--	--
12	Chlorides/Acid Chlorides		22.5	17.5	40			
	1	3 Chloropropionyl Chloride - 3 CPC				625-36-5	1200	1
	2	Isobutyryl Chloride				79-30-1	--	--
	3	5 - Chlorovaleroyl Chloride				1575-61-7	320	--
	4	Pivaloyl Chloride				3282-30-2	638	1.4
	5	Chloroacetyl Chloride				79-04-9	220	660
13	Carbamates		22.5	17.5	40			
	1	N Butyl Propargyl Carbamate				76114-73-3	--	--
	2	2-Methyl-2-Propyl-1,3-Propanediol Dichlocarbamate				80471-57-4	--	--
	3	Benzyl Carbamate				621-84-1	--	--
	4	3 Iodo 2 Propynyl N Butyl Carbamate				55406-53-6	--	--
14	Carbodiimides		10	-5	5			
	1	Dicyclohexyl Carbodiimide - DCC				538-75-0	400	0.16
15	Protected Amino Acids		3	-3	0			
	1	CBZ Valine				1149-26-4	--	--
16	Nitriles		5	-4	1			
	1	Ethyl 2-(Hydroxylmino) Cyanoacetate				3849-21-6	--	--
	2	Acetonitrile				75-05-8	1320	3587
	3	2 Cyano Phenol				611-20-1	--	--
17	FTMA		1	-1	0	535-52-4	--	--
18	Polymers		0.5	0.5	1			
	1	Polyquat				75345-27-6	--	--
19	Thiadiazole		0	20	20			
	1	5-Methoxy-1, 3, 4-Thiadiazol-2(3H)-One				17605-27-5	--	--
20	Esters		0	209	209			
	1	Methyl 3-Aminocrotonate				14205-39-1	1760	0.02
	2	Phenyl Benzoate				93-99-2	1225	--

	3	Ethylene Glycol Dibenzoate				120-55-8	4190	200
	4	Benzyl Carbazate				5331-43-1	--	--
	5	Tert Butyl Carbazate				870-46-2	--	--
Total			898	1592	2490			

By-Products List

S.No	By-Product	Quantity (MT/Month)			CAS No.	LD ₅₀ mg/kg	LC ₅₀ Ppm
		Existing	Additional	Total			
1	Hydrochloric Acid (30 %)	500	1000	1500	7647-01-0	--	--
2	FeCl ₂	6	12	18	7705-08-0	1300	--
3	Recovered Mercury	3.6	3.6	7.2	7439-97-6	--	0.03
4	Recovered Mercury Chloride	3.6	3.6	7.2	7487-94-7	--	--
Total		513.2	1019.2	1532.4			

39.3.7.2 The proposal was last considered by the EAC in its meeting held on 29-31 May, 2018, wherein the EAC desired for clarifications/inputs in respect of the following:

- Categorization of project under the EIA Notification, 2006, item 5(b) and/or 5(f),
- Revised layout plan for proper demarcation of green belt 10 m width,
- Revised water balance for the unit conforming to Zero Liquid Discharge after the proposed expansion,
- Revised product list to ensure uniformity/consistency with the ToRs issued vide letter dated 26th May, 2017,
- Justification for several expansions during the period 2006 and 2013 as observed by the Regional Office of the Ministry vide their monitoring report dated 9th November, 2017,
- Proper explanation to be provided for the accident happened in 2015-2016 and necessary action/precautions taken by the project proponent.

Parawise replies submitted by the project proponent in response to the above observations, are as under:-

S. No.	Clarifications/inputs sought by the EAC	Reply submitted by the project proponent
1.	Categorization of project under the EIA Notification, 2006, item 5(b) and/or 5(f)	Project covered under item 5(f) of the schedule to the EIA Notification, 2006
2.	Revised layout plan for proper demarcation of green belt 10 m width	Revised layout plan has been submitted for proper demarcation of green belt 10 m width.
3.	Revised water balance for the unit conforming to Zero Liquid Discharge after the proposed expansion	Revised water balance has been submitted for the unit conforming to Zero Liquid Discharge after the proposed expansion.
4.	Revised product list to ensure uniformity/consistency with the ToRs issued vide letter dated 26 th May, 2017	Revised product list has been submitted to ensure uniformity/consistency with the ToRs issued vide letter dated 26 th May,

		2017
5.	Justification for several expansions during the period 2006 and 2013 as observed by the Regional Office of the Ministry vide their monitoring report dated 9 th November, 2017	There was no Environmental Clearance obtained between Years 2006 to 2013. Product Mix NOC's was taken as per Circular No. J.11013/41/2000-IA.II (I) dated February 20, 2001.
6.	Proper explanation to be provided for the accident happened in 2015-2016 and necessary action/precautions taken by the project proponent.	<p>Incident Description: During atmospheric distillation of Chloroformate intermediate the glass column top dome got damaged and vapour of the material spread in the atmosphere.</p> <p>Immediate Action Taken: 1. Immediately stirring was stopped. 2. Applied cooling in the reactor jacket. 3. Evacuate the plant personals and stop the other processes.</p> <p>As the Chloroformates are corrosive and lachrymatory (eye irritant in nature), adequate treatment had been given at the time of incident to the affected people. A medical person was sent to surrounding village(s) to give treatment to affected people.</p> <p>Corrective Action/Precaution Taken: 1. The glass safety valve is installed on the reactor vent line; Increase the outlet dia of vent line. 2. Both the vents were connected to the vent scrubber. 3. Compound gauge was installed to monitor internal pressure in place of pressure gauge. 4. Blind provided at the bottom of reaction column. 5. Regular pressure testing & preventive maintenance of the equipment have been strengthen.</p>

38.3.7.3 During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the expansion project of specialty chemicals of capacity from 898 TPM to 2490 TPM by M/s Paushak Ltd in a total area of 119108 sqm at Plot No. 135, 136, 145, 146, 147, 229 & 230, Village Panelav, PO Tajpura, Taluka Halol, District Panchmahal (Gujarat). These chemicals are to be used as intermediates for manufacturing agrochemicals and pharmaceuticals.

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

The ToR for the project was granted on 26th May, 2017. Public hearing was conducted by the SPCB on 16th February, 2018.

Total fresh water requirement is estimated to be 344 cum/day (Existing - 144 cum/day, Additional - 200 m³/day) to be met from the ground water. The necessary permission for abstraction of 144 cum/day from the CGWA has been obtained vide letter 14th January, 2011. It was informed that the application for additional abstraction of 200 cum/day has been submitted vide letter date 9th September, 2017.

Effluent generated due to present industrial operations is 95 KLD (Industrial-65 KLD, Domestic-30 KLD). Effluent generation after the proposed expansion would be increased to 178.5 KLD, which includes 138.5 KLD due to industrial operations and 40 KLD from domestic side. The industrial wastewater of 138.5 KLD shall be treated in RO / MEE / ATFD and treated effluent of 103 KLD would be recycled. Existing treated waste water of 65 KLD would be sent to CETP of M/s Enviro Infrastructure Co. Ltd, Umaraya, Vadodara (Gujarat) for final disposal.

Ministry had earlier issued EC vide letter dated 6th February, 2013 for expansion of Specialty Chemicals from 216.5 TPM to 898 TPM to in favour of M/s Paushak Ltd. The monitoring report on compliance status of EC conditions forwarded by the Regional Office at Bhopal vide their letter dated 9th November, 2017, was found to be satisfactory.

Consent to Operate for the present capacity of 898 TPM has been obtained from the State PCB vide letter dated 13th August, 2014, which is presently valid up to 17th June, 2019

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.

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

- *Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.*
- *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.*
- *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 201cum/day to be met from ground water. 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 and ATFD (agitated thin film drier). 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.*
- *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 should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided.*
- *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.*
- *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.39.3.8

Manufacturing of Activated Pharma Ingredients by M/s Skantr Lifescience LLP at Survey no. 340 & 345, Village-Amipura, Kensville Nalsarovar Road, District Bavla, (Ahmedabad)

[IA/GJ/IND2/62557/2017, IA-J-11011/46/2017-IA-II(I)]

39.3.8.1 The project proponent and their consultant M/s T. R. Associates (Ahmedabad) made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for environment clearance to the project Active Pharmaceutical Ingredients manufacturing unit at Survey No.: 340 & 345, Village Amipura, Taluka Bavla, District Ahmedabad, Gujarat by M/s Skantr Lifescience LLP.

(ii) The project proposal was considered by the expert appraisal committee (Industry 2) in its 37th EAC meeting held during 29th to 31st May 2018 and recommended Terms of References (ToR) for the project. The ToR has been issued by Ministry vide letter No. J-11011/46/2017-IA.II (I) dated 30/5/2017.

(iii) All Synthetic Organic Chemicals Industry projects, located outside the notified industrial area/estate and not fall into small scale unit criteria are listed at S.N. 5(f) of schedule of Environmental Impact Assessment (EIA) notification under Category 'A' and are appraised at Central level by the Expert Appraisal Committee (EAC).

(iv) Total 14485 m² land area will be used for proposed project. Industry will develop greenbelt in an area of 33 % i.e. 4,767 m² out of 14485 m² area of the project.

(v) The estimated project cost is Rs.7.048 crores. Total capital cost earmarked towards environmental pollution control measures is Rs.201.8 lakhs and the recurring cost (operation and maintenance) will be about Rs.122.1 lakhs per annum. Total employment will be 110 persons as a direct. It is proposed to allocate Rs. 17.62 Lakhs @ 2.5% towards Corporate Social Responsibility.

(vi) There are No national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wild life Corridors etc. Lies within 10 km distance from the project site. RiverRodh is flowing at a distance of 6.1 km in WNW direction, Amipura Pond is at 0.95 km in SSW direction and Canal from Vasna Barrage is flowing at a distance of 1 km in WSW direction.

(vii) Ambient air quality monitoring was carried out at 8 locations during March to May 2017 and the baseline data indicates the ranges of concentrations as: PM₁₀ (55.12 to 80.41 µg/m³), PM_{2.5} (22.49 to 34.42 µg/m³), SO₂ (9.63 to 25.15 µg/m³) and NO₂ (18.25 to 40.32 µg/m³) respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 17.4 µg/m³, 0.756 µg/m³, 3.94 µg/m³, 0.860 µg/m³ and 1.16 µg/m³ with respect to PM₁₀, SO₂, NO₂, HCl Process Gas and SO₂ Process Gas. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(viii) Total water requirement is 69 m³/day of which fresh water requirement of 34 m³/day and which will be met from Bore well.

(ix) Effluent of 39.5 m³/day will be treated through Effluent Treatment Plant (having MEE followed by Condenser). The unit will be based on Zero Liquid Discharge system.

(x) Power requirement of proposed project will be 550 kVA and will be met from Uttar Gujarat Vij Company Limited (UGVCL). 125 kVA DG Set will be used as standby during power failure. Stack (height 6.5 m) will be provided as per CPCB norms to the proposed DG. set.

(xi) Briquettes/Coal fired 1 TPH Steam Boiler will be installed. Cyclone Separator followed by Bag Filter with a stack height of 30 m will be installed for controlling the particulate emissions (within statutory limit of 150mg/Nm³).

(xii) Details of process emissions generation and its management.

S.No.	Vent attached to	Vent Height	Expected Pollutant	APC System	Quality of Pollutant
1	Glimepiride	12 m	HCl Gas	Common duct to Caustic Scrubber with adequate stack height	As per GPCB Norms
2	Carbidopa	12 m	SO ₂ Gas		
3	Folic Acid	12 m	H ₂ S Gas		

(xiii) Details of solid waste/hazardous waste generation and its management.

S.No	Description	Category	Quantity (MT/Annum)	Management
1	ETP Sludge & evaporation	35.3	252	Collection, storage and disposal at approved TSDF

	residue			Site
2	Distillation Residue	20.3	641.5	Collection, storage and disposal at approved CHWIF Site
3	Spent Catalyst & Carbon	28.2 & 28.3	79.6	Collection, storage and disposal at approved CHWIF Site
4	Spent Solvent	28.6	22.8	Collection, storage and disposal at approved CHWIF Site
5	Used / Spent Oil	5.1	0.1	Collection, storage and used within premises as a lubricant / sold to registered recycler.
6	Discarded bags/ drums/ containers	33.1	28.6	Collection, storage & sell to authorized vendor
7	Off specification drug	28.4	App. 5	Collection, storage and disposal at approved CHWIF Site
8	Date-expired Drugs	28.5	48	Collection, storage and disposal at approved CHWIF Site

(xiv) Public hearing for the proposed project has been conducted by the State Pollution Control Board on 6th March, 2018. The main issues raised during the Public Hearing are related local employment and domestic waste water management.

(xv) Following are the list of proposed products.

S.No	Products	Capacity (TPM)
1.	Atenolol	9.6
2.	Glimepiride	10.0
3.	Atorvastatin Calcium	6.0
4.	Abacavir Sulfate	2.1
5.	Pantoprazole Sodium	16.0
6.	Olanzapine	3.2
7.	Rosuvastatin Calcium	1.5
8.	Montelukast sodium	5
9.	Carbidopa	1.5
10.	Amlodipine Besylate	6.8
11.	Hydroxychloroquine	4.0
12.	Labetalol hydrochloride	3.0
13.	Methylcobalamin	0.1
14.	Lafutidine	2.2
15.	Aripiprazole	3.0
16.	Levosulpride	2.1
17.	Fexofenadine Hydrochloride	2.2
18.	Folic acid	3.0

19.	Ipratropium Bromide	2.2
20.	Ursodeoxycholic acid	1.4
21.	Albuterol	1.5
22.	Saxagliptin	1.0
23.	Research & Development	0.5
	Total	87.9 TPM

39.3.8.2 The proposal was last considered by the EAC in its meeting held on 29-31 May, 2018, wherein the EAC desired for clarifications/inputs in respect of the following:

- Clarity on products and quantity,
- Plot area,
- Compliance of other terms and conditions vis-a-vis the ToR dated 30th May, 2017,
- Revised water balance for the unit conforming to Zero Liquid Discharge,
- Revised Form-1

Parawise replies submitted by the project proponent in response to the above observations, are as under: -

S. No.	Clarifications/inputs sought by the EAC	Reply submitted by the project proponent
1.	Clarity on products and quantity	
2.	Plot area	
3.	Compliance of other terms and conditions vis-a-vis the ToR dated 30 th May, 2017	
4.	Revised water balance for the unit conforming to Zero Liquid Discharge	
5.	Revised Form-1	

39.3.8.3 During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for setting up Active Pharmaceutical Ingredients Manufacturing Unit of 87.9 TPM by M/s Skantr Lifescience LLP in a total area of 14485 sqm at Survey No. 340 & 345, Village Amipura, Taluka Bavla, District Ahmedabad (Gujarat).

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

The ToR for the project was granted on 30th May, 2017. Public hearing was conducted by the SPCB on 6th March, 2018. The main issues raised during the Public Hearing are related to employment to the local people, waste water management etc.

Total estimated water requirement is 69 cum/day of which fresh water requirement of 34 cum/day will be met from bore well.

Total effluent generated from different industrial operations is estimated to be 35 cum/day, which will be taken to the Effluent Treatment plant having MEE followed by Condenser. There will be no

discharge of treated/untreated waste water from the unit, and thus conforming to Zero Liquid Discharge.

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.

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

- *Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.*
- *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.*
- *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 34 cum/day to be met from ground water. 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 and ATFD (agitated thin film drier). 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.*
- *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 should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided.*
- *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.*
- *All the commitments made to the public 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.39.3.9

Capacity Expansion in Grain Based Distillery (125 KLPD to 140 KLPD) by modernization in fermentation technology by M/s Globus Spirits Limited at Village Shyampur, Tehsil Behror, District Alwar (Rajasthan)

[IA/RJ/IND2/75045/2018]

39.3.9.1 The project proponent and the accredited Consultant M/s J.M. EnviroNet Pvt Ltd made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for environmental clearance to the project under Section 7(ii) of EIA Notification, 2006 & its amendments, Capacity Expansion in Grain Based Distillery (125 KLPD to 140 KLPD) by modernization in fermentation technology at Village Shyampur, Tehsil Behror, District Alwar (Rajasthan) by M/s. Globus Spirits Limited.

(ii) All activities are listed at S.No. 5 (g) {Distilleries} of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

(iii) Ministry had issued EC earlier vide letter no. J-11011/237/2015.IA-II dated 30th June, 2016 to the existing project in favor of M/s Globus Spirits Limited. Existing land area is 7.276 ha. No additional land would be acquired for proposed expansion. Industry has already developed greenbelt in an area of 33 % i.e., 2.4 ha out of total area of the project. No additional cost will be required for the expansion project as the expansion will be achieved by modernization in fermentation technology. Also, present pollution control equipment are adequate for handling the pollution load.

(iv) There are no national parks, wildlife sanctuaries, biosphere reserves, Tiger/ Elephant Reserves, wildlife corridors etc., within 10 km distance from the project site. Sota River flowing at a distance of 1.0 km in SE direction and Sahibi River flowing at 6.0 km in SE direction.

(v) Total water requirement is 552 m³/day which shall be met from Ground water. No additional fresh water is required for the proposed expansion.

(vi) Process condensate water is being/ will be treated in Condensate Polishing Unit (CPU) and completely recycled in the plant. The plant is / will be based on Zero Liquid Discharge System.

(vii) Power requirement after expansion will be same as existing i.e. 3.2 MW and will be met from Co-generation Power Plant. Existing unit has 2 DG sets of 600 KVA & 320 KVA capacity each which are used as standby during power failure. Stack (for 600 kVA - 6.5 m & for 320 kVA - 3.6 m) has been provided as per CPCB norms to the existing DG sets.

(viii) Existing unit has 2 nos. boiler of 25 TPH & 14 TPH capacity each which is Rice husk (biomass)/ coal fired. ESP & multi cyclone with a stack of height of 45 m & 38 m respectively has been installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm³ for the boilers.

(ix) Details of Process emissions generation and its management

- Adequate APCEs (ESP & multi - cyclone) have been installed to maintain the emission levels within the stipulated standards.
- CO₂ generated during the fermentation process is being/will be collected by utilizing CO₂ scrubbers and sold to authorized vendors.
- Online Stack Monitoring system is already in place and operational.

(x) Details of Solid waste/ Hazardous waste generation and its management.

- Solid waste from the grain based operations generally comprises of fibres and proteins in the form of DDGS, which are being / will be ideally used as cattle feed. Yeast sludge is being / will be sent to the sludge drying beds or may be added to the wet cake.

- Ash from the boiler is being / will be supplied to brick/cement manufacturers.
- Used oil & grease generated from plant machinery/gear boxes as hazardous waste are being / will be sold out to the CPCB authorized recyclers.

(xi) Certified compliance report of existing EC was obtained from Regional Office of MoEFCC (Lucknow) vide letter no. IV/ENV/R/Ind – 178/974/2018/27 dated 6th April, 2018.

(xii) The details of products and capacity as under:

S. No.	Product Details	Existing Quantity	Proposed Quantity	Total Quantity
1.	Distillery (ENA/RS/ IMFL/ CL)	125 KLPD	15 KLPD	140 KLPD
2.	Co-generation Power Plant	3.8 MW	No change	3.8 MW

39.3.9.2 During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for modernization of grain based distillery and thereby its expansion from 125 KLPD to 140 KLPD by M/s Globus Spirits Limited in the existing plant area of 7.276 ha at Village Shyampur, Tehsil Behror, District Alwar (Rajasthan). The proposed modernization would involve better fermentation technology and process optimization by adding advanced enzyme and yeast, which would ultimately result in higher alcohol concentration and better efficiency.

The project/activity is covered under category A of item 5(g) 'Distillery' of Schedule to the EIA Notification, 2006, and requires appraisal at central level by the sectoral EAC in the Ministry.

Total estimated water requirement of 552 cum/day is proposed to be met from ground water and no additional fresh water is required for the proposed expansion. Further, there shall be no additional requirement of land, steam, storage area and cost.

Total effluent generated from different industrial operations shall be treated in Condensate Polishing Unit (CPU) and completely recycled to meet the plant requirements. There will be no discharge of treated/untreated waste water from the unit, and thus conforming to Zero Liquid Discharge.

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.

Ministry had earlier issued EC vide letter dated 30th June, 2016 in favour of M/s Globus Spirits Limited to the project for expansion of distillery from 100 KLPD to 125 KLPD and the cogeneration power plant from 3 to 3.8 MW. The monitoring report on compliance status of EC conditions forwarded by the Regional Office at Lucknow vide their letter dated 6th April, 2018, was found to be satisfactory.

Consent to Operate for the present capacity of 125 KLPD has been obtained from the State PCB vide letters dated 22nd December, 2016 & 1st September, 2017, which are presently valid up to 31st October, 2021 & 30th June, 2022 respectively.

39.3.9.3 *The EAC, after deliberations and as per the provisions contained in para 7(ii) of the EIA Notification, 2006, exempted the project from fresh EIA studies, EMP and the public hearing, and*

recommended the project for grant of environmental clearance for a period of one year, subject to compliance of terms and conditions as under: -

- *The environmental clearance shall be valid for a period of one year. Meanwhile, based on the certified compliance report for the conditions stipulated in the EC and the prevailing status for no increase in pollution load at the enhanced capacity of 140 KLPD, the project shall be reviewed by the EAC for its continuance beyond one year.*
- *Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.*
- *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.*
- *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.*
- *Total fresh water requirement shall not exceed the present of 552 cum/day, proposed to be met from ground water. Prior permission shall be obtained from the concerned regulatory authority in this regard.*
- *The spent wash of 816 KLD quantity will be treated through centrifuged decanter for solid separation, supernatant will be concentrate in MEE and Concentrate from MEE, will be mixed with the Wet cake.*
- *Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.*
- *Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm and the 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:-*
 - 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 5-10 m width shall be developed in more than 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 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.*
- *There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places.*
- *Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.*
- *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.*
- *CO₂ generated from the process shall be bottled and sold to authorized vendors.*

Day two - 26th July, 2018

Agenda No. 39.3.10

Setting up of Molasses/Grain based distillery of 120 KLPD and Co-generation (3 MW) unit at village Hakimpur, Post Nandganj, Tehsil Saidpur District Ghazipur (Uttar Pradesh) by M/s Lords Distillery Limited.

[IA/UP/IND2/63478/2017, J-11011/150/2017-IA-II(I)]

39.3.10.1 The Project Proponent and the accredited consultant M/s Ascenso Enviro Pvt Ltd made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for environmental clearance to the project for setting up of Molasses/Grain based distillery of 120 KLPD and Co-generation (3 MW) unit at village Hakimpur, Post Nandganj, Tehsil Saidpur District Ghazipur (Uttar Pradesh) by M/s Lords Distillery Limited.

(ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 22nd meeting held during 17- 18 April, 2017 and recommended Terms of References (ToRs) for the Project. The ToR has been issued by Ministry vide letter No. J 11011/150/2017 - IA. II (I); dated 30th May, 2017.

(iii) All Distillery (Molasses Based) are listed at S.N. 5(g) of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

(iv) Total land area will be 64820 sqm. Green belt will be developed Industry will develop in an area of 33 % i.e., 21390 sqm out of total area of the project. The estimated project cost is Rs.12500 Lakh. Total capital cost earmarked towards environmental pollution control measures is

Rs 5625 Lakh and the Recurring cost (operation and maintenance) will be about Rs 175 Lakh per annum. Total Employment will be 155.0 persons as direct & 150.0 persons indirect establishment. Industry proposes to allocate Rs 3.12 Crores @ of 2.5 % towards Corporate Social Responsibility.

(v) There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. River Ganga is flowing at a distance of 6.22 km in South direction and River Ganga is flowing at a distance of 3.36 km in North East direction.

(vi) Ambient air quality monitoring was carried out at Eight (08) locations during 1st January 2017 to 31st March 2017 and the baseline data indicates the ranges of concentrations as: PM10 (45.2 – 82.8 µg/m³), PM2.5 (26.0 – 46.8 µg/m³), SO₂ (7.0 - 15.6 µg/m³) and NO₂ (9.2 – 22.6 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.55 µg/m³, 1.93 µg/m³ and 2.32 µg/m³ with respect to PM10, SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(vii) Total water requirement is 2739.0 m³/day of which fresh water requirement is 840.0 (@ 7.0 KL/KL (Molasses Based Operation)m³/day will be met from Ground water. During Grain based Operation Total water requirement is 2434.0 m³/day of which fresh water requirement is 780.0 (@ 6.5 KL/KL m³/day.

(viii) During Molasses based operation spent wash of 840 KLD quantity will be treated through Concentration in MEE then concentrate from MEE will be incinerated in Slop fired boiler. The plant will be based on Zero Liquid discharge system. During Grain based operation spent wash of 816 KLD quantity will be treated through will be first centrifuged for solid separation, supernatant will be concentrate in MEE and Concentrate from MEE, will be mixed with the Wet cake.

(ix) Power requirement will be 3000 kW. Two number of DG sets of capacity 1000 kVA & 500 kVA will be used as standby during power failure. Stack (6 m height) will be provided as per CPCB norms.

(x) One Slop fired boiler of 35 TPH capacity will be installed. Bag filter with a stack of height of 65 m will be installed to control the particulate emissions within the statutory norms. Recovered Carbon Di oxide will be sold in the market.

(xi) Demolition solid waste will be disposed as per Solid waste management rules 2016. *Ash generated during molasses based operation (47.3 MT/Day)* will be used as manure. *Ash generated during grain based operation (74.0 MT/Day)* will be used in manufacturing of cattle feed. Used oil and Grease will be provided to the authorised vendor for end disposal.

(xii) Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 30.01.2018. The main issues raised during the public hearing are related to Air pollution, Water pollution, Fly ash disposal and employment in the local area.

(xiii) No Litigation Pending is pending against the proposal.

(xiv) The details of products are as under:

S. No.	Product	Quantity
1	RS/ENA/AA	120 KLPD
2	Co-generation plant	3 MW

39.3.10.2 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for setting up of Molasses/Grain based distillery of 120 KLPD (RS/ENA/AA) and Co-generation (3 MW) unit by M/s Lords Distillery Limited in a total area of 64820 sqm at village Hakimpur, Post Nandganj, Tehsil Saidpur District Ghazipur (Uttar Pradesh).

The project/activity is covered under category A of item 5 (g)(i) 'All Molasses based distilleries' and 5 (g)(ii) 'Non-molasses based distillery' of the Schedule to the Environmental Impact Assessment Notification, 2006 and requires appraisal at Central level by the sectoral EAC in the Ministry

The ToR for the project was granted on 30th May, 2017. Public hearing was conducted by the SPCB on 30th January, 2018.

Total estimated water requirement during molasses based operations will be 2739 cum/day of which fresh water requirement will be 840 cum/day and during Grain based operation the total estimated water requirement will be Total water requirement is 2434.0 m³/day of which fresh water requirement is 780 (@ 6.5 KL/KL m³/day proposed to will be met from Ground water.

During Molasses based operation spent wash of 840 KLD quantity will be treated through Concentration in MEE then concentrate from MEE will be incinerated in Slop fired boiler. The plant will be based on Zero Liquid discharge system. During Grain based operation spent wash of 816 KLD quantity will be treated through will be first centrifuged for solid separation, supernatant will be concentrate in MEE and Concentrate from MEE, will be mixed with the Wet cake.

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.

39.3.10.3 *The EAC, after deliberations, observed that the proposed distillery would be of course of total capacity 120 KLPD, but the capacity of different plants both molasses based and grain based, were not firmed up. Given the different operational details, raw materials, utilities, treatment mechanism, etc for the two trains namely, molasses and grain based plants, the project proponent were asked for submission of the revised proposal accordingly, which would also include the following:-*

- *Only the non-edible grains to be utilized for the grain based distillery,*
- *Detailed plot plan indicating both the trains separately,*
- *Details of effluent treatment and disposal, separately for both the trains,*
- *Mitigation measures for odour management,*
- *Plan for Corporate Environment Responsibility (CER) and the traffic management to be submitted. Traffic management plan to be duly certified by the concerned regulatory authority.*

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

Agenda No.39.3.11

Expansion of Agrochemical & Agrochemical Intermediate Products at Plot No.43/1, GIDC Dahej, Taluka Vagra, District Bharuch (Gujarat) by M/s Tagros Chemical India Ltd.

[IA/GJ/IND2/52237/2016; J-11011/122/2016- IA II(I)]

39.3.11.1 The Project Proponent and the accredited consultant M/s Aqua-Air Environmental Engineers Pvt Ltd, made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for expansion of Agrochemical & Agrochemical Intermediate Products from 1265 MTPM to 2350 MTPM by M/s Tagros Chemical India Ltd at Plot No. 43/1, GIDC Dahej, Village Dahej, Taluka Vagra, District Bharuch (Gujarat).

(ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 8th EAC meeting held during 26 - 27 May 2016 and recommended Terms of References (TORs) for the Project. The TOR has been issued by Ministry vide letter No.J-11011/122/2016-IA.II (I); dated 15th July, 2016.

(iii) All Products are listed at S.N. 5(b) of Schedule of Environmental Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

(iv) Ministry has issued EC earlier vide letter no. J-11011/20/2012-IA II dated 6th March 2014 for Pesticide Manufacturing unit to M/s Tagros Chemical India Ltd.

(v) Existing land area is 71,359 m², no additional land will be required for proposed expansion. Greenbelt will be developed in an area of 21,359 m² (30%) out of total area of the project.

(vi) The estimated project cost is Rs.164.81 Crores including existing investment of Rs.92.42 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs.15.07 Crores and the recurring cost (operation and maintenance) will be about Rs.9.3 Crores per annum. Total employment generation will be 345 persons (145 (Existing) + 200 (Additional) including contract workers) as direct & indirect after expansion.

(vii) It is reported that as per Form 1, no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance.

(viii) Ambient air quality monitoring was carried out at 9 locations during March, 2016 to May, 2016 and submitted baseline data indicates that ranges of concentrations of PM10 (54-83 µg/m³), PM2.5 (26-49 µg/m³), SO₂ (7-24 µg/m³) and NO₂ (9-31 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.07 µg/m³, 0.12 µg/m³ and 0.04 µg/m³ with respect to PM10, SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(ix) Total water requirement is 2353 cum/day of which fresh water requirement will be 1413 cum/day and will be met from GIDC Water Supply.

(x) Treated effluent of 1474 cum/day. Effluent of 1474 cum/day shall be treated in ETP followed by MEE & RO. RO permeate and steam condensate of 940 and 40 cum/day will be recycled/reused and remaining effluent of 494 cum/day shall be sent to GIDC effluent pipeline for final disposal into deep sea. Existing discharge to deep sea will be maintained i.e. 494 cum/day & Additional 980 cum/day will be recycled/reused.

(xi) Power requirement will be increased from 4.5 MW to 5.5 MW and will be met from DGVCL. Existing unit has 3 Nos. DG sets of 2500 kVA, 1500 kVA & 1000 kVA capacity, additionally 2 Nos. DG Sets of Capacity 1500 kVA and 1000 kVA will be installed and used as standby during power failure. Stack (height 10 m) will be provided as per CPCB norms.

(xii) Existing unit has 3 Nos. of 16 TPH & 2 Nos. of 10 TPH (1 Stand-by) Coal fired boiler. Multi cyclone separator/bag filter/ESP with a stack of height of 30 m will be installed to control the particulate emissions (within statutory norms). No additional boiler will be installed under proposed expansion.

(xiii) Details of Process emissions generation and its management are as under:-

S. No.	Process attached to	Stack Height (m)	Diameter (m)	Air pollution control system	Pollutants
1	DVAC Manufacturing	15	0.15	Two stage water scrubber followed by alkali scrubber	SO ₂ , HCl
2	Permethrin & Deltamethrin Manufacturing	15	0.15	Two stage water scrubber	HCl
3	MPB Manufacturing	15	0.15	Two stage water scrubber followed by alkali scrubber	HCl, Cl ₂ , HBr
4	Metamitron Thiamethoxam, Carfentrazone&Sulfentrazone Manufacturing	15	0.15	Two stage water scrubber followed by alkali scrubber	SO ₂ , HCl, Cl ₂

(xiv) Used Lube will be sold to GPCB Authorized Recyclers. Discarded Drums & Containers, Discarded Liners & Cardboards will be sent back to the supplier for reuse or sold to GPCB authorized vendor. Cotton wastes/raw dust/bag filters containing pesticides will be sent for co-processing at cement industry or common incineration facility. Expired pesticides will be sent to common incineration facility. Spent catalysts (Reney Nickel Catalyst) will be send back for regeneration or return to suppliers. Process/Distillation Residue will be sent for co-processing or sent to common incineration facility. ETP Sludge, MEE Salt ,Spent carbon from ETP, Sludge from wet scrubber, Incineration ash will be sent to TSDF Site. Spent Ion Exchange Resins will be sent for regeneration or returned to supplier. Spent solvent is Collected, Stored, and Transported &

Recovered within premises. Fly Ash (Coal Ash) will be Collected, Stored, Transported and Final Disposal at bricks manufacturers or common TSDF site.

(xv) Public Hearing is exempted as per para 7(i) III stage (3) (i) (b) of EIA Notification, 2006.

(xvi) Certified Compliance Report was given by RO, MoEF&CC Bhopal on 27/11/2017.

(xvii) No litigation is pending against the proposal.

(xviii) Following are the list of existing and proposed products:

S. No.	Products	Existing Capacity (MTPM)	Proposed capacity (MTPM)	CAS Nos.	Ld ₅₀ (mg/kg)
Pesticides & Pesticides Intermediates					
1	DV Acid Chloride	200	250	52314-67-7	4123
2	Carfentrazone	100	150	128621-72-7	>4000
3	Ethofumesate	50	100	26225-79-6	>8743
4	Metamitron	100	150	41394-05-2	>4000
5	Cypermethrin	150	200	52315-07-8	>2000
6	Permethrin	75	100	52645-53-1	430 to 4000
7	Alphamethrin	50	75	67375-30-8	>2000
8	Meta Phenoxy Benzaldehyde	200	250	39515-51-0	1222
9	Metaphenoxybenzyl Alcohol	100	100	13826-35-2	2040
10	RRCMA	30	30	59042-50-8	>2000
11	Dicamba	50	500	1918-00-9	>2740
12	Deltamethrin tech.	10	30	52918-63-5	>2000
13	Sulfentrazone	100	100	122836-35-5	>2855
14	Thiamethoxam	50	100	153719-23-4	>2000
15	Bio Pesticides	-	215	-	-
Total		1265	2350		
Inorganic Products (not covered under EIA Notification, 2006)					
15	PAC/AlCl ₃	572.50	656.75	1327-41-9	2000
16	Sodium Sulphite	560.7	747.6	7757-83-	820

	Powder			7	
17	NH ₄ Cl Powder	162.7	216.6	12125-02-9	1300
18	KCl Powder	124.4	137.5	7447-40-7	3020
Total		2685.3	4267.7		
By products:					
1	HCl Solution	606.51	606.51	7647-01-0	238-277
2	Cu(OH) ₂ Powder	2.10	2.63	20427-59-2	200
3	Spent Acid	3333.7	7618	7664-93-9	2440
Total		3942.31	8227.14		
4	D.G. Sets	2500 KVA x 1, 1500 KVA x 1, 1000 KVA x 1	2500 KVA x 1, 1500 KVA x 2 1000 KVA x 2		

39.3.11.2 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for expansion of agrochemical & agrochemical intermediate products from 1265 TPM to 2350 TPM (15 nos of products) by M/s Tagros Chemical India Ltd in a total area of 71,359 sqm at plot No.43/1, GIDC Dahej, Village Dahej, Taluka Vagra, District Bharuch (Gujarat). With the proposed expansion, inorganic products and by-products would increase from the present of 2685.3 TPM to 4267.7 TPM, and from 3942.31 TPM to 8227.14 TPM respectively.

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

The ToR for the project was granted on 15th July, 2016 with exemption from public hearing under the provisions as per Para 7 Stage III. (3) (i) (b) of the EIA Notification, 2006, as plant is located in notified Industrial Estate.

Total water requirement is estimated to be 2353 cum/day, which includes fresh water demand of 1413 m³/day (from the present of 1029 cum/day) will be met from GIDC Water Supply.

Total effluent generation shall be increased from 920 cum/day to 1474 cum/day, which would be treated in the ETP followed by MEE & RO. The RO permeate of 940 cum/day and steam condensate of 40 cum/day will be recycled/reused, and the remaining treated effluent of 494 cum/day shall be sent to GIDC effluent pipeline for final disposal into deep sea.

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 Ministry had earlier issued EC vide letter dated 6th March 2014 in favour of M/s Tagros Chemical India Ltd for Pesticide manufacturing. The monitoring report on compliance status of the

EC conditions, forwarded by the Regional office Bhopal vide letter dated 27th November, 2017, was found satisfactory.

Consent to Operate for the present capacity of 1485 TPM has been obtained from the State PCB vide letter dated 16th September, 2014, which is presently valid up to 14th February, 2019.

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

- *Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.*
- *The incremental treated effluent of 980 cum/day and also the present discharge of 494 cum/day to GIDC pipeline, shall be reused/recycled for different industrial operations. No waste/treated water shall be discharged outside the premises and thus ensuring Zero Liquid Discharge.*
- *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.*
- *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 1413 cum/day to be met from GIDC water supply. 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 and ATFD (agitated thin film drier). 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.*

- *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 should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided.*
- *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.*
- *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. 39.3.12

Manufacturing of Active Pharmaceutical Ingredients of capacity 125 TPM at Survey No. 112 Paiki 2&113, Paiki 1& 2, village chachapar, Taluka & District Morbi (Gujarat) by M/s Healthgenic Chemicals Pvt Ltd

[IA/GJ/IND2/65521/2017, J-11011/328/2017-IA-II(I)]

39.3.12.1 The project proponent and the accredited consultant M/s T R Associates, made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for environment clearance to the project for proposed Active Pharmaceutical Ingredients manufacturing unit at Survey No.112 Paiki 2 & 113, Paiki 1 & Paiki 2, Village Chachapar, Taluka and District Morbi (Gujarat) by M/s Healthgenic Chemicals Pvt. Ltd.

(ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 39th meeting held during 25th to 27th July 2018 and recommended Terms of References (TORs) for the project. The TOR has been issued by Ministry vide letter no. J-11011/328/2017-IA.II (I) dated 10/11/2017.

(iii) All Synthetic Organic Chemicals Industry projects, located outside the notified industrial area/estate and not fall into small scale unit criteria are listed at S.N.5(f) of schedule to the Environmental Impact Assessment (EIA) Notification, 2006 under Category 'A' and are appraised at Central level by the Expert Appraisal Committee (EAC).

(iv) Total land area will be 13,304 sqm. Green belt will be developed in an area of 34.5% i.e. 4,590 sqm out of 13,304 sqm area of the project.

(v) The estimated project cost is approx. Rs.4 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs.70 Lakhs and the recurring cost (operation and maintenance) will be about Rs.37. Lakhs per annum. Total employment will be 40 persons as a direct.

(vi) There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wild Life Corridors etc within 10 km distance from the project site. Phulki River is flowing at a distance of 4.7 km in ENE direction. Demi River is flowing at a distance of 3.6 km in WSW direction and DEMI II-Irrigation Project is situated at a distance of 5.30 km in SSE direction.

(vii) 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 (57.10 to 86.20 µg/m³), PM_{2.5} (21.15 to 36.63 µg/m³), SO₂ (9.79 to 24.97 µg/m³), NO₂ (20.01 to 35.87 µg/m³) respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.40 µg/m³, 0.055 µg/m³, 0.40 µg/m³, 1.00 µg/m³, 3.00 µg/m³ with respect to PM₁₀, SO₂, NO₂, NH₃, HCl. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(viii) Total estimated water requirement is 79 cum/day of which fresh water requirement of 32m³/day will be met from Borewell.

(ix) Industrial effluent of 53.8m³/day will be treated through Effluent Treatment Plant followed by MEE and the stated system will achieve Zero Liquid Discharge. Domestic effluent of 3.8 m³/day will be disposed off through Septic tank/ Soak pit system.

(x) Power requirement of proposed project will be 375 KVA proposed to be met from Paschim Gujarat Vij Company Limited (PGVCL). DG set of 125 kVA capacity will be installed and will be used as standby during power failure. Stack height of 6 m will be provided as per CPCB norms.

(xii) Briquettes/Coal fired boiler of 1 TPH capacity will be installed. Cyclone Separator followed by Bag Filter with a stack height of 30 m will be provided to control the particulate emissions within statutory norms.

(xiii) Details of process emissions generation and its management is as under:-

S. No.	Stack attached to	Stack Height (m)	Expected Pollutant	APC System
1	Reactor -1	12	HCl Gas	Caustic scrubber followed by stack
2	Reactor -2	12	Ammonia	HCl scrubber followed by stack
3	Reaction vessels	12	VOC	Two stage Condenser followed by activated carbon and scrubber.

(xiv) Details of solid waste/hazardous waste generation and its management is as under:-

S. No.	Description	Category	Quantity (MTPM)	Mode of Disposal
1	ETP Sludge + Evaporation residue	35.3	390	Collection, storage and disposal at approved TSDF Site.
2	Distillation residue	20.3	175	Collection, storage and disposal at approved CHWIF for disposal.
3	Process residue	28.1	180	Collection, storage and disposal at approved CHWIF for disposal
4	Spent Carbon	28.3	26	Collection, storage and disposal at approved CHWIF for disposal
5	Spent catalyst	28.2	3	
6	Used / Spent Oil	5.1	0.5	Collection, storage and used within premises as a lubricant / sold to registered recycler.
7	Discarded bags/ drums/ containers	33.1	30	Collection, storage & sell to authorized vendor
8	Off specification product/drugs	28.4 & 28.5	App. 5	Collection, storage and disposal at approved CHWIF for disposal.

(xv) Public hearing for the proposed project has been conducted by the State Pollution Control Board on 2nd May, 2018. The main issues raised during the Public hearing are related local employment and social upliftment activities in surrounding area.

(xvi) The details of proposed products is as under:-

S. No.	Name of Product	Capacity (MTPM)
1	Povidon Iodine	30
2	Bronopol	4
3	Diclofenac Sodium	4
4	Diclofenac Potassium	4
5	Sodium Citrate	15
6	Carvedilol	4
7	Metformin Hydrochloride	4
8	Pentoxifylline	10
9	Pregabalin	4
10	Pentoprazole Sodium	4
11	Glimepiride	4
12	Topiramate	4
13	Gabapentin	4
14	Atorvastatin Calcium	30

39.3.12.2 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for setting up of Active Pharmaceutical Ingredients manufacturing unit of capacity 125 TPM by M/s Healthgenic Chemicals Pvt. Ltd in a total area of 13,304 sqm at Survey No.112 Paiki 2 & 113, Paiki 1 & Paiki 2, Village Chachapar, Taluka and District Morbi (Gujarat).

The project/activities 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.

The ToR for the project was granted on 10th November, 2017. Public hearing was conducted by the SPCB on 2nd May, 2018.

Total water requirement is estimated to be 79 cum/day of which fresh water requirement of 32m³/day will be met from Borewell.

Total effluent generated from different industrial operations is estimated to be 53.8m³/day. Generated effluent will be treated through Effluent Treatment Plant followed by MEE. Domestic effluent of 3.8 m³/day will be disposed off through Septic tank/ Soak pit system. There will be no discharge of treated/untreated waste water from the unit, and thus conforming to Zero Liquid Discharge.

39.3.10.3 *The EAC, after deliberations and especially in view of the unit proposed in non-industrial area, desired for concurrence of the State Pollution Control Board to allow APIs manufacturing therein.*

The proposal was, therefore, not taken forward for the needful.

Agenda 39.3.13

Expansion of Soda Ash and Captive Cogeneration Power Plant at village Mithapur & Surajkaradi, Taluka Dwarka, District Devbhumi (Gujarat) by M/s TATA Chemicals Ltd.

[IA/GJ/IND2/53444/201, J-11011/140/2016-IA II (I)]

39.3.13.1 The Project Proponent and the accredited Consultant M/s. J.M. Enviro Net Pvt Ltd made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for environmental clearance to the project for proposed expansion of Soda Ash & Captive Cogeneration Power Plant at Villages Mithapur & Surajkaradi, Taluka Dwarka, District: Devbhumi Dwarka, Gujarat by M/s. Tata Chemicals Ltd.

(ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 9th meeting held during 27th-28th June, 2016 and recommended Terms of References (ToRs) for the project. The ToR has been issued by Ministry vide Letter No. J-11011/140/2016-IA.II.(I) dated 2nd August, 2016.

(iii) All activities are listed at S.No. 4(e) {Soda Ash Industry} and 1(d) {Thermal Power Plant} of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

(iv) Ministry had issued EC earlier vide letter no. J-13011/20/2006.IA-II(T) dated 22nd May, 2006; amended on 30th May, 2007 for expansion of Captive Co-generation Power Plant in favour of M/. Tata Chemicals Ltd.

(v) Existing land area is 231 Ha (2310000 m²). No additional land will be required for proposed expansion.

(vi) Greenbelt will be developed in an area of 33 % i.e., 131 Ha (1310000 m²) out of total area of the project.

(vii) The estimated project cost is Rs.1042.07 crores including existing investment of Rs.2977.30 crores. Total capital cost earmarked towards environmental pollution control measures is Rs.80.79 crores and the Recurring cost (operation & maintenance) will be about Rs.16.29 crores per annum. Total Employment generation will be 4551 persons as direct & 10,262 persons indirect after expansion.

(ix) There are Marine National Park and Marine Sanctuary (2.19 km in East direction), within 10 km distance from the project site. Shamlasar River is flowing at a distance of 9.7 km in SE direction. Bhimgaja Rainwater Lake is at a distance of 9.7 km in SE direction. Gopi Talav is at a distance of 9.5 km in ESE direction. Arabian Sea is at a distance of 2.44 km. Gulf of Kutch is at a distance of 2.19 km.

(x) Ambient air quality monitoring was carried out at 9 locations during (Post Monsoon Season, 2016) October to December, 2016 and the baseline data indicates the ranges of concentrations PM₁₀ (36.52 to 74.21 µg/m³), PM_{2.5} (8.71 to 27.13 µg/m³), SO₂ (4.63 to 12.40 µg/m³) and NO₂ (6.55 to 15.21 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLC's after the proposed expansion project would be 1.56 µg/m³, 4.19 µg/m³ and 1.39 µg/m³ with respect to PM₁₀, SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(xi) Total Sea water requirement is 30,872 m³/day for proposed expansion which will be met from existing sea water intake facility. There is no additional fresh water requirement for proposed expansion.

(xii) Effluent (Treated waste water) of 2,40,000 m³/day quantity will be treated through existing facilities.

(xiii) Power requirement after expansion will be 92.60 MW including existing 62.97 MW and will be met from Captive Co-generation Power Plant (Total capacity after expansion 125 MW). Existing unit has 09 DG sets of 8318 Kw capacity which are used as standby during power failure. There is no proposed DG sets.

(xiv) Existing unit has 757 TPH (Steam generation capacity) Coal/Petcoke (Fuel) fired boilers. Additionally Coal/ Petcoke fired boiler of 300 TPH capacity will be installed. ESP with a stack of height 130 m will be installed to control the particulate emissions within the statutory norms of 30 mg/Nm³ for the proposed boiler.

(xvi) Details of Solid waste/ Hazardous waste generation and its management is given in EIA Report (Chapter-10, Section 10.5).

(xvii) Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 17th Feb., 2018. The main issues raised during the public hearing are related to Local Employment, Environment, Health and Education.

(xviii) Certified compliance report of existing EC for Captive Co-generation Power Plant is obtained from Regional office of MoEFCC vide letter no. 5-13/2000(ENV)/138 dated 23rd May, 2018.

(xix) No litigation is pending against the proposal.

(xx) The details of products are as under:

S. No.	Product Details	Unit	Existing Capacity	Proposed Capacity	Total Capacity
1.	Soda Ash	TPA	10,91,000	2,25,000	13,16,000
2.	Power	MW	85	40	125
3.	Steam	TPH	757	300	1057

39.3.13.2 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for expansion of Soda Ash (1091000 to 1316000 TPA) & Captive Cogeneration Power Plant (85 MW to 125 MW) by M/s Tata Chemicals Ltd in a total area of 231 ha at Villages Mithapur & Surajkaradi, Taluka Dwarka, District Devbhumi Dwarka (Gujarat).

The project/activities are covered under category A of item 4(e) 'Soda ash industry' of the Schedule to the Environment Impact Assessment Notification, 2006, and requires appraisal at central level by the sectoral EAC in the Ministry.

The ToR for the project was granted on 2nd August, 2016. Public hearing was conducted by the SPCB on 17th February, 2018.

Total existing water requirement is 30,872 m³/day. No additional fresh water will be required for proposed expansion.

Total effluent generated from different industrial operations is estimated to be 53.8m³/day. Generated effluent will be treated through Effluent Treatment Plant followed by MEE. Domestic effluent of 3.8 m³/day will be disposed off through Septic tank/ Soak pit system. There will be no discharge of treated/untreated waste water from the unit, and thus conforming to Zero Liquid Discharge.

Earlier, Ministry had issued environmental clearance vide letter 22nd May, 2006 for expansion of Captive Co-generation Power Plant; amended on 30th May, 2007 to the existing Captive Co-generation Power Plant in favour of M/s. Tata Chemicals Ltd.

The monitoring report on compliance status of above EC conditions issued by the Regional office Bhopal to the project proponent vide letter dated 23rd May, 2018 and was found satisfactory.

39.3.10.3 *The EAC, after deliberations, asked for additional information/inputs and clarifications in respect of the following:-*

- *Clarification on requirement of recommendations/clearance from wildlife angle for the soda ash and captive power plant,*
- *Status of forest clearance for diversion of 11.268 ha of mangrove forests, earmarked for laying of discharge pipeline,*

- *Impact of the project on the marine environment including marine national park/sanctuary/mangrove,*
- *ESZ map of Marine National Park and Marine Sanctuary,*
- *Details on water requirement and its source.*
- *Changes in the existing water intake pipeline and also the effluent discharge along with the water quality parameters.*

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

39.4 Amendment in Terms of Reference

Agenda No.39.4.1

Capacity Expansion from 13.7 to 18 MMTPA with 100% BS-VI Auto Fuel Production at Vadodara (Gujarat) by M/s Indian Oil Corporation Limited Gujarat Refinery

[IA/GJ/IND2/73416/2018, J-11011/93/2018-IA-II(I)]

39.4.1.1 The proposal is for amendment in the standard terms of reference issued by the Ministry vide letter dated 14th April, 2018 to the project for capacity expansion of Gujarat Refinery from 13.7 to 18 MMTPA with 100% BS-VI Auto Fuel Production by M/s Indian Oil Corporation Limited at Vadodara (Gujarat).

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

S. No.	Para of ToR issued by MoEF&CC	Details as per the ToR	To be revised / read as	Justification / reasons
1.	Pg 9, Point No. ix	Submission of draft EIA/RA report to SPCB for conduct of Public Hearing	Waiver of Public Hearing	PH was conducted at Gujarat refinery on 5 th November, 2016 for BS-IV/VI project for which Environmental Clearance has already been granted. The new projects envisaged in the same BS-IV/VI project site.

39.4.1.3 *The EAC, after deliberations and especially in view of the last public hearing conducted by the State Pollution Control Board on 5th January, 2016 for another project namely BS-IV and BS-VI Project at the same refinery in District Vadodara (Gujarat), not more than 3 years old, agreed for exemption from fresh public hearing and amending the ToR dated 14th April, 2018 accordingly.*

Agenda No.39.4.2

Expansion of Soda Ash from 2,800 TPD to 4,300 TPD, Caustic Soda from 750 TPD to 1,000 TPD and Captive Power Plant from 197.18 MW to 350 MW at Kalatalav, Bhavnagar (Gujarat) by M/s Nirma Ltd

[IA/GJ/IND2/75000/2017, IA/GJ/IND2/71426/2017]

39.4.2.1 The proposal is for amendment in the terms of reference granted by the Ministry vide letter dated 5th April, 2018 in favour of M/s Nirma Ltd for the expansion project of Soda Ash (2,800 TPD to 4,300 TPD), Caustic Soda (750 TPD to 1,000 TPD) and Cogeneration Plant (197.18 MW to 350 MW) located at Kalatalav, Near Bhavnagar, Gujarat.

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

S. No.	Para of ToR	Details as per theToR	To be revised/ read as	Justification/ reasons
1	4	Captive Thermal Power Plant - Expansion from 197.18 MW to 350	Cogeneration Plant - Expansion from 197.18 MW to 350	As per Govt. of Gujarat's Notification(<i>The Gujarat Government Gazette Extraordinary published by Authority dated 06/02/2018.</i>), we want to apprise your kind authority that, we have cogeneration plant as combined heat and power (CHP) instead of captive power plant alone. Therefore, we would like to request your good self to amend our Captive Power Plant to "Cogeneration plant".
2	7(i)	Effluent Treatment should conform to Zero Liquid Discharge system, and compliance with directives of CPCB for online continuous monitoring system, if any, to be ensured	Trade Effluent should be treated in existing treatment facilities and discharged into Gulf of Khambhat by diffuser system at a point suggested by NIO	a) The condition mentioned in the ToR cannot be implemented by us since the drawl is of sea water and salt / sea water drawl based projects, such as ours, cannot work without suitable sea discharge, considering the huge volumes of sea water involved.
3	-	CRZ clearance requirement is not mentioned in ToR.	Project will seek CRZ clearance for withdrawal of sea water and effluent discharge into sea and attracts CRZ	The proposed expansion project entails the withdrawal of sea water (at Sonarai creek) and effluent discharge into the sea, downstream of the project site. Since these activities are

			clearance under CRZ Notification, 2011. Recommendation of GCZMA should be submitted.	in the CRZ, Nirma Ltd. will be seeking CRZ clearance for the same. The same may please be noted.
				The proposed expansion project entails the withdrawal of sea water (at Sonarai creek) and effluent discharge into the sea, downstream of the project site. Since these activities are in the CRZ, we will be seeking CRZ clearance for the same. The same may please be noted.

39.4.2.3 *The EAC, after deliberations, recommended for amendment in the ToR dated 5th April, 2018 as proposed by the project proponent. Accordingly, the Captive thermal power plant (mentioned in para 2&4 of the ToR) shall be revised to 'Co-generation Plant' and the additional conditions stipulated in the said ToR to be read as under:-*

'Sea water intake and the effluent discharge facilities being in CRZ areas, recommendations from the State Coastal Zone Management Authority shall be obtained and submitted.'

Agenda No.39.4.3

Establishment of Pesticides industry and pesticide specific intermediates (excluding formulations) & Synthetic organic chemicals manufacturing unit by M/s Prasol Chemicals Limited at Plot No. FS-30, Addl Mahad MIDC situated in Raigad District (Maharashtra) - Amendment in ToR

[IA/MH/IND2/62822/2017, IA-J-11011/70/2017-IA-II(I)]

39.4.3.1 *The project proponent vide letter dated 14th July, 2018 has informed that they have already requested for withdrawal of the proposal. The proposal was, therefore, not considered and agreed for its delisting.*

Day three - 27th July, 2018

39.5. Environmental Clearance

Agenda No. 39.5.1

Exploratory Drilling of 22 Wells (Onshore) in Ramanathapuram PML, Tamil Nadu by M/s Oil and Natural Gas Corporation Ltd

[IA/TN/IND/19240/2013, J-11011/207/2013-IA-II(I)]

39.5.1.1 The Project Proponent and their Consultant M/s Arcadis India Pvt Ltd (earlier name M/s Senes consultants India Pvt Ltd), made a detailed presentation on the salient features of the project and informed that:

- (i) The proposal is for environmental clearance to the project for exploratory drilling of 22 wells (onshore) in Ramanathapuram PML at Ramanathapuram, Tamil Nadu by M/s ONGC Ltd.
- (ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 11th meeting held during 26-27 August 2013 and recommended Terms of Reference (TORs) for the Project. The TOR has been issued by Ministry vide letter No. J-11011/207/2013-IA II (I) dated 05.11.2013.
- (iii) All offshore and onshore oil & gas exploration, development and Production Projects are listed at S.N. 1b of Schedule of Environment Impact Assessment Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).
- (iv) The land area required for each well be about 4.5 Acres which will be taken on lease/hire basis.
- (v) The estimated project cost is Rs.440 crores. Including existing investment of Rs 50 Crores. Total capital cost earmarked towards environmental pollution control Measures is Rs0.71 crores per well and the Recurring cost (operation and Maintenance) will be about Rs0.06 Crores per annum.
- (vi) During site construction non-technical jobs will be generated. Most of the people employed during this stage would be semi-skilled. People from adjoining areas especially will be given preference through local contractors according to the skill sets possessed. Industry Proposes to allocate 5% of total cost of project towards enterprise Social responsibility.
- (vii) There are National parks, wildlife sanctuaries, Biosphere Reserves, within 10 km distance from the project site. River Vaigai is flowing at a distance of 0.9 Km in south direction.
- (viii) Ambient air quality monitoring was carried out at 22 locations during July 2014 to September 2014. And the baseline data indicates the ranges of concentrations as: PM10 (35-57 µg/m³), PM2.5 (18-27 µg/m³), SO₂ (6-13 µg/m³) and NO₂ (9-16 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 57.07 µg/m³, 13.02 µg/m³ and 19.18 µg/m³ with respect to PM10, Sox and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).
- (ix) Total water requirement is 25 m³/day of which fresh water requirement of 25m³/day will be met from surface.
- (x) All effluents will be confined within the impermeable waste Pit and will be allowed for Solar evaporation. In case of excess effluent mobile ETP will be utilized for treatment.

(xi) Power requirement will be met from 04 DG sets of 900Kw Capacity .Only three units will be in operation and one will be standby. Stack (height 6.6 M) will be provided as per CPCB norms to the proposed DG sets.

(xii) Details of Process emissions generation and its management. Considering temporary nature of drilling phase (approx. 40-60 days),dry conditions prevalent in that region and provision of adequate stack height ,no significant effect is envisaged.

(xiii) Details of Solid waste/ Hazardous waste generation and its management:The major waste streams are drill cuttings, drilling mud and wash water, kitchen waste and sewage, waste oil. The waste management plan establishes specific measures to ensure proper collection, storage, treatment and disposal in accordance with the applicable regulations and standards.

(xiv) Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 14.05.2015.The main issues raised during the public hearing have been addressed in the meeting itself. Besides adequate budget provision is kept for CSR activities in that district.

(xv) The proposal was considered by EAC in its meeting held during 26-29 December 2016 and recommended for Environment clearance. On examination of the proposal in the Ministry, it was perceived that the Ministry had granted EC to ONGC for a Project for drilling of five wells in LX&L-XII Blocks in Ramanathapuram Area vide letter no J-1011/178/2008-IA (I) dated 28.04.2008.The proposed location of some of the wells in the present proposal are within L-X&L-XII Blocks and Ministry is of the opinion that this involves overlapping of the coverage area. This EC has 6 Blocks and L-X & L-II Blocks are one among them.

In view of above, MoEFCC vide letter dated 25.08.2017 requested their Regional MoEFCC at Chennai to submit a report on compliance status of the Conditions stipulated in the referred EC dated 28.04.2008.

ONGC on 31.08.17 informed Regional MoEFCC that ONGC has completed drilling of all the five wells falling in L-X& L-XII Blocks by April 2011 itself and thereafter the blocks were relinquished. Besides it was informed that a new area named as Ramanathapuram Block has been created covering parts of L-X & L-XII blocks and adding some new area in the vicinity. Thereafter ONGC has applied to DGH for PML who has granted the same with the validity upto 2019.Since the Blocks L-X and L-XII are already relinquished in 2011 itself and no more wells are available in those blocks ,report on the compliance is not appropriate at this juncture.

However, based on the other data provided by ONGC on 24.11.17, Regional MoEFCC has given their report on 08.01.18 comparing all the six blocks rather than comparing only Ramanathapuram L-X & L-XII Blocks as sought by MoEFCC. Based on this, MoEFCC has not accepted our proposal.

ONGC again on 24.01.2018 has submitted the Action Taken Report to Regional MoEFCC, Chennai based on which they have submitted their final report on 07.03.2018. The various points raised by them and ONGC's parawise comments have been replied to the MoEFCC on 06.06.2018.

(xvi). Status of Litigation Pending against the proposal, if any. NIL

39.5.1.2 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for exploratory drilling of 22 wells (onshore) in Ramanathapuram PML, District Ramanathapuram (Tamil Nadu) by M/s Oil and Natural Gas Corporation 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). The ToR for the project was granted on 5th November, 2013.

Total water requirement is estimated to be 25 cum/day proposed to be met from authorized water tanker vehicles/surface water. All effluents will be confined within the impermeable waste pit and allowed for solar evaporation. In case of excess effluent mobile ETP will be utilized for treatment. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

The proposal for EC was earlier considered by the EAC (Industry-2) in its meetings held on 26- 27 October, 2016 and 26-29 December, 2016 and recommended for EC. However, in view of overlapping of coverage areas with another project for exploratory drilling in Petroleum Exploration License (PEL) Blocks located in Cauvery Basin (for which EC was earlier granted by the Ministry on 28th April, 2008), it was desired to seek compliance status of conditions stipulated therein. Based on observations of the Regional Office of the Ministry at Chennai regarding non-compliances, the proposal for environmental clearance was rejected by the Ministry and the same was communicated to the project proponent vide letter dated 22nd February, 2018.

Based on the action taken report submitted by the project proponent to the Regional Office on 24th January, 2018, final report was forwarded by the Regional Office vide letter dated 7th March, 2018. The project proponent has submitted the parawise comments to the Ministry on 6th June, 2018 and requested the Ministry for reconsideration of the proposal. The same are reproduced as under:-

S. No.	Comments of Regional Office-Chennai	Clarification by ONGC against the comments of RO Chennai
1	<p>Matter pertains to the validity extension of environmental clearance. Hence, MoEFCC, New Delhi may like to take an appropriate view in the matter.</p> <p>Further, it is submitted that drilling of five exploratory wells in L-X & L-XII PML were completed within the EC validity period.</p>	<p>It is informed that our present proposal is for EC for exploratory drilling in Ramanathapuram PML and not in L-I block. All the five wells falling in L-X and L-XII blocks in Ramanathapuram PML had been completed within EC validity period as endorsed by Regional MoEFCC</p>
2	<p>It is informed that drilling of five Exploratory wells in L-X & L-XII PML were completed within the EC validity period and Drill site restoration activities have not been completed within the EC validity period. Since, the matter pertains to the validity period of Environmental clearance, MoEFCC, New Delhi may like to take an appropriate view in the matter</p>	<p>Regarding drill site Restoration, it can be seen from the EC that "restoration to be done to the near to original condition after abandonment of well" and nowhere validity is mentioned. Hence EC validity extension is not required in this case. The restoration of any well could be carried out only after the well is declared "Abandoned" Hence after the wells are declared abandoned the restoration for the five wells in L-X & LXII blocks in Ramanathapuram PML have been completed</p>
3	<p>During the visit as well as in their Action taken report (ATR) dated 24/11/2017 the requisite supporting document has not been submitted.</p>	<p>Regional MoEFCC already certified the compliance</p>

	<p>However in the recent ATR, the supporting has been submitted. It is observed from the supporting document that crop compensation as well as annual compensation has been reportedly paid to the land losers of five exploratory wells namely UPAA, PEAI, AGAA, KJAF and VIAA located in L-X & L-XII PML, Ramanathapuram District, Tamilnadu. In view of the above, compliance status is treated as "Reportedly complied"</p>	
4	<p>During the visit as well as in their action taken report dated 24/11/2017 the requisite supporting document has not been submitted. However in the recent ATR, the supporting document has been submitted.</p> <p>As per the supporting document. It is observed that Periodic Medical Examination of the employees of M/s ONGCL has been reportedly carried out from 2009-10 to 2016-17. In view of above , compliance status is treated as "Reportedly complied".</p>	<p>Regional MoEFCC already certified the compliance.</p>
5	<p>It is observed that PP has carried out the drilling of five exploratory wells namely UPAA, PEAI, AGAA, KJAF and VIAA located in L-X & L-XII PML Ramanathapuram District ,Tamilnadu without obtaining CTO from TNPCB and TNPCB has not issued the CTO .</p> <p>In view of the above Compliance status is still treated as "Not complied "and MoEFCC New Delhi may like to take an appropriate view in the matter</p>	<p>CTO for AGAA has already been submitted by ONGC to Regional MoEFCC. For other four wells it is informed that TNPCB during that period used to collect ONGC's application along with requisite fees and mostly not issued any CTOs.</p> <p>Hence ONGC's application details along with requisite fees paid to TNPCB for the balance four wells were submitted to Regional MoEFCC already as a documentary evidence.</p>
6	<p>PP is claiming that no prior approval is required to be obtained from any other statutory authorities.</p> <p>It may be noted that PP must comply with this condition (or) would have sought amendment of this condition from MoEFCC, if it is not applicable to them, However, PP has neither complied with this condition nor sought amendment of this condition from MoEFCC.</p> <p>In view of the above, compliance status is still treated as "Not complied" and MoEFCC, New Delhi may like to take an appropriate view</p>	<p>The prior approvals from chief inspectorate of factories, chief Controller of Explosives and Fire Safety Inspectorate etc., for the drilling are not applicable to this project</p>
7	<p>It is observed that environment Monitoring data carried out by TNPCB are not traceable for the exploratory wells namely UPAA, PEAI, KJAF, VIAA except AGAA since the case is 8year old.</p>	<p>Regional MoEFCC has already certified as partly complied .</p>

	It is also observed that PP has submitted their in house monitoring data of drill site effluent and drill cutting samples for the exploratory wells in L-X& L-XII PML. In view of above, compliance status shall be treated as” partly complied”	
8	PP is claiming that date of financial closure is not applicable to them as the fund required for drilling of five exploratory wells in L-X & L-XII PML, Ramanathapuram district, Tamil Nadu has been met from their internal funds .In view of the above, MoEFCC New Delhi may like to take an appropriate view in the matter.	Regarding date of financial closure of the project, the same were not intimated to Regional MoEFCC as the funds required wells have been met from Internal funds. ONGC will ensure the submission of such details in future

The above action taken report was discussed and found to be in order and complying with the EC conditions. Further, it is reported that the proposed area of Ramanathapuram PML is highly prospective and anticipated potential of hydrocarbon is to the tune of 30 Billion Cubic meters of Gas.

The Standing Committee of National Board for Wildlife (SC NBWL) in its meeting held on 13th June, 2018 has recommended the proposal along with the conditions and the wildlife mitigation measures stipulated by the State Chief Wildlife Warden. The Ministry has communicated the decision of the SC NBWL to the State Government vide letter dated 29th June, 2018.

39.5.1.3 *The EAC, after deliberations, reiterated its recommendations in its meeting held on 26-29 December, 2016 for grant of environmental clearance, subject to compliance of terms and conditions as under: -*

- *All the conditions suggested by the Standing Committee of National Board for Wildlife (SC NBWL) shall be adhered to.*
- *Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.*
- *As proposed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged to any surface water body, sea and/or on land.*
- *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 as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for PM₁₀, PM_{2.5}, SO₂, NO_x, CO, CH₄, HC, Non-methane HC etc.*
- *During exploration, production, storage and handling, the fugitive emission 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 the proposed quantum of 25 cum/day proposed to be met from water tankers, and prior permission shall be obtained from the concerned regulatory authority.
- 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.
- The company shall take measures after completion of drilling process by well plugging and secured enclosures, decommissioning of rig upon abandonment of the well and drilling site shall be restored the area in original condition. In the event that no economic quantity of hydrocarbon is found a full abandonment plan shall be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations.
- All the commitments made to the public during public hearing/consultation shall be satisfactorily implemented.
- At least 1.5% 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.*
- *Restoration of the project site shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office.*
- *Oil content in the drill cuttings shall be monitored by some Authorized agency and report shall be sent to the Ministry's Regional Office.*
- *An audit shall be done to ensure that the Environment Management Plan is implemented in totality and report shall be submitted to the Ministry's Regional Office.*
- *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.*
- *On completion of drilling, the company has to plug the drilled wells safely and obtain certificate from environment safety angle from the concerned authority.*

Agenda No.39.5.2

Expansion of Dyes, Chlor-Alkali, Pesticides Technical, Bulk Drug & Pharmaceuticals, Resin & other chemicals and adding new products (flavours & fragrances) at Survey No.274, 275, 276, Tehsil & District Valsad (Gujarat) by M/s Atul Ltd.

[IA/GJ/IND2/57601/2015, J-11011/108/2015-IA II (I)]

39.5.2.1 The Project Proponent and their consultant M/sEcoChem Sales & Services and M/s Kadam Environmental Consultants, made a detailed presentation on the salient features of the project and informed that:

- The proposal is for EC to the project for expansion of existing production capacity and addition of new products at Plot No. 5, 6, 29, 30, 33, 34, 35, 37, 38, 80, 81, 84, 85, 91 Survey No. 274, 275, 276, Tehsil and District Valsad, Gujarat by M/s Atul Limited.
- The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 40th meeting held during 18th-19th May, 2015 and recommended Terms of References (ToRs) for the Project. The ToR has been issued by Ministry vide letter No. J-11011/108/2015-IA II (I); dated 3rd July 2015
- All products are listed at S.N. 5 (b), 5 (f) & 4 (d) of Schedule of Environmental Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).
- Ministry has issued EC earlier vide letter no. J-11011/85/2009-IA II (I); dated 13th May, 2009 for existing unit to M/s. Atul Ltd.
- Existing land area is 12,05,401 m², no additional will be required for proposed expansion.
- Industry has already developed greenbelt in an area of 33 % i.e., 409030 m² (33.93%) out of total area of the project.
- The estimated project cost is Rs 265 Crores. Total capital cost earmarked towards environmental pollution control measures for proposed project is Rs 26 Crores and the Recurring cost (operation and maintenance) will be about Rs 2.60 Crores per annum.

(viii) Total Employment will be 130-140 persons as direct & 200-300 persons indirect after expansion. Industry proposes to allocate Rs 5.45 Crores @ 2.5 % towards Corporate Social Responsibility.

(ix) There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. River Par is flowing at a distance of 0.7 km in SE direction.

(x) Ambient air quality monitoring is carried out at 8 locations during October 2015 to December 2015 and the baseline data indicates the ranges of concentrations as: PM10 (70.2-101 µg/m³), PM2.5 (30.2-47.4 µg/m³), SO₂ (16.3-25.3 µg/m³) and NO₂ (20.2-31.4 µg/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be nil with respect to PM10, SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(xi) Total water requirement is 28357.70 m³/day of which fresh water requirement of 5788.7 m³/day will be met from Par River.

(xii) Effluent of 23021.51 KL/Day will be treated through ETP of 32 MLD.

(xiii) Power requirement after expansion will be maximum 56 MW and which will be met from existing captive Power plant. Existing unit has 2 DG sets of 3100 KVA and 1500 KVA capacity. Stack height will be provided as per CPCB norms to the proposed DG sets. No additional Boiler/DG set required.

(xiv) Existing unit has 263 TPH coal fired boiler. No additional Boiler/DG set required. Existing Boilers and power plant are sufficient for the proposed expansion projects.

(xv) Details of Process emissions generation and its management are as following

a. Presently the unit has installed scrubbers like Alkali, Water, Hypo, Caustic, etc., as an air pollution control device to scrub the various parameters like COCl₂, Cl₂, HCl, SO₂, NO_x from the various process stacks. Due to proposed expansion, three numbers of additional stacks will be installed for MPP plant, Pharma Plant and Flavors & Fragrances plant. The unit shall install water & alkali scrubber as APC device in MPP plant to scrub the HCl gas. The unit shall install water scrubber followed by two stage caustic scrubber with ammonia/steam injection at Pharma Plant stack and water scrubber followed by caustic scrubber Flavors & Fragrances plant.

(xvi) Details of Solid waste/ Hazardous waste generation and its management is as following

Sr No.	Description	Category	Quantity (MT/Month)			Method of storage	Method of disposal
			Existing	Proposed	Total after expansion		
1.	Graphite granules from decomposer	16.1	0.0417	0	0.0417	Collection, Storage	Own TSDF
2.	Sludge from recycle unit, ground floor & sack filter	16.1	0.014	0	0.014	Collection, Storage	Own TSDF after mercury recovery (At present, we don't have Mercury cell as the same has been converted to membrane in 2015)

Sr No.	Description	Category	Quantity (MT/Month)			Method of storage	Method of disposal
			Existing	Proposed	Total after expansion		
3.	Sludge from Demercurisation Plant	16.1	1.00	0	1.00	Collection, Storage	Recycle
4.	Membranes	16.2	6.00	0	6.00	Collection, Storage	Own TSDF
5.	Waste Resin	16.2	0.05	0	0.05	Collection, Storage	Own Incineration/Co processing/ Co processing
6.	Sulfurised Carbon	16.2	0.003	0	0.003	Collection, Storage	Own Incineration/Co processing
7.	Activated Carbon	16.2	0.0104	0	0.0104	Collection, Storage	Own TSDF
8.	Brine purification sludge	16.3	22.5	220.00	242.50	Collection, Storage	Own TSDF
9.	Sulphur sludge	17.1	5.83	0	5.83	Stored for melting and reuse	Reuse
10.	Hot Gas filter Ash	17.1	0.0208	0	0.0208	Collection, Storage	Own TSDF
11.	Bottom Sludge after recovery of Sulphur Sludge	17.1	0.5	0	0.50	—	Own TSDF
12.	Waste Catalyst	17.2	0.083	0	0.083	Collection, Storage	Own TSDF
13.	Spent Solvents	20.2	5.00	0	5.00 kl/month	Recovery	Recovery
14.	OCBC/OCT /distillation residue	20.3	0.042	154.00	154.042	Collection, Storage	Own Incineration/Co processing / Co processing
15.	Waste residue Bulk Intermediate (meta hydroxy phenol) (Tar)	20.3	15.00	0	15.00	Sell	Sell to reuser having GPCB permission
16.	Waste residue from (Resorcinol Plant)	20.3	15.00	0	15.00	Collection, Storage	Sell to reuser having GPCB permission

Sr No.	Description	Category	Quantity (MT/Month)			Method of storage	Method of disposal
			Existing	Proposed	Total after expansion		
17.	Urea Formaldehyde Polymer Product	23.1	0.25	0	0.25	—	Own Incineration/Co processing
18.	Sludge containing higher amino compound	23.1	0.417	0	0.417	—	Own Incineration/Co processing
19.	Filter cake of Epoxy resins with resin contamination	23.1	0.833	0	0.833	—	Own Incineration/Co processing
20.	Epoxy Resin (Filter Cake with resin contamination)	23.1	130.29	0	130.29	Collection, Storage	Own Incineration/Co processing
21.	Aluminum Hydroxide	26.1	15.417	0	15.417	—	Own TSDF
22.	Iron sludge	26.1	80.00	0	80.00	—	Own TSDF
23.	Brass residue	26.1	0.667	0	0.667	—	Own TSDF
24.	Still / Other residue	26.1	8.67	0	8.67	—	Own Incineration/Co processing
25.	Darco / filter aid sludge	26.1	2.083	0	2.083	—	Own Incineration/Co processing
26.	Dust (Agro Plant)	26.1	3.0	0	3.0	Collection, Storage	Own TSDF
27.	Iron Residue	26.1	62.5	0	62.5	Collection, Storage	Own TSDF
28.	PER crystal residue	26.1	0.4	0	0.4	Collection, Storage	Own Incineration/Co processing
29.	Hyflo sludge	26.1	0.5	0	0.5	Collection, Storage	Own Incineration/Co processing
30.	Filter aid sludge for Hg recovery	26.1	1.0	0	1.0	Recovery of mercury	Recovery of mercury
31.	Sludge from waste water Treatment	26.2	5.0	0	5.0	—	Own TSDF
32.	Dust from Air Filtration System	26.3	0.001	0	0.001	Reprocessed	Reprocessed, reused within industry

Sr No.	Description	Category	Quantity (MT/Month)			Method of storage	Method of disposal
			Existing	Proposed	Total after expansion		
33.	Spent carbon	28.2	40.0	0	40.0	Incineration	Captive incineration/ Collections, storage, Disposal by selling to authorized cement industries for co-processing
34.	Date expired, discarded and off-specification product	28.4	0.008	0	0.008	Incineration	Own Incineration/Co processing
35.	Spent Mother Liquor	28.5	19.75	0	19.75 kl/month	—	To ETP after recovery
36.	Spent Solvent	28.6	19.75	0	19.75 kl/month	—	Solvent recovery
37.	Still / Other bottom residue	29.1	10.00	53.66	63.66	Incineration	Own Incineration/Co processing
38.	Pyridine based insecticides & herbicides (Darco / Filter aid Sludge)	29.1	3.62	0	3.62	Incineration	Own Incineration/Co processing
39.	Sulfonyl Urea (Residue)	29.1	14.27	0	14.27	Incineration	Own Incineration/Co processing
40.	Triazole based Fungicides (Residue)	29.1	1.28	0	1.28	Incineration	Own Incineration/Co processing
41.	Pyrethroids	29.1	0.6	0	0.6	—	Own Incineration/Co processing
42.	Hyflo	29.1	15.75	0	15.75	Collection, Storage	Own TSDF
43.	Dust from Air Filtration System	29.3	0.008	0	0.008	Collection, Storage	Own Incineration/Co processing
44.	Chemical containing residue from decontamination and disposal	33.1	0.0008	0	0.0008	Collection, Storage	Own Incineration/Co processing

Sr No.	Description	Category	Quantity (MT/Month)			Method of storage	Method of disposal
			Existing	Proposed	Total after expansion		
45.	Liners /Bags	33.3	9500.00	0	9500.00 No./month	Collection, Storage, Decontaminated, detoxification	After decontamination reuse / Sell to authorized party
46.	Drums /HDPE Carboys	33.3	250.00	0	250.00 No./month	—	Own TSDF
47.	Flue cleaning gas	34.1	0.0008	0	0.0008	—	Own TSDF
48.	Toxic metal containing residue from used-ion exchange material; in water Purification	34.2	0.001	0	0.001	Collection, Storage	Own TSDF
49.	Sludge from ETP	34.3	41.667	0	41.667	—	Own TSDF
50.	Gypsum from ETP	34.3	2.00	0	2.00	—	Own TSDF
51.	MEA distillation residue	35.1	1.667	0	1.667	—	Own Incineration/Co processing
52.	Spent Catalyst	35.2	0.002	0	0.002	—	Own TSDF
53.	Sludge from wet scrubber	36.1	0.02	0	0.02	—	Own TSDF
54.	Incineration ash	36.2	4.62	0	4.62	—	Own TSDF
55.	Sludge & filters contaminated with oil	3.3	0.005	0	0.005	—	Own Incineration/Co processing
56.	Used oil	5.1	2.00	0	2.00 kl/month	—	sell to registered refiners
57.	Wastes residues containing oil	5.2	0.001	0	0.001	—	Own Incineration/Co processing
58.	Aluminum Ash	B30	2.60	0	2.60	—	Own TSDF
59.	Gypsum (From Meta Hydroxy Phenol Plant)	D1	840.00	0	840.00	—	Reuse & sell to GPCB authorized actual reusers only
60.	Sodium Sulfitite	D1	550.00	0	550.00	—	Own TSDF/ Sell to actual user
61.	Salt from MEE	—	825.00	853.71	1,678.71	—	Own TSDF/ Sell to actual user

Sr No.	Description	Category	Quantity (MT/Month)			Method of storage	Method of disposal
			Existing	Proposed	Total after expansion		
62.	Spent Acid	D2	400.00	0	400.00	—	Collection, Storage, disposal by sell to the units having permission from CPCB, New Delhi under rule 11 of Hazardous waste rule 2008.
63.	Chemical Gypsum	34.3	4930.00 (dry basis)	0	4930.00 (dry basis)	—	Own TSD/ Collections, storage, Disposal by selling to authorized cement industries
64.	Copper Hydroxide cake	wet B3	40.00	0	40.00	—	Collection, Storage, Disposal by sell to the units having permission from CPCB, New Delhi under rule 11 of Hazardous waste rule 2008, Vapi
65.	Spent organic solvent	28.5	24.75	0	24.75	—	Collection, Storage, Disposal by sell to the units having permission from CPCB, New Delhi under rule 11 of Hazardous waste rule 2008
66.	2,6 Dichloro Phenol	—	94.355	0	94.355	—	Sell to actual Users
67.	2,4,6-Trichloro Phenol	—	45.925	0	45.925	—	Sell to actual Users
68.	p-CBSA/Na-salt Waste from	—	127	0	127	—	Sell to actual Users
69.	Waste from Pharma intermediates	28.1	0	28.97	28.97	—	Own Incineration/Co processing

Sr No.	Description	Category	Quantity (MT/Month)			Method of storage	Method of disposal
			Existing	Proposed	Total after expansion		
Solid Waste							
1.	Fly Ash	—	13,127.20	—	13,127.20	Collection, Storage	Disposal at cement Manufacturing & company's own brick Manufacturing.
2.	Bottom Ash	—	2,907.00	—	2,907.00	Collection, Storage	Disposal at cement Manufacturing & company's own brick Manufacturing.

(xvii) Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 21st June 2016. The main issues raised during the public hearing is related to local employment and will be ensured.

(xviii) Details of Certified compliance report submitted by RO, MoEF&CC.: Certified compliance report was received on 24th April 2017 from RO, MoEF and uploaded on 12th May 2017.

(xix) Status of Litigation Pending against the proposal, if any. – No litigation

(xx) The details of products and capacity as under:

S. No.	Product Details	Existing Quantity	Proposed Quantity	Total Quantity
1	Dyes	1300.8 TPM	583.33 TPM	1884.13 TPM
2	Chloro – Alkali Industry	3400.0 TPM	4100 TPM	7500 TPM
3	Pesticide Technical	2644.07 TPM	261.64 TPM	2905.71 TPM
4	Bulk Drugs & Pharmaceuticals	350.6 TPM	0.00 TPM	350.6TPM
5	Resin	2990.90 TPM	441.67 TPM	3432.57 TPM
6	Other Chemicals	20551.6 TPM	651.0 TPM	21202.6 TPM
7	Flavors& Fragrances	0.00 TPM	733.32 TPM	733.32 TPM
	Total	31237.96 TPM	6770.95 TPM	38008.91 TPM
Co Product	30% HCl	-	417 TPM	417 TPM

39.5.2.2 The proposal was earlier considered by the EAC (Industry-2) in its meetings held on 26-29 December, 2016, 23-25 January, 2017 and 14-16 June, 2017. The EAC (Industry-2), after detailed deliberation and taking cognizance of Regional Office's report suggested the project proponent to submit the proposal with the committee for examining the violation cases.

Subsequent to submission of the proposal under violation category, the proposal was considered by the EAC (Violation) in its meetings held on 17-18 May, 2018 and 13 -14 June, 2018 in the Ministry. The EAC (violation) noted the following:-

(a) The project being category A of the schedule to the EIA Notification, 2006, the ToR was granted by the Ministry on 3rd July, 2015. Public hearing for the project was conducted by the SPCB on 21st June, 2016.

(b) A separate proposal for grant of EC to the project for expansion of power plant from 54 MW to 76 MW [Category B of item 1(d)] within the premises was under consideration of the SEAC/SEIAA in Gujarat, based on the different ToR granted by SEIAA on 2nd May, 2015 and public hearing conducted by the SPCB on 9th October, 2015. The project was granted EC by SEIAA Gujarat on 20th May, 2016.

(c) The proposal for EC to the project for expansion of bulk drugs manufacturing was earlier considered by the sectoral EAC (Industry-2), but not taken forward after taking cognizance of the observations of the Regional Office of Bhopal during site visit on 9th May, 2016. The Regional Office had informed construction activities for the power plant already taken up without obtaining the prior EC for the same from the SEIAA Gujarat.

In view of the above, the Committee opined that the power plant could be seen as standalone project and independent of the existing industrial operations. Also, the reported construction of the power plant might have a bearing on the EC already issued by the concerned regulatory authority (SEIAA, Gujarat), and not to be linked with the proposal for EC submitted to the Ministry.

The EAC (violation), in its last meeting held on 13 -14 June, 2018, after deliberations and taking note of the fact that the concerned SEAC/SEIAAs are vested with appraisal of category B projects involving violation of the EIA Notification, 2006, recommended the following:

- The matter regarding alleged violation of the EIA Notification, 2006 may be referred to the SEIAA, Gujarat for necessary action as per the extant statutory provision.
- The proposal for EC to the project for expansion of present industrial operations may be taken up by the sectoral EAC as routine one, without integrating the same with the power plant project.

39.5.2.3 During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for expansion of Synthetic Organic Chemical (Dyes, Bulk Drug & Pharmaceuticals, Resin, flavours & fragrances & other chemicals), Chlor-Alkali from 3400 TPM to 7500 TPM, Pesticides Technical from 2644.07 TPM to 2905.71 TPM manufacturing unit (total capacity from 31237.96 TPM to 38008.91 TPM) by M/s Atul Ltd in a total area of 12,05,401 sqm located at Plot No. 5, 6, 29, 30, 33, 34, 35, 37, 38, 80, 81, 84, 85, 91 Survey No. 274, 275, 276, Tehsil and District Valsad (Gujarat).

The project/activities are covered under category A of item 5(b) 'Pesticides industry and Pesticide specific intermediates', item 5(f) 'Synthetic Organic Chemicals industry' and 4(d) 'Chlor-Alkali industry' of the Schedule to the Environment Impact Assessment Notification, 2006, and requires appraisal at central level by the sectoral EAC in the Ministry.

The ToR for the project was granted on 3rd July 2015. Public hearing was conducted by the SPCB on 21st June 2016. The main issues raised during the public hearing are related to local employment.

Total water requirement is estimated to be 28357.70 cum/day, of which fresh water requirement of 5788.7 cum/day will be met from Par River. Total effluent generated from different industrial operations is estimated to be 23021.51 KLD, which will be treated in ETP of capacity 32 MLD.

The Committee in its meeting held on 14-16 June, 2017, after detailed deliberation and taking cognizance of Regional Office's report had suggested the project proponent to submit the proposal with the committee for examining the violation cases. The EAC (violation), in its meeting held on 13-14 June, 2018, after deliberations and taking note of the fact that the concerned SEAC/SEIAAs are vested with appraisal of category B projects involving violation of the EIA Notification, 2006, has recommended that the proposal for EC to the project for expansion of present industrial operations may be taken up by the sectoral EAC as routine one, without integrating the same with the power plant project.

39.5.2.4 *The EAC, after deliberations, asked for additional information/inputs and clarifications in respect of the following:-*

- *Revised product list with the complete details viz, product name, capacity, CAS no, LD₅₀.*
- *Categorization of products under different items vis-a-vis the Schedule of the EIA Notification, 2006.*
- *Revised water balance along with effluent treatment plan. Fresh water requirement to be rationalized/minimized with more recycling of treated effluents and limited to the worst case scenario of production.*
- *Baseline data already exceeding the prescribed standards in respect of PM₁₀, and accordingly action plan to be submitted to control the emissions from the proposed project, in consultation with SPCB.*
- *Compliance status of the CRZ clearance for the pipeline in CRZ area, meant for discharging treated effluents to the estuary zone of river Par through diffusers.*
- *NOC from SPCB for discharge of additional effluents.*

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

Agenda No. 39.5.3

Setting up pesticide technical & intermediates unit at Plot No.D-2/11/B/3/2, GIDC Dahej-II, Dahej-392 130, Taluka Vagra, District Bharuch (Gujarat) by M/s Greentec Chemicals Pvt Ltd

[IA/GJ/IND2/67796/2017, IA-J-11011/437/2017-IA-II(I)]

39.5.3.1 The Project Proponent and their consultant M/s Aqua-Air Environmental Engineers Pvt. Ltd. made a detailed presentation on the salient features of the project and informed that:

- (i) The proposal is for setting up Pesticides technical and Specific Intermediates unit (9100 TPM & By-Products-7555 TPM) by M/s Greentec Chemicals Pvt Ltd located at Plot No. D-2/11/B/3/2, GIDC, Dahej-II, Taluka: Vagra, District: Bharuch (Gujarat).
- (ii) The project proposal was granted Standard TORs by the Ministry vide letter No. IA-J-11011/437/2017-IA-II(I); dated 09th Dec, 2017
- (iii) All Products are listed at S.N. 5(b) of Schedule of Environmental Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

- (iv) The land area required for the project is 79,999 sqm. Industry will develop greenbelt in an area of 25,600 sqm(32%) out of total of area of the project.
- (v) The estimated project cost is Rs. 101 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs.8.0 Crores and the Recurring cost (operation and maintenance) will be about Rs.80 Lakhs per annum.
- (vi) Total Employment will be 500 persons as direct & indirect for new project. Industry proposes to allocate Rs 2.5 Crores (approx.) in next 5 years towards Corporate Social Responsibility.
- (vii) There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance.
- (viii) Ambient air quality monitoring was carried out at 8 locations during March, 2017 to May, 2017 and the baseline data indicates the ranges of concentrations as: PM10 (72.5-81.2 µg/m³), PM2.5 (40.65-45.99 µg/m³), SO₂ (11.97-17.29 µg/m³) and NO₂ (14.06-18.36 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.33 µg/m³, 0.98 µg/m³ and 0.05 µg/m³ with respect to PM10, SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).
- (ix) Total water requirement is 1750 m³/day of which fresh water requirement of 1100 m³/day will be met from GIDC Water Supply.
- (x) The wastewater generation for proposed project will be 792 KL/day. Wastewater will be segregated in 3 different streams i.e.
 High COD/High TDS = 632 KL/Day (It will be treated in ETP followed by Solvent stripper + MEE + ATFD ultimately the MEE Condensate i.e. 550 KL/Day will be sent to ETP for further treatment followed by RO)
 Low COD/Low TDS Stream = 120 KL/Day (It will be treated in ETP followed by RO, where already MEE Condensate i.e. 550 KL/Day is mixed with Low COD/Low TDS Stream i.e. 120 KL/Day so Total 670 KL/Day in RO for further treatment, from where RO Permeate i.e. 500 KL/Day will be reused/recycled for Cooling, Scrubbing & Process & RO Reject i.e. 170 KL/Day is sent to MEE-2 for further treatment and MEE Condensate i.e. 150 KL/Day will be recycled back for further reuse)
 Domestic = 40 KL/Day (It will be treated in STP and treated water will be reused for land irrigation/gardening).
 Ultimately this unit will be a Zero Liquid Discharge Unit.
- (xi) Power requirement for proposed project will be 7500 KVA, which will be met from DGVCL/State power distribution corporation limited. Three DG sets of 1500 KVA capacity shall be used as standby during power failure. Stack (height 30 m) will be provided as per CPCB norms to the proposed DG sets.
- (xii) Unit will have two 15 TPH Coal fired boiler. ESP with a stack of height of 30 m will be installed for controlling the Particulate emissions within the statutory limit of 150 mg/Nm³.
- (xiii) Details of Process emissions generation and its management

S. No.	Stack Attached to	Stack Height	Air Pollution Control System	Prescribed Standards
1	Boiler (15 TPH each) – 2 Nos.	30 m	ESP	PM ≤ 150 mg/Nm ³ SO ₂ ≤ 100 ppm NO _x ≤ 50 ppm
2	DG Sets (1500 KVA) – 3 Nos.	30 m	--	PM ≤ 150 mg/Nm ³ SO ₂ ≤ 100 ppm NO _x ≤ 50 ppm

3	Specialty Phenol Vessel	Chloro Reaction	15 m	Two Stage Alkali Scrubber	HCl ≤ 20 mg/Nm ³
4	Herbicide		15 m	Two Stage Water + Alkali Scrubber, HBr Scrubber	HCl ≤ 20 mg/Nm ³
					SO ₂ ≤ 40 mg/Nm ³
					HBr ≤ 5 mg/Nm ³
5	Fungicide		15 m	Two Stage Water + Alkali Scrubber	HCl ≤ 20 mg/Nm ³
					SO ₂ ≤ 40 mg/Nm ³
					CS ₂ ≤ 180 mg/Nm ³
6	Insecticide		15 m	Two Stage Water + Alkali Scrubber, HBr Scrubber	HCl ≤ 20 mg/Nm ³
					SO ₂ ≤ 40 mg/Nm ³
					HBr ≤ 5 mg/Nm ³
7	Amino Compound Reaction Vessel		15 m	Two Stage Alkali Scrubber	HCl ≤ 20 mg/Nm ³
8	Nitro Plant		15 m	Two Stage Water + Alkali Scrubber	HCl ≤ 20 mg/Nm ³
					SO ₂ ≤ 40 mg/Nm ³
9	Mancozeb / Maneb Plant		15 m	Two Stage Alkali Scrubber	H ₂ S ≤ 45 mg/Nm ³
					CS ₂ ≤ 180 mg/Nm ³
10	Propineb / Zineb Plant, Carbamate preparation		15 m	Two Stage Water + Alkali Scrubber	H ₂ S ≤ 45 mg/Nm ³
					CS ₂ ≤ 180 mg/Nm ³
					NH ₃ ≤ 175 mg/Nm ³
11	Spray Dryer for MancozebManeb Plant No. 1		31 m	Double Ventury scrubber	PM ≤ 150 mg/Nm ³
12	Spray Dryer for MancozebManeb Plant No. 2		31 m	Double Ventury scrubber	PM ≤ 150 mg/Nm ³
13	Spray Dryer for Propineb and Zineb Plant		31 m	Double Ventury scrubber	PM ≤ 150 mg/Nm ³

(xiv) Details of Solid waste/ Hazardous waste generation and its management:

Sr. No.	Waste Details	Waste Category	Quantity MT/Month	Mode of Disposal
1	ETP Sludge	35.3	300	Collection, Storage, Transportation and Disposal at Nearest TSDF
2	Process Waste Sludge (Iron Sludge and residual process salt)	29.1	550	Collection, Storage, Transportation and Disposal at Nearest TSDF or co-processing in Cement Industries
3	Used Oil	5.1	2,000 Lit./Month	Collection, Storage, Transportation and Selling to authorized recyclers
4	Discarded liners / Bags Carboy	33.1	10	Collection, Storage, Transportation, Decontamination

	Drums			and Selling to authorized recyclers
5	Salt from MEE	37.3	1,000	Collection, Storage, Transportation and Disposal at Nearest TSDF
6	Distillation Residue	36.1	200	Collection, Storage, Transportation and Sent to Cement Industries for Co-processing OR incineration at Common Incineration Site
7	Spent Carbon	28.3	5	Collection, Storage, Transportation and Co-processing in Cement Industries or incineration at Common Incineration facility
8	Process Inorganic Salt	-	150	Collection, Storage, Transportation and Disposal at Nearest TSDF facility
9	Ammonium Sulphate Salt	C1	500	Collection in woven sag bags, Sell to licensed factory and after purification used
10	Formic Acid	-	100	Collection in HDPE tank and Sell to formulation industry
11	HBr Solution 20%	-	2000	Collection in HDPE tank and Sell to Dyes industry or In-House Bromine Recovery
12	Hydrochloric Acid (10 to 20%)	C2	400	Collection in HDPE tank and Sell to Dyes/Calcium Chloride industry
13	KCl Powder	-	200	Collection in woven sag bags and Sell to agro chemical industry
14	Manganese Carbonate (MnCO ₃)	-	400	Collection in woven sag bags, Sell to agro chemical industry which converts it to MnSO ₄ soln. and use
15	NH ₄ Cl Powder	-	250	Collection in HDPE tanks and Sell to Dyes industry or recycle in agro chemical industry
16	Potassium Bromide	-	215	Collection in HDPE tanks and Sell to Dyes industry or recycle in agro chemical industry
17	Potassium Fluoride Salt	-	500	Collection in HDPE tank, Evaporation to Powder and Sell to Dyes industry/recycle in agro chemical industry
18	Recovered Solvent	-	40	Storage in MS/SS tanks, Purification in plant and Residue send in drums to nearest TSDF for incineration
19	Sodium Bi Sulphite Salt	-	400	Collection in HDPE tank, Evaporation to Powder and Sell to Dyes industry/recycle in agro chemical industry
20	Sodium Bromide	-	150	Collection in HDPE tank,

	20 % Solution			Evaporation to Powder and Sell to Dyes industry/recycle in agro chemical industry
21	Sodium Fluoride 20 % Solution	-	100	Collection in HDPE tank, Evaporation to Powder and Sell to Dyes industry/recycle in agro chemical industry
22	Sodium Sulphite Powder	-	500	Collection in woven sag bags and Sell to Dyes/textile/washing powder industry
23	Sodium Sulphate (Na ₂ SO ₄)	-	1200	Collection in woven sag bags and Sell to Dyes/textile/washing powder industry
24	Spent Sulphuric Acid	C2	100	Collection in HDPE tanks, Neutralized in factory and Send to nearest TSDF for land filling or Sell to converting Sulphate salt industry
25	Formaldehyde 10 to 15 % solution	-	100	After Formaldehyde Recovery and reused, rest of aqueous ML will be treated in ETP
26	Sodium Chloride Salt	-	400	Collection, Storage, Transportation and Disposal at Nearest TSDF
27	Fly Ash	-	180	Collection, Storage, Transportation and Sell to Brick Manufacturers

(xv) Public Hearing is exempted for this project as this project is located in Notified Industrial Estate of Dahej GIDC (Covered under PCPIR Region) .

(xvi) Status of Litigation Pending against the proposal, if any- No litigation is pending.

(xvii) Following are the list of existing and proposed products:

LIST OF PRODUCTS ALONG WITH PRODUCTION CAPACITY

Group-I: Insecticides				
Sr. No.	Name	Capacity (MT/Month)	CAS number	LD50 (mg/kg)
1	Propargite	50	2312-35-8	> 5.0 g/kg
2	Permethrin		52645-53-1	>1000 mg/kg
3	Alphamethrin		67375-30-8	>5000 mg/kg
4	Cyfluthrin & Beta Isomers		68359-37-5	1270 mg/kg
5	Monocrotophos		6923-22-4	17-18 mg/kg
6	Lambda Cyhalothrin		91465-08-6	> 5000 mg/kg
7	Diethyl Phenyl Acetamide		2431-96-1	1749 mg/kg
8	Fipronil		120068-37-3	> 2,000 mg/kg
9	Transfluthrin		118712-89-3	> 2,000 mg/kg
10	Zeta Cypermethrin		52315-97-08	>4920 mg/kg
11	Spirodiclofen		148477-71-8	> 2,000 mg/kg
12	Beta Cypermethrin		86753-92-6	> 5000 mg/kg

13	Dichlorvos		62-73-7	435 mg/kg
14	Acetamiprid		160430-64-8	1065 mg/kg
15	Chlorantraniliprole		500008-45-7	> 5000 mg/kg
16	Pyriproxypane		95737-68-1	> 5000 mg/kg
17	Imidacloprid		138261-41-3	> 4820 mg/kg
18	Bifenthrin		82657-04-3	1800-2150 mg/kg
19	Thiomethoxam		15719-23-4	1750 mg/kg
20	Deltamethrin		52918-63-5	> 2250 mg/kg
21	Acephate	900	30560-19-1	>10000 mg/kg
22	Profenofos		41198-08-7	>4000 mg/kg
23	Chlorpyrifos		2921-88-2	222 mg/kg
	TOTAL (Group I)	950		

Group-II: Fungicides

Sr. No.	Name	Capacity (MT/Month)	CAS number	LD50 (mg/kg)
24	Azoxystrobin	50	131860-33-8	> 2000 mg/kg
25	Kresoxim methyl		143390-89-0	> 2000 mg/kg
26	Cymoxanil		57966-95-7	1200 mg/kg
27	Picoxystrobin		117428-22-5	> 2000 mg/kg
28	Triclopyricarb		902760-40-1	5840 mg/kg
29	Fluoxastrobin		361377-29-9	>5000 mg/kg
30	Flufenoxystrobin		918162-02-4	>2000 mg/kg
31	Pyraclostrobin		175013-18-0	5000 mg/kg
32	Trifluoxystrobin		141517-21-7	>5050 mg/kg
33	Fenoxanil		115852-48-7	>2000 mg/kg
34	Thiafluzamide	20	130000-40-7	>6500 mg/kg
35	Boscalid		188425-85-6	1490 mg/kg
36	Cyazofamid		120116-88-3	> 5000 mg/kg
37	Diafenthiuron		80060-09-9	1950 mg/kg
38	Dodine	2439-10-3	> 1500 mg/kg	
39	Propineb	400	12071-83-9	3708 mg/kg
40	Tricyclazole	200	41814-78-2	>2000 mg/kg
41	Mancozeb	4000	8018-01-7	>5000mg/kg
42	Maneb	200	12427-38-2	6750 mg/kg
43	Zineb	200	12122-67-7	1850 mg/kg
44	Imazalil	50	3554-44-0	>4000mg/kg
45	Bromuconazole		116255-48-2	5800 mg/kg
46	Azaconazole		60207-31-0	2730 mg/kg
47	Difenoconazole		119446-68-3	1453 mg/kg
48	Epoxiconazole		133855-98-8	5000 mg/kg
49	Itracozazole		84625-61-6	>320 mg/kg
50	Hexaconazole		79983-71-4	> 2000 mg/kg
51	Tebuconazole		107534-96-3	3352 mg/kg
52	Fenbuconazole		114369-43-6	5628 mg/kg
53	Ipconazole		125225-28-7	1338 mg/kgs

54	Metconazole		125116-23-6	>3129 mg/kg
55	Tetraconazole		112281-77-3	1250 mg/kg
56	Cyproconazole		94361-06-5	1020 mg/kg
57	Prothioconazole		178928-70-6	3459 mg/kg
58	Fluquinconazole		136426-54-5	20000 mg/kg
59	Myclobutanil		88671-89-0	2500.86 mg/kg
60	Propiconazole		60207-90-1	2105 mg/kg
61	Triadimenol		55219-65-3	2330 mg/kg
62	Triadimefon		43121-43-3	2828 mg/kg
63	Triticonazole		131983-72-7	>2000 mg/kg
64	Quinoxifen	20	124495-18-7	>2000 mg/kg
65	Chlorothalonil		1897-45-6	10000mg/kg
66	Fluazinam		79622-59-6	1782 mg/kg
67	Famoxadone		131807-57-3	5800 mg/kg
68	Metalaxyl		57837-19-1	> 2000 mg/kg
69	Benalaxyl		71626-11-4	4200 mg/kg
	TOTAL (Group II)	5140		

Group-III: Herbicides				
Sr. No.	Name	Capacity (MT/Month)	CAS number	LD50 (mg/kg)
70	Pendimethalin	350	40487-42-1	1050 mg/kg
71	2,4-Di Chloro phenoxy Acetic Acid		94-75-7	>2000 mg/kg
72	Glyphosate Tech and its Intermediates Volume		1071-83-6	5600 mg/kg
73	Acifluofen	50	50594-66-6	1370 mg/kg
74	Bispyribac		125401-75-4	41110 mg/kg
75	Carfentrazone		128621-72-7	>4000 mg/kg
76	Clethodim		99129-21-2	>2000 mg/kg
77	Clodinafop-propargyl		105512-06-9	>2276 mg/kg
78	Fenoxaprop-p-ethyl		66441-23-4	2357 mg/kg
79	Fluazifop-p-butyl		79241-46-6	>5000 mg/kg
80	Dicamba		1918-00-9	2629 mg/kg
81	Cloquintocet-mexyl		99607-70-2	>2000 mg/kg
82	Fomesafen		72178-02-0	1250-2000 mg/kg
83	Chlomethoxyfen		32861-85-1	18 gm/kg
84	Oxyfluorfen		42874-03-3	>5000 mg/kg
85	Cyhalofop Butyl		122008-85-9	1630 mg/kg
86	Fluroxypyr-meptyl		81406-37-3	>5000 mg/kg
87	Picloram		1918-02-1	4200 mg/kg
88	Pretilachlor		81690-06-4	6099 mg/kg
89	Metamitron	21087-64-9	1865 mg/kg	
90	Metribuzin	21087-64-9	1865 mg/kg	
91	Metamifop	256412-89-2	>2000 mg/kg	
92	Quizalofop Ethyl	76578-14-8	1210 mg/kg	
93	Sulfentrazone	122836-35-5	1750 mg/kg	

94	Triclopyrbutotly		64700-56-7	1400 mg/kg
	TOTAL	50		
	TOTAL (Group-III)	400		

Group-IV: List of the Intermediates:

Sr. No.	Name	Capacity (MT/Month)	CAS number	LD50 (mg/kg)
95	1,2,4-Triazole	50	288-88-0	1350 mg/kg
96	3-Methyl-1,2,4-triazole		7170-01-6	300 mg/kg
97	Diphenyl Ether		101-84-8	3370 mg/kg
98	4-Phenoxy Phenol		831-82-3	Not Available
99	3,4' Dimethyl Diphenyl Ether		--	Not Available
100	3 - Phenoxy Toluene		3586-14-9	2509 mg/kg
101	2, 3 - Dichloro phenol		576-24-9	2376 mg/kg
102	2, 5-Dichloro Phenol		583-78-8	946 mg/kg
103	3, 4- Dichloro Phenol		95-77-2	1685 mg/kg
104	3, 5-Dichloro Phenol		591-35-5	2389 mg/kg
105	4-Bromo-2-Chloro Phenol		3964-56-5	Not Available
106	4-Bromo 2,5 Dichloro Phenol		1940-42-7	300 mg/kg
107	4-Fluoro Phenol		371-41-5	293 mg/kg
108	2 - Fluoro Phenol		367-12-4	5628 mg/kg
109	O -Benzyl-p-Chloro Phenol		120-32-1	65 mg/kg
110	O-Cyano Phenol		611-20-1	Not Available
111	2-Methyl Phenol		95-48-7	242 mg/kg
112	3-Chloro Phenol		108-43-0	570 mg/kg
113	P- Chloro - m-Cresol		59-50-7	1830 mg/kg
114	P-Chloro-m-Xylenol		88-04-0	3830 mg/kg
115	4,6- Dichloro - 2-Amino Phenol		527-62-8	Not Available
116	2-Cyano-3,4,5,6-Tetrachloro Benzoic Acid Methyl Ester		--	Not Available
117	3 - Amino - 4 - Methyl Benzoic Acid		2458-12-0	Not Available
118	3-Amino-4-Chloro Benzotrifluoride		121-50-6	Not Available
119	3-Amino Benzotrifluoride		98-16-8	1330 mg/kg
120	3,4-Diamino Toluene		496-72-0	500 mg/kg
121	2,3-Dichloro Aniline		608-27-5	250 mg/kg
122	2, 5-Dichloro Aniline		95-82-9	1600 mg/kg
123	3, 4-Dichloro Aniline		95-76-1	545 mg/kg
124	3, 5-Dichloro Aniline	626-43-7	Not Available	
125	3-Iso Propoxy Aniline	41406-00-2	Not Available	
126	2-Chloro-1,4-Phenylene Diamine	615-66-7	150 mg/kg	
127	2, 5-Dichloro-1, 4-Phenylene Diamine	6393-01-7	Not Available	
128	2-Chloro-5-Methyl-1, 4-Phenylene Diamine	5307-03-9	Not Available	
129	2, 5-Dimethyl-1, 4-Phenylene	6393-01-7	Not Available	

	Diamine			
130	2,4-Dichlorobuterophenone		--	Not Available
131	6-Methyl-5-Amino Benzimidazolone		67014-36-2	Not Available
132	2, 4-Dichloro Acetophenone		937-20-2	Not Available
133	2, 5-Dichloro Acetophenone		2476-37-1	Not Available
134	4-Fluoro Acetophenone		403-29-2	Not Available
135	2,4-Dichloro-5-Fluoro Acetophenone		704-10-9	> 2000 mg/kg
136	4-Fluoro Phenacyl Chloride		403-26-2	Not Available
137	2,4-Dichloro Phenacyl Chloride		4252-78-2	Not Available
138	5-Amino Benzimidazol -2-One		--	Not Available
139	4-Nitro-2,5-Dichloro Aniline		--	1500 mg/kg
140	2-Nitro-4-Methyl Aniline		89-62-3	Not Available
141	4-Nitro-2,5-Dimethyl Aniline		--	Not Available
142	4-Nitro-5-Chloro-2-Methyl Aniline		--	Not Available
143	6-Nitro-3,4-Dichloro Aniline		--	Not Available
144	3-Nitro-4-Chloro-Benzotrifluoride		121-17-5	1075 mg/kg
145	PCI3		7719-12-2	18 mg/kg
146	2-Nitro-5-chloro phenol		611-64-5	Not Available
147	DMPAT	500	17321-47-0	980 mg/kg
148	2-Amino Diphenyl Ether	20	2688-84-8	Not Available
149	Phenofen		--	Not Available
150	Resorcinol Di (Beta-Hydroxy Ethyl) Ether	20	--	Not Available
151	Metaphenoxybenzyl Alcohol		13826-35-2	1496 mg/kg
152	Meta phenoxy Benzaldehyde		39515-51-0	1222 mg/kg
153	1R Hightrans CMA		52314-67-7	Not Available
154	Hydroxy Benzo Furan		4790-80-1	Not Available
155	m-Bromo Anisole		2398-37-0	Not Available
156	m-Bromo Nitrobenzene	200	586-78-7	Not Available
157	m – Phenoxy Benzaldehyde		67-36-7	Not Available
158	DV Acid Chloride		52314-67-7	Not Available
159	High Trans CMA and CMAC		52314-67-7	Not Available
160	High Cis CMA and CMAC		52314-67-7	Not Available
	TOTAL (Group-IV)	790		
	Group I (Insecticides)	950		
	Group II (Fungicides)	5140		
	Group III (Herbicides)	400		
	Group IV (Intermediates)	790		
	Group V (Bio Pesticides)	1820		
	GRAND TOTAL (Group I to IV)	9100		

LIST OF BY-PRODUCTS

Sr. No	By- Product Name	MT/Month	CAS No.
1	Ammonium Sulphate Salt	500	10043-01-3
2	Formic Acid	100	64-18-6
3	HBr Solution 20%	2,000	10035-10-6
4	Hydrochloric Acid 10 to 20%	400	7647-01-0
5	KCl Powder	200	7447-40-7
6	Manganese Carbonate	400	598-62-9
7	NH ₄ Cl Powder	250	12125-02-9
8	Potassium Bromide	215	7758-02-3
9	Potassium Fluoride Salt	500	7789-23-3
10	Recovered Solvent	40	8030-30-6
11	Sodium Bi Sulphite Salt	400	7631-90-5
12	Sodium Bromide 20 % Solution	150	7647-15-6
13	Sodium Fluoride 20 % Solution	100	7681-49-4
14	Sodium Sulphite Powder	500	7757-83-7
15	Sodium Sulphate	1200	7757-82-6
16	Spent Sulphuric Acid	100	7664-93-9
17	Formaldehyde 10 to 15 % solution	100	50—00-0
18	Sodium Chloride Salt	400	7647-14-5

39.5.3.2 The proposal was earlier considered by the EAC (Industry-2) in its meeting held on 24-26 April, 2018. The EAC, after deliberations, expressed its concern over large number of proposed products (pesticides/pesticide specific intermediates), which could not be technically and practically feasible in terms of pollution concerns and impact on environmental parameters. The Committee desired for reconfiguration of the product list by reducing the number of products with more focus on manufacturing bio-pesticides (nearly 25%) and thus to make the same more rationale and universally acceptable. The Committee further desired for the plant to be natural gas based rather than relying on dual fuel system. The proposal was therefore deferred for the needful.

39.5.3.3 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for manufacturing of Pesticides, Pesticide Specific Intermediates by M/s Greentec Chemicals Pvt. Ltd in a total area of 79999 sqm at Plot No.D-2/11/B/3/2, GIDC, Dahej-II, Taluka Vagra, District Bharuch (Gujarat). The proposal also includes manufacturing of bio-pesticides of capacity 1820 TPM.

The project/activity is covered under category A of item 5(b) 'Pesticide industry and pesticide specific intermediates' of Schedule of Environmental Impact Assessment (EIA) Notification, 2006, and requires appraisal at central level by the sectoral EAC in the Ministry.

The ToR for the project was granted on 9th December, 2017. Public hearing is exempted as the project is located in the Industrial area as provided under the Ministry's OM dated 27th April, 2018.

Total water requirement is estimated to be 1750 cum/day of which fresh water demand of 1100 cum/day is to be met from GIDC water supply.

Total effluent generated from different industrial operations is estimated to be 792 KLD, which will be taken to the Effluent Treatment plant followed by MEE & RO for treatment. The treated water of 150 KLD shall be reused in the plant. There will be no discharge of treated/untreated waste water from the unit, and thus conforming to Zero Liquid Discharge.

39.5.3.4 *The EAC, after deliberations, insisted for inputs, clarifications and necessary actions in respect of the following:-*

- *The product list contains Pesticides and Intermediates having LD₅₀ less than 1000 mg/kg, which are reported to be highly toxic and need to be deleted. In case of remaining products where the LD50 are reportedly not available, efforts to be made to find out the same. As such, all the products need to be reviewed for the toxicity involved and biodegradability, to revise the list accordingly.*
- *Considering the safety precautions, risk assessment study should be carried out using 3-D modelling.*
- *Allegations made by M/s Anupam Rasayan India Ltd regarding some of the products proposed to be manufactured by the project proponent using their product names, manufacturing process, product chemistry and/or the patented products of their customers, etc, and thus in contravention with the rules and regulations in this regard.*

The proposal was deferred for the needful on the above lines

Agenda No.39.5.4

Setting up of 100 KLPD lingo-cellulosic 2G Ethanol Plant at village Baulsingha, Tehsil Bhatli, District Bargarh (Odisha) by M/s Bharat Petroleum Corporation Ltd

[IA/OR/IND2/65843/2017, IA-J-11011/351/2017-IA-II(I)]

39.5.4.1 The project proponent and their consultant M/s Engineers India Limited made a detailed presentation on the salient features of the project and informed that:

- (i) The proposal is for environmental clearance to the project for Setting up 100 KLPD lingo-cellulosic 2G Ethanol Plant at village Baulsingha, Bhatil Tehsil, District Bargarh (Odisha) by M/s Bharat Petroleum Corporation Limited (BPCL).
- (ii) The project proposal was issued with standard Terms of References (ToR) vide MoEFCC letter Nno.J-11011/351/2017-IA-II(I); dated 17th August 2017.
- (iii) All Distilleries projects are listed at S.N. 5(g) of Schedule of Environmental Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).
- (iv) The proposed land area is 58.44 acres approximately and the same is available with BPCL. Industry will develop Greenbelt in an area of 11 acres out of 58.44 acres area of the project. Additional green belt will be developed later.
- (v) Total estimated project cost for installation of 2G Ethanol Plant is Rs. 747.46 crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 13.86 Crores and the Recurring cost (operation and maintenance) will be about Rs. 0.70 crores per annum.

- (vi) Employment of approximately 200 persons directly and around 1000 persons indirectly (biomass supply chain management) is envisaged during operation phase. Industry proposes to allocate Rs 7.47 crores towards Corporate Environment Responsibility.
- (vii) There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance from the project site. Danta river is flowing in the North (5 km) and Jira river is 8 km in South from project site.
- (viii) Ambient air quality monitoring was carried out at 6 locations during January to March 2018 and the baseline data indicates the ranges of concentrations as: PM₁₀ (72.2-92.9 µg/m³), PM_{2.5} (24.9-38.9 µg/m³), SO₂ (10.7-12.8 µg/m³) and NO_x (17.5-25.5 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental resultant GLCs (including baseline concentration) after the proposed project would be 36.6 µg/m³ and 28.03 µg/m³ with respect to SO₂ and NO₂. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).
- (ix) Total water requirement for proposed project is 133 m³/hr and will be met from Bargarh Canal.
- (x) Effluent of 45 m³/hr will be treated through Recycle Plant (RO based) inside 2G Ethanol complex. The plant will be based on Zero Liquid discharge system.
- (xi) Power requirement for 2G Ethanol project is 9.65 MW will be met from State Grid. DG sets have been envisaged for emergency power.
- (xii) Boiler with agricultural waste/lignin feed shall be installed in the 2G Ethanol Plant complex.
- (xiii) SO_x emission release due to proposed project has been estimated at 500 kg/hr.
- (xiv) The solid waste that is produced during operation phase will be either sold to brick/cement industries or as manure for agricultural fields.
- (xv) Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 27th June, 2018. The main issues raised during the public hearing are related to local employment, medical facilities, education, electricity, infrastructural development etc.
- (xvi) There is no litigation pending against the proposal.

39.5.4.2 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for setting up 100 KLPD lingo-cellulosic 2G Ethanol Plant by M/s Bharat Petroleum Corporation Ltd in a total area of 58.44 acres located at Village Baulsingha, Tehsil Bhatli, District Bargarh (Odisha).

The project/activity is covered under category A of item 5(g) 'Distilleries' of Schedule of Environment Impact Assessment (EIA) Notification, 2006, and requires appraisal at central level by the sectoral EAC in the Ministry.

The ToR for the project was granted on 17th August 2017 and public hearing was conducted by the State Pollution Control Board on 27th June, 2018. The main issues raised during the public hearing are related to local employment, medical facilities, education, electricity, infrastructural development etc.

Total fresh water requirement is 133 cum/hr (3192 cum/day), which is proposed to be met from Bargarh Canal. It was informed that the designated Committee in the State Government has accorded its approval to meet the requirement for the lingo-cellulosic ethanol plant.

Total effluent of 45 cum/hr will be treated through Recycle Plant (RO based) inside 2G Ethanol complex. The treated water shall be used in the process. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

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

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

- *Ethanol shall be used exclusively for fuel blending only.*
- *Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.*
- *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.*
- *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.*
- *Total fresh water requirement shall not exceed 3192 cum/day, proposed to be met from Bargarh Canal.*
- *Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through a separate conveyance system.*
- *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 5-10 m width shall be developed in more than 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 1% of the total project cost shall be allocated for Corporate Environment Responsibility (CER) and the details along with time bound action plan shall be 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.
- There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places.
- Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- 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.
- CO₂ generated from the process shall be bottled/made solid ice and sold to authorized vendors.

39.6 Amendment in Environmental clearance/others

Agenda No. 39.6.1

Expansion of Grain based Distillery from 100 KLPD to 600 KLPD & Co-generation Power Plant of 40 MW at Village Mansoorwal, Tehsil Zira, District Ferozepur (Punjab) by M/s Malbros International Private Limited

[IA/PB/IND2/30448/2006, J-11011/187/2006-IAII(I)]

39.6.1.1 The proposal is for amendment in the environmental clearance granted by the Ministry vide letter dated 15th January, 2018 to the project for Expansion of grain based distillery from 100 KLPD to 600 KLPD & co- generation power plant of 40 MW located at Village-Mansoorwal, Tehsil-Zira, District-Ferozepur (Punjab) in favour of M/s Malbros International Private Limited.

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

S. No.	Para of EC issued by MoEFCC	Details as per the EC Letter	To be Revised / Read as	Justification / Reason

S. No.	Para of EC issued by MoEFCC	Details as per the EC Letter	To be Revised / Read as	Justification / Reason
3.	Para 5 - Fresh Water requirement	The total water requirement is estimated to be 10958 cum/ day. The treated effluent of 6848 cum/day is proposed to be recycled/ reused for different industrial operations, leaving the fresh water requirement for the proposed expansion limited to 4110 cum/day which is proposed to be met through Sirhind Canal Water. Necessary permission to draw 2.5 cusecs (6000 cum/day) of water has been obtained from the concerned authority i.e. Sirhind Canal Circle, Ludhiana.	The total water requirement is estimated to be 15170 cum/ day. The treated effluent of 11060 cum/day is proposed to be recycled/ reused for different industrial operations, leaving the fresh water requirement for the proposed expansion limited to 4110 cum/day which is proposed to be met through Sirhind Canal Water. Necessary permission to draw 2.5 cusecs (6000 cum/day) of water has been obtained from the concerned authority i.e. Sirhind Canal Circle, Ludhiana.	<i>The fresh water requirement will remain the same after amendment as there is no additional water requirement.</i>
4.	Para 6 - Spent Wash Treatment	Spent Wash will be taken through centrifuge decanters and thin slops from the decanter centrifuge will be partly recycled back to process (30-35 %) and partly taken to the Thin Slops Evaporation plant	Grain based operation Spent Wash treatment: Same as per Earlier EC. Molasses based operation Spent Wash treatment: Spent wash generated from the analyzer column during the operation will be	The Grain & Molasses based distillery is /will be based on "Zero Liquid Discharge". During Molasses based operation Rice Husk/ Bagasse/Paddy/Coal will be used as supporting fuel to burn these spent wash quantity as to achieve ZLD concept. The water evaporated is partly taken to the process as recycle water and balance fed to ETP/STP to reuse after

S. No.	Para of EC issued by MoEFCC	Details as per the EC Letter	To be Revised / Read as	Justification / Reason
		for concentration of remaining solids to form a syrup. This syrup will also be mixed into the wet cake coming out of centrifuge and forms part of cattle feed. Wet Cake/DWGS from decanter will be passed through steam tube bundle drier for drying into cake with 10-12% moisture (max.) to give higher shelf life. DDGS will be ideally used as cattle feed/ poultry feed/ etc. No effluent will be generated from the plant as the distillery is based on "Zero Effluent Discharge".	concentrated in integrated & standalone Multi – Effect Evaporator (MEE) from initial 12% solid to 55% solid and transferred for complete incineration in a special boiler designed for spent wash. Hence, the complete spent wash will be concentrated & incinerated & no spent wash will be discharged.	treatment as to achieve ZLD concept. There will be no DDGS production & total Concentrated spent wash from MEE will be fed into Incineration boiler to burn it as fuel.
5.	Para 7 - Power Requirement	The total power requirement for proposed project shall be 9.0 MW proposed to be sourced from 40 MW (2X20 MW) Co- generation Power plant & 3X 1000 KVA of DG set (for back up).	The total power requirement for proposed project shall be 9.0 MW proposed to be sourced from 40 MW (12 MW & 28 MW) Co- generation Power plant & 3X 1000 KVA of DG set (for back up).	The total capacity of cogeneration power plant will remain same.
6.	Para 8 - Boiler Details	Two biomass/ rice husk/ bagasse/paddy & wheat straw fired	145 TPH biomass/ rice husk/ bagasse/paddy &	Total boiler capacity will remain same. Concentrated spent wash from MEE will be fed into

S. No.	Para of EC issued by MoEFCC	Details as per the EC Letter	To be Revised / Read as	Justification / Reason
		<p>boilers of 100 TPH capacity each shall be installed. A stack of 63 m height equipped with Electrostatic Precipitator (ESP) shall be installed to encounter the emission from boiler stack. (2x100 TPH = 200 TPH)</p>	<p>wheat straw fired boiler shall be installed for Grain based operation. A stack of 65 m height equipped with Electrostatic Precipitator (ESP) shall be installed to encounter the emission from boiler stack. 55 TPH Incineration boiler with fuel as con. Spent wash along with Biomass shall be installed for Molasses based operation. A stack of 65 m height equipped with Electrostatic Precipitator (ESP) shall be installed to encounter the emission from boiler stack. (145 TPH + 55 TPH = 200 TPH)</p>	<p>Incineration boiler to burn it as fuel along with biomass/ rice husk/ bagasse/ paddy & wheat straw.</p>
7.	Para 12 - Expansion Capacity	Expansion of Grain based Distillery from 100 KLPD to 600 KLPD (by adding 2 units of 250 KLPD each in two phases as Unit II) and the expansion of Co-generation Power Plant by adding 40 MW (2X20 MW).	Expansion of Grain/ Molasses based Distillery from 100 KLPD to 600 KLPD (by adding 160 KLPD Molasses/Grain based and 340 KLPD Grain based) & Co-generation Power Plant of 40 MW (By adding 12 MW & 28 MW).	-

39.6.1.3 The EAC, after detailed deliberations noted that the present proposal involves substantial deviation from the scope of work due to different feed stock leading to significant changes in fermentation parameters, boilers configuration, spent wash treatment, etc, and may not be admissible as amendment in terms of the provisions of the EIA Notification, 2006. The Committee suggested the proponent to submit the revised proposal in line with Ministry's Notification dated 23rd November, 2016.

Agenda No.39.6.2

Expansion of Partially Oriented Yarn (POY), Fully Drawn Yarn(FDY) & Polyester Textured Yarn(PTY) alongwith Gas based Captive Co-generation Heat and Power Plant at Notified Industrial Zone, Sy. No.342, village Kharadpada, Naroll, Dadra & Nagar Havell, U.T by M/s Reliance Industries Ltd. (Silvassa Mfg. Divn)

[IA/DN/IND/4955/2010, J-11011/429/2010-IA.II(I)]

39.6.2.1 The proposal is for amendment in the environmental clearance environment clearance granted by the Ministry vide letter dated 8th June, 2011 to the project 'Expansion of Partially Oriented Yarn (POY), Fully Drawn Yarn (FDY) & Polyester Textured Yarn (PTY) along with Gas based Captive Co-Generation Heat and Power Plant in favour M/s Reliance Industries Ltd (Silvassa Mfg. Divn) located at Sy. No. 342, Village Kharadpada, Naroli (UT of Dadra & Nagar Haveli).

39.6.2.2 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	3.0	Natural Gas/ LSHS as fuel	Alternate Fuel shall be used to meet process heat & steam requirement.	In order to process different categories of fuels, modifications in existing boilers, heaters & DG sets and or new equipment shall be required. Balancing utilities for remaining plants of Phase II shall be put up along with the expansion. Capacity of units to be installed												
2	3.0	Adequate Stack Height will be provided to CCHPP & HTM Heaters	Adequate Stack Height will be provided to CCHPP, HTM, Boilers & D. G Sets													
3	Specific Condition (iv)	Adequate stack height shall be provided to NG based CCHPP (50 MW i.e. 8.3 MW * 6 Nos.) and NG/ LSHS fired HTM heaters (2*4 Nos.) to control the air emissions within the limit stipulated by CPCB and DD & DNH Pollution Control Committee (DD & DNH PCC). Low NOx burner shall be provided in	Adequate stack height shall be provided to CCHPP, HTM Heaters, Boilers & D.G Sets. Alternate fuel can be used to meet process heat & steam requirement. As mentioned below.													
			<table border="1"> <thead> <tr> <th>Sr. No.</th> <th>Utility</th> <th>UOM</th> <th>Amount</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Steam</td> <td>T/ ToP</td> <td>0.15</td> </tr> <tr> <td>2</td> <td>Process Heat</td> <td>Gcal/ ToP</td> <td>0.82</td> </tr> </tbody> </table>	Sr. No.	Utility	UOM	Amount	1	Steam	T/ ToP	0.15	2	Process Heat	Gcal/ ToP	0.82	
Sr. No.	Utility	UOM	Amount													
1	Steam	T/ ToP	0.15													
2	Process Heat	Gcal/ ToP	0.82													

		Captive Co-generation Power Plant to reduce the NOx emissions.	3	D. G Set	KVA	2500	shall confer to specific consumption norms as indicated in the columns alongside.	
			(ToP: Ton of Product)					
4	Specific Condition (v)	The Gaseous emissions (SO ₂ , NO _x , CO & HC) and PM from HTM & Proposed CCHPP unit shall confirm to the norms prescribed by the CPCB/ DD & DNHPCC from time to time.	The Gaseous emissions (SO ₂ , NO _x , CO & HC) and PM from HTM, CCHPP & Proposed HTM Heaters, Boilers & D. G Sets units shall confirm to the norms prescribed by the CPCB/ DD & DNHPCC from time to time.					

39.6.2.3 The EAC after detailed deliberations, found no merit in the proposal and not agreed for amendment in the EC.

Agenda No. 39.6.3

Expansion of Sugar unit (4500 TCD to 12000 TCD), Cogeneration Power Plant (20 MW to 70 MW) and Distillery Unit (60 KLPD to 160 KLPD) by M/s Baramati Agro Ltd at Village Shetphalgade, Tehsil Indapur, District Pune (Maharashtra)

[IA/MH/IND2/27937/2015, J-11011/106/2016- IA II(I)]

39.6.3.1 The proposal is for amendment in the environment clearance granted by the Ministry vide letter dated 20th March, 2017 for the project expansion of Sugar unit (4500 TCD to 12000 TCD), Cogeneration Power Plant (20 MW to 70 MW) and Distillery Unit (60 KLPD to 160 KLPD) by M/s Baramati Agro Ltd at Village Shetphalgade, Tehsil Indapur, District Pune (Maharashtra).

39.6.3.2 The details of amendment requested are as under:

S. No.	Para of EC	Details as per the EC	To be revised read as	Justification/ reason
--------	------------	-----------------------	-----------------------	-----------------------

S. No.	Para of EC	Details as per the EC	To be revised read as	Justification/ reason																																																						
1	Para 2 (Point No. 2)	<p>The following products will be generated by the company:</p> <table border="1"> <thead> <tr> <th rowspan="2">S. No.</th> <th rowspan="2">Product</th> <th colspan="3">Production</th> <th rowspan="2">Working days</th> </tr> <tr> <th>Existing</th> <th>New</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Crystalline Sugar</td> <td>4500</td> <td>7500</td> <td>12000</td> <td>180</td> </tr> <tr> <td>2</td> <td>Co-gen Power</td> <td>20</td> <td>50</td> <td>70</td> <td>240</td> </tr> <tr> <td>3</td> <td>Distillery (Ethyl Alcohol)</td> <td>60</td> <td>100</td> <td>160</td> <td>270</td> </tr> </tbody> </table>	S. No.	Product	Production			Working days	Existing	New	Total	1	Crystalline Sugar	4500	7500	12000	180	2	Co-gen Power	20	50	70	240	3	Distillery (Ethyl Alcohol)	60	100	160	270	<p>The following products will be generated by the company:</p> <table border="1"> <thead> <tr> <th rowspan="2">S. No.</th> <th rowspan="2">Product</th> <th colspan="3">Production</th> <th rowspan="2">Working days</th> </tr> <tr> <th>Existing</th> <th>New</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Crystalline Sugar</td> <td>4500</td> <td>7500</td> <td>12000</td> <td>180</td> </tr> <tr> <td>2</td> <td>Co-gen Power</td> <td>20</td> <td>50</td> <td>70</td> <td>240</td> </tr> <tr> <td>3</td> <td>Distillery (Ethyl Alcohol)</td> <td>60</td> <td>100</td> <td>160</td> <td>330</td> </tr> </tbody> </table>	S. No.	Product	Production			Working days	Existing	New	Total	1	Crystalline Sugar	4500	7500	12000	180	2	Co-gen Power	20	50	70	240	3	Distillery (Ethyl Alcohol)	60	100	160	330	<p>The environment management methodology is being upgraded from anaerobic digestion -composting combination to Conc. Incineration technology which will achieve ZLD on continuous time frame</p>
S. No.	Product	Production			Working days																																																					
		Existing	New	Total																																																						
1	Crystalline Sugar	4500	7500	12000	180																																																					
2	Co-gen Power	20	50	70	240																																																					
3	Distillery (Ethyl Alcohol)	60	100	160	270																																																					
S. No.	Product	Production			Working days																																																					
		Existing	New	Total																																																						
1	Crystalline Sugar	4500	7500	12000	180																																																					
2	Co-gen Power	20	50	70	240																																																					
3	Distillery (Ethyl Alcohol)	60	100	160	330																																																					
2	Para 9 (Point No. 9)The power evacuation line..... New incineration boiler of capacity 32 TPH will be installed for distillery. ESP will be provided with Stack height of 70 m for distillery for dispersion as per SPCB consent. The power evacuation line	Addition of new incineration boiler for change in disposal method.																																																						
3	Para 11 (Point No. 11)	Spent wash generated in proposed project will be used as compost (organic fertilizer). It is also proposed to convert this and use as fuel in the factory. Air pollution control equipment	Spent wash generated from 60 KLPD facility will be used as compost (organic fertilizer) and remaining spent wash from 100 KLPD Facility will be burnt together with coal in new incineration boiler (32 TPH) for distillery. Air pollution control equipment	Kept 60 KLPD for composting & 100 KLPD for incineration boiler , in case of maintenance.																																																						
A	Specific Condition																																																									
	(i) Para 14 of EC letter	ESP & wet scrubber with stack height of 65m for sugar co-gen and 40m for distillery for dispersion and for proposed boiler as per SPCB	ESP & wet scrubber with stack height of 65m for sugar co-gen and 70m for distillery for dispersion and for proposed boiler as per SPCB	Addition of boiler increase in Stack Height																																																						

S. No.	Para of EC	Details as per the EC	To be revised read as	Justification/ reason
	(pg. 3 of 7)			
	(ix) Para 22 of EC letter (pg. 4 of 7)	Spent wash to be generated will be used as compost (organic fertilizer) as proposed. Treated spent wash will be evaporated in MEE and concentrated spent wash will be bio-composted by mixing with press mud generated from sugar unit to achieve 'Zero' discharge. Evaporator Condensate, spent lees and utilities effluent	Spent wash generated from 60 KLPD facility will be used as compost (organic fertilizer) as proposed. Treated spent wash will be evaporated in MEE and concentrated spent wash will be bio-composted by mixing with press mud generated from sugar unit to achieve 'Zero' discharge. Remaining spent wash from 100 KLPD Facility will be burnt together with coal in new incineration boiler (32 TPH) for distillery. Evaporator Condensate, spent lees and utilities effluent	Change in technology

39.6.3.2 The EAC, in its meeting held on 29-31 May, 2018, after detailed deliberations, deferred the proposal for more clarity on the proposed amendments and desired for submission of an addendum to the EIA report, clearly spelling out the working days for distillery while composting the spent wash and/or its incineration. The Committee also asked for dispersion modeling for the additional stack attached to the incineration boiler of 32 TPH to arrive at the GLC for different pollutants, and also the impact of the proposed amendments on different environmental parameters.

39.6.3.3 *The EAC during deliberations agreed for amendment in EC in the following manner:*

- *The number of working/operating days for the proposed 100 KLPD distillery shall be 300 days in place of 270 days.*
- *New incineration boiler of 32 TPH capacity shall be installed for the end treatment of concentrated spent wash from the 100 KLPD distillery.*

Agenda No.39.6.4

Setting up Molasses based Distillery (45 KLPD) at Gat No. 74 and 79 Village Mangrul, Tehsil Tuljapur, District Osmanabad (Maharashtra) by M/s Kancheshwar Sugar Ltd

[IA/MH/IND2/60405/2016, J-11011/224/2013-IA II(I)]

39.6.4.1 The proposal is for amendment in the Environmental Clearance (EC) granted by the Ministry vide letterdated 29th September, 2016 to the project for setting up Molasses based Distillery (45 KLPD) at Gat No.74 and 79, village Mangrul, tehsil Tuljapur, District Solapur (Maharashtra) in favour of M/s Kancheshwar Sugar Ltd.

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

S. No.	Para of EC issued by MoEF&CC	Details as per the EC	To be Revised / Read as	Justification/ reasons
1.	Page No. 1, Paragraph – 1	The cost of project is Rs. 26.94 Crore.	Cost of the distillery project is Rs. 60 Crore.	<p>1. Earlier Spentwash Treatment: Biomethanation – Concentration – Bio-composting.</p> <p>2. Change the Spentwash Treatment as – Concentration in MEE (5 Effect) - Incineration.</p> <p>3. Additional Invest. (Rs. 33.06 Cr) for - MEE; Conc. Sp.wash Storage Tank; 20 TPH Incineration Boiler & interlocking PLC infrastructure, ESP as APC and 30 M Stack and; OCMS, Auto. Ash Handling System, Storage Silos.</p>
2.	Page No.1, Paragraph - 1	Distillery will be operated for 240 days	Distillery will be operated for 330 days.	Due to installation of incineration boiler, ZLD will be achieved and composting will be discontinued.
3.	Page No. 2, Paragraph – 1	Qty. of By- products : 1. Compost: 24,812 MT/Yr 2. CO ₂ : 2 MT/Day	Qty. of By-products – 1. CO ₂ : 35 MT/Day	In the EC; qty. of CO₂ generated is reflected as 2 T/Day. Actual qty. generated would be 35 T/Day . Same was reflected in the MoM of 8 th EAC. Due to Spentwash incineration; composting shall not be done.

S. No.	Para of EC issued by MoEF&CC	Details as per the EC	To be Revised / Read as	Justification/ reasons
4.	Page No. 2, Paragraph – 2	Total water requirement for Distillery will be 442 M ³ /day.	Total water requirement for Distillery will be 497 M³/Day.	Freshwater Requirement of 217 M ³ /day as mentioned in EC shall remain unchanged. Additional 55 M³/day water shall be condensate from Spentwash conc. after CPU; 20 TPH Incineration Boiler.
5.	Page No. 2, Paragraph – 2	200 M ³ /day Conc. & Biomethanated Spentwash will be Bio-composted with Pressmud	200 M ³ /day Conc. Spentwash to be blended with Bagasse (105 TPD) for Burning in 20 TPH Incineration Boiler. Ash-18 TPD.	Change in Sp. wash Treatment as Concentration in MEE & Incineration from Bio-methanation – Concentration – Bio-composting.
6.	Page No. 2, Paragraph – 6, Specific Cond. i	No Boiler will be installed for Distillery	20 TPH Boiler with ESP & 30 M stack as APC will be installed	Same as above.

39.6.4.3 The EAC in its meeting held on 26-28 February, 2018, noted that the proposal for amendment in the environmental clearance dated 29th September, 2016, does not fit for amendment. Instead, the Committee asked the project proponent to submit the proposal afresh for ToR.

39.6.4.4 The EAC, after deliberations, agreed for amendment in EC in the following manner:

- Cost of the distillery project will be Rs. 60 Crore.
- The number of working/operating days for the proposed 45 KLPD distillery shall be 300 days in place of 240 days.
- Total water requirement for Distillery will be 497 cum/day.
- The quantity of CO₂ (by-product) shall be corrected as 35 MT/Day,
- New incineration boiler of 20 TPH capacity shall be installed for treatment of spentwash.

Agenda No.39.7

Any other item with permission of the chair

Following proposals was considered by the EAC, with the approval of Chairman

Agenda No.39.7.1

Installation of 100 KLPD Lingo-Cellulosic 2G Ethanol Plant at Gram Panchayat Baholi, Block Madlauda, Panipat Refinery Road, District Panipat (Haryana) - Amendment in ToR

[IA/HR/IND2/72123/2018, IA-J-11011/43/2018-IA-II(I)]

39.7.1.1 The proposal is for amendment in the standard terms of reference to the project for installation of 100 KLPD Lingo-Cellulosic 2G Ethanol Plant at Baholi, Block Madlauda, Panipat Refinery Road, District Panipat (Haryana), issued vide letter dated 5th April, 2018 with public hearing.

39.7.1.2 The project proponent has requested for exemption from public hearing for the project in view of the Government's initiative for environment protection. It is informed that the 2G ethanol project will be used for the purpose of mandatory blending of with fuel as per guidelines issued by Government of India. The raw material (paddy straw) shall be used for the project, with which the straw burning in the field will be controlled resulting in air quality improvement.

39.7.1.3 *The EAC after detailed deliberations opined that such proposals for biofuel production need to be encouraged for improving air quality in the area, especially in the NCR. The Committee has recommended that the Ministry, considering the national importance of such projects, may exempt the public hearing to such projects as per the extant rules/regulations.*

Agenda No.39.7.2

Setting up 100 KLPD 2G Ethanol Bio-Refinery Plant at Village Nasibpura, Tehsil Talwandi Sabo, Bathinda (Punjab) by M/s Hindustan Petroleum Corporation Limited - Environmental Clearance

[IA/PB/IND2/64593/2017, IA-J-11011/221/2017-IA-II(I)]

39.7.2.1 The Project Proponent and their consultant M/s Ultratech, made a detailed presentation on the salient features of the project and informed that:

- (i) The proposal is for environmental clearance of the project for setting up 100 KLPD 2G Ethanol Bio-Refinery Plant at Village Nasibpura, Tehsil Talwandi Sabo, Bathinda (Punjab) by M/s Hindustan Petroleum Corporation Limited.
- (ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 24th meeting held during 15.6.2017 and recommended Terms of References (ToRs) for the Project. The ToR has been issued by Ministry vide letter dated 19.7.2017.
- (iii) All distillery are listed at S.N 5 (g) of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).
- (iv) Industry will develop greenbelt in an area of 33 % i.e., 4.98 m² out 15.1ha of total area of the project.
- (v) The estimated project cost is Rs 850 Cr including Total capital cost earmarked towards environmental pollution control measures is Rs. 13.5 Cr and the recurring cost (operation and maintenance) will be about Rs 123 Cr. per annum.
- (vi) Total Employment will be 120 persons. Industry proposes to allocate Rs.8.51Cr @ 1% towards Corporate Social Responsibility.

(vii) There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Lasara drain is flowing at a distance of 0.67 km in SE direction.

(viii) Ambient air quality monitoring was carried out at 10 locations during March to May 2017 and the baseline data indicates the ranges of concentrations as: PM₁₀ (70 µg/m³ to 96 µg/m³), PM_{2.5} (22 µg/m³ to 44 µg/m³), SO₂ (2 µg/m³ to 5 µg/m³) and NO₂ (Nox 3 µg/m³ to 10 µg/m³) AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.8 µg/m³, 0.11 µg/m³ with respect to PM₁₀, SO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(ix) Total water requirement for the unit is 4972cum/day, of which fresh water requirement of 1800 cum/day will be met from canal supply.

(x) The plant will be based on Zero Liquid discharge system.

(xi) Power requirement will be 10.5MW and will be met from State power distribution corporation limited (SPDCL), additionally 2 nos. of 500 KVA DG sets are used as standby during power failure. Stack (height70.) will be provided as per CPCB norms to the Proposed DG sets.

(xii) New 2 x 35 TPH boiler will be installed. ESP with a stack of height of 70m will be installed for controlling the particulate emissions within the statutory limit for the proposed boilers.

(xiii) Details of Solid waste/ Hazardous waste generation and its management:

Table : Non-Hazardous Solid Waste

Type of waste	Qty.	Remarks	
Mud Generation	8 TPD	Dirt will be washed with water and will be filled in trolleys (3-6 ton capacity) and used in construction business.	
Ash (comprising silica)	60 TPD (For Rice straw)	Component	TPD
		SiO ₂	56.00
		Al ₂ O ₃	0.23
		Fe ₂ O ₃	0.05
		CaO	0.08
		MgO	1.53
		P ₂ O ₅	0.76
		MnO	0.01
		K ₂ O	0.22
		Others	1.12
Ash	19.2 TPD (For Cotton Stalk)	Component	TPD
		Al ₂ O ₃	1.10
		Fe ₂ O ₃	0.23
		CaO	0.36
		MgO	7.36
		P ₂ O ₅	3.65
		MnO	0.06
		K ₂ O	1.04
		Others	5.37

Table: Hazardous Waste

Cat.	Type of waste	Source	Qty. per month	Method of Disposal
5.1 Sch – I	Used Lubricants	Plant & Machineries	0.5 MTM	CHWTSDF
33.3 Sch – I	Used Containers (Metal & Plastic)	Raw Material Storage	1200 (Nos.)	Decontamination & Re-use or sell to Scrap vendors
	HDPE/ LDTE/ Gunny Bags	Raw Material Storage	800 (Nos.)	Decontamination & Re-use or sell to Scrap vendors

(xiv) Public hearing for the proposed project has been conducted by the State Pollution Control Board on 2nd May, 2018. The main issues raised during the public hearing are related to employment & pollution generation.

(xv) Status of Litigation Pending against the proposal, if any: NA

(xvi) The details of products and capacity as under:

S. No.	Product	Production Capacity
1	Ethanol	100 KLPD
By-Product		
2	CO2	80 TPD
3	Ash (with Silica)	60 TPD
4	Fusel Oil	0.3 KLPD
5	Methanol	0.03 KLPD

*Feed Stock or Raw material for the Ethanol Plant will be Rice Straw or Cotton Stalk.

39.7.2.2 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for setting up 100 KLPD 2G Ethanol Bio-Refinery Plant by M/s Hindustan Petroleum Corporation Limited in a total area of 15.1 ha at Village Nasibpura, Tehsil Talwandi Sabo, Bathinda (Punjab). The raw material for the project is Rice Straw and Cotton stalk.

The project/activity is covered under category A of item 5(g) 'Distilleries' of Schedule of Environment Impact Assessment (EIA) Notification, 2006, and requires appraisal at central level by the sectoral EAC in the Ministry.

The ToR for the project was granted on 19th July, 2017 and public hearing was conducted by the State Pollution Control Board on 2nd May, 2018. The main issues raised during the public hearing are related to employment and pollution.

Total water requirement for the unit is 4972 cum/day, of which fresh water requirement of 1800 cum/day will be met from canal supply.

Total effluent of 3340 cum/day will be treated through RO and MEE. Treated water of 3172 cum/day shall be used in process. There will be no discharge of treated/ untreated waste water from the unit and thus ensuring zero liquid discharge.

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.

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

- *The ethanol shall be used exclusively for fuel blending only.*
- *Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.*
- *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.*
- *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.*
- *Total fresh water requirement shall not exceed 1800 cum/day, proposed to be met from canal supply.*
- *Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through a separate conveyance system.*
- *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 5-10 m width shall be developed in more than 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 1% of the total project cost shall be allocated for Corporate Environment Responsibility (CER) and the details along with time bound action plan shall be 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.*
- *There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places.*
- *Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.*
- *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.*
- *CO₂ generated from the process shall be bottled/made solid ice/value added products and sold to authorized vendors.*

List of the Expert Appraisal Committee (EAC-Industry-2)

S. No.	Name and Address	Designation
1	Dr. J. P. Gupta	Chairman
2	Dr. Ahmed Kamal	Member
3	Prof. J.R. Mudakavi	Member
4	Dr. N. Nandini	Member
5	Ms. Saloni Goel	Member
6	Shri Suhas Ramchandra Pharande	Member
7	Shri Sanjay Bist	Member
8	Sh. Paritosh Kumar	Member
9	Prof. (Dr.) Y.V. Rami Reddy	Member
10	Shri S.K. Srivastava	Member Secretary