

# **MINUTES OF THE 1<sup>st</sup> EXPERT APPRAISAL COMMITTEE (INDUSTRY-2) MEETING HELD DURING 19-20 December 2018**

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

**Time: 10:30 AM**

## **1.1 Opening Remarks by the Chairman**

## **1.2 Confirmation of the Minutes of the 43<sup>rd</sup> Meeting of the EAC (Industry-2) held during 26-27 November 2018 at Indira Paryavaran Bhawan, New Delhi.**

The EAC, having taken note that no comments were offered on the minutes of its 43<sup>rd</sup> meeting held on 26-27 November 2018 at New Delhi, confirmed the same.

## **Day One - 19<sup>th</sup> December, 2018**

### **1.3 Environmental Clearance**

#### **Agenda No.1.3.1**

**Expansion of specialty chemicals & agrochemical intermediates manufacturing plant of at Plot No.907/3 & 907/4, Jhagadia Industrial Estate, Jhadia, District Bharuch (Gujarat) by M/s Anupam Rasayan India Ltd. (Unit-4) - For Environmental Clearance**

**[IA/GJ/IND2/64151/2017, IA-J-11011/202/2017-IA-II(I)]**

**1.3.1.1** 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 & informed that:

(i) The proposal is for Environmental Clearance to the project for Expansion of Pesticide Specific Intermediates and Specialty Chemicals Manufacturing Plant in Existing Plant without increasing production capacity (7500 MT/Month) at Plot No. 907/3 & 907/4, Jhagadia Industrial Estate - Jhagadia, Dist: Bharuch, Gujarat of M/s Anupam Rasayan India Ltd (Unit- 4).

(ii) The ToR has been issued by Ministry vide letter No. J-11011/202/2017-IA II (I) dated 10/07/2017 then TOR amendment dated: 09/02/2018.

(iii) All Products are listed at S.N. 5(b) & 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) SEIAA has earlier issued EC vide letter no. SEIAA/GUJ/EC/5(f)/186/2013 dated July 18, 2013 for the existing operations.

(v) Existing land area is 54000 m<sup>2</sup>, no additional land required for expansion. Industry will develop Greenbelt in an area of 30 % i.e. 16195 m<sup>2</sup> out of 54000m<sup>2</sup> total area of the project.

(vi) The estimated project cost is Rs. 83.0 Crores including existing investment of Rs. 40 Crores. Total Capital cost earmarked towards environmental pollution control measures is Rs. 5.0 Crore and recurring cost (Operation and Maintenance) will be around Rs. 8.5 Crore per annum.

(vii) Total employment will be for 220 people as direct and for 125 persons indirect after expansion. Industry purposes to allocate Rs.0.83 Cr of 1% towards Corporate Social Responsibility.

(viii) There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. AmlaKhadi is flowing at a distance of 6 Km in North Direction.

(ix) Ambient air quality monitoring is carried out at 8 locations during Oct., 2017 to Dec., 2017. The dispersion of pollutants in the atmosphere is a function of several meteorological parameters viz. temperature, wind speed and direction, mixing depths, inversion level, etc. The ambient air samples were collected and analyzed for Particulate Matter (PM<sub>10</sub>), Particulate Matter (PM<sub>2.5</sub>), Sulphur Dioxide (SO<sub>2</sub>), Oxides of Nitrogen (NO<sub>x</sub>), Ozone (O<sub>3</sub>), Lead (Pb), Carbon Monoxide (CO), Ammonia (NH<sub>3</sub>), Benzene (C<sub>6</sub>H<sub>6</sub>), Benzo (a) Pyrene (BaP), Arsenic (AS), Nickel (Ni), HCl, Cl<sub>2</sub>, HC, & VOCs were monitored at site and nearby villages for identification, prediction, evaluation and assessment of potential impact on ambient air environment. The maximum concentration of SPM (121 µg/m<sup>3</sup>), PM<sub>10</sub> (78.85 µg/m<sup>3</sup>), PM<sub>2.5</sub> (47.64 µg/m<sup>3</sup>), SO<sub>2</sub> (16.42 µg/m<sup>3</sup>), maximum concentration of NO<sub>x</sub> (19.75 µg/m<sup>3</sup>), maximum concentration of O<sub>3</sub> (10.81 µg/m<sup>3</sup>), maximum concentration of CO (1.28 µg/m<sup>3</sup>), maximum concentration of VOC (0.9 ppm), was recorded in study area.

The minimum concentration of SPM (114.6 µg/m<sup>3</sup>), PM<sub>10</sub> (74.85 µg/m<sup>3</sup>), PM<sub>2.5</sub> (42.12 µg/m<sup>3</sup>), SO<sub>2</sub> (13.63 µg/m<sup>3</sup>), minimum concentration of NO<sub>x</sub> (15.47 µg/m<sup>3</sup>), minimum concentration of O<sub>3</sub> (10.25 µg/m<sup>3</sup>), minimum concentration of CO (1.14 µg/m<sup>3</sup>), minimum concentration of VOC (0.4 ppm), was recorded in study area.

The PM<sub>10</sub> and PM<sub>2.5</sub> concentrations at all the AAQM locations were primarily caused by local phenomena including industrial & vehicular activities and natural dust getting air borne due to manmade activities and blowing wind. PM<sub>10</sub> and PM<sub>2.5</sub> concentrations were observed below stipulated standards of CPCB for Industrial, Residential, Rural and Other Area at all air quality monitoring locations during the monitoring period.

The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(x) Total water requirement will be 310 m<sup>3</sup>/day of which fresh water requirement of 310 m<sup>3</sup>/day and will be met from GIDC Water Supply.

(xi) 50.0 KL/Day High COD & High TDS Industrial Waste Water will be treated in MEE & Condensate of MEE 50KLD is treated finally at SBT based Bio Reactor System.

a. 24.0 KL/Day Low COD & Low TDS Industrial Effluent will be treated in ETP Plant and followed by SBT based Bio Reactor along with MEE condensate.

b. Total 74 KL/Day SBT Treated Industrial Waste Water which confirming NCT-Discharge Norms will be discharged to NCT-Jhagadia new pipeline leads to Marine Discharge in Deep Sea at Kantiyajar.

c. 4.0 KL/Day domestic waste water will be treated and disposed in septic Tank & Soak Pit.

(xii) Total Power Requirement - 2500KVA from DGVCL (Existing -1000 KVA + Proposed - 1500 KVA) from Dakshin Gujarat Vij Company Limited (DGVCL). Existing unit has 1 D G Set of 1050 KVA, Additionally 2 DG Set (800 KVA + 600 KVA) will be used as standby during power failure. Stack (Height – 11 m) will be provided as per CPCB norms to the proposed DG Set.

(xiii) Existing unit have one 2.5 TPH steam boiler, one 600 U Thermic fluid heater and 1050 KVA D G Set. Additionally, will have 2.5 TPH Agro waste/Coal base 1 No. steam boiler, 12 TPH Agro waste/Coal base 1 No. steam boiler, 10 MT/Hr – 2 Nos. Hot Air Generator and 600 U -2 No. Thermic fluid heater, 800 U- 1 No. Thermic fluid heater and 2 D G set (800 KVA + 600 KVA). Multi Cyclone Separator with Bag Filter, ESP, scrubber with a stack of height will be installed for controlling the Particulates Matter (PM).

(xiv) Details of Process emissions generation and its management: There will no process gas emission in existing unit and Additionally will have 3 No. of reaction vessel. Two scrubber system will be installed to control process gas emission.

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

Sr. No.	Waste Details	Waste Category	Quantity MT/Month			Mode of Disposal
			Existing	Additional	Total	
1.	ETP Sludge	35.3	15.83	0	15.83	Collection, Storage, Transportation and Disposal at Nearest TSDF
2.	Process waste Sludge Iron Sludge & Process Salts	26.1	5000	0	5000	Collection, Storage, Transportation and Disposal at Nearest TSDF or sell to Cement Industry
3.	Used Oil	5.1	50 Liter/Mont h	0	50 Liter/ Mont h	Collection, Storage, Transportation And Selling to authorized recyclers.
4.	Discarded liners/Bags Carboy Drums Unit in No./Month	33.1	1003 Nos/Month	0	1003 Nos/ Mont h	Collection, Storage, Transportation And Selling to authorized recyclers after decontamination.
5.	Salt from MEE	35.3	60	0	60	Collection, Storage, Transportation and Disposal at Nearest TSDF
6.	Distillation Residue	20.3	85.66	0	85.66	Collection, Storage, Transportation and sell to Cement Industry for Co-processing or Disposal at Common Incineration Site
7.	Fly Ash	--	80	0	80	Collection, Storage, Transportation and sell to brick manufacturers or disposal in TSDF.
8.	Dilute	--	753.3	14750	1550	Sell to end user

	Sulphuric Acid				3.3	
9.	30 % HCl Solution	--	3375.0	0	3375.0	Sell to end user
10.	35 -40 % Nitrosyl Sulphuric Acid / Sodium Nitrite Solution	C1	986.0	0	986.0	Sell to end user
11.	POCl <sub>3</sub>	D2	265.0	0	255.0	Sell to end user
12.	Caustic Soda Solution (30% to 40%)	C7	470.0	0	470.0	Sell to end user
13.	Ammonium Chloride	--	55.0	0	55.0	Sell to end user
14.	Ammonium Sulphate Salt	D2	150.0	0	150.0	Sell to end user
15.	20-28 % HBr Solution	C12	0	10920	10920	Sell to end user
16.	Sodium Bromide Salt	--	0	3570	3570	Sell to end user
18.	Sodium Sulphate	C1	0	6093	6093	Collection, Storage, Transportation and Disposal at Nearest TSDF
19.	8-10 % Sodium Hypochlorite Soln.	--	0	600	600	Sell to end user
20.	30 -40 % Dilute Nitric Acid	D2	0	20	20	Sell to end user
21.	Sulphur Dichloride	D2	0	1090	1090	Sell to end user
22.	Potassium Chloride salt	D2	0	2795	2795	Sell to end user
23.	Ammonium Bi Sulphate Salt	D2	0	1175	1175	Sell to end user
24.	Liq. Ammonia	D2	0	1490	1490	Sell to end user
25.	Sodium Sulphite	D2	0	525	525	Sell to end user
26.	Copper Sulphate Salt	D2	0	3425	3425	Sell to end user

(xvi) Public Hearing is exempted as the plant is located in notified Industrial Estate (Jhagadia GIDC).

(xvii) Details of Certified compliance report submitted by RO, MoEF&CC.: Certified compliance report has been forwarded by the Ministry's Regional Office after conducting site visit on 12<sup>th</sup> January, 2018

(xviii) There is no any litigation pending against the proposal.

(xix) Following are the list of proposed products:

Sr. No.	Name of Products	CAS No.	Existing Capacity (MT/Month)	Additional Capacity (MT/Month)	Total capacity (MT/Month)	LD50 (mg/Kg)			
1.1	1,4 Dioxane	123-91-1	1000	0	1000	5170 mg/kg			
1.2	2-Methyl 1,3 Dioxolane	497-26-7				2900 mg/kg			
<b>2.0</b>	<b>CHLORO / FLUORO / AMINO BENZENE COMPOUNDS</b>								
2.1	Chloro Benzene (MCB)	108-90-7	2500	0	2500	2000-4000 mg/kg			
2.2	Para Di Chloro Benzene (PDCB)	106-46-7				>2000 mg/kg			
2.3	Ortho Di Chloro Benzene (ODCB)	95-50-1				1516 mg/kg			
2.4	1-Amino 2,4,6 Trichloro Benzene/ 2,4,6 Tri Chloro Aniline	634-93-5				2.400 mg/kg			
2.5	2,6 Di Chloro Benzoxazole	3621-82-7				5000 mg/Kg			
2.6	2,3,4,5,6 PentaChloro Pyridine	2176-62-7				435 mg/kg			
2.7	3,7 Di Chloro 8-Methyl Quinoline	84086-96-4				3129 mg/kg			
2.8	Ortho Phenylene Diamine	95-54-5				0	0	2500	510 mg/kg
2.9	Meta Phenylene Diamine	108-45-2				0			280 mg/kg
2.10	Para Phenylene Diamine	106-50-3				0			80 mg/kg
2.11	2,4-Difluoro Aniline	367-25-9				0			820 mg/kg
2.12	2,6- Difluoro Aniline	5509-65-9	0			850 mg/kg			
2.13	1,2-Di Fluoro Benzene	367-11-3	0			2000 mg/kg			
2.14	2-Amino Benzotrifluoride	88-17-5	0			1550 mg/kg			
2.15	3 - Amino Benzotrifluoride	98-16-8	0			480 mg/kg			
2.16	4 - Amino Benzotrifluoride	455-14-1	0			128 mg/kg			
2.17	3,4-Difluoro Benzonitrile	64248-62-0	0			2000 mg/kg			
<b>3.0</b>	<b>SPECIALTY PHENOL COMPOUNDS</b>								
3.1	Para Chloro Phenol (PCP)	106-48-9	500	0	500	367 mg/kg			

3.2	Ortho Chloro Phenol (OCP)	95-57-8				670 mg/kg
3.3	2,4 Di Chloro Phenol	120-83-2				147 mg/kg
3.4	2,6 Di Chloro Phenol	87-65-0				390 mg/kg
3.5	4- Bromo 2,5 Di Chloro Phenol	1940-42-7				1350 mg/kg
3.6	Resorcinol / 1,3 Benzenediol / Meta Di Hydroxy Benzene	108-46-3	0			510 mg/kg
3.7	Meta Amino Phenol	591-27-5	0			924 mg/kg
4.0	<b>Meta Di Chloro Benzene (MDCB)</b>	541-73-1	400	0	400	1100 mg/kg
<b>5.0</b>	<b>NITRO COMPOUNDS</b>					
5.1	Nitro Benzene	98-95-3			800	588 mg/kg
5.2	Meta Di Nitro Benzene (MDNB)	99-65-0				159.5 mg/kg
5.3	2,4 Di Chloro 3,5 DinitroBenzotrifluoride	29091-09-6	800	0		1500 mg/kg
5.4	2,3,4 Tri Chloro Nitro Benzene	17700-09-3				2300 mg/kg
5.5	4- Nitro Ortho Xylene	99-51-4				2636 mg/kg
5.6	2,4- Difluoro Nitrobenzene	446-35-5	0			200 mg/kg
6.0	<b>Calcium Chloride</b>	10043-52-4	1800	0	1800	2301 mg/kg
<b>7.0</b>	<b>AMINO BENZOIC ACID / ESTERS</b>					
7.1	3-Amino-4-Methyl Benzoic Acid Methyl Ester	18595-18-1			500	1000 mg/kg
7.2	3-Amino 4-Methyl Benzoic Acid Isopropyl Ester (AMBI)	21447-47-2				980 mg/kg
7.3	3-Amino 4-Methyl Benzoic Acid(2' - Chloro Ethyl Ester) (AMBC)	2458-12-0				1210 mg/kg
7.4	5-Amino-2-Methyl Benzene Sulphonic Acid Phenyl Ester	1089339-15-0	500	0		2000 mg/kg
7.5	Benzene Sulphonic Acid 3-Amino Phenyl Ester	13653-12-4				1640 mg/kg
7.6	2-Cyano-3,4,5,6- Tetrachloro Benzoic Acid Methyl Ester	10276-78-2				1780 mg/kg
7.7	Benzene Sulphonic Acid 2-Methyl-5-Nitrophenyl Ester	85896-03-5				560 mg/kg

7.8	4- Amino Benzoic Acid Methyl Ester	619-45-4				237 mg/kg
7.9	3,5 Di Amino 4-Chloro Benzoic Acid Iso Butyl Ester	32961-44-7				2487 mg/kg
7.10	3,4,5 Tri Methoxy Benzoic Acid	118-41-2				2000 mg/kg
7.11	1- Methyl 3,4,5 Tri Methoxy Benzene / 3,4,5 Tri Methoxy Toluene	6443-69-2				1420 mg/kg
7.12	5- Methyl 2,3 Pyridine Di Carboxylic Acid	53636-65-0				1000 mg/kg
7.13	3,4,5 Tri Methoxy Benzaldehyde	86-81-7				980 mg/kg
7.14	2 – Amino 3-Chloro Benzoic Acid Methyl Ester	77820-58-7	0			1460 mg/kg
7.15	2- Nitro-5-Chloro-4-Methyl Benzoic Acid Iso Propyl Ester	1204518-43-3	0			2000 mg/kg
7.16	N-(2-Hydroxypropyl)-2-Picolylamine	68892-16-0	0			1890 mg/kg
<b>Total</b>			<b>7500</b>	<b>0</b>	<b>7500</b>	

**List of By-Products:**

Sr. No.	Name of By-Products	CAS No.	Existing (MT/Month)	Additional (MT/Month)	Total (MT/Month)	LD50
1.	Dilute Sulphuric Acid	7664-93-9	753.3	14750	15503.3	2140 mg/Kg
2.	30 % HCl Solution	7647-01-0	3375.0	0.0	3375.0	900 mg/Kg
3.	35 -40 % Nitrosyl Sulphuric Acid / Sodium Nitrite Solution	7780-78-7	986.0	0.0	986.0	>5,000 mg/Kg
4.	POCl <sub>3</sub>	10025-87-3	265.0	0.0	265.0	380 mg/Kg
5.	Caustic Soda Solution (30% to 40%)	1310-73-2	470.0	0.0	470.0	1350 mg/Kg
6.	Ammonium Chloride	12125-02-9	55.0	0.0	55.0	1650 mg/Kg
7.	Ammonium Sulphate Salt	7783-20-2	150.0	0.0	150.0	4250 mg/Kg
8.	20-28 % HBr Solution	10035-10-6	0.0	10920.0	10920.0	2500 mg/Kg

9.	Sodium Bromide Salt & Solution	7647-15-6	0.0	3570.0	3570.0	3500 mg/Kg
10.	Sodium Sulphate & Solution	7647-15-6	0.0	6093.0	6093.0	>10,000 mg/Kg
11.	8-10 % Sodium Hypochlorite Solution	7681-52-9	0.0	600.0	600.0	8200 mg/Kg
Sr. No.	Name of By-Products	CAS No.	Existing Capacity (MT/Month)	Additional Capacity (MT/Month)	Total Capacity (MT/Month)	LD50
12	MnSO4 Salt	7785-87-7	0.0	650.0	650.0	782 mg/Kg
13.	30 -40 % Dilute Nitric Acid	7697-37-2	0.0	20.0	20.0	>2,000 mg/Kg
14.	Sulphur Dichloride	105454-99-0	0.0	1090.0	1090.0	300 mg/Kg
15.	Potassium Chloride Salt & Solution	7447-40-7	0.0	2795.0	2795.0	2600 mg/Kg
16.	Ammonium Bi Sulphate Salt	7803-63-6	0.0	1175.0	1175.0	2000 mg/kg
17.	Liq. Ammonia	1336 - 21 - 6	0.0	1490.0	1490.0	350 mg/Kg
18.	Sodium Sulphite	7757-83-7	0.0	476.0	476.0	2610 mg/Kg
19.	Copper Sulphate Salt	<a href="#">7758-99-8</a>	0.0	3425.0	3425.0	482 mg/Kg
<b>Total</b>			<b>6054.3</b>	<b>47054</b>	<b>53108.3</b>	

**1.3.1.2** During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for change in product mix of synthetic organic chemicals (specialty chemicals) manufacturing unit with the addition of pesticide specific intermediates, without increasing total production capacity of 7500 TPM by M/s Anupam Rasayan India Ltd (Unit- 4) in a total area of 54000 sqm located at Plot No. 907/3 & 907/4, Jhagadia Industrial Estate, Jhagadia, District Bharuch (Gujarat).

Synthetic organic chemicals industry located in notified industrial area is covered under category B of item 5(f) of the schedule to the EIA Notification, 2006 and requires appraisal at State level. However, in case of pesticides, it is only those units producing technical grade pesticides, are covered under category A of item 5(b). Pesticide specific intermediates, which are essentially synthetic organic chemicals, are not specifically mentioned either under category A or B of the items 5(f) & 5(b), and needs to be looked into on case to case basis depending upon their proportion.

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



Total water requirement is estimated to be 310 cum/day proposed to be met from GIDC water supply.

Total effluent generated from different industrial operations is estimated to be 792 KLD. High COD/High TDS Industrial waste water of 50 KLD will be treated in MEE and condensate will be subjected to final treatment in SBT based Bio Reactor System. Low COD/Low TDS Industrial effluent of 24 KLD will be treated in ETP followed by SBT based Bio Reactor along with the MEE condensate. Treated industrial waste water of 74 KLD conforming to discharge norms will be sent to M/s NCTJhagadia new pipeline leading to discharge in deep sea. Domestic waste water of 4 KLD will be treated and disposed in septic Tank & Soak Pit.

Earlier, the SEIAA had issued EC vide letter dated 18<sup>th</sup> January, 2013 and 10<sup>th</sup> May, 2016 for manufacturing of synthetic organic chemicals (speciality chemicals) at Plot No. 907/3 & 907/4, GIDC-Jhagadia, District Bharuch (Gujarat). The monitoring report on compliance status of EC conditions after conducting site visit on 12<sup>th</sup> January, 2018 was forwarded by the Regional Office at Bhopal. Out of the 107 conditions, 37 are fully complied, 3 are complied subject to condition, 58 are agreed to comply, 1 is complied subject to needful amendment in EC, 2 is partly complied and 5 are noted and agreed.

Consent to Operate for the present capacity of 7500 TPM issued by Gujarat PCB vide letter dated 29<sup>th</sup> August, 2018, is valid up to 25<sup>th</sup> December, 2022.

**1.3.1.3** *The EAC, in the first instance and in view of no change in production capacity (7500 TPM) for which the earlier EC was granted by the SEIAA, Gujarat on 10<sup>th</sup> May, 2016, was not convinced with admissibility of the proposal under expansion category. Further, in view of different products remaining under the same group of organic compounds, the Committee found no justification for the project to be covered under category A for its appraisal at the central level.*

*The EAC also expressed its concerns over poor compliance status of the conditions stipulated in the earlier ECs dated 18<sup>th</sup> January, 2013 & 10<sup>th</sup> May, 2016 issued by the SEIAA, Gujarat, and insisted for action taken report along with firm time lines to be submitted to the Regional Office of the Ministry.*

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

### **Agenda No.1.3.2**

**Expansion of dyes and chemicals manufacturing unit at Block no. 484,502, 503 A, 504 & 505. NH-8, Palsana, District Surat (Gujarat) by M/s Spectrum Dyes & Chemicals Pvt Ltd - For Environmental Clearance**

**[IA/GJ/IND2/79313/2017, J-11011/517/2017-IA II(I)]**

*(Proposal was considered on 20<sup>th</sup> December, 2018 as per the request of the project proponent with the approval of Chairman)*

**1.3.2.1** The project proponent and their consultant M/s En-Vision Environmental Services 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 expansion of dyes and dyes intermediates manufacturing Unit at Block No. 484, 502, 503-A 504 & 505, N.H. NO. 8, Palsana-394315, Dist: Surat, Gujarat by M/s. Spectrum Dyes and Chemicals Pvt. Ltd.

- (ii) The ToR has been issued by Ministry vide letter No. IA-J-11011/517/2017-IA-II(I); dated 9<sup>th</sup> December, 2017.
- (iii) All dyes and dyes intermediates manufacturing projects are listed at S.N. 5 (f) Synthetic Organic Chemicals Industry 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-11011/36/2003-IA II (I), Dated: 01/04/2004 to the existing project dyes and dyes intermediates manufacturing Unit in favour of M/s. Spectrum Dyes and Chemicals Pvt. Ltd.
- (v) Existing land area is 46158.23 m<sup>2</sup>, additional 3666.29 m<sup>2</sup> land will be used for proposed expansion. Industry has About 8185 sq.m area i.e. 16.42 % of total project plot area is developed as green belt at plant boundary, road side, around offices and buildings and Stretch of open land. Industry already developed compensatory greenbelt of 5400 sq.m area i.e. 10.83 % of the total project plot area at Udhana-Magdalla Road, Surat / Industry will develop greenbelt another 2000 sq. m area i.e 4.06 % of total project area. Total Green belt area of total project area would be 31.31 %.
- (vi) Cost of the proposed project would be Rs. 4,757.83 Lacs. Total capital cost for environmental pollution control measures with the existing plant would be Rs. 3,155.91 Lacs and recurring cost per annum would be Rs. 1,165.38 Lacs.
- (vii) Total Employment will be (Existing-1080 + Proposed-122) persons as direct & indirect after expansion. Industry proposes to allocate Rs 91.53 @ of 2 % towards Corporate Environment Responsibility.
- (viii) There are no any national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Mindhola River is flowing at a distance of 2.6km in SE direction.
- (ix) Ambient air quality monitoring was carried out at 8 locations during 1<sup>st</sup> October 2017 to 31<sup>st</sup> December 2017 and the baseline data indicates the ranges of concentrations as: PM10 (56.20-100.00 µg/m<sup>3</sup>), PM2.5 (29.30-60.00µg/m<sup>3</sup>), SO<sub>2</sub> (14.30-80.00 µg/m<sup>3</sup>) and NO<sub>x</sub> (17.10-80.00µg/m<sup>3</sup>). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 3.5797 µg/m<sup>3</sup>, 1.01139 µg/m<sup>3</sup> and 0.50569 µg/m<sup>3</sup> with respect to PM<sub>10</sub>, SO<sub>x</sub> and NO<sub>x</sub>. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).
- (x) Total fresh water requirement is 2700 KLD (Existing – 1142.5 KLD, Proposed – 1557.5 KLD) (Domestic, Green belt and Industrial purpose) which will be sourced from existing 4 nos. of bore well and proposed 3 nos. of bore well.
- (xi) Domestic wastewater of 75.0 KL/Day (Existing -15 KLD + Proposed - 60 KLD) generated will be discharged through secondary ETP. There shall be 2185.0 KL/Day (Existing-950 KLD + Proposed-1235 KLD) of industrial waste water generated from the proposed plant which will be treated in in-house ETP of 2500.0 KLD capacity. Treated water (2245.0 kl/day) will be send to CETP of M/s. NPICSL, Palsana for further treatment.
- (xii) Power requirement after expansion will be 6000 KVA including existing 4000 KVA and will be met from DGVCL. Existing unit has D.G 2x380KVA, D.G 2x500KVA, D.G 2x1250KVA, All DG sets are used as standby during power failure. Stack (height 11 m) will be provided as per CPCB norms to the proposed DG sets.

(xiii) Existing unit has 6 MTPH (Running) & 4 MTPH (Stand by) Coal fired steam boiler. Additionally, Boiler 10 MTPH Coal fired steam boiler will be installed. ESP with a stack of height of 36 m will be installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm<sup>3</sup> for the proposed boilers.

**FLUE GAS STACKS : [EXISTING]**

Stack No.	Stack Attached To	Stack Height	Stack Diameter	Fuel	Pollutants	Permissible value	APC Attached
1	Steam Boiler 6 MTPH (Running) 4 MTPH (Stand by) *	36.5 M	1300 mm	Coal, Lignite	PM So <sub>x</sub> No <sub>x</sub>	150mg/Nm <sup>3</sup> 100 ppm 50 ppm	High Efficiency Multi Cyclone Separator, Bag filter
2	Thermo pack 2,00,000 Kcal/Hr	21 M	250 mm	NG	PM So <sub>x</sub> No <sub>x</sub>	150mg/Nm <sup>3</sup> 100 ppm 50 ppm	Sufficient Stack Height
3	HAG	34 M	1000 mm	Coal, Lignite	PM So <sub>x</sub> No <sub>x</sub>	150mg/Nm <sup>3</sup> 100 ppm 50 ppm	Dual Teema Cyclone Separator, Bag filter
4	Thermo pack 3,00,000 Kcal/Hr. Heat transfer area 24m <sup>2</sup>	5 M	305 mm	NG	PM So <sub>x</sub> No <sub>x</sub>	150mg/Nm <sup>3</sup> 100 ppm 50 ppm	Sufficient Stack Height
5	(LDO/HSD)/NG Based Power Plant (stand by)	30 M	800 mm	LDO/ HSD/ NG	PM So <sub>x</sub> No <sub>x</sub>	150mg/Nm <sup>3</sup> 100 ppm 50 ppm	Sufficient Stack Height
6	(LDO/HSD)/NG Based Power Plant on plot no. 484 (stand by)	32 M	800 mm	LDO/ HSD/ NG	PM So <sub>x</sub> No <sub>x</sub>	150mg/Nm <sup>3</sup> 100 ppm 50 ppm	Sufficient Stack Height
7	DG Set – 02 Nos stand by (380 KVA)	11 M	150 mm	HSD	PM So <sub>x</sub> No <sub>x</sub>	150mg/Nm <sup>3</sup> 100 ppm 50 ppm	Sufficient Stack Height
8	DG Set – 02 Nos stand by (500 KVA)	11 M	150 mm	HSD	PM So <sub>x</sub> No <sub>x</sub>	150mg/Nm <sup>3</sup> 100 ppm 50 ppm	Sufficient Stack Height
9	DG Set – 02 Nos stand by (1250 KVA)	11 M	150 mm	HSD	PM So <sub>x</sub> No <sub>x</sub>	150mg/Nm <sup>3</sup> 100 ppm 50 ppm	Sufficient Stack Height

**Note - \* indicate that in proposed expansion, we will resell our Existing 4 MTPH Boiler (Stand by)**

**Flue Gas Stack: [ Proposed]**

Stack No.	Stack Attached To	Stack Height	Stack Diameter	Fuel	Pollutants	Permissible value	APC Attached
1	Steam	36 M	1450 mm	Coal,	PM	150mg/Nm	ESP (Combine

	Boiler 10 MTPH **			Lignite	So <sub>x</sub> No <sub>x</sub>	<sup>3</sup> 100 ppm 50 ppm	Stack and APC for boiler and HAG)
2	HAG						

**Note - \*\* indicate that in proposed expansion, we will use our Existing 6 MTPH Boiler as a (Stand by)**

(xiv) Details of Process emissions generation and its management:

**PROCESS STACKS :[EXISTING]**

Stack No.	Stack Attached To	Stack Height	Stack Diameter	Fuel	Pollutants	Permissible value	APC Attached
1	Spray Dryer No. 3	21.4 M	700 mm	NG / Steam (HAG) After Expansion	PM So <sub>x</sub> No <sub>x</sub>	150 mg/Nm <sup>3</sup> 40 mg/Nm <sup>3</sup> 25 mg/Nm <sup>3</sup>	Cyclone + Wet Scrubber
2	Spray Dryer No. 4	18.4 M	450 mm	Steam	PM So <sub>x</sub> No <sub>x</sub>	150 mg/Nm <sup>3</sup> 40 mg/Nm <sup>3</sup> 25 mg/Nm <sup>3</sup>	Cyclone + Wet Scrubber
3	Spray Dryer No.5	21.4 M	1200 mm	NG / Steam (HAG) After Expansion	PM So <sub>x</sub> No <sub>x</sub>	150 mg/Nm <sup>3</sup> 40 mg/Nm <sup>3</sup> 25 mg/Nm <sup>3</sup>	Cyclone + Wet Scrubber
4	Spray Dryer No.6	33.0 M	1100 mm	Steam (HAG)	PM So <sub>x</sub> No <sub>x</sub>	150 mg/Nm <sup>3</sup> 40 mg/Nm <sup>3</sup> 25 mg/Nm <sup>3</sup>	Cyclone + Wet Scrubber
5	Spray Dryer No.7	33.0 M	1200 mm	Steam (HAG)	PM So <sub>x</sub> No <sub>x</sub>	150 mg/Nm <sup>3</sup> 40 mg/Nm <sup>3</sup> 25 mg/Nm <sup>3</sup>	Cyclone + Wet Scrubber
6	Spray Dryer No.8	33.0 M	1200 mm	Steam (HAG)	PM So <sub>x</sub> No <sub>x</sub>	150 mg/Nm <sup>3</sup> 40 mg/Nm <sup>3</sup> 25 mg/Nm <sup>3</sup>	Cyclone + Wet Scrubber
7	Scrubber at Bromide Plant	16.5 M	250 mm	-	Cl <sub>2</sub> Hcl Br <sub>2</sub> Hbr	9 mg/Nm <sup>3</sup> 20 mg/Nm <sup>3</sup> 2 mg/Nm <sup>3</sup> 30 mg/Nm <sup>3</sup>	Two Stage venturi scrubbers followed by packed column scrubber
8	Scrubber At AQ-I Plant	16.5 M	250 mm	-	Cl <sub>2</sub> Hcl Br <sub>2</sub> Hbr	9 mg/Nm <sup>3</sup> 20 mg/Nm <sup>3</sup> 2 mg/Nm <sup>3</sup> 30 m g/Nm <sup>3</sup>	Two Stage venturi scrubbers followed by packed column scrubber
9	Scrubber At DD1 Plant / Mono-Azo #	16.5 M	250 mm	-	Br <sub>2</sub> So <sub>2</sub>	2 mg/Nm <sup>3</sup> 20 mg/Nm <sup>3</sup>	Two Stage venturi scrubbers followed by packed column scrubber

10	Oleum Storage Tank	6.0 M	50 mm	-	Sox	40 mg/Nm <sup>3</sup>	Scrubber
----	--------------------	-------	-------	---	-----	-----------------------	----------

Note - # indicate that in proposed expansion, we will use our existing DD1 scrubber for Mono Azo plant and install new scrubber for DD1 Plant

Process Stacks : [Proposed]							
Stack No.	Stack Attached To	Stack Height	Stack Diameter	Fuel	Pollutants	Permissible value	APC Attached
1	Spray Dryer No.9	33.0 M	1200 mm	Steam (HAG)	PM		Cyclone + Wet Scrubber
2	Scrubber At NKS Plant	2.5 M	250 mm	-	So <sub>2</sub>	-	Two Stage venturi scrubbers followed by packed column scrubber
3	Scrubber At DD2 Plant (Diazo)	6.0 M	250 mm	-	Cl <sub>2</sub> Hcl Br <sub>2</sub> Hbr	-	Two Stage venturi scrubbers followed by packed column scrubber
4	Scrubber At DD2 Plant (Coupling)	5.3 M	650 mm	-	So <sub>2</sub>	-	Two Stage venturi scrubbers followed by packed column scrubber
5	Scrubber At Solvent -II Plant	2.0M	250 mm	-	Br <sub>2</sub> , So <sub>2</sub> , Cl <sub>2</sub>	-	Two Stage venturi scrubbers followed by packed column scrubber
6	Scrubber At MAA Plant	6.0 M	150 mm	-	Br <sub>2</sub> , So <sub>2</sub> , Cl <sub>2</sub>	-	Venturi scrubbers followed by packed column scrubber
7	Scrubber At Solvent – III Plant Stage-1 Acid	5.6 M	450 mm	-	So <sub>2</sub> Cl <sub>2</sub>	-	Packed column scrubber
	Scrubber At Solvent – III Plant Stage-2 Alkaline	5.6 M	450 mm	-	So <sub>2</sub> Cl <sub>2</sub>	-	Packed column scrubber
8	Scrubber At NEW DD1 Plant (Diazo)	5.5 M	650 mm	-	Cl <sub>2</sub> Hcl Br <sub>2</sub> Hbr	-	Two Stage venturi scrubbers followed by packed column scrubber
9	Scrubber At NEW DD1 Plant	5.5 M	1000 mm	-	Cl <sub>2</sub> Hcl Br <sub>2</sub>	-	Two Stage venturi scrubbers followed by

	(Coupling)				Hbr		packed column scrubber
10	Primary Treatment Plant (Equalization tank)	3.5 M	355 mm	-	Hcl Br <sub>2</sub> Hbr	-	Packed column scrubber

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

S. No	Type Of Hazardous Waste	Existing (TPM)	Proposed (TPM)	Total (TPM)	Waste Category	Source	Waste Management Details
							DISPOSAL
1	ETP Sludge	500	750	1250	35.3	Effluent Treatment Plant	Collection, Storage, Transportation, Disposal at GPCB approved TSDF site
2	Used/spent Oil	1.8 MT/Year	0	1.8 MT/Year	5.1	Various maintenance processes	Collection, Storage, Transportation, Disposal by selling to registered re-refiner
3	Discarded Containers	60000 MT/Year	0	60000 MT/Year	33.3	Various production units	Collection, Storage, Decontamination, Transportation, Disposal by selling to registered party
4	Process Waste	5	0	5	26.1	Manufacturing process	Collection, Storage, Transportation, Disposal at GPCB approved CHWIF
5	Distillation Residue	75	100	175	36.1	Manufacturing process	Collection, Storage, Transportation, Disposal at GPCB approved CHWIF or co/pre-processing
6	GYPSUM	500	0	500	D2	Effluent Treatment Plan	Collection, Storage, Transportation, Disposal by

							selling to actual user authorized by GPCB
--	--	--	--	--	--	--	---

(xvi) Public hearing was conducted on 25th May 2018, at Palsana, Surat and MOM of public hearing, issues raised and commitments made by the project proponent during public hearing with action plan in tabular chart Annexure- XLII of EIA Report.

(xvii) Certified compliance report of existing EC letter no.J-11011/36/2003-II (I) submitted to RO, MoEF&CC on dated 30/08/2018 vide File No: 5-77/2004(ENV)/448.

(xviii) No any Litigation Pending against the proposal.

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

SR. NO.	NAME OF PRODUCTS	Existing (MT/ MONTH)	Proposed (MT/ MONTH)	Total After Expansion (MT/ MONTH)
1	S.O.Dyes	250	650	900
2	Dispersing Agent	1500	0	1500
3	Textile Auxiliaries	2125	-2125	0
4	Hydrous & Specialty Chemicals	1000	-1000	0
5	Dyes Intermediate	400	350	750
<b>Total</b>				<b>3150</b>
<b>OR</b>				
1	Formulated SO Dyes	-	2400	2400
2	Dyes Intermediate	400	350	750
<b>Total</b>				<b>3150</b>

**1.3.2.2** During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for expansion of dyes and dyes intermediates manufacturing Unit by M/s Spectrum Dyes and Chemicals Pvt Ltd in an area of 49824.52 sqm located at Block No. 484, 502, 503-A 504 & 505, N.H. No. 8, Palsana, District Surat (Gujarat).

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

Standard ToR for the project was granted on 9<sup>th</sup> December, 2017. Public hearing was conducted by the SPCB on 25<sup>th</sup> May 2018.

Total water requirement is estimated to be 2700 cum/day, of which fresh water requirement of 1150 cum/day will be met from ground water through bore well. Application for ground water withdrawal has been submitted to CGWA on 29<sup>th</sup> January, 2018.

Total effluent generated from different industrial operations is estimated to be 2185 cum/day, which will be treated in ETP. Domestic wastewater of 75 cum/day will be treated in secondary

ETP. Treated water of 2245 cum/day will be send to CETP of M/s NPICSL, Palsana for further treatment and disposal.

Earlier, the Ministry had issued EC vide letter dated 1<sup>st</sup> April, 2004 for Dye Manufacturing unit of capacity 250 TPM by M/s Spectrum Dyes and Chemicals Pvt Ltd. The monitoring report on compliance status of EC conditions was forwarded by the Regional Office vide their letter dated 30<sup>TH</sup> August, 2018.

Consent to Operate for the present industrial operations issued by Gujarat PCB vide letter dated 24<sup>th</sup> April, 2018, is valid up to 21<sup>st</sup> October, 2019.

**1.3.2.3** *The EAC, after deliberations and taking note of discrepancies in product list, effluent discharge without any recycle/reuse, issues raised during public hearing, discrepancy in baseline air quality analysis, desired for clarifications/inputs in respect of the following:-*

- *Justification for not obtaining prior EC for the presently manufacturing products, viz. Dispersing Agent, Textile Auxiliaries, Hydrous & Specialty Chemicals, Dyes Intermediate.*
- *Revised product list as per the schedule to the EIA Notification, 2006.*
- *Revised water balance with reduction in fresh water requirement up to 50 % of the presently proposed.*
- *Effluent treatment plan.*
- *Action plan for chemical health and safety impact.*
- *Response and commitment on the issues raised during public hearing.*
- *Plan for capturing of emission of volatile compounds.*
- *Commitment for use of natural gas in place of coal.*
- *Reanalysis of the baseline data.*
- *Plan for Corporate Environment Responsibility.*

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

### **Agenda No.1.3.3**

**Expansion of specialty chemicals & pesticide intermediate products in existing unit at Plot No.Z/103/D, Phase-II, Dahej SEZ, Taluka Vagra, District Bharuch (Gujarat) by M/s Benzo Chem Industries Pvt Ltd - For Environmental Clearance**

**[IA/GJ/IND2/71018/2017, IA-J-11011/547/2017-IA-II(I)]**

**1.3.3.1** 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 & informed that:

(i) The proposal is for Environmental Clearance to the project for Expansion of Pesticide Specific Intermediates and Specialty Chemicals Manufacturing Plant in Existing Plant (600 MT/Month to 744 MT/Month) at Plot No. Z-103/D, Phase-II, Dahej SEZ, Tal: Vagra, District: Bharuch, Gujarat of M/s Benzo Chem Industries Pvt Ltd.

(ii) The ToR has been issued by Ministry vide letter No. J-11011/547/2017-IA II (I) dated 10/02/2018.

(iii) All Products are listed at S.N. 5(b) & 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-11011/132/2014 IA II (I) dated 28<sup>th</sup> October, 2015.
- (v) Existing land area is 47613.19m<sup>2</sup>, no additional land required for expansion. Industry will develop greenbelt in an area of 30% i.e. 15000 m<sup>2</sup> out of 47613.19 m<sup>2</sup> total area of the project.
- (vi) The estimated project cost is Rs.225 Crores. Total Capital cost earmarked towards environmental pollution control measures is Rs.12.5 Crore and recurring cost (Operation and Maintenance) will be around Rs. 3.3 Crore per annum.
- (vii) Total employment will be 150 people as direct and 75 persons indirect after expansion. Industry purposes to allocate Rs.2.25 Cr of 1% towards Corporate Social Responsibility.
- (viii) There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. AmlaKhadi is flowing at a distance of 6 Km in North Direction.
- (ix) Ambient air quality monitoring is carried out at 6 locations during March, 2017 to May 2017. The maximum concentration of SPM (120.6 µg/m<sup>3</sup>), PM<sub>10</sub> (78.28 µg/m<sup>3</sup>), PM<sub>2.5</sub> (45.99 µg/m<sup>3</sup>), SO<sub>2</sub> (18.08 µg/m<sup>3</sup>), maximum concentration of NOx (19.25 µg/m<sup>3</sup>), maximum concentration of O<sub>3</sub> (10.90 µg/m<sup>3</sup>), maximum concentration of CO (1.22 µg/m<sup>3</sup>), maximum concentration of VOC (0.7 ppm), was recorded in study area.  
The minimum concentration of SPM (112.6 µg/m<sup>3</sup>), PM<sub>10</sub> (72.5 µg/m<sup>3</sup>), PM<sub>2.5</sub> (40.65 µg/m<sup>3</sup>), SO<sub>2</sub> (11.97 µg/m<sup>3</sup>), minimum concentration of NOx (14.06 µg/m<sup>3</sup>), minimum concentration of O<sub>3</sub> (10.02 µg/m<sup>3</sup>), minimum concentration of CO (1.12 µg/m<sup>3</sup>), minimum concentration of VOC (0.2 ppm), was recorded in study area.  
The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).
- (x) Total water requirement will be 630 m<sup>3</sup>/day of which fresh water requirement of 630 m<sup>3</sup>/day and will be met from GIDC Water Supply.
- (xi) The wastewater generation will be 320 m<sup>3</sup>/day. Effluent generated shall be segregated in to high COD and low COD stream. M/s BENZO CHEM INDUSTRIES PVT. LTD. proposes a new ETP consisting of primary, secondary and tertiary treatment facility. The low COD stream effluent will be sent to propose ETP. Treated effluent shall be sent to GIDC effluent pipeline for final disposal into deep sea. The high COD stream and High TDS effluent will be treated in primary ETP and then treated effluent will be sent to MEE and MEE Condensate will be treated in ETP. Final Treated effluent shall be sent to GIDC effluent pipeline for final disposal into deep sea. Domestic Waste water will be treated in secondary treatment or disposed by septic tank & soak pit.
- (xii) Total Power Requirement – 5600 KVA from DGVCL (Existing -1500 KVA + Proposed - 4100 KVA) from Dakshin Gujarat Vij Company Limited (DGVCL). Existing unit has 1 D G Set of 500 KVA, Additionally 2 DG Set (500 KVA) will be used as standby during power failure. Stack (Height 11 m) will be provided as per CPCB norms to the proposed DG Set.
- (xiii) Existing unit have 6 TPH coal/briquette base 1 No. steam boiler, 10,00,000 Kcal/ hr coal/briquette base 1 No. Thermic fluid heater and 500 KVA – 1 D G Set. Additionally will have 8 TPH Agro waste/Coal base 2 No. steam boiler, 10,00,000 Kcal/ hr coal/briquette base 2 No. Thermic fluid heater and 750 KVA – 2 Nos. D G Set.. Multi Cyclone Separator with Bag Filter, ESP, scrubber with a stack of height will be installed for controlling the Particulates Matter (PM).

(xiv) Details of Process emissions generation and its management: Existing unit have 3 Nos. of process gas emission and Additionally will have 4 No. of reaction vessel. Two scrubber system will be installed to control process gas emission.

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

S. No.	Type of Hazardous Waste	Category No.	Quantity as per EC	Additional	Total Quantity after proposed expansion	Treatment & Disposal
1.	ETP Sludge	35.3	30 MT/Month	+20 MT/Month	50 MT/Month	Collection, storage, transportation, Disposal to Nearest TSDF site
22.2.	Residue from Distillation	36.1	65 MT/Month	+30 MT/Month	95 MT/Month	Collection, storage, transportation, Co-processing in Cement Industries or send to Nearest Common Incineration Site
33.3.	Discarded Drum	33.1	1000 Nos./Month	+2000 Nos./Month	3000 Nos./Month	Collection, storage, transportation, Sell to GPCB authorized Vendor after decontamination
44.4.	Discarded PP Bags/Liner	33.1	2000 Nos./Month	+2000 Nos./Month	4000 Nos./Month	Collection, storage, transportation, Sell to GPCB authorized Vendor after decontamination
55.5.	Used Oil	5.1	200 Liters/Month	+300 Liters/Month	500 Liters/Month	Collection, storage, transportation, Sell to GPCB registered reprocessor.
66.6.	Inorganic Salts	29.1	100 MT/Month	-50 MT/Month	50 MT/Month	Collection, storage, transportation, Sell to end user or disposal in TSDF
77.7.	Carbon Sludge	28.3	5 MT/Month	--	5 MT/Month	Collection, storage, transportation, Disposal at Nearest TSDF Site
88.8.	MEE Salt	--	25 MT/Month	+275 MT/Month	300 MT/Month	Collection, storage, transportation, Disposal at Nearest TSDF Site
9.	HCl (30%)	29.6	126 MT/Month	--	156 MT/Month	Collection, storage, transportation, Sell to end user
10	H <sub>2</sub> SO <sub>4</sub> (70%)	29.6	50 MT/Month	-30 MT/Month	20 MT/Month	Collection, storage, transportation, Sell to end user
11.	Liquor Ammonia (24%)	--	45 MT/Month	+10 MT/Month	55 MT/Month	Collection, storage, transportation, Sell to end user
12.	HBr (35-40% Solution)	B26	70 MT/Month	--	70 MT/Month	Collection, storage, transportation, Sell to end user
13.	NaBr	B26	76	--	76	Collection, storage,

	(18-20% Solution)		MT/Month		MT/Month	transportation, Sell to end user
14.	Phosphoric Acid (30-35% Solution)	29.3	60 MT/Month	--	60 MT/Month	Collection, storage, transportation, Sell to end user
15.	Copper Sulphate/ Copper Oxide/Hydroxide	C1	80 MT/Month	-40 MT/Month	40 MT/Month	Collection, storage, transportation, Sell to end user
16.	Sodium Acetate	--	5 MT/Month		5 MT/Month	Collection, storage, transportation, Sell to end user
17.	Sodium Sulphite 18-20%	--	30 MT/Month	+30 MT/Month	60 MT/Month	Collection, storage, transportation, Sell to end user
18.	Potassium Chloride	--	5 MT/Month	-5 MT/Month	--	Collection, storage, transportation, Sell to end user
19.	Potassium Carbonate	--	12 MT/Month	--	12 MT/Month	Collection, storage, transportation, Sell to end user
20.	Ammonium Sulphate	C1	4 MT/Month	-4 MT/Month	--	Collection, storage, transportation, Sell to end user
21.	Spent Solvent	--	--	50 KL/Month	50 KL/Month	Collection, storage, transportation, Sell to Cement Industry
22.	Poly Aluminum Chloride solution 25%	--	--	+20 KL/Month	20 KL/Month	Collection, storage, transportation, Sell to end user
23.	Boiler/Fly Ash	--	--	+100 MT/Month	100 MT/Month	Collection, storage, transportation & given to Bricks Manufacturers / Land filling

(xvi) Public Hearing for the proposed project is not required as the plant is located in notified Industrial Estate (Dahej GIDC).

(xvii) Details of Certified compliance report submitted by RO, MoEF&CC: Certified compliance report has been submitted.

(xviii) There is no any litigation pending against the proposal.

(xix) Following are the list of proposed products:

S. No	Name of Products	CAS No.	Quantity as per EC No.	Quantity as per	Quantity as per	Category	LD50
-------	------------------	---------	------------------------	-----------------	-----------------	----------	------

			F. No. J-11011/132/2014-IA II (I) and CTE No. 70398 (TPM)	proposed expansion in MT/Month	after proposed expansion (TPM)		
<b>Pesticide Specific Intermediate products 5(b) -229 MT/Month</b>							
1.	2,4,6-trimethyl Benzaldehyde (Mesitaldehyde ) / or 2,4,6-TrimethylBenzaldehyde 84%in 16% Aceton (Mesitaldehyde 84% in 16% Acetone)	487-68-3	20	-12	8	<b>5 (b)</b>	300 mg/kg
2.	Indoline	496-15-1	20	-20	0	<b>5 (b)</b>	238 mg/kg
3.	2,4-Dichloro Phenyl Acetic Acid	19719-28-9	25	-25	0	<b>5 (b)</b>	2000 mg/kg
4.	2,4-Dichloro Phenyl Acetyl Chloride	53056-20-5	25	-12	13	<b>5 (b)</b>	5000 mg/kg
5.	2,4,6-Trimethyl Phenyl Acetyl Chloride	52629-46-6	20	+5	25	<b>5 (b)</b>	4400 mg/kg
6.	2,4 Dichloro Meta Cresol	17788-00-0	4	-3	1	<b>5 (b)</b>	3200 mg/kg
7.	2-chloro-4,6 dimethoxy-1,3,5-Triazine	3140-73-6	25	0	25	<b>5 (b)</b>	2150 mg/kg
8.	2-Coumaranone 30%, Acetic Anhydride 70 %	553-86-6	170	+38	208	<b>5 (b)</b>	2000 mg/kg
9.	3,4,5 trimethoxy Toluene	6443-69-2	25	-17	8	<b>5 (b)</b>	1240 mg/kg
10.	3,4,5 trimethoxy Benzyl chloride	<a href="#">3840-30-0</a>	2	-2	0	<b>5 (b)</b>	1000 mg/kg
11.	3,4,5-trimethoxybenzyl cyanide	<a href="#">13338-63-1</a>	2	-2	0	<b>5 (b)</b>	156 mg/kg
12.	3,4,5-trimethoxyphenyl acetic acid	951-82-6	2	-2	0	<b>5 (b)</b>	2000 mg/kg
13.	4,4-dimethoxy-2-Butanone	<a href="#">5436-21-5</a>	17	-17	0	<b>5 (b)</b>	6200 mg/kg

14.	R-2-(2,4-Dichlorophenoxy) Propionic Acid	1516 5-67-0	40	-40	0	5 (b)	825 mg/kg
15.	Para Methyl Benzaldehyde / 4-Methyl Benzaldehyde	104-87-0	25	-25	0	5 (b)	400 mg/kg
16.	2-5 Dimethyl Phenyl Acetyl Chloride	5531 2-97-5	25	+8	33	5 (b)	2000 mg/kg
17.	3-coumaranone	7169-34-8	-	+8	8	5 (b)	1640 mg/kg
18.	3, 3 Dimethyl Butyryl Chloride	7065-46-5	-	+16	16	5 (b)	277 mg/kg
19.	4-bromo Anisole	104-92-7	-	+16	16	5 (b)	2200 mg/kg
20.	3-Chloro2- Methyl Anisole	3260-88-6	-	+25	25	5 (b)	2000 mg/kg
21.	2 2 Dimethyl Butyryl Chloride	5856-77-9	-	+8	8	5 (b)	1670 mg/kg
22.	4-Chloro 2,6 Dimethyl Phenyl Acetic Acid	3994 4-18-8	-	+8	8	5 (b)	300 mg/kg
23.	3-Methoxy,2-Methyl Benzoyl Chloride	2448 7-91-0	-	+8	8	5 (b)	1250 mg/kg
24.	Methyl(E)-3-methoxy-2-(2-chloromethylphenyl)-2-propenoate	1174 2-51-0	-	+33	33	5 (b)	1980 mg/kg
25.	2-(2-hydroxyphenyl)-3-methoxypropenoic acid methyl ester	1258 08-20-0	-	+33	33	5 (b)	2000 mg/kg
26.	Methyl (2E) -2-( 2-(6-(2-Cyanophenoxy) Pyrimidine -4yl) Oxy Phenyl Acetate	4784 1-45-5	-	+33	33	5 (b)	1420 mg/kg
<b>Specialty Chemicals –5 (f) - 515 MT/Month</b>							
27.	2-Amino Benzo Nitrile	1885-29-6	10	-9	1	5 (f)	180 mg/kg
28.	2-Amino-5-Bromo Benzo Nitrile	3926 3-32-6	5	-5	0	5 (f)	2000 mg/kg
29.	Pivolonitrile (Trimethylacetone nitrile)	630-18-2	10	-10	0	5 (f)	2140 mg/kg
30.	4,4-dihydroxy Benzo phenone	611-99-4	25	-25	0	5 (f)	500 mg/kg

31.	4-Bromo-2-Hydroxy Anisole / 5-Bromo-2-Methoxy Phenol	3794 2-01-1	4	-4	0	5 (f)	1890 mg/kg
32.	5-Propionyl-2-Thiophenyl acetic acid (PPP) /	1039 18-73-6	2	-2	0	5 (f)	800 mg/kg
	2-Phenyl Thio-5-Propionyl Phenyl Acetic Acid	9232 1-29-4				5 (f)	
33.	2,3,4,5-tertrachloro Benzoyl chloride	4222 1-52-3	17	-17	0	5 (f)	540 mg/kg
34.	3,4,5-trimethoxy benzoic acid	118-41-2	4	-3	1	5 (f)	230 mg/kg
35.	3,4,5-Trimethoxy Benzaldehyde	86-81-7	17	-17	0	5 (f)	310 mg/kg
36.	2-Amino 2 Phenyl Butyric Acid	5438-07-3	4	-4	0	5 (f)	2000 mg/kg
37.	1-(2,6 Dichloro Phenyl)2-Indolinone	1530 7-86-5	4	-4	0	5 (f)	170 mg/kg
38.	2-(3-Benzoyl Phenyl)-propio Nitrile / Ketoprofen Nitrile	4287 2-30-0	8	-8	0	5 (f)	483 mg/kg
39.	N-Methyl-1-Naphtahlene Methyl Amine Acetate	-----	2	+0	2	5 (f)	750 mg/kg
40.	N-Methyl-1-Naphtahlene Methyl Amine Base	1448 9-75-9	2	+0	2	5 (f)	802 mg/kg
41.	Para Chloro Phenyl Ethyl Amine / 2-(4-Chloro-Phenyl)-Ethylamine	156-41-2	5	-5	0	5 (f)	680 mg/kg
42.	Ortho Chloro Phenyl Ethyl Amine	1307 8-80-3	5	-5	0	5 (f)	1470 mg/kg
43.	2-Dimethylamino-2Phenyl Butanol/2-(N,N-Dimethylamino)-2-Phenyl-1-Butanol	3906 8-94-5	4	-4	0	5 (f)	342 mg/kg
44.	Methyl- 2-Dimethylamino-2-Phenyl butyrate /2-(N,N-Dimethyl Amino)-2-Phenyl-2-	3906 8-93-4	4	-4	0	5 (f)	640 mg/kg

	Butyrate							
45.	2-Phenyl Butyric Acid	90-27-7	4	-4	0	5 (f)	210 mg/kg	
46.	5-Chloro-2-Hydroxy Benzo phenone	85-19-8	5	-4	1	5 (f)	980 mg/kg	
47.	5-(1-Carboxy Ethyl)-2-Phenyl Thiophenyl Acetic Acid (DIACID)	83237-49-4	2	-2	0	5 (f)	2000 mg/kg	
48.	N-Methyl 1-Napthalene Methyl Amine Hydrochloride	65476-13-4	5	-2	3	5 (f)	1980 mg/kg	
49.	7-Methoxy Tetralone	6836-19-7	5	-5	0	5 (f)	654 mg/kg	
50.	2-Amino 4 HydroxyAcetophenone	19745-72-3	0	+3	3	5 (f)	580 mg/kg	
51.	4-Cyano Benzoic Acid	619-65-8	0	+1	1	5 (f)	300 mg/kg	
52.	7-Hydroxy Tetralone	22009-38-7	0	+1	1	5 (f)	4000 mg/kg	
53.	Atropic acid	492-38-6	0	+2	2	5 (f)	300 mg/kg	
54.	4-chloro Benzaldehyde Glycol Acetal	2403-54-5	0	+6	6	5 (f)	240 mg/kg	
55.	2,2-Dichloro-2 Phenyl Acetic Acid Ethyl Ester	5317-66-8	0	+16	16	5 (f)	6000 mg/kg	
56.	Para Chloro Meta Xylenol BP	88-04-0	00	+25	25	5 (f)	3830 mg/kg	
57.	Pivaloacetonitrile	59997-51-2	0	+3	3	5 (f)	283 mg/kg	
58.	2-Dimethyl Methyl 1 Propanol	75-84-3	00	+8	8	5 (f)	1506 mg/kg	
59.	4-Hydroxy 3 5 Dimethyl Benzaldehyde	2233-18-3	00	+2	2	5 (f)	2000 mg/kg	
60.	2 Ethyl 2 Methyl Butanoic Acid	19889-37-3	00	+8	8	5 (f)	500 mg/kg	
61.	DV Acid Chloride (60:40 Cistrans)	52314-67-7	00	+5	5	5 (f)	575 mg/kg	
62.	Ortho Benzyl Para Chloro Phenol	120-32-1	00	+7	7	5 (f)	65 mg/kg	

63.	4-Isopropyl Catechol	2138-43-4	00	+1	1	5 (f)	56 mg/kg
64.	1-Adamantyl HCL	665-66-7	00	+8	8	5 (f)	800 mg/kg
65.	1-Bromo-2-(3-Chloro-4-Ethoxyphenyl)-2-Methyl Propane		00	+11	11	5 (f)	1000 mg/kg
66.	4-Hydroxy Benzyl Alcohol	623-05-02	00	+3	3	5 (f)	10500 mg/kg
67.	2-Methoxy Phenyl Acetone	5211-62-1	00	+1	1	5 (f)	3330 mg/kg
68.	Methyl-2-Dimethyl Amino-2-phenyl butyrate	3906 8-93-4	00	+2	2	5 (f)	2000 mg/kg
69.	Meta Phenoxy Benzyl Alcohol	1382 6-35-2	00	+4	4	5 (f)	2040 mg/kg
70.	4-Bromophenyl Acetic Acid Methyl Ester	4184 1-16-1	00	+1	1	5 (f)	2000 mg/kg
71.	N Methyl 1-Napthalene Methyl Amine Hydro Chloride	6547 3-13-4	00	03	03	5 (f)	2000 mg/kg
72.	4-Hydroxy Acetophenone	99-93-4	00	+16	16	5 (f)	1500 mg/kg
73.	2-(1-Admantyl)-4-Bromo Anisole	1042 24-63-7	00	+2	2	5 (f)	3200 mg/kg
74.	2-(3-Hydroxy-2-Methyl Propionyl)-aminol-2-methyl-propanol	--	00	+10	10	5 (f)	850 mg/kg
75.	4-Bromophenyl Acetic Acid	1878-68-8	00	+1	1	5 (f)	1050 mg/kg
76.	2-Amino 2-Methyl Propanol	124-68-5	00	+12	12	5 (f)	2000 mg/kg
77.	2-Bromo-5-Methoxy-Benzoic Acid	2292 1-68-2	00	+4	4	5 (f)	2900 mg/kg
78.	2-Bromo-5-Hydroxy -Benzoic Acid	5838 0-11-3	00	+4	4	5 (f)	2000 mg/kg
79.	Diphenylmethane-bis-4,4'-N,N'-ethylene Urea (DEU)	7417-99-4	00	+8	8	5 (f)	2000 mg/kg
80.	Trimethylolpropane Tris(2-methyl-1-aziridinepropionate)	6426 4-57-2	00	+8	8	5 (f)	300 mg/kg
81.	PentaerythritolTris(I	5711	00	+8	8	5 (f)	492



	3-(1-aziridinyl) propionate]	6-45-7					mg/kg
82.	2-Bromophenyl Acetonitrile	1947-27-74-3	00	+1	12	5 (f)	1000 mg/kg
83.	3-CHLORO-4-METHYLISOPROPYL BENZOATE	--	00	+25	25	5 (f)	2000 mg/kg
<b>Total</b>			<b>600</b>	<b>144</b>	<b>744</b>		

**1.3.3.2** During deliberations, the EAC noted the following:-

The proposal is for environmental clearance to the project for expansion of Pesticide Specific Intermediates from 447 TPM to 509 TPM (26 nos of products) and Specialty Chemicals from 153 TPM to 241 TPM (57 nos of products) manufacturing unit by M/s Benzo Chem Industries Pvt Ltd in an area of 47613.19 sqm at Plot No.Z-103/D, Phase-II, Dahej SEZ, Taluk Vagra, District Bharuch (Gujarat).

Synthetic organic chemicals industry located in notified industrial area is covered under category B of item 5(f) of the schedule to the EIA Notification, 2006 and requires appraisal at State level. However, in case of pesticides, it is only those units producing technical grade pesticides, are covered under category A of item 5(b). Pesticide specific intermediates, which are essentially synthetic organic chemicals, are not specifically mentioned either under category A or B of the items 5(f) & 5(b), and needs to be looked into on case to case basis depending upon their proportion.

Standard ToR for the project was granted on 10<sup>th</sup> February, 2018. Public hearing is exempted as the project is located in the Industrial area as provided under the Ministry's OM dated 27<sup>th</sup> April, 2018.

Total water requirement is estimated to be 800 cum/day, including fresh water requirement of 630 cum/day proposed to be met from GIDC water supply.

Earlier, the Ministry had issued EC vide letter dated 29<sup>th</sup> October, 2015 for specialty chemicals and pesticide intermediate products manufacturing plant of 600 TPM of M/s Benzo Chem Industries Pvt Ltd at Plot No.Z-103, Phase-II, Dahej SEZ, Taluk Vagra, District Bharuch (Gujarat). The monitoring report on compliance status of EC conditions (site visit conducted on 26<sup>th</sup> June, 2018) was forwarded by the Regional Office at Bhopal vide their letter dated 28<sup>th</sup> August, 2018.

Consent to Operate for the present capacity of 600 TPM was not made available by the project proponent. It was informed that the project was implemented.

**1.3.3.3** *The EAC, in the first instance and taking note that the project for which EC was granted by the Ministry on 29<sup>th</sup> October, 2015 for its capacity of 600 TPM not yet implemented and even consent to operate not obtained, was not inclined to accept the present proposal for expansion and desired that the Ministry may take a view in this regard as per the extant norms/guidelines.*

The Committee, while considering the proposal vis-a-vis the environmental parameters, 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 treated effluent of 320 cum/day shall conform to the standards prescribed under the Environment (Protection) Rules, 1986, for discharge into deep sea through GIDC pipeline.
- 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 21<sup>st</sup> 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 630 cum/day proposed 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, 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, mainly along the plant periphery, in downward wind direction, and along road sides etc. The project proponent shall compensate green belt in nearly 33% of the total project area. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.*
- *As committed, funds allocation for the Corporate Environment Responsibility (CER) shall be 1% of the total project cost. Item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.*
- *Safety and visual reality training shall be provided to employees.*
- *For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.*
- *The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.*
- *Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.*
- *Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.*

#### **Agenda No.1.3.4**

**Expansion of bulk drug intermediates, pesticide specific intermediates & specialty chemicals manufacturing unit of at plot No.127/1, GIDC Estate, Ankleshwar, District Bharuch (Gujarat) by M/s Gujarat Organics Ltd (Unit-1) - For Environmental Clearance**

**[IA/GJ/IND2/73407/2018, IA-J-11011/97/2018-IA-II(I)]**

**1.3.4.1** 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 environmental clearance to the project for expansion of Bulk Drug Intermediates, Pesticide Specific Intermediates & Specialty Chemicals Manufacturing Unit from 94.5 MT/Month to 175 MT/Month by M/s Gujarat Organics Ltd (Unit-1) located at Plot No. 127/1, GIDC Estate, Ankleshwar, Dist Bharuch, Gujarat.

(ii) Standard Terms of References to the Project was granted by the Ministry vide letter No.IA-J-11011/97/2018-IA-II (I); dated 14<sup>th</sup> April, 2018.

(iii) All Products are listed at S.N. 5(b) & 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) Industry was established before EIA Notification, 2006.

(v) Existing land area is 10,468.88 m<sup>2</sup>, no additional land will be used for proposed expansion project. Proposed Expansion is within the Existing Premises. Industry has already developed Greenbelt in an area of 33% i.e., 1,294 (12.36%) m<sup>2</sup> out of 10,468.88 m<sup>2</sup> of area of the project.

(vi) The estimated project cost is Rs. 6.45 Crores excluding existing investment of Rs. 43.47 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs.6.45 Crores and the Recurring cost (operation and maintenance) will be about Rs.4.8 Crores per annum.

(vii) Total Employment will be 280 persons as direct & indirect after expansion. Industry proposes to allocate Rs 11.08 Lakhs (approx.) in next 5 years @ of 5/2.5 % (1.7%) towards Corporate Social Responsibility.

(viii) There are No national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance.

(ix) Ambient air quality monitoring was carried out at 9 locations during March, 2017 to May, 2017 and submitted baseline data indicates that ranges of concentrations of PM10 (72.04 – 95.94 µg/m<sup>3</sup>), PM2.5 (42.46 – 57.51 µg/m<sup>3</sup>), SO<sub>2</sub> (16.42 – 26.72 µg/m<sup>3</sup>) and NO<sub>2</sub> (18.16 – 28.53 µg/m<sup>3</sup>) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion project would be 1.01 µg/m<sup>3</sup>, 1.77 µg/m<sup>3</sup> and 0.635 µg/m<sup>3</sup> with respect to PM10, SO and NO<sub>x</sub>. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). (In case of EC Proposal)

(x) Total water requirement is 276 m<sup>3</sup>/day (Existing = 150 m<sup>3</sup>/day + Additional = 126 m<sup>3</sup>/day) of which fresh water requirement of 189 m<sup>3</sup>/day and will be met from GIDC Water Supply.

(xi) The wastewater generation for proposed expansion project will be 180 m<sup>3</sup>/day (Existing = 98 m<sup>3</sup>/day + Additional = 82 m<sup>3</sup>/day).

**Existing Treatment:** Industrial wastewater (88 KL/day) is discharged in to NCT pipeline after treatment for deep sea disposal via FETP. Domestic wastewater (10 KL/day) is disposed in septic tank and soak pit.

**Total Proposed Treatment:** Domestic wastewater (sewage) shall be treated in ETP. Existing Industrial wastewater (88 KL/day) shall be treated in ETP and discharged into NCT pipeline for deep sea disposal via FETP. Additional Industrial wastewater (92 KL/day) shall be treated in ETP, RO & MEE and 74 KL/day of RO Permeate and 13 KL/day of MEE Condensate shall be reused in Boiler & Cooling purposes. Ultimately it will be a Zero Liquid Discharge Unit for proposed expansion.

(xii) Power requirement for proposed project will be 2500 KVA including existing 750 KVA and will be met from DGVCL. 1 No. DG sets of 320 KVA\*1 capacity shall be used as standby during power failure. Stack (height 15 m) will be provided as per CPCB norms to the proposed DG sets of 320 KVA\*1 which will be used as standby during power failure.

(xiii) Unit shall have 3 Nos. of 1 TPH, 3 TPH & 4TPH Natural Gas/Furnace Oil fired boiler & 5 Nos. of 2 Lakh Kcal/Hr, 4 Lakh Kcal/Hr & 6 Lakh Kcal/Hr Thermic Fluid Heaters will be installed. Stack of height of 30 m will be installed for controlling the Particulate emissions (within statutory limit of 150 mg/Nm<sup>3</sup>) respectively.

(xiv) Details of Process emissions generation and its management and Details of Solid waste/ Hazardous waste generation and its management.

Eighteen Categories of Hazardous/Solid Wastes shall be generated from this Unit. ETP Waste @ 10 MT/Month (Existing – 5 MT/Month + Additional – 5 MT/Month) which shall be Collected, Stored, Transported & Sent to TSDF site of M/s. BEIL, Ankleshwar. Used Oil @ 4 Lit./Month (Existing – 2 Lit./Month + Additional – 2 Lit./Month) which shall be Collected, Stored, Transported & Sold to registered re-processor or use for lubrication with in premises. Spent Carbon @ 0.8 MT/Month (Existing – 0.4 MT/Month + Additional – 0.4 MT/Month) which shall be Collected, Stored, Transported & co-processing in cement industries or Send to CHWIF of BEIL, Ankleshwar for incineration. Discarded Drums/Containers @ 100 Nos./Month (Existing – 17 Nos./Month + Additional – 83 Nos./Month), Discarded Bags @ 100 Nos./Month (Existing – 42 Nos./Month + Additional – 58 Nos./Month) & Contaminated HDPE/LDPE Bags @ 50 Nos./Month (Existing – 25 Nos./Month + Additional – 25 Nos./Month) which shall be Collected, decontaminated, stored and sold to GPCB registered vendor. Sodium Sulphate @ 183 MT/Month (Existing – 100 MT/Month + Additional – 83 MT/Month), Potassium Sulphate @ 183 MT/Month (Existing – 100 MT/Month + Additional – 83 MT/Month), Sodium Bromide @ 110 MT/Month (Existing – 60 MT/Month + Additional – 50 MT/Month), Sodium Bromide (30% Solution) @ 300 MT/Month (Additional), Sodium Formate @ 1050 MT/Month (Additional), Ammonium Sulfate @ 625 MT/Month (Additional), Sodium Acetate @ 200 MT/Month (Additional), Cyanuric Acid @ 200 MT/Month (Additional), p-Phenol Sulfonic acid @ 200 MT/Month (Additional), Sodium Sulphide @ 110 MT/Month (Additional), Sodium Bisulfite @ 125

SR NO	STACKS ATTACHED TO	HEIGHT FROM GROUND LEVEL	APCM	EXPECTED POLLUTANTS
1.	Steam Boiler – 1 (1 TPH)	15 m	-	PM < 150 mg/Nm <sup>3</sup> SO <sub>2</sub> < 100 ppm NO <sub>x</sub> < 50 ppm
2.	Steam Boiler – 1 (3 TPH) (Proposed)	15 m	-	PM < 150 mg/Nm <sup>3</sup> SO <sub>2</sub> < 100 ppm NO <sub>x</sub> < 50 ppm
3.	Steam Boiler – 2 (4 TPH)	30 m	-	PM < 150 mg/Nm <sup>3</sup> SO <sub>2</sub> < 100 ppm NO <sub>x</sub> < 50 ppm
4.	Thermic Fluid Heaters – 1 & 2 (2 Lakh Kcal/Hr & 4 Lakh Kcal/Hr)	15 m	-	PM < 150 mg/Nm <sup>3</sup> SO <sub>2</sub> < 100 ppm NO <sub>x</sub> < 50 ppm
5.	Thermic Fluid Heaters – 3, 4 & 5 (6 Lakh Kcal/Hr)	15 m	-	PM < 150 mg/Nm <sup>3</sup> SO <sub>2</sub> < 100 ppm NO <sub>x</sub> < 50 ppm
6.	Reactor	11 m	Water & Alkali Scrubber	PM < 20 mg/Nm <sup>3</sup> SO <sub>2</sub> < 9 mg/Nm <sup>3</sup> NO <sub>x</sub> < 50 ppm
7.	Flash Dryer	11 m	Bag Filter	PM < 150 mg/Nm <sup>3</sup>
8.	DG Set	15 m	-	PM < 150 mg/Nm <sup>3</sup> SO <sub>2</sub> < 100 ppm NO <sub>x</sub> < 50 ppm

MT/Month (Additional) & Sodium Chloride @ 145 MT/Month (Additional) which shall be Collected, Stored, Transported & Sale to authorized end users.

(xv) Public Hearing is exempted for this project as this project is located in Notified Industrial Estate of Ankleshwar GIDC

(xvi) Certified Compliance Report is not applicable as Industry was established before EIA Notification, 2006.

(xvii) No Litigation is Pending against the proposal

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

Product/ Group No.	Sr. No.	Product	CAS No.	LD <sub>50</sub>	CATEGORY	EXISTING (TPM)	PROPOSED (TPM)	Application
1	1.	Salicylic Acid	69-72-7	500 mg/Kg	5 (b)	94.5	175	Preservative in food products, in the manufacturing of methyl salicylate, o-anisic acid & 2-ethoxy benzoic acid
	2.	Zinc Salicylate	16283-36-6	300 mg/Kg	5 (f)			Antiseptic & astringent agent
	3-a.	2-Hydroxy Benzonitrile – 60% of 94.5	611-20-1	410 mg/kg	5 (b)			Synthesis of fungicide, Azoxystorbin
	3-b.	Sodium Formate (S)/ Sodium Formate (Aq.60-70 %) - 40% of 94.5 (Byproduct)	141-53-7	11200 mg/Kg	5 (f)			
	4.	2-Hydroxy Phenyl Acetic Acid	614-75-5	3600 mg/kg	5 (b)			Synthesis of fluoxastorbin
	5.	2-Hydroxy Phenyl Acetic Acid Methyl Ester	22446-37-3	3380 mg/kg	5 (f)			Drug intermediate
	6.	6 Hydroxy-2-Naphthoic Acid	16712-64-4	3080 mg/Kg	5 (f)			Synthesis of 5-bromo-6-hydroxy-2-naphthoic acid & in liquid crystals &

							resin
	7.	6 Hydroxy-2-Naphthoic Acid Methyl Ester	1729 5-11-3	3480 mg/kg	5 (f)		Drug intermediate
	8.	P-Hydroxy Benzoic Acid	99-96-7	2200 mg/Kg	5 (b)		Synthesis of various bulk drug preservatives (Parabens); in liquid crystal polymers & in the synthesis of p-anisic acid
	9.	O-Cresotic Acid	83-40-9	445 mg/Kg	5 (f)		Manufacturing of dye & as drug intermediate
	10-a.	4-Hydroxy Benzonitrile – 60% of 94.5	767-00-0	450 mg/Kg	5 (f)		intermediate for liquid crystal; as intermediate of bromoxynil & in the drug Fabuxostat
	10-b.	Ammonium Sulfate (S)/Ammonium Sulfate (Aq.60-70 %) - 40% of 94.5 (Byproduct)	7783-20-2	3000 mg/Kg	5 (f)		
	11.	4-Hydroxy Phenyl Acetic Acid	156-38-7	3500 mg/Kg	5 (f)		Intermediate of atenolol syntheses
	12.	4-Hydroxy Phenyl Acetic Acid Methyl Ester	14199-15-6	3800 mg/kg	5 (f)		Synthesis of 2-[3-(2H-Benzotriazole-2yl)-4-hydroxy phenyl methacrylate
	13.	3-Methyl Salicylic Acid	83-40-9	445 mg/Kg	5 (f)		Manufacturing of dye & as drug

							intermediate
	14.	4-Methyl Salicylic Acid	50-85-1	1800 mg/Kg	5 (f)		Manufacturing of dye & as drug intermediate
	15.	5-Methyl Salicylic Acid	89-56-5	1000 mg/Kg	5 (f)		Manufacturing of dye & as drug intermediate
	16.	3-Hydroxy Benzoic Acid Methyl Ester	19438-10-9	2000 mg/kg	5 (f)		Drug intermediate
	17.	2,4-Dihydroxy Benzoic Acid	89-86-1	800 mg/Kg	5 (f)		Synthesis of ester; in the synthesis of 2, 6-Dimethoxy Benzoic Acid
	18.	2,6-Dihydroxy Benzoic Acid	303-07-1	>4000 mg/Kg	5 (f)		Synthesis of 2, 4-Dihydroxy Benzoic Acid (Ester) which is used as drug intermediate
	19-a.	p-Phenol Sulfonic acid – 60% of 94.5	98-67-9	6400 mg/Kg	5 (f)		Drug intermediate
	19-b.	Ammonium Sulfate (S)/Ammonium Sulfate (Aq.60-70 %) - 40% of 94.5 (Byproduct)	7783-20-2	3000 mg/Kg	5 (f)		
2	20.	6 Methoxy -2-Naphthoic Acid	2471-70-7	830 mg/kg	5 (f)	<b>94.5</b>	Drug intermediate
	21.	6 Methoxy -2-Naphthoic Acid Methyl Ester	5043-02-7	1040 mg/kg	5 (f)		Drug intermediate
	22.	6-Methoxy-2-Naphthaldehyde	3453-33-6	14,500 mg/Kg	5 (f)		Drug intermediate
3	23.	3- Chloro Salicylic Acid	1829-32-9	350 mg/kg	5 (f)		Synthesis of ester & 3-chloro-2-methoxy



							benzoic acid
24.	3-Chloro Salicylic Acid Methyl Ester	5215 9-67-8	400 mg/kg	5 (f)	<b>94.5</b>		Drug intermediate
25.	3-Chloro -2-Methoxy Benzoic Acid	3260-93-3	350 mg/kg	5 (f)		Drug intermediate	
26.	3-Chloro -2-Methoxy Benzoic Acid Methyl Ester	N/A	400 mg/kg	5 (f)		Drug intermediate	
27.	3-Chloro -2-Ethoxy Benzoic Acid	N/A	350 mg/kg	5 (f)		Drug intermediate	
28.	3-Chloro -2-Ethoxy Benzoic Acid Methyl Ester	N/A	400 mg/kg	5 (f)		Drug intermediate	
29.	4-Chloro Salicylic Acid	5106-98-9	490 mg/Kg	5 (f)		Synthesis of 4-Chloro-2-Methoxy Benzoic Acid & 4-chloro-2-methoxy benzoic acid ester	
30.	4-Chloro Salicylic Acid Methyl Ester	7895 5-90-5	540 mg/kg	5 (f)		Drug intermediate	
31.	4-Chloro -2-Methoxy Benzoic Acid	5747 9-70-6	360 mg/kg	5 (f)		As drug intermediate	
32.	4-Chloro -2-Methoxy Benzoic Acid Methyl Ester	N/A	410 mg/kg	5 (f)		As drug intermediate	
33.	4-Chloro -2-Ethoxy Benzoic Acid	N/A	360 mg/kg	5 (f)		As drug intermediate	
34.	4-Chloro -2-Ethoxy Benzoic Acid Methyl Ester	N/A	410 mg/kg	5 (f)		As drug intermediate	
35.	5-Chloro Salicylic Acid	321-14-2	250 mg/Kg	5 (f)		Synthesis of 5-Chloro-2-methoxy benzoic acid; which is used as intermediate s of glibenclamide drug	
36.	5-Chloro Salicylic Acid Methyl Ester	4068-78-4	300 mg/kg	5 (f)		as drug intermediate	
37.	5-Chloro-2-Methoxy Benzoic Acid	3438-16-2	350 mg/kg	5 (f)		as drug intermediate	
38.	5-Chloro-2-Methoxy	3392	400	5 (f)	as drug		

		Benzoic Acid Methyl Ester	4-48-0	mg/kg			intermediate
	39.	5-Chloro -2-Ethoxy Benzoic Acid	N/A	340 mg/kg	5 (f)		as drug intermediate
	40.	5-Chloro -2-Ethoxy Benzoic Acid Methyl Ester	N/A	400 mg/kg	5 (f)		as drug intermediate
4	41.	Methyl Salicylate	119-36-8	887 mg/Kg	5 (f)	<b>94.5 MT/Month</b>	Perfumery for flavouring candies as counter irritant
	42.	Ethyl Salicylate	118-61-6	1320 mg/Kg	5 (f)		used in many artificial perfumes also used as counter irritant
	43.	Phenyl Salicylate	118-55-8	3000m g/Kg	5 (f)		Manufacture of various polymers for plastic industry. It also act as analgesic; antipyretic & as anti inflammatory agent
	44.	Methyl- 3-Methyl Salicylate	2328 7-26-5	900 mg/kg	5 (f)		pharmaceutical application
	45.	Methyl- 4-Methyl Salicylate	4670-56-8	900 mg/kg	5 (f)		pharmaceutical application
	46.	Methyl- 5-Methyl Salicylate	2271 7-57-3	900 mg/kg	5 (f)		pharmaceutical application
	47.	Benzyl Benzoate	120-51-4	4000 mg/kg	5 (f)		As solvent of cellulose acetate, nitrocellulose & antifungal; perfume fixative, in confectionary & chewing gum favours
	48-a.	4-Cyano Phenyl Acetate – 60% of 94.5	1303 1-41-	400 mg/kg	5 (f)		Drug intermediate

			9				or as synthetic intermediate
	48-b.	Sodium Acetate – 40% of 94.5 (Byproduct)	127-09-3	25956 mg/kg	5 (f)		
5	49.	Methyl Paraben	99-76-3	2,100 mg/kg	5 (f)	<b>94.5 MT/Month</b>	Preservative in food, beverages, cosmetics & bulk drugs; as drug intermediate in synthesis of drugraloxifen
	50.	Ethyl Paraben	120-47-8	3000 mg/kg	5 (f)		preservative for pharmaceuticals
	51.	Propyl Paraben	94-13-3	7500 mg/kg	5 (f)		preservative in bulk drug; pharmaceutical aid (antifungal)
	52.	Butyl Paraben	94-26-8	5000 mg/kg	5 (f)		preservative in bulk drug; pharmaceutical aid (antifungal)
	53.	Iso Propyl Paraben	4191-73-5	1,900 mg/kg	5 (f)		mainly used as antiseptic in cosmetics; it can also be used as food preservative
	54.	Iso Butyl Paraben	4247-02-3	2,600 mg/kg	5 (f)		it is an antimicrobial preservative for bulk drug
	55.	Benzyl Paraben	94-18-8	2,600 mg/kg	5 (f)		used in cosmetics products it is also used as antimicrobial preservative

										s
56.	Sodium Paraben	Benzyl	94-19-8	2200 mg/kg	5 (f)					used in cosmetics products it is also used as antimicrobial preservatives
57.	Sodium Paraben	Methyl	5026-62-0	7500 mg/kg	5 (f)					in the manufacturing of personal care products; it is also used as preservative in cosmetics & bulk drug formulations
58.	Sodium Ethyl Paraben		3528 5-68-8	2200 mg/kg	5 (f)					as preservative in cosmetics & bulk drug formulations
59.	Sodium Paraben	Propyl	3528 5-69-9	3,700 mg/kg	5 (f)					as preservative in cosmetics & bulk drug formulations
60.	Sodium Butyl Paraben		3645 7-20-2	4600 mg/kg	5 (f)					as in cosmetics & bulk drug formulation as preservative
61.	Sodium Paraben	Iso Propyl	3645 7-21-3	1700 mg/kg	5 (f)					as in cosmetics & bulk drug formulation as preservative
62.	Sodium Paraben	Iso Butyl	8493 0-15-4	2400 mg/Kg	5 (f)					as in cosmetics & bulk drug formulation as

	63.	Gujsol – 1	[2-Phenoxy Ethanol(CAS No. 122-99-6), Methyl Paraben (CAS No. 99-76-3), Ethyl Paraben (CAS No. 120-47-8), Propyl Paraben (CAS No. 94-13-3), Butyl Paraben (CAS No. 94-26-8)]	200 mg/kg	5 (f)			preservative Used in cosmetics & bulk formulations & as preservatives.
	64.	Gujsol - 2	[2-Phenoxy Ethanol(CAS No. 122-99-6), Methyl Paraben (CAS	200 mg/kg	5 (f)			Used in cosmetics & bulk formulations & as preservatives.

			No. 99-76-3), Ethyl Paraben (CAS No. 120-47-8), Propyl Paraben (CAS No. 94-13-3), Butyl Paraben (CAS No. 94-26-8), Iso Butyl Paraben (CAS No. 4247-02-3)]				
65.	Gujsol - 3	[2-Phenoxy Ethanol (CAS No. 122-99-6), Methyl Paraben (CAS No. 99-76-3), Ethyl Paraben	200 mg/kg	5 (f)		Used in cosmetics & bulk formulations & as preservatives.	

			(CAS No. 120-47-8), Propyl Paraben (CAS No. 94-13-3)]				
66.	Gujsept		[Methyl Paraben (CAS No. 99-76-3), Ethyl Paraben (CAS No. 120-47-8), Propyl Paraben (CAS No. 94-13-3)]	200 mg/kg	5 (f)		Used in cosmetics & bulk formulations & as preservatives.
67.	Gujsept Sodium		[Methyl Paraben Sodium (CAS No. 5026-62-0), Ethyl Paraben Sodium (CAS No. 94-13-3)]	200 mg/kg	5 (f)		Used in cosmetics & bulk formulations & as preservatives.

			3528 5-68- 8), Propy l Para ben Sodiu m (CAS No. 3528 5-69- 9)]				
	68.	Gujstat	[Meth yl Para ben (CAS No. 99- 76-3), Ethyl Para ben (CAS No. 120- 47-8), Propy l Para ben (CAS No. 94- 13-3), Butyl Para ben (CAS No. 94- 26-8)]	200 mg/kg	5 (f)		Used in cosmetics & bulk formulations & as preservative s.
6	69.	2- Ethoxy Benzoic Acid	134- 11-2	800 mg/kg	5 (f)		Drug intermediate of viagra (SILDENAFI L CITRATE)
	70.	2- Ethoxy Benzoic Acid Methyl Ester	3686- 55-3	1000 mg/kg	5 (f)		Used as drug intermediate



71.	2- Ethoxy Benzoic Acid Ethyl Ester	6290-24-0	1000 mg/kg	5 (f)	<b>94.5</b>	Used as drug intermediate	
72.	4- Ethoxy Benzoic Acid	619-86-3	800 mg/kg	5 (f)		Used as drug intermediate	
73.	4- Ethoxy Benzoic Acid Methyl Ester	2367 6-08-6	1000 mg/kg	5 (f)		Used as drug intermediate	
74.	4- Ethoxy Benzoic Acid Ethyl Ester	2367 6-09-7	1000 mg/kg	5 (f)		as catalyst in poly propylene manufacturi ng; intermediate in synthesis of various products	
75.	P-Iso Propoxy Benzoic Acid	1320 5-46-4	800 mg/kg	5 (f)		ester of paraisoprop oxy benzoic acid is used as catalyst for polypropyle ne manufacturi ng	
76.	P-Iso Propoxy Benzoic Acid Methyl Ester	3582 6-59-6	1000 mg/kg	5 (f)		ester of paraisoprop oxy benzoic acid is used as catalyst for polypropyle ne manufacturi ng	
77.	P-Iso Propoxy Benzoic Acid Ethyl Ester	1224 88-52-2	1000 mg/kg	5 (f)		ester of paraisoprop oxy benzoic acid is used as catalyst for polypropyle ne manufacturi ng	
78.	P – Anisic Acid	100-	400	5 (b)		paraanistic	

			09-4	mg/kg			acid has an antiseptic application. It is also used in dye application & as synthetic drug intermediates also used in agrochemicals intermediates.
79.	P – Anisic Acid Methyl Ester	121-98-2	5000 mg/kg	5 (f)			As intermediates in synthesis
80.	P – Anisic Acid Ethyl Ester	94-30-4	2040 mg/kg	5 (f)			As intermediates in synthesis
81.	O-Anisic Acid	579-75-9	300 mg/kg	5 (b)			used in chemical reaction as intermediates to obtain target materials such as dyes, pharmaceuticals, perfumes, photoinitiators and agrochemicals.
82.	O– Anisic Acid Methyl Ester	606-45-1	5000 mg/kg	5 (f)			as intermediate in synthesis of drug intermediate
83.	O– Anisic Acid Ethyl Ester	7335-26-4	300 mg/kg	5 (f)			as intermediate in synthesis of drug intermediate
84.	O - Anisic Acid Phenyl	N/A	300	5 (f)			as

	Ester		mg/kg			intermediate in synthesis of drug intermediate
85.	m-Anisic Acid	586-38-9	400 mg/kg	5 (f)		used in perfumes; used as drug intermediate
86.	2-Ethoxy Benzamide	938-73-8	700 mg/kg	5 (f)		as Analgesics drug
87.	Ethyl Benzoate	93-89-0	2100 mg/kg	5 (f)		used in perfumery under the name essenceden iobe. As artificial fruit essence; as catalyst in the synthesis of polypropylene.
88.	3-Methoxy Phenol	150-19-6	682 mg/Kg	5 (f)		in the synthesis of 4-bromo-3-methoxy phenol; as antioxidant; acts as building block in the synthesis of organic compound
89.	2-Ethoxy Phenol	94-71-3	682 mg/Kg	5 (f)		it is used as intermediate in chemical synthesis mainly for pharmaceuticals & food flavoring application
90.	2,6-Dimethoxy Benzoic Acid	1466-76-8	> 500 mg/kg	5 (b)		application as agrochemical intermediate

								in the synthesis of 3-bromo-2,6-dimethyl benzamide.
	91.	4-[N-(2-Methoxy Benzoyl)Sulfomoyl]Benzoyl Chloride	8164-31-72-8	200 mg/kg	5 (b)			as fungicide / herbicide for crops
	92.	2,4-Dihydroxy Benzoic Acid Methyl Ester	2150-47-2	600 mg/kg	5 (f)			as drug intermediate
	93.	2,6-Dihydroxy Benzoic Acid Methyl Ester	2150-45-0	600 mg/kg	5 (f)			as synthetic intermediates
7	94.	1-Hydroxy-2-Naphthoic Acid	86-48-6	800 mg/kg	5 (f)	<b>25.0 MT/Month</b>		raw material for the synthesis of 1-hydroxy-2-naphthoic acid phenyl ester used in photography
	95.	1-Hydroxy-2-Naphthoic Phenyl Ester	132-54-7	820 mg/kg	5 (f)			used in photography ; in chemical synthesis; in dyestuff intermediate
	96.	1-Methoxy-2-Naphthoic Acid	883-62-5	830 mg/kg	5 (f)			As intermediate in drug synthesis
	97.	1-Methoxy-2-Naphthoic Acid Methyl Ester	N/A	1040 mg/kg	5 (f)			as synthetic intermediate
	98.	1-Ethoxy-2-Naphthoic Acid	N/A	800 mg/kg	5 (f)			as synthetic intermediate
	99.	1-Ethoxy-2-Naphthoic Acid Methyl Ester	N/A	1020 mg/kg	5 (f)			as synthetic intermediate
	100	4-Cyano-2-Nitro Phenol	3272-08-0	437 mg/kg	5 (f)			as synthetic intermediate
	101-a.	Cyanuric Acid – 60% of 25	108-80-5	> 5,000 mg/kg	5 (f)			
	101-b.	Ammonium Sulfate (S)/Ammonium Sulfate (Aq.60-70 %) - 40% 25 (Byproduct)	7783-20-2	2840 mg/kg	5 (f)			
8	102	3-Amino Salicylic Acid	570-23-0	4000 mg/kg	5 (f)		<b>10.0 MT/Month</b>	

	103	3-Amino Salicylic Acid Methyl Ester	3574 8-34- 6	878 mg/kg	5 (f)			as drug intermediate
	104	4-Amino Salicylic Acid	65- 49-6	4000 mg/kg	5 (f)			As antibacterial (Tuberculostatic)
	105	4-Amino Salicylic Acid Methyl Ester	4136- 97-4	880 mg/kg	5 (f)			Drug intermediate
	106	5-Amino Salicylic Acid	89- 57-6	4000 mg/kg	5 (f)			Inflammatory bowel disease & to maintain remission crohn's disease
	107	5-Amino Salicylic Acid Methyl Ester	4275 3-75- 3	887 mg/kg	5 (f)			Intermediate in drug synthesis
		<b>Total</b>				<b>94.5 MT/Mon th (Any one or Cumula tive)</b>	<b>175 MT/M onth</b>	
		<b>By Products</b>						
	1.	Sodium Sulfate	7757- 82-6	5989 mg/kg	-	100	185.1 8	
	2.	Potassium Sulfate	7778- 80-5	6600 mg/kg	-	100	185.1 8	
	3.	Sodium Bromide	7647- 15-6	3500 mg/kg	-	60	111.1 1	
		<b>Total</b>				<b>260</b>	<b>481.4 7</b>	

**1.3.4.2** During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for expansion of Bulk Drug Intermediates, Pesticide Specific Intermediates & Specialty Chemicals Manufacturing Unit from 94.5 TPM to 175 TPM by M/s Gujarat Organics Ltd (Unit-1) in an area of 10,468.88 sqm located at Plot No.127/1, GIDC Estate, Ankleshwar, District Bharuch (Gujarat).

Synthetic organic chemicals industry located in notified industrial area is covered under category B of item 5(f) of the schedule to the EIA Notification, 2006 and requires appraisal at State level. However, in case of pesticides, units producing technical grade pesticides, are covered under category A of item 5(b). Pesticide specific intermediates, which are essentially synthetic organic chemicals, are not specifically mentioned either under category A or B of the items 5(f) & 5(b), and needs to be looked into on case to case basis depending upon their proportion.

The instant proposal involves the products mainly covered under category B of item 5(f) of the schedule to the EIA Notification, 2006, and precisely, requires appraisal at the State level.

Standard ToR for the project was granted on 14<sup>th</sup> April, 2018. Public hearing is exempted as the project is located in the Industrial area as provided under the Ministry's OM dated 27<sup>th</sup> April, 2018.

Total water requirement is estimated to be 276 cum/day of which fresh water demand of 189 cum/day is to be met from GIDC water supply.

Total effluent generated from different industrial operations is estimated to be 180 cum/day. Existing Industrial wastewater of 88 cum/day shall be treated in ETP and discharged into M/s NCT pipeline for deep sea disposal via FETP. Additional Industrial wastewater of 92 cum/day shall be treated in ETP, MEE & RO, and 74 cum/day of RO permeate and 13 cum/day of MEE condensate shall be reused in boiler & cooling purposes. Domestic wastewater shall be treated in ETP.

It was informed that the Industry has developed greenbelt in an area of 1,294 sqm, covering 12.36% of the total project area. Further, there being no more land available, green belt on 3500 sqm area is proposed in nearby GIDC allotted plot.

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

The Industry was reported to be established before the EIA Notification, 2006, and thus not requiring environmental clearance for the existing operations.

Consent to Operate for the present capacity of 94.5 TPM issued by Gujarat PCB vide letter dated 18<sup>th</sup> April, 2016, is valid up to 25<sup>th</sup> May, 2019.

**1.3.4.3** The Member Secretary informed the Committee that there are similar proposals submitted on the Ministry's portal for consideration of environmental clearance. These proposals, in view of dual categorization and the discrepancy so involved, were not accepted in the first instance. He urged the Committee to look into the matter and to evolve certain criterion in this regard, compatible with the provisions of the EIA Notification, 2006, to ensure consistency henceforth.

**1.3.4.4** *The EAC, after deliberations, resolved that the Ministry may take a comprehensive view on categorization of such projects, taking into consideration its observations in para 1.3.4.2 above. In case of greenbelt also, the Committee was not convinced with the proposed approach/planning in view of the deviation from the practice in similar other projects.*

*In view of above observations, the proposal was not taken forward for the present.*

### **Agenda No.1.3.5**

**Expansion of production capacity of SEZ refinery from 35.2 MMTPA to 41 MMTPA at Reliance Industries Jamnagar by M/s Reliance Industries Limited - For Environmental Clearance**

**[IA/GJ/IND2/79902/2018, IA-J-11011/351/2018-IA-II(I)]**

**1.3.5.1** The project proponent 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 enhanced production capacity of SEZ Refinery from 35.2 MMTPA to 41 MMTPA at Jamnagar by M/s Reliance Industries Limited, A Unit of Reliance SEZ'.

(ii) The project proposal is submitted for consideration by Expert Appraisal Committee (Industry-2) for grant of Environmental Clearance for the project, as per the provision in Para 7 (ii) of the EIA Notification, 2006, as it is based on increased operating hours of the units with no increase in pollution load.

(iii) The project is listed at S.No. 4(a) of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and is appraised at Central Level by Expert Appraisal Committee (EAC).

(iv) Ministry had issued EC's vide letter nos. J.11011/232/2005-IA (II) – I dated 3<sup>rd</sup> August 2005; J.11011/232/2005-IA (II) – I dated 2<sup>nd</sup> March 2006; and J-11011/149/2007-IA II (I) dated 30<sup>th</sup> March 2010 to the existing project in favour of M/s Reliance Industries Limited (Unit of Reliance Jamnagar SEZ).

(v) Existing land area is 930 ha. and no additional land will be required for capacity enhancement. Industry has already developed greenbelt in an area of 30%.

(vi) The estimated project cost for proposed project will be nil. The cost of existing project is Rs 27,000 crores. Total capital cost earmarked towards environmental pollution control measures is Rs 500 crores and the recurring cost (operation and maintenance) is about Rs 60 crores per annum.

(vii) There will be no direct and indirect employment after expansion.

(viii) There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Panna Dam is at a distance of 3.5 kms, Sasoi dam at 6.8 kms and Gulf of Kutch at 11 km in northern direction.

(ix) Ambient air quality monitoring is carried out at four (4) locations during April'18 to Sept' 18, and the baseline data indicates the ranges of concentrations as: PM<sub>10</sub> (30-58µg/m<sup>3</sup>), PM<sub>2.5</sub> (18-42µg/m<sup>3</sup>), SO<sub>2</sub> (9-29µg/m<sup>3</sup>) and NO<sub>2</sub> (11-33µg/m<sup>3</sup>). There is no change expected due to the increased production as there is no change in emission rates.

(x) Total water requirement for the refinery is 3,760 m<sup>3</sup>/hr. There will be no additional fresh/desalinated water requirement. The water requirement will be met from existing desalination facilities.

(xi) Effluent of maximum 1500m<sup>3</sup>/hr will be treated through existing Effluent Treatment Plant and the treated water is recycled for various purposes.

(xii) The existing power requirement is 450 MW and no additional power will be required for the project. The power will be met from existing captive power plant within the refinery complex. Existing unit has 29 DG sets of 29,050 KVA capacity, no additional DG sets will be required as standby during power failure. Stack height as per CPCB norms have been provided for the existing DG sets.

(xiii) The steam requirement is supplied as a part of the utilities and HRSGs and Aux Boilers supply it. No additional liquid/gas fired boilers will be installed.

(xiv) Details of Process emissions generation and its management: As the operating conditions and daily fuel requirement will remain the same, there will be no change in the stacks / emissions from the refinery complex.

(xv) Details of Solid waste/ Hazardous waste generation and its management: There will be no change in the hazardous wastes generated from the refinery complex or their present mode of treatment / disposal.

(xvi) The compliance status is certified by Regional Office, MoEFCC, Bhopal vide letter no. 3-790/RO(NZ)/566 dated 14.07.16 and letter no. 5-42/2005(ENV)/098 dated 09.03.17 for the above mentioned ECs.

(xvii) No litigation is pending against the proposal.

(xviii) The details of plant capacity as under:

S. No	Product Details	Existing Quantity (% yield of crude processing capacity)	Total Quantity (% yield of total crude processing capacity)*
1	<b>Lighter and Light Distillates</b> <ul style="list-style-type: none"> <li>▪ Hydrogen / Mix Pet Gas / Propane / Propylene / Butane / LPG</li> <li>▪ PCN / Naphtha LP / Naphtha AR / Light Naphtha / Pentane Mix / MS (Gasoline) / FRN / Alkylates / Reformate (AFS)</li> </ul>	31.7-43.3	31.7-43.3
2	<b>Middle Distillates</b> <ul style="list-style-type: none"> <li>▪ HSD / Kero / ATF (Jet Fuel) / LAB Feed Stock / High Sulphur Gasoil / Aromex</li> </ul>	38.5-51.0	38.5-51.0
3	<b>Heavy Distillates</b> <ul style="list-style-type: none"> <li>▪ Fuel Oil / CBFS / VGO / Vacuum Residue</li> </ul>	1.5-3.7	1.5-3.7
4	<b>Solid Products</b> <ul style="list-style-type: none"> <li>▪ Propylene</li> <li>▪ Sulphur</li> <li>▪ Coke</li> </ul>	3.0-4.2 1.4-2.5 8.3-9.8	3.0-4.2 1.4-2.5 8.3-9.8
5	<b>Electric Power (Operational Capacity)</b>	450 MW	450 MW
	<b>Total</b>	---	---

1.3.5.2 During deliberations, the EAC noted the following:-



The proposal is for environmental clearance to the project for increase in crude processing capacity of expansion of SEZ Refinery of M/s Reliance Industries Limited (A Unit of Reliance SEZ) from 35.2 MMTPA to 41 MMTPA with improved on-stream factor (increase in operating hours from the present of 8000 to 8760 per annum) and implementation of best practices, but without any increase in pollution load, in an area of 930 ha located at District Jamnagar (Gujarat). Best practices would include efficient operating strategy with software up-gradation, best in class maintenance and inspection practices and minimum downtime during shutdown.

In spite of higher production/crude processing, no change is expected in environmental parameters, with the details as under:-

Unit	UOM	Approved Limit	Revised Limit	Remarks
Crude Processing	MMTPA	35.2	41	With change in operating days.
Power	MW	450	No change	Being met by CPP
Water Consumption (De-sal)	m <sup>3</sup> /hr	3,760	No change	Desalinated water consumption within approved limit.
Effluent Generation	m <sup>3</sup> /hr	1,500	No change	Effluent generation within approved limit.
Return Sea Water (from De-sal)	m <sup>3</sup> /day	1,50,000	No change	Desalination units installed as per the approved capacities.
Air Emissions (SO <sub>2</sub> , NO <sub>x</sub> , CO, PM)	mg/Nm <sup>3</sup>	As per State PCB norms.	No change	Operating condition and daily fuel requirement remain the same.
Waste Generation	TPA	15,210	No change	Operating conditions remain the same.

The project/activity is covered under category A of item 4(a) 'Petroleum refining industry' 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 proposal has been submitted under para 7 (ii) of the EIA Notification, 2006 for consideration without any ToR, public hearing and EIA/EMP report.

Total water requirement is estimated to be 3,760 cum/hr, which is being met from desalination facilities. There shall be no additional fresh/desalinated water requirement.

Industrial effluent of 1500 cum/hr will be treated through existing Effluent Treatment Plant and the treated water shall be recycled for use in the process/green belt development. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

The details of earlier ECs granted by the Ministry for the refinery complex are as under:-

Refinery complex of 18 MMTPA by M/s Reliance Petroleum Ltd	15 <sup>th</sup> September, 1995
Expansion of Crude processing capacity from 18 to 27 MMTPA with no additional pollution load M/s Reliance Petroleum Ltd	6 <sup>th</sup> September, 2000
Expansion and modernization of Petrochemical Refinery	3 <sup>rd</sup> August, 2005

complex with increase in production from 27 MMTPA to 59.7 MMTPA by M/s Reliance Industries Ltd.	
Expansion and modernization of the petrochemical refinery- Amendment (Production segregation between M/s Reliance Petroleum Ltd (26.7 MMTPA) and M/s Reliance Industries Ltd (33 MMTPA))	2 <sup>nd</sup> March, 2006
Petroleum and petrochemical complex in multi-products special economic zone (SEZ) (capacity increased from 26.7 MMTPA to 35.2 MMTPA) by M/s Reliance Jamnagar Infrastructure Limited	30 <sup>th</sup> March, 2010

Monitoring report on compliance status of the conditions stipulated in the above ECs, was forwarded by the concerned Regional Office of this Ministry vide letter 9<sup>th</sup> March, 2017.

Consent to Operate for the present industrial operations issued by Gujarat PCB vide letter dated 27<sup>th</sup> February, 2015, is valid up to 29<sup>th</sup> December, 2020.

**1.3.5.3** *The EAC, after deliberations and in terms of the provisions contained in para 7(ii) of the EIA Notification, 2006, exempted the project from fresh EIA studies and public hearing, and recommended the project for grant of environmental clearance for a period of one year, with the terms and conditions already stipulated in the existing environmental clearance dated 30<sup>th</sup> March, 2010 granted in favour of M/s Reliance Jamnagar Infrastructure Limited, subject to compliance of additional terms and conditions as under: -*

- *Prior transfer of EC dated 30<sup>th</sup> March, 2010 granted in favour of M/s Reliance Jamnagar Infrastructure Limited to M/s Reliance Industries Limited (the present applicant).*
- *Sulphur emissions from the refinery complex shall be recovered at 99.92% efficiency.*
- *VOC emissions shall not exceed 0.1%.*
- *Considering safety precautions, risk assessment study shall be carried out using 3-D modelling, and report submitted to Ministry/EAC.*

#### **Agenda No.1.3.6**

**Manufacturing of Active Pharmaceutical Ingredients (API) (745 MTPM) and Excipients (2300 MTPM) at Survey No.1530, Village Rajpur, Taluka Kadi, District Mehsana (Gujarat) by M/s Infocus Remedies Pvt Ltd - For Environmental Clearance**

**[IA/GJ/IND2/70401/2017, IA-J-11011/530/2017-IA-II(I)]**

**1.3.6.1** The project proponent and their Consultant M/s Bhagwati Enviro Care Pvt Ltd, Ahmedabad gave a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for Environmental Clearance to the project for Active Pharmaceutical Ingredients (API) (745 MTPM) and Excipients (Inactive Pharmaceutical Ingredients) (2300 MTPM) manufacturing at Plot No. 1530, Village: Rajpur, Tal: Kadi, Dist: Mehsana, Gujarat by M/s Infocus Remedies Pvt. Ltd.

(ii) The TOR has been issued by Ministry vide letter No. IA-J-11011/530/2017-IA-II (I); dated 09/12/2017.

(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 are appraised at Central Level by Expert Appraisal Committee (EAC).

(iv) Proposed land area is 18980 m<sup>2</sup>. Industry will develop greenbelt in an area of 33 % i.e., 6400 m<sup>2</sup>, out of total area of the project.

(v) The estimated project cost of proposed unit is Rs. 20.0 crore. Total capital cost earmarked towards environmental pollution control measures is Rs. 3.50 crore and the Recurring cost (operation and maintenance) will be about Rs. 2.0 crore per annum.

(vi) Total employment including direct and indirect will be 75 persons. Industry proposes to allocate Rs. 40.00 lakhs of 2.0% towards Corporate Social Responsibility.

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

(viii) Ambient air quality monitoring was carried out at 8 locations during January, 2018 to March, 2018 and the baseline data indicates the ranges of concentrations as: PM<sub>10</sub> (53.8 – 77.3 µg/m<sup>3</sup>), PM<sub>2.5</sub> (30.9 – 47.0 µg/m<sup>3</sup>), SO<sub>2</sub> (12.5 – 25.8 µg/m<sup>3</sup>) and NO<sub>x</sub> (15.1 – 28.4 µg/m<sup>3</sup>). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 4.759 µg/m<sup>3</sup>, 3.399 µg/m<sup>3</sup>, and 1.131 µg/m<sup>3</sup>, with respect to PM<sub>10</sub>, SO<sub>2</sub>, and NO<sub>x</sub>. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(ix) Total water requirement is 494 m<sup>3</sup>/day of which fresh water requirement of 204 m<sup>3</sup>/day will be met from Bore well water supply.

(x) High COD/TDS process effluent stream generated from API (57 KLD) will be treated in ETP followed by MEE. Other wastewater streams from excipient plant, washing and utilities (totaling to 297 KLD) will be treated in ETP-RO-MEE regime. Permeate from the RO (235 KLD) and condensate from the MEE (55 KLD) will be reused/recycled to reduce the fresh water requirement. Thus, the plant will be based on Zero Liquid discharge system.

(xi) Power requirement will be 500 kVA and will be met from Uttar Gujarat Vij Company Ltd (UGVCL). Unit will install one D.G. Set of 250 kVA capacity and will be used as standby during power failure. Stack (height 11 meters) will be provided as per CPCB norms to the proposed DG sets.

(xii) Steam boilers (2 TPH & 3 TPH), Thermic Fluid Heater (10 lac Kcal/hr) and Hot Air generators (20 lac Kcal/hr & 30 lac Kcal/hr) will be installed. Cyclone separator followed by bag filter with a stack height of 21 m will be installed for controlling the particulate emissions within the statutory limit of 150 mg/Nm<sup>3</sup> for the proposed utilities.

(xiii) Process emissions generation will be from the vent attached with Spray Dyer, Common vent of SFD-1 (Excipient), Common vent of SFD-2 (API) and Process Vent. In built cyclone and wet scrubber will be provided as an APCM to Spray dyer, Inbuilt cyclone to vent of SFDs and water and alkali scrubber as an APCM to process vent.

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

Sr.	Name	of	Catego	Total	Disposal method
-----	------	----	--------	-------	-----------------

No.	Waste	ry		
1	ETP Waste MEE Salt	35.3	50.0 65.0 <hr/> 115.0 MT/month	Collection, storage & disposal at TSD site approved by GPCB.
2	Distillation residue	20.3	75 MT/month	Collection, storage & disposal at CHWIF or co-processing.
3	Spent Solvent	28.6	75 MT/month	Collection, storage & transportation at distillation facility approved by GPCB.
4	Used Lubricating Oil	5.1	0.5 Kl/year	Collection, storage & use within premises as lubricant/sell to registered recycler.
5	Discarded containers/ barrels/ liners	33.1	Barrels- 10000 nos./month Liner-1.0 Mt/month	Collection, storage and reuse for packing of products or disposal by selling to approved recycler.
6	Spent carbon	28.3	1.5 MT/month	Collection, storage & disposal at CHWIF or co-processing.
7	Spent catalyst	28.2	0.5 MT/month	Collection, storage & return back to supplier for regeneration.
8	Off Specific Products	28.4	Whatever generated	Collection, storage & disposal at CHWIF.

(xv) Public Hearing for the project has been conducted by the Gujarat Pollution Control Board on 23/07/2018. The main issues raised during the public hearing are related to employment opportunities, greenbelt development, women empowerment classes, safety of workers, and proper disposal of industrial wastes.

(xvi) No Litigation is pending against the proposal.

(xvii) The details of products and capacity are as under:

Sr. No.	Name of Products	Production Mt/month	Physical Form	CAS Nos.	Major Uses
<b>A</b>	<b>Excipients (Inactive Pharmaceutical Ingredients)</b>				
1	Croscarmellose Sodium	500	Solid	9004-32-4	Drugs Excipient
2	Sodium Carboxy Methyl Cellulose		Solid	7811-65-7	
3	Calcium Carboxy Methyl Cellulose		Solid	9050-04-8	
4	Methyl Cellulose		Solid	9004-67-5	
5	Ethyl Cellulose		Solid	9004-57-3	
6	Hydroxy Ethyl Cellulose		Solid	9004-62-0	
7	Hydroxy Propyl Cellulose		Solid	3032-42-2	
8	Hydroxy Propyl Methyl Cellulose		Solid	9004-64-2	
9	Hydroxy Ethyl Methyl Cellulose		Solid	9004-65-3	
10	Sodium Starch Glycolate	200	Solid	9063-38-1	

11	Pregelatinised Starch		Solid	9005-25-8	
12	Calcium Stearate	100	Solid	1592-23-0	
13	Magnesium Stearate		Solid	557-04-0	
14	Zinc Stearate		Solid	557-05-1	
15	Aluminium Stearates		Solid	637-12-7	
16	Water Base drug coat liquid	1500	Liquid	--	Drug Coating Materials
17	Water base drug coat powder		Solid	--	
18	Solvent base drug coat powder		Solid	--	
19	Poly Acrylic Acid		Solid	--	
20	Castrol Oil Based derivatives		Liquid	--	
<b>B Active Pharmaceutical Ingredients (API)</b>					
1	Metformin HCl	500	Solid	1115-70-4	Anti-diabetics
2	Atenolol	50	Solid	29122-68-7	Beta-Blockers
3	Metoprolol Succinate		Solid	98418-47-4	
4	Metoprolol Tartrate		Solid	56392-17-7	
5	Carvedilol Phosphate		Solid	610309-89-2	
6	BisoprololFumerate		Solid	104344-23-2	
7	Propranolol Hydrochloride		Solid	318-98-9	
8	Pregabalin	75	Solid	148553-50-8	Anti-Epileptic
9	Gabapentin		Solid	60142-96-3	Anti-Convulsant
10	Topiramate		Solid	97240-79-4	Inhibitor
11	Sildenafil Citrate		Solid	171599-83-0	Anti-Inflammatory
12	Naproxen		Solid	22204-53-1	Anti-Bacterial
13	Naproxen Sodium	Solid	26159-34-2		
14	Levofloxacin	Solid	138199-71-0		
15	Norfloxacin	Solid	70458-96-7		
16	MoxifloxacinHCl	100	Solid	151096-09-2	
17	CiproflocacinHCl		Solid	86483-48-9	
18	O-floxacin		Solid	82419-36-1	
19	Silver Sulfadiazine	10	Solid	22199-08-2	Antimicrobial
20	Povidone Iodine		Solid	25655-41-8	Antiseptic
21	R & D Products	10	--	--	--
<b>Total (A+B+C)</b>		<b>3045</b>			

1.3.6.2 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for setting up Active Pharmaceutical Ingredients of 745 TPM and Excipients (Inactive Pharmaceutical Ingredients) of 2300 TPM Manufacturing unit by M/s Infocus Remedies Pvt Ltd in an area of 18980 sqm located at Plot No. 1530, Village Rajpur, Taluk Kadi, District Mehsana (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 9<sup>th</sup> December, 2017. Public hearing was conducted by the Gujarat SPCB on 23<sup>rd</sup> July, 2018.

Total water requirement is estimated to be 494 cum/day, of which fresh water requirement of 204 cum/day will be met from ground water through bore well. Application for withdrawal of 204 cum/day has been submitted to CGWA.

Total effluent generated from different industrial operations is estimated to be 297 cum/day. High COD/TDS effluent stream of 57 KLD generated from API manufacturing process will be treated in ETP followed by MEE. Other effluents of 297 KLD (from excipient plant, washing and utilities) will be treated in ETP followed by MEE and RO. Permeate from the RO of 235 KLD and condensate from the MEE of 55 KLD will be reused/recycled in the process. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

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

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

**1.3.6.3** *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.*
- *National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21<sup>st</sup> 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 204 cum/day, proposed to be met from ground water through bore wells. Prior permission in this regard shall be obtained from the concerned regulatory authority/CGWA.*
- *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, 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:-*
  - (g) *Metering and control of quantities of active ingredients to minimize waste.*
  - (h) *Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.*
    - (i) *Use of automated filling to minimize spillage.*
    - (j) *Use of Close Feed system into batch reactors.*
    - (k) *Venting equipment through vapour recovery system.*
    - (l) *Use of high pressure hoses for equipment clearing to reduce wastewater generation.*
- *The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.*
- *All the commitments made regarding issues raised during the public hearing/ consultation meeting shall be satisfactorily implemented.*
- *As committed, funds allocation for the Corporate Environment Responsibility (CER) shall be 2% of the total project cost. Item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.*
- *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.1.3.7**

#### **Expansion in existing plant facility for production of Ammonium Sulphate unit at P.O. Fertilizer Nagar, District Vadodara (Gujarat) by M/s Gujarat State Fertilizers and Chemicals Ltd - For Environmental Clearance**

#### **[IA/GJ/IND2/80904/2007, J-11011/901/2007-I(A)II]**

**1.3.7.1** The project proponent and their Consultant M/s Eco Chem Sales & Services (ECSS) - Surat, made a detailed presentation, also using the video conferencing facility, on salient features of the project and informed that:

- (i) The proposal is for environmental clearance to the project for Expansion in existing plant facility for production of Ammonium Sulphate (AS-I) unit at P.O. Fertilizernagar – Vadodara (Gujarat) by Gujarat State Fertilizers & Chemicals Ltd.
- (ii) The Ministry has issued Standard ToRvide letter No. J-11011/123/2018-IA II (I) dtd. 17<sup>th</sup> June 2018.
- (iii) All Products are listed at S.No. 5(a) 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-11011/901/2007-IA(II) dated 31<sup>st</sup> July, 2008; SEIAA/GUJ/EC/5(e)/131/2013 dated 5<sup>th</sup> July 2013 from SEIAA Gujarat and SEIAA/GUJ/EC/5(f)/228/2016 dated 31<sup>st</sup> March 2016 from SEIAA Gujarat for unit to M/s. Gujarat State Fertilizer & Chemicals Ltd.
- (v) Existing land area is 328 Ha (32,80,000 m<sup>2</sup>) and expansion will be developed within existing plant premises (for AS-I: 2240 m<sup>2</sup>) hence no additional land area will be used for proposed expansion.
- (vi) Industry has already developed Greenbelt/plantation in an area of 36% of the project area i.e. 118.7 Ha(11,87,000 m<sup>2</sup>).
- (vii) The estimated project cost is INR 875 Lakhs for proposed expansion. Total capital cost earmarked towards environmental pollution control measures is INR 50.00 Lakhs and the Recurring cost (operation and maintenance) will be about INR1.50 Lakhs per annum for the proposed expansion.



(viii) Employment will be 50 persons as direct & 20 persons indirect for this expansion. Total employment after expansion will be 5050 person directly. Industry proposes to allocate Rs. 8.75 Lakhs @ of 1% towards Corporate Environmental Responsibility.

(ix) There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance. River Vishwamitri and Mahi is flowing at a distance of 8.5 km and 9.0 km in SE and W direction respectively.

(x) Ambient air quality monitoring was carried out at 8 locations during 1<sup>st</sup> March, 2018 to 31<sup>st</sup> March, 2018 and the baseline data indicates the ranges of concentrations of PM<sub>10</sub> (62.7 – 86.2 µg/m<sup>3</sup>), PM<sub>2.5</sub> (32.1 – 46.2 µg/m<sup>3</sup>), SO<sub>2</sub> (8.5 -16.8 µg/m<sup>3</sup>) and NO<sub>2</sub> (13.7- 20.8 µg/m<sup>3</sup>). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.14 µg/m<sup>3</sup>, 0.01 µg/m<sup>3</sup> and 0.01 µg/m<sup>3</sup> with respect to PM<sub>10</sub>, SO<sub>x</sub> and NO<sub>x</sub>. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(xi) Total water required for the expansion will be 439 m<sup>3</sup>/day, out of which the fresh water required 39 m<sup>3</sup>/day only and will be met through existing water supply from Mahi River. The permission is already obtained for the 7.0 MGD (31822 m<sup>3</sup>/day) for the year 2018-19.

(xii) Effluent of industrial process will be reused into existing PA plant.

(xiii) Power requirement for expansion will be 0.5 MW which will be produced by existing power generation plant i.e. wind mill and joint venture with GIPCL. Further GSFC has connectivity with MGVCCL.

(xiv) Existing unit has 50TPH (3 Nos.), 130TPH (3Nos) NG/LSHS based boiler respectively. Electrostatic precipitator with a stack height of 40 m as per CPCB norms has been installed to IWI unit of Caprolactam-II plant for controlling flue gas emission i.e. PM within the statutory limit of 150 mg/Nm<sup>3</sup>.

(xv) Details of emissions (Flue gas & process) generation and its management is listed below-

**Flue Gas Emission**

S. No.	Stack attached to	Stack height (m)	Stack Dia. (mm)	Air Pollution Control system	Parameter
<b>EXISTING</b>					
1.	Reformer (F1)	33	2.5	NA	PM, SO <sub>2</sub> , NO <sub>x</sub>
2.	Reformer (F3)	30	0.85	NA	
3.	Salt furnace (10A-1102)	30	1.19	NA	
4.	Boiler for Cogen-I (F5)	70	3.08	NA	
5.	Boiler for Cogen –II (F6)	70	3.08	NA	
6.	Boiler for Cogen –III (F7)	35	3.4	NA	
7.	Boiler IV&V (F4)	30	2.4	NA	
8.	New Boiler (F10)	70	3.5	NA	
9.	Waste Liquor unit	22	0.96	Water scrubber	
10.	IWI Unit	40	1.0	ESP(Eff. 99.26%)	

S. No.	Stack attached to	Stack height (m)	Stack Dia. (mm)	Air Pollution Control system	Parameter
11.	Salt furnace (A-102)	35	1.5	NA	
12.	Ammonia- IV unit				-
	Reforming Section-100	52	3.0	NA	PM, SO <sub>2</sub> , NOx
	Syn. Unit-500	30	-	NA	NOx
	CRG Unit-900	30	-	NA	NOx
	CRG Unit-900	30	-	NA	NOx

### Process gas emission

S. No.	Stack attached to	Stack height (m)	Stack Dia. (mm)	Air Pollution Control system	Parameter
<b>EXISTING</b>					
1.	Prilling Tower-I	38	4 x 1	Water Scrubber	SPM, NH <sub>3</sub>
2.	Prilling Tower-II	70	1.45 x 4.36	Water Scrubber	SPM, NH <sub>3</sub>
3.	Condenser oxidation column	38	-	H <sub>2</sub> SO <sub>4</sub> Scrubber (Eff. 99.5%)	NH <sub>3</sub> ,
4.	Dryer Outlet-I	15	0.15	Filter	SPM, NH <sub>3</sub>
5.	Dryer Outlet-II	17	0.15	Filter	SPM, NH <sub>3</sub>
6.	Rock grinding	30	0.8	Ventury Scrubber	SPM
7.	Digester	20	--	Fume scrubber	F
8.	Dryer & Dust Scrubber A&B	30	1.43	Cyclone separator & Ventury scrubber	NH <sub>3</sub> SPMF
9.	Granulator & Neutralization	25	0.74 & 1.02	Fume Scrubber	NH <sub>3</sub> , F
10.	Dryer	19.2	0.9	Cyclone Separator	SPM
11.	Final Absorption Tower	52	1.22	Final Absorption Tower	SO <sub>2</sub> , Acid
12.	Final Absorption Tower	100	2.86	Final Absorption tower	SO <sub>2</sub> Acid Mist
13.	D-415-3 Tower O/L	25	0.43	Scrubber	SO <sub>2</sub> NH <sub>3</sub>
14.	D-414-3 Tower O/L	25	--	De Nox unit	Nox NH <sub>3</sub>
15.	AS Dryer	30	1.016	Cyclone Separator & Scrubber	SPM
16.	AS Vent Scrubber	30	--	Scrubber	SO <sub>2</sub> NH <sub>3</sub>
17.	Process Vessels	30	0.25	Scrubber	PM
18.	Crusher, Hopper, Mixers	40	0.25	Bag Filter	PM
<b>PROPOSED</b>					
1	Dryer	21	0.56	Dust cyclone	PM <150 mg/Nm <sup>3</sup>

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

#	Waste Type	Existing	Proposed	Total	Category	Mode of Disposal
		Waste Generation				
1.	ETP Sludge					
	Biological sludge	--	--	--	-	Sell to Farmer as a soil conditioner
	Chemical sludge	-	--	40 MTPA	34.3	Collection, Storage, Transportation & Disposal at TSDF site i.e. NECL
2	Used Oil	125 MTPA	640 L/annum	125.6 MTPA	5.1	Collection, Storage, Transportation & Disposal by selling to registered refiners
3	Discarded Container	10,000 nos./Yr	--	10,000 nos./Yr	33.3	Collection, Storage & Decontamination within premise.
4	Spent Catalyst	35 MTPA	--	35 MTPA	17.2	Collection, Storage, Transportation & Disposal by selling to registered recyclers OR disposal at TSDF
5	Spent Catalyst	115 MTPA	--	115 MTPA	18.1	Collection, Storage, Transportation & Disposal by selling to registered recyclers
6	Organic Waste	20 MTPA	--	20 MTPA	1.4	Collection, Storage, Transportation & Disposal at Incineration Facility.
7	Sulphur Muck	350 MTPA	--	350 MTPA	17.1	Collection, Storage, reuse &/or Transportation and Disposal at TSDF site

(xvii) Public Consultation is not applicable for expansion project as the expansion is in existing unit which is located in Notified Industrial Area established in 31<sup>st</sup> August 1987.

(xviii) The status of compliance of earlier EC was obtained from Regional Office Bhopal vide Letter No5-193/2008/(ENV)/492 and submitted to MoEF&CC, Delhi which are found satisfactory.

(xix) No any litigations pending against the expansion project.

(xx) The existing and proposed products:

#.	Plant Name	Product	Unit	Production Capacity		
				Existing	Proposed	Total
1.	Ammonia – III	Ammonia	MT/year	33000	--	33000
2.	Ammonia – IV	Ammonia	MT/year	450000	--	450000
		Argon	NM <sup>3</sup> /year	3200000	--	3200000
3.	Urea – I	Urea	MT/year	103200	--	103200
4.	Urea – II	Urea	MT/year	264000	--	264000
5.	Melamine – I	Melamine	MT/year	5000	--	5000
6.	Melamine – II	Melamine	MT/year	10000	--	10000

	Melamine – III	Melamine	MT/year	40000	--	40000
7.	Phosphoric Acid	Phosphoric Acid	MT/year	54000	--	54000
		Phosphogypsum	MT/year	253260	--	253260
8.	DAP/ASP/MAP/NPK	ASP	MT/year	216000	--	216000
9.	Sulphuric Acid-III	Sulphuric Acid	MT/year	132000	--	132000
10.	Sulphuric Acid-IV	Sulphuric Acid	MT/year	445500	--	445500
11.	Cogeneration – I	Power	-	15 MWH (131400MWPY)	--	15 MWH (131400MWPY)
		Steam	-	130 MT/Hr (1138800 MTPY)	--	130 MT/Hr (1138800 MTPY)
	Cogeneration – II	Power	-	25 MWH	--	25 MWH
		Steam	-	130 MT/Hr	--	130 MT/Hr
	Cogeneration – III	Power	-	50 MWH (438000MWPY)	--	50 MWH (438000MWPY)
		Steam	-	130 MT/Hr (1138800 MTPY)	--	130 MT/Hr (1138800 MTPY)
12.	Caprolactam – I (Ammonium Sulphate-II)	Caprolactum	MT/year	20000	--	20000
		Nitric Acid	MT/year	8300	--	8300
		Ammonium Sulfate	MT/year	80000	-	80000
13.	Caprolactam – II (Ammonium Sulphate-III)	Ammonium Sulfate	MT/year	116000	-	116000
		Caprolactum	MT/year	50000	--	50000
		Nitric Acid	MT/year	8300	--	8300
14.	Nylon – 6	Nylon – 6 (Continuous/Batch)	MT/year	8000	--	8000
15.	MEK Oxime – I	MEK Oxime	MT/year	1200	--	1200
16.	MEK Expansion	MEK Oxime	MT/year	6500	--	6500
17.	Urea Phosphate	Urea Phosphate	MT/Year	1500	--	1500
18.	Methanol	Methanol	MT/year	191625	--	191625
19.	HAS Crystal	HAS Crystal	MT/year	1200	--	1200
20.	Water Soluble Fertilizer (WSF) & MM*	WSF 19:19:19	MT/year	21600	--	21600
		Other WSF	MT/year	10800	--	10800
		Micronutrient Mixture (MM)	MT/year	54	--	54
21.	Ammonium Sulphate-I	Ammonium Sulphate	MT/year	-	146000	146000

\*The product is not covered under EIA notification 2006. Hence, EC is not applicable to this product.

### 1.3.7.2 During deliberations, the EAC noted the following:-

The proposal is for environmental clearance to the project for expansion of fertilizer plant by adding Ammonium Sulphate (AS-I) production unit of capacity 146000 TPA by M/s Gujarat

State Fertilizers & Chemicals Ltd in an area of 3280000 sqm located at Fertilizer Nagar, District Vadodara (Gujarat). Present industrial operations already involve manufacturing of Ammonium Sulphate as by-products from Caprolactum-I & II plants producing Ammonium Sulphate 80000 TPA and 116000 TPA respectively.

The project/activity is covered under category A of item 5(a) 'Chemical Fertilizer' of the Schedule to the Environment Impact Assessment Notification, 2006 and requires appraisal at central level by the sectoral Expert Appraisal Committee in the Ministry.

The ToR for the project was granted on 17<sup>th</sup> June 2018. Public hearing is exempted as the project is located in the notified Industrial area (GO Notification dated 21<sup>st</sup> August, 1987).

Total fresh water requirement for the proposed expansion is 39 cum/day, proposed to be met from Mahi River through existing water supply agreement with Vadodara Irrigation Division, State Government of Gujarat. The project proponent has already got the permission from Vadodara Irrigation Division vide letter dated 1<sup>st</sup> February, 2018, to meet the total water demand of 30368 cum/day, which would also cater to the present expansion.

Total effluent generated from different industrial operations is estimated to be 13662 cum/day, which will be sent to M/s Vadodara Enviro Channel Limited (VECL) after treatment, for ultimate disposal to sea. Effluent of proposed plant of 73 cum/day will be reused into existing PA plant. It is reported that M/s GSFC is having the permission of 13989 m<sup>3</sup>/day effluent discharge quantity as per GPCB Consent Order. Due to reuse of effluent of APS plant, there will be reduction of 327 m<sup>3</sup>/day effluent in overall discharge quantity.

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.

Earlier, the Ministry had issued EC on 31<sup>st</sup> July, 2008 for 'Methanol plant of 525 TPD by revamping existing 450 TPD Ammonia-1 plant', SEIAA has issued EC's dated 5<sup>th</sup> July, 2013 for 'Nylon-6 plant of 45 MTPD within existing GSFC complex' and dated 31<sup>st</sup> March, 2016 for 'Setting up new melamine plant within the existing complex' in favour of M/s Gujarat State Fertilizers & Chemicals Ltd at Fertilizer Nagar, Vadodara. The monitoring report on compliance status of EC conditions, was forwarded by the Ministry's Regional Office at Bhopal vide letter dated 17<sup>th</sup> September, 2018 (site visit on 17<sup>th</sup> July, 2018).

Consent to Operate for the present industrial operations issued by Gujarat PCB vide letter dated 7<sup>th</sup> June, 2016 is valid up to 31<sup>st</sup> December, 2016.

**1.3.7.3** *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 treated effluent of 13662 cum/day shall conform to the standards prescribed under the Environment (Protection) Rules, 1986, for discharge into deep sea through M/s Vadodara Enviro Channel Limited (VECL).*
- *To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms for particulate matter and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.*

- *Total fresh water requirement for the fertilizer plant, including that for the proposed expansion, shall not exceed 30368 cum/day, proposed to met through existing water supply from Mahi River. Prior permission in this regard shall be obtained from the concerned regulatory authority.*
- *Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system.*
- *Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps.*
- *The project proponent 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 project proponent shall undertake waste minimization measures such as: -*
  - (a) Metering and control of quantities of active ingredients to minimize waste.*
  - (b) Use of high pressure hoses for equipment clearing to reduce wastewater generation.*
  - (c) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.*
  - (d) Use of automated filling to minimize spillage.*
  - (e) Use of Close Feed system into batch reactors.*
  - (f) Venting equipment through vapour recovery system.*
- *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.*
- *Transportation of raw materials/products should be carefully performed using GPS enabled vehicles.*
- *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.1.3.8**

**Manufacturing of S.O Dyes (130mt/m) at Plot No 66 to 70, RudraInd Park, Bakrol, Ahmedabad (Gujarat) by M/s Aditya Color Chem - For Environmental Clearance**

**[IA/GJ/IND2/67946/2017, IA-J-11011/450/2017-IA-II(I)]**

The project proponent informed that their EIA consultant (NABET Accredited) was not available for the meeting due to some exigencies, and requested for consideration of the proposal in next meeting of the Committee.

*The EAC took note of the prevailing circumstances, and desired to defer the proposal.*

### **Agenda No.1.3.9**

#### **Expansion & Modernization of existing project for manufacturing of explosives and defence Products at Village Chakdoh Near Bazargaon, Tehsil Katol, Dist. Nagpur by M/s Solar Industries India Limited - For Environmental Clearance**

**[IA/MH/IND2/61877/2017, IA-J-11011/28/2017-IA-II(I)]**

**1.3.9**The Project Proponent and the accredited Consultant M/s Anacon Laboratories Pvt. Ltd., Nagpur 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 Expansion & Modernization of explosives and defense products manufacturing plant at Village Chakdoh, Near Bazargaon, Tehsil Katol, District Nagpur (Maharashtra) by M/s Solar Industries India Limited, Nagpur, Maharashtra.

(ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 20<sup>th</sup> EAC meeting held during 28<sup>th</sup> February 2017 and 22<sup>nd</sup> EAC (Industry – 2) Meeting held on 17<sup>th</sup> April 2017 and recommended Terms of References (ToRs) for the Project. The ToR has been issued by Ministry vide letter No. J-11011/28/2017-IA.II(I), dated 7<sup>th</sup> July, 2017.

(iii) The project is listed at S. No. 5(f) and 6(b) of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee.

(iv) Existing land area is 1108474.47 m<sup>2</sup>, no additional land will be used for proposed expansion. Out of total land area of 1108474.47 m<sup>2</sup> only 2590.44m<sup>2</sup> land area will be used for proposed expansion. Industry has already developed greenbelt in an area of 33 % i.e. 365795.35m<sup>2</sup> out of total area 1108474.47 m<sup>2</sup> of the project.

(v) The estimated project cost is Rs.184.01Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 7.0114915 Crores and the Recurring cost (operation and maintenance) will be about Rs. 3.6168353 crores per annum.

(vi) Total employment will be 1710 persons as direct & 100 persons indirect after expansion. Industry proposes to allocate Rs.3.44 Crores (year 2017-2018) @ of 5/2.5 % towards Corporate Social Responsibility. There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. River/ water body Jam river is flowing at a distance of 18.0 km in W-NW direction.

(vii) Ambient air quality monitoring was carried out at 8 locations during 01 Dec. 2016 to 28 Feb. 2017 and the baseline data indicates the ranges of concentrations as: PM<sub>10</sub> (33.7-79.2µg/m<sup>3</sup>), PM<sub>2.5</sub> (13.1-31.7 µg/m<sup>3</sup>), SO<sub>2</sub> (3.0 to 16.6.µg/m<sup>3</sup>) and NO<sub>2</sub> (3.4-28.2 µg/m<sup>3</sup>). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.05 µg/m<sup>3</sup>, 0.32 µg/m<sup>3</sup> and 3.2 µg/m<sup>3</sup> with respect to PM<sub>10</sub>, SO<sub>x</sub>

and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(viii) Total water requirement is 922 M<sup>3</sup>/day of which fresh water requirement of 471m<sup>3</sup>/day will be met from presently ground water and for expansion will be surface water.

(ix) Effluent of 259 KLD (Existing 181 KLD + Proposed addition 78 KLD) = Total Effluents after proposed expansion 259 KLD, will be treated through ETP. The plant will be based on Zero Liquid discharge system.

(x) Power requirement after expansion will be 3100 KVA including existing 2000 KVA and will be met from Maharashtra State power distribution corporation limited grid power supply (MSEDCL/SPDCL). Existing unit has DG sets of capacities 2x 380 KVA, 1x 400 KVA and 1x 600 KVA, additionally 2x300 KVA DG sets are proposed (total DG sets capacity after expansion will be 2360 KVA) as standby during power failure. Stack (height 8m) will be provided as per CPCB norms to the proposed DG sets.

(xi) Existing unit has 11 TPH (2 TPH, 3 TPH and 6 TPH) coal / agro waste briquette fired boiler and Thermopac Boiler of 600000 K.Cal/Hr capacity. Additionally, 12 TPH coal fired boiler will be installed. Multi cyclone separator/ bag filter with a stack of height of 30 m (existing boilers) and 33.5 m (proposed boilers) will be installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm<sup>3</sup> for the proposed boilers.

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

Sr. No.	Type of waste	Quantity and UoM	Treatment	Disposal
Existing				
	Boiler Ash	540 MT/A	Collection	Sold to Brick manufactures
	Biological sludge (STP)	1.20MT/A	Collection	In the gardening
Proposed				
	Coal Ash	5775 MT/A	Collection	Will be Sold to Brick manufactures

## B. Hazardous Waste

Chemical Sludge from Effluent Treatment Plant: (Category No. 34.3)

ETP sludge is separated at the sludge drying beds of ETP. Sun dried sludge is collected and stored in LDPE lined bags and disposed to CHWTSDF, Butibori of M/s Maharashtra Enviro Power Limited, Nagpur.

Ash from destruction of contaminated discarded containers/ barrel/ liners/ cardboard boxes, explosives wastes etc. (Category No. 36.2)

Empty HDPE bags are collected and temporarily stored in the covered shed and sold to authorized recyclers. The empty liners and cardboard boxes have traces of explosives contamination. Hence, all these materials are safely burnt under the supervision of competent person at place approved by licensing authority in the licensed premises of the factory in compliance of Rule 42 of Explosives Rules, 2008. Ash is packed in the LDPE lined bags, stored



in the covered shed in the factory premises and disposed periodically to CHWTSDF, Butibori, of M/s Maharashtra Enviro Power Limited, Nagpur.

The management is actively considering installation of an incinerator for disposal of aforesaid wastes.

Sr. No.	Type of waste	Category	Quantity	UOM	Treatment	Disposal
Existing						
	Chemical sludge from ETP	34.3	25.0	MT/A	In-house	CHWTSDF
	Ash from burning of Explosives contaminated wastes	36.4	4.0	MT/A	Made explosive free	CHWTSDF
	Discarded containers/ barrels/ Ash from burning of discarded explosives contaminated liners /CFB/bags	36.2	50.0	MT/A	Cleaning & decontamination	CHWTSDF
	Waste oil	5.1	0.5	KL/A	-	Sale/ Recycle/ Reprocess
Proposed						
	Waste /residues containing oil	5.2	0.5	MT/A	--	CHWTSDF
	Chemical sludge from waste water treatment	34.3	10.0	MT/A	--	CHWTSDF
	Ash from incineration of hazardous wastes	36.2	5.0	MT/A	--	CHWTSDF
	Distillation residue from contaminated organic solvents	36.4	8.0	MT/A	--	CHWTSDF

(xiii) Public Hearing for the proposed project has been conducted by the Maharashtra Pollution Control Board on 27<sup>th</sup> December 2017. The main issues raised during the public hearing are related to providing Employment to local population and ground vibration during testing of explosives and cracks were observed in villages homes.

(xiv) No Litigation is pending against the proposal.

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

Sr. No.	Name of Products	Existing	Proposed	Total after Expansion
1.	Surry /Emulsion Explosives	100000 MT/A	56250 MT/A	156250 MTA
2.	PentaErythritol Tetra Nitrate (PETN) C & F	2062.5 MT/A	937.5 MT/A	3000 MTA

3.	Sorbitan Monooleate (SMO) Captive	9162 MT/A	NIL MT/A	9162 MT/A
4.	Detonators (Finished)	125 Million Nos/Annum	NIL	125 Million Nos/Annum
5.	Detonating Fuse (Finished)	75 Million Meter/Annum	75 Million Meter/Annum	150 Million Meter/Annum
6.	Pentolite Cast Booster (Finished)	1875 MT/A	1125 MT/A	3000 MT/A
7.	Calcium/Sodium Nitrate Melt (Captive)	3600 MT/A	NIL	3600 MT/A
8.	Dust Suppressant (finished)	1000 MT/A	NIL	1000 MT/A
9.	GI/CU Wire coating Million Nos/Annum	90 Million Nos/Annum	NIL	90 Million Nos/Annum
10.	Filling & Pressing for Filled shells Million Nos/Annum	63 Million Nos/Annum	NIL	63 Million Nos/Annum
11.	Polyisobutylene succinic anhydride, (PIBSA) (Captive & Finished)	6000 MT/A	NIL	6000 MT/A
12.	Lead Azide (Captive)	9 MT/A	NIL	9 MT/A
13.	Lead Styphanate (Captive)	3 MT/A	NIL	3 MT/A
14.	ASA Mixing & Drying (Captive)	12 MT/A	NIL	12 MT/A
15.	Cyclotetramethylenetetranitamine, (HMX) & HMX Compounded Products C & F	62.5 MT/A	237.5 MT/A	300 MT/A
16.	RDX & RDX Compounded Products	125 MT/A	2875 MT/A	3000 MT/A
17.	Bulk Emulsion (SME)	NIL	125000 MTA	125000 MT/A
18.	Trinitrotoluene (TNT)	625 MT/A	2375 MT/A	3000 MT/A
19.	Coal Fired Boiler Utility	11 TPH	12 TPH	23 TPH

**1.3.9.2** During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for expansion & modernization of explosives and defence products manufacturing plant by M/s Solar Industries India Limited in an area of 1108474.47 sqm located at Village Chakdoh, Tehsil Katol, District Nagpur (Maharashtra).

The project/activities are covered under category A of item 5(f) 'Synthetic organic chemicals industry' & 6(b) 'Isolated storage & handling of hazardous chemicals' 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 7<sup>th</sup> July, 2017. Public hearing was conducted by the Maharashtra SPCB on 28<sup>th</sup> December 2017. The main issues raised during the public hearing are related to employment to the local villagers, ground vibration during testing of explosives, cracks observed in nearby homes, etc.

Total water requirement is estimated to be 922 cum/day, of which fresh water requirement will be 471 cum/day. Presently the fresh water requirement is met through ground water and after expansion, the same will be sourced from surface water. Permission for withdrawal for 430 KLD has been obtained from the CGWA vide letter dated 15<sup>th</sup> May, 2018. To meet the additional requirement of water, proposal has been submitted to the concerned regulatory authority.

Total effluent generated from different industrial operations is estimated to be 259 cum/day, which will be treated in ETP, and 227 cum/day of treated water will be reused in the process/gardening. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

Consent to Operate for the present industrial operations issued by Maharashtra PCB vide letter dated 30<sup>th</sup> December, 2016 is valid up to 30<sup>th</sup> June, 2021.

PESO has given licence vide letter dated 16<sup>th</sup> December, 2014 for the site and layout plan of storage (Petroleum storage Class A installation), valid up to 31<sup>st</sup> March, 2019, as per Explosives Act, 1884 and licence for manufacturing explosives vide letter dated 7<sup>th</sup> June, 2018, which is valid up to 31<sup>st</sup> March, 2020, as per Explosives Rule, 2008.

**1.3.9.3** *The EAC, after deliberations and especially taking note of public hearing proceedings, insisted for scientific and technical analysis of the prevailing concerns, response and commitment made on the issues raised during public hearing. The Committee also desired for the proposal to be restructured in consistent with the schedule to the EIA Notification, 2006.*

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

## **Day Two - 20<sup>th</sup> December, 2018**

### **Agenda No.1.3.10**

**Expansion of Synthetic organic chemicals at Plot No.D-8, MIDC Piathan, District Aurangabad (Maharashtra) by M/s Matrix Fine Sciences Pvt Ltd - For Environmental Clearance**

**[IA/MH/IND2/79952/2018, IA-J-11011/60/2018-IA-II(I)]**

**1.3.10.1** The project proponent and the accredited Consultant M/s sd engineering services Pvt Ltd, gave a detailed presentation on the silent features of the project and informed that:

(i) The proposal is for Environmental Clearance to the project expansion of synthetic organic chemicals at Plot No. D-8, MIDC Paithan, Taluka Aurangabad, District Aurangabad (MS) by M/s Matrix Fine Sciences Pvt. Ltd.

(ii) The standard ToR has been issued by Ministry vide letter no. IA-J-11011/60/2018-IA-II(I) Dated 24<sup>th</sup>May 2018.

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

(iv) The existing products are not fall under the purview of EC.

(v) Existing land area is 40,000 m<sup>2</sup>. Expansion will be on existing land. About 3300 m<sup>2</sup> land will be used for expansion. Industry has already developed Greenbelt on an area of 9947 m<sup>2</sup> and 795 m<sup>2</sup> is proposed for green belt development.

(vi) The estimated project cost is Rs.28 Cr. Total capital cost earmarked towards environmental pollution control measures is Rs.1.95 Cr. and the Recurring cost (operation and maintenance) will be about Rs.0.90 Cr. per annum.

(vii) Total Employment will be 200 persons as direct & 500 persons indirect after expansion. Industry proposes to allocate Rs.0.28 Cr @ 2.5 % towards Corporate Social Responsibility.

(viii) There are no National Parks, Biosphere Reserves, Tiger/Elephant Reserves and Wildlife Corridors etc lies within 10 km distance from project site. However Jayakwadi Bird Sanctuary lies at distance of 2 Km in South-West Direction. Godavari River flowing at a distance of 7.6 Km in South direction.

(ix) Ambient air quality monitoring was carried out at 9 locations during March 2018 to May 2018 and the baseline data indicates that ranges of concentrations as: PM<sub>10</sub> 30.59 µg/m<sup>3</sup> to 64.87 µg/m<sup>3</sup>, PM<sub>2.5</sub> 16.03 µg/m<sup>3</sup> to 36.63 µg/m<sup>3</sup>, SO<sub>2</sub> 29.59 µg/m<sup>3</sup> to 32.50 µg/m<sup>3</sup> and NO<sub>x</sub> 16.90 µg/m<sup>3</sup> to 39.84 µg/m<sup>3</sup> respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 24.3 µg/m<sup>3</sup> for PM<sub>10</sub>, 9.7 µg/m<sup>3</sup> for PM<sub>2.5</sub> and 18.1 µg/m<sup>3</sup> for SO<sub>2</sub>. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(x) Total water requirement is 340 m<sup>3</sup>/day of which fresh water requirement of 340 m<sup>3</sup>/day and will be supply by MIDC.

(xi) Effluent of 91.5 m<sup>3</sup>/day quantity will be treated through Primary, Secondary and Tertiary treatment unit. HCOD effluent will be treated in solvent stripper, MEE and ATFD. The plant is based on Zero Liquid discharge system.

(xii) Power requirement after expansion will be 1650 kVA including existing 400 kVA and will be supplied by Maharashtra State power distribution corporation limited (MSEDCL). Existing unit has 2 DG sets of 750 kVA and 320 kVA capacity each. Additionally 1no. of DG Set. DG Sets are used as standby during power failure. Stack (height 6.5 m) is provided as per CPCB norms to proposed DG Sets.

(xiii) Existing unit has 3 TPH Coal fired boiler. Additionally 7 TPH Coal fired boiler will be installed. Multi cyclone Dust Collector and bag filter with a stack of height of 30 m will be installed for controlling the Particulate emissions within statutory limit of 115 mg/Nm<sup>3</sup> for Proposed the proposed boilers.

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

S. No.	Solid Waste	Quantity/ Month	Disposal	Remark
--------	-------------	-----------------	----------	--------

1.	Canteen	10 (kg)	Authorized recycler	Organic
2.	Packing Waste	200 (kg)	Authorized recycler	--
3.	waste paper	50 (kg)	Authorized recycler	For recycle
4.	Boiler Ash	25.4 (TPD)	Authorized recycler	Brick Manufacturers

S. No.	Hazardous Waste	Proposed Kg/M	Remark/Disposal practice
1	ETP Sludge MEE Salt	75 27900	CHWTSDF
2	Residue and Waste	142	CHWTSDF
3	Off Specification Product	50	CHWTSDF
4	Discarded containers barrels used form HW and chemicals	100	Sale to authorized recycler
5	Spent Solvent	183.48	Sale to authorized Recycler, Re-processor
6	Distillation Residue	1226	CHWTSDF

(xv) Public Hearing for the proposed project is not applicable as per the Ministry's O.M. dated 27th April 2018 being site is located inside the notified industrial area.

(xvi) No litigation is pending.

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

S. No.	Product	Existing (MT/ A)	Proposed (MT/ A)	Total (MT/ A)
1	FAME/Biodiesel/ Distillated Fatty Acid	7600	0	7600
2	Phytosterol	450	0	450
3	Tocopherol& Its Derivatives	600	0	600
4	Oil Residue	600	0	600
5	Squalene	50	0	50
6	Tocotrieols	550	0	550
7	Bixin or Nor-Bixin	52	0	52
8	Omega 3 Fatty Acid	53	0	53
9	Beta Carotene	50	0	50
10	D Alpha Tocopherol	0	720	720
11	D Alpha Tocopherol Acetate	0	720	720
12	D Alpha Tocopheryl Succinate	0	720	720
13	Vitamin E TPGS	0	720	720
14	Steryl Ester	0	720	720
15	Squalane	0	720	720
16	Vitamin E Powder	0	600	600

	<b>Total</b>	<b>10005</b>	<b>4920</b>	<b>14925</b>
<b>By Products</b>				
1	Acetic Acid	0	3	3
2	Succinic Acid	0	5	5

**1.3.10.2** During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for expansion of synthetic organic chemicals from 10005 (9 products) to 14925 MTPA (16 nos of products) by M/s Matrix Fine Sciences Pvt Ltd in an area of 40,000 sqm at Plot No. D-8, MIDC Paithan, Taluka Aurangabad, District Aurangabad (Maharashtra).

The project/activity is covered under category B of item 5(f) 'Synthetic Organic Chemicals' of schedule to the Environment Impact Assessment (EIA) Notification, 2006, and requires appraisal at State level by the concerned SEAC/SEIAA. However, due to applicability of general condition (Jayakwadi Bird Sanctuary within 2 km), the proposal was appraised at central level by the sectoral EAC in the Ministry.

The standard ToR for the project was granted on 24<sup>th</sup> May 2018. Public hearing/ consultation is not required as project site is located inside the notified industrial area.

Total water requirement is estimated to be 245 cum/day, which includes fresh water of 245 cum/day to be met from the MIDC supply.

Industrial effluent of 91.5 cum/day generated will be treated through Effluent Treatment Plant. Domestic effluent will be taken to STP for treatment. High COD effluent will be treated in solvent stripper, MEE and ATFD and treated water will be recycled in the process and for green belt development. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

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

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

The existing products are based on purification and extraction process and do not fall under the purview of prior environmental clearance and as such, no compliance status of the same is required.

Consent to Operate for the existing capacity has been obtained from the State PCB vide letter dated 28<sup>th</sup> August, 2018, which is valid up to 31<sup>st</sup> May, 2019

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

- *Higher incremental GLCs in respect of all the air pollutants namely, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> due to the proposed expansion.*
- *Usage of coal having Sulphur content less than 0.5%.*
- *Health & safety management plan, including that for toluene.*
- *Different sources of volatile organic matter to be equipped with suitable control devices to limit the concentration within 99.52%.*
- *Revised water balance and the expected characteristics for the treated effluent.*

- Plan for waste management, including ash.

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

### **Agenda No.1.3.11**

#### **Development drilling of 200 wells in Sivasagar District (Assam) by M/s Oil And natural Gas Corporation - For Environmental Clearance**

**[IA/AS/IND2/61229/2016, J- 11011/369/2016-IA.II(I)]**

**1.3.11.1** The project proponent and the accredited Consultant M/s Vimta Labs 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 Onshore development and production of oil & gas from 200 wells in 23 blocks at Sivasagar District, Assam by M/s Oil and Natural Gas Corporation (ONGC).

(ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 18th meeting held during 23<sup>rd</sup>-25<sup>th</sup> January 2017 and recommended Terms of References (ToRs) for the Project. The ToR has been issued by Ministry vide letter No.J-11011/369/2016-IA.II(I) dated 29<sup>th</sup> April, 2017.

(iii) All Offshore and onshore oil and gas exploration, development & production are listed at S.No. 1(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 minimum land required at each well site during development and production of oil & gas will be 125 m x 125 m, i.e., 1.5-2.0 ha. Land requirement for the base camp will be about 0.5 ha. The land will be acquired on a temporary basis and if commercial quantity of oil or gas is found, the land will be returned to the owner by bringing back to its original status and adequate compensation as per the guidelines of local administration will be provided.

(v) The estimated project cost is Rs.6,000 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs.25 Crores and the Recurring cost (operation and maintenance) will be about Rs.45 Crores. The proposed project is a temporary activity for 3 - 4 months. Total Employment will be 60 persons as direct & indirect for proposed project. Industry proposes to allocate Rs. 45 Crores towards Corporate Environmental Responsibility (CER).

(vi) The Environmental sensitive area as follows:

<b>Particulars</b>	<b>Details</b>
Nearest river	<b><u>Rivers within ML Area:</u></b> <ul style="list-style-type: none"> <li>• Dikhu river/ Nanga river</li> <li>• Disang river</li> <li>• Jhanji river</li> <li>• Brahmaputra river</li> <li>• Diroyadi</li> </ul>
Protected areas as per Wildlife Protection Act,1972 (Tiger reserve,	Panidihingia bird sanctuary (2.3 km, North from north Rudrasagar ML boundary)

Particulars	Details
Elephant reserve, Biospheres, National parks, Wildlife sanctuaries, community reserves and conservation reserves)	
Reserved / Protected Forests	<p><b><u>Reserved Forest within ML Area:</u></b></p> <ul style="list-style-type: none"> <li>• Panidhingia RF (2.3 km, North from north Rudrasagar ML boundary)</li> <li>• Diroi RF</li> <li>• Sola RF</li> <li>• Abaypur RF</li> <li>• Singphan RF (adjacent)</li> <li>• Geleki RF</li> <li>• Tiruhill RF (2.5 km from Namti ML Boundary)</li> </ul>

(vii) Ambient air quality monitoring was carried out at 20 locations during 1<sup>st</sup> October 2017 to 31<sup>st</sup> December 2017.

Pollutant	Baseline Concentration ( $\mu\text{g}/\text{m}^3$ ) Study Period	Maximum AAQ concentration ( $\mu\text{g}/\text{m}^3$ ) Study period	Incremental concentration ( $\mu\text{g}/\text{m}^3$ ) due to drilling	Resultant concentration ( $\mu\text{g}/\text{m}^3$ )	Limits as per NAAQS
PM <sub>2.5</sub>	10.1 – 42.3	42.3	0.1	42.4	60
PM <sub>10</sub>	23.6 – 67.9	67.9	0.3	68.2	100
SO <sub>2</sub>	11.1 – 25.8	25.8	3.8	29.6	80
NO <sub>2</sub>	14.7 – 31.9	35.7	1.7	37.4	80

(i) Total water requirement for each well site is 25 m<sup>3</sup>/day (15 m<sup>3</sup>/day for mud preparation and 10 m<sup>3</sup>/day for drinking purposes) will be met from local water sources through tankers/ contractors.

(ii) Drilling wastewater generation for each well site is 15 m<sup>3</sup>/day and will be treated before sending for solar evaporation in lined pit at drilling site. Domestic sewage generation for each well site is 10 m<sup>3</sup>/day will be sent to septic tank and followed by soak pit.

(iii) Power requirement for each well site is 3000 KVA and will be met from DG sets of 750 KVA x 4 Nos. capacity, additionally 750 KVA x 1 No. DG sets are used as standby of AC-SCR type. Stack (height) will be provided as per CPCB norms to the proposed DG sets.

(iv) During the short period of site preparation mechanical shovels and earthmovers will be used for vegetation clearance, cut and fill and other site leveling activities. These activities could generate dust particles which will be mobilized by wind, and deteriorate the ambient air conditions. However, these activities will be only temporary and the impact to ambient air quality would be within the close proximity of well site. The gaseous emissions from the DG set will be controlled by efficient combustion of fuel in the DG set. The flaring of oil and gas during well testing is a short duration activity (about 14 - 21 days) and will be done within a ground level enclosed pit. Wherever, required special precautions will be taken to minimize the impact on the local environment and habitat.



(v) Small amounts of solid wastes will be generated during normal operation at the drilling rig. The wastes will be disposed on compliance with local and national legislations. Spent waste oil approx. 150 – 200 liters/ month to be stored in a secure paved area and disposed to MoEF&CC/ Assam PCB approved waste oil recyclers. Drill cuttings 500 m<sup>3</sup>/well and sludge from drilling mud of 2,500 m<sup>3</sup>/well to be buried within the impervious lined pit and covered with soil as part of the site abandonment plan. Biodegradable waste arising from kitchen and canteen activities to be scientifically composted and the bio-manure so generated to be used for green belt development

(vi) Public Hearing for the proposed project has been conducted by the Assam State Pollution Control Board on 15<sup>th</sup> June 2018 in the venues at Auditorium, Sivasagar Yuvadol, Borpukhuri Par, Sivasagar town, District Sivasagar (Assam). The main issues raised during the public hearing are related to Employment opportunities for local youths, Installation of ETP.

(vii) No litigation pending against the proposal.

**1.3.11.2** During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for onshore development and production of oil & gas from 200 wells in 23 blocks in District Sivasagar (Assam) by M/s Oil and Natural Gas Corporation (ONGC) Ltd.

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

The ToR for the project was granted on 29<sup>th</sup> April, 2017 and public hearing was conducted by Assam State Pollution Control Board at Sivasagar district on 15<sup>th</sup> June, 2018.

Total water requirement is estimated to be 25 cum/day proposed to be met from local water sources through tankers/contractors. 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 project proponent has confirmed the expenditure towards CER @ 0.5% of the total project cost.

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.

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

- *No drilling activity shall be carried out within 10 km of the Wildlife Sanctuary. In case it is inevitable, the environmental clearance shall be subject to obtaining prior clearance from the wildlife angle including clearance from the Standing Committee of the National Board for Wildlife as applicable. Grant of environmental clearance does not necessarily implies that Wildlife Clearance shall be granted to the project and that their proposals for Wildlife*

*Clearance will be considered by the respective authorities on their merits and decision taken.*

- *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 16<sup>th</sup> November, 2009 for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, CH<sub>4</sub>, 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 CO<sub>2</sub> 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 30<sup>th</sup> 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 H<sub>2</sub>S release including all necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal H<sub>2</sub>S 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 0.5% 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.1.3.12**

**Manufacturing of synthetic organic chemicals (pharmaceutical bulk drugs & intermediates) at Survey No.44/B, Village Naldhari, Siludi-Valia Road Near Ankleshwar, Taluka Valia, Bharuch (Gujarat) by M/s Intas Pharmaceuticals Ltd - For Environmental Clearance**

**[IA/GJ/IND2/71820/2017, IA-J-11011/583/2017-IA-II(I)]**

**1.3.12.1** The project proponent and the accredited consultant M/s Envisafe Environment Consultants 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 expansion of Active Pharmaceutical Intermediates (APIs) manufacturing unit from 241 to 287.77 TPM at Survey No.

44/B, village- Naldhari, Survey No. 130, village - Valia and Plot 7/2 in Valia industrial estate of GIDC, Tal: Valia, District-Bharuch, Gujarat by M/s Intas Pharmaceuticals Ltd.

(ii) The Standard ToR has been issues by Ministry vide letter No. IA-J-11011/583/2017-IA-II(I); dated 10<sup>th</sup>February 2018.

(iii) All the proposed 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) Environment Clearance was not applicable to the existing plant as it was not covered under the preview EIA Notification 1994 regulated at the time of its establishment in 1986. M/s Intas Pharmaceuticals Ltd (Formerly M/s Zora Pharma Pvt Ltd) had obtained fresh Consent to Establish (CTE/NOC) for manufacturing of synthetic organic chemicals in May 1986 from Gujarat Pollution Control Board (GPCB).

(v) Existing land area is 28,567 m<sup>2</sup>. Additional 33,099 m<sup>2</sup> land will be used for proposed expansion.

(vi) Industry has already developed greenbelt in an area of 43.75% i.e. 12,500 m<sup>2</sup> out of 28,567 m<sup>2</sup> of area of the existing plant. After proposed expansion, Greenbelt will be expanded up to 20,350 m<sup>2</sup>(33%) out of 61,666 m<sup>2</sup> area of the project.

(vii) The estimated project cost is Rs.98.66 Crores including existing investment of Rs.28.66 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs.5.85 Crore and the Recurring cost (operation and maintenance) will be about Rs.128 Lacs/annum.

(viii) Total Employment will be 296 persons as direct and 344 persons indirect after expansion. Industry proposes to allocate Rs. 70Lakhs @ of 1 % towards Corporate Environment Responsibility (CER).

(ix) There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc lies within 10 km distance. River Amravati is flowing at a distance of 3 km in N direction.

(x) Ambient air quality monitoring will be carried out at 8 locations during March 2017 to May 2017 and the baseline data indicated the ranges of concentration as: PM<sub>10</sub> (51- 94µg/m<sup>3</sup>), PM<sub>2.5</sub> (21.1- 42.2 µg/m<sup>3</sup>), SO<sub>2</sub> (7- 20.8 µg/m<sup>3</sup>), NO<sub>2</sub>(8- 24 µg/m<sup>3</sup>). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.625µg/m<sup>3</sup>, 1.935 µg/m<sup>3</sup>, 0.162 µg/m<sup>3</sup>, 0.106 µg/m<sup>3</sup> and 0.916 µg/m<sup>3</sup>with respect to PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, HCl and NH<sub>3</sub>. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(xi) Total water requirement is 318.4 m<sup>3</sup>/day of which fresh water requirement of 186 m<sup>3</sup>/day will be met from own borewell.

(xii) Effluent of 110.8 m<sup>3</sup>/day quantity will be treated through stripper, MEE, Primary& Secondary ETP followed by RO. Plant will be based on Zero Liquid Discharge system.

(xiii) Power requirement after expansion will be 1,675 KVA including existing 475 KVA and will be met from Dakshin Gujarat Vij Company Ltd. (DGVCL). Existing unit has 2 DG sets of 500 KVA and 125 KVA capacity, additionally 2 DGsets (500 KVA each)will be used as standby

during power failure. Stack (height 9 m) for existing DG Sets has been provided and Stack (height 10 m) for proposed DG Sets will be provided as per CPCB norms.

(xiv) Existing unit has installed 4 TPH Biofuel &/or Coal fired steam boiler and 3 TPH FO/LDO fired steam boiler, 1 lac Kcal/hr FO/LDO fired thermic fluid heater. Multicyclone separator followed by bag filter followed by water scrubber with a stack height of 31m is installed to 4 TPH steam boiler for controlling the Particulate emission. Additionally, 6 TPH Biofuel &/or Coal fired steam boiler will be installed. Multicyclone separator followed by bag filter followed by water scrubber with stack height of 31 m will be installed for controlling the Particulate emission within the statutory limit of 150 mg/Nm<sup>3</sup> for the proposed boilers.

(xv) Process emission generation will be in the form of SO<sub>2</sub>, HCl and NH<sub>3</sub> gas from proposed expansion. Two stage alkali scrubbers will be provided for control of SO<sub>2</sub> & HCl gas and two stage acidic scrubber for control of NH<sub>3</sub> gas.

(xvi) Hazardous waste to be generated from proposed expansion will be managed as per Hazardous & Other Wastes (Management & Transboundary Movement) Rules, 2016.

Type of waste	Qty. per Annum		Management
	Existing	Total after expansion	
ETP Sludge	6 MT	60 MT	Collection, Storage, Transportation and Disposal by land filling at common TSDF
MEE Salt	Nil	440 MT	
Spent Hyflow	Nil	5 MT	
Inorganic Process Waste (Sodium Sulphate / Sodium Bicarbonate)	Nil	310 MT	Collection, Storage, Transportation and Disposal by Selling to GPCB authorized end-users <b>OR</b> Disposal by land filling at common TSDF
Spent Carbon	3 MT	8 MT	Collection, Storage, Transportation and Disposal by incineration at CHWIF <b>OR</b> Disposal by co-processing at Cement Manufacturers
Spent / Mix Solvent	900MT	19,000 MT	Collection, Storage, Transportation and sell to GPCB authorized end-users <b>OR</b> In-house recovery and re-use <b>OR</b> Disposal by co-processing <b>OR</b> Disposal by incineration at CHWIF
Distillation Residue	6 MT	90MT	Collection, Storage, Transportation and Disposal by Incineration at CHWIF <b>OR</b> Disposal by co-processing at Cement Manufacturers

Bleed Liquor from Scrubber	Nil	20 MT	Collection, Storage and Send to ETP for treatment
Discarded Containers/ Bags	12 MT 48,000 Nos.	17 MT 68,000 Nos.	Collection, Storage, Decontamination and Disposal by selling to scrap vendors
Spent Oil/ Used Oil	0.04 KL	0.60 KL	Collection, Storage, Transportation, sell to registered Reprocessor / MoEF approved recyclers <b>OR</b> Reused as Lubricant within premises

(xvii) Public hearing for the proposed project will be conducted by Gujarat Pollution Control Board on 24<sup>th</sup> July 2018. The main issues raised during the public hearing are related to employment opportunities and Social welfare activities.

(xviii) There is no litigation pending against the proposal.

(xix) The details of products and capacity are as under.

S. No.	Name of Products	*Capacity (TPM)			
		E1	E2	P	T
↪ <b>Intermediates (Existing)</b>					
E1	Crotonic Acid <b>OR</b> 1:3 Butandiol	50	19.68	(-19.68)	Nil
E2	Hexa Methyl Di Silazane (HMDS)	50	20	(-20)	Nil
E3	Floroquinolonic Acid (FQ Acid)	66	17	(-17)	Nil
E4	Sodium Methoxide Solution	75	75	200	275
E5	R(-) 3 Carboxymethyl-5-methyl hexanoic Acid	Nil	4	(-4)	Nil
E6	R(+/-) 3 Carboxymethyl-5-Methyl hexanoic Acid	Nil	4	(-4)	Nil
E7	R(+) - α – Methyl Benzylamine	Nil	0.5	(-0.5)	Nil
E8	Lacosamide (Stage III)	Nil	0.5	(-0.5)	Nil
E9	Chloroform	Nil	100	(-100)	Nil
↪ <b>General API (Proposed)</b>					
P1	Dabigatran Etxilate Mesylate	Nil	Nil	0.80	0.80
P2	Lurasidone HCl	Nil	Nil	0.10	0.10
P3	Lacosamide	Nil	Nil	0.50	0.50
P4	Bendamustine HCl	Nil	Nil	0.01	0.01
P5	Trazodone HCl	Nil	Nil	4.00	4.00
P6	Gemcitabine HCl	Nil	Nil	0.20	0.20
P7	Capecitabine	Nil	Nil	6.00	6.00
P8	Erlotinib HCl	Nil	Nil	0.10	0.10
P9	Imatinib Mesylate Alpha	Nil	Nil	0.50	0.50
P10	Nilotinib	Nil	Nil	0.15	0.15

S. No.	Name of Products	*Capacity (TPM)			
		E1	E2	P	T
P11	Dasatinib	Nil	Nil	0.05	0.05
P12	Pazopanib HCl	Nil	Nil	0.06	0.06
P13	Sorafenib	Nil	Nil	0.10	0.10
↳ Intermediates (Proposed)					
P14	N-BZ-Bis-Lactam	Nil	0.02	0.04	0.05
P15	N-BOC-Bis-Lactam	Nil		0.04	0.05
P16	5-(4-(4-(5-Cyano-1H-indol-3-yl)-butyl)-piperazin-1-yl) benzofuran-2-carboxamide	Nil	0.3	(-0.25)	0.05
P17	2-acetamido-2-phenethylpropane-1,3-diyl-diacetate	Nil	Nil	0.05	0.05
<b>Total Product Capacity</b>		<b>241</b>	<b>241</b>	<b>46.77</b>	<b>287.77</b>
*E1: As per Earlier CC&A &ToR application, E2: As per current CC&A after change in Product Mix, P: Proposed Change, T: Total after proposed expansion &ToR application					

1.3.12.2 During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for expansion of Active Pharmaceutical Ingredients (APIs) and intermediates manufacturing unit from 241 to 287.77 TPM by M/s Intas Pharmaceuticals Ltd in an area of 61,666 sqm at Survey No.44/B, village-Naldhari, Survey No.130, village Valia and Plot No.7/2 in Valia industrial estate, GIDC, Taluka Valia, District Bharuch (Gujarat).

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

The standard ToR for the project was granted on 10<sup>th</sup> February, 2018. Public hearing was conducted by the SPCB on 24<sup>th</sup> July, 2018.

Total water requirement is estimated to be 318 cum/day, which includes fresh water of 186 cum/day to be met from ground water. Application in this regard has been submitted to the statutory authority on 25<sup>th</sup> October, 2018.

Industrial effluent of 91.5 cum/day generated will be treated through Effluent Treatment Plant. Domestic effluent will be taken to STP for treatment. High COD effluent will be treated in solvent stripper, MEE and ATFD and treated water will be recycled in the process and for green belt development. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

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

The existing unit was reported to be established prior to inception of the EIA Notification, 1994/2006. Hence, no prior environmental clearance was required.

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.

**1.3.12.3** 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.*
- *National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21<sup>st</sup> July, 2010 and amended from time to time shall be followed.*
- *Coal shall not be used as fuel in the boiler, instead bio-fuel/briquettes/bagasse shall be preferred.*
- *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 186 cum/day to be met from ground water. Prior permission in this regard shall be obtained from the concerned regulatory authority.*
- *Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system.*
- *Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps.*
- *Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.*
- *The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.*
- *Fly ash should be stored separately as per CPCB guidelines so that it 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.*
- *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.1.3.13**

#### **Manufacturing of technical pesticides and its intermediates at plot No.19/1, GIDC Industrial Estate, Panoli, Bharuch (Gujarat) by M/s Krishi Rasayan Exports Pvt. Ltd - For Environmental Clearance**

#### **[IA/GJ/IND2/69917/2017, IA-J-11011/488/2017-IA-II(I)]**

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

(i) The proposal is for environment clearance to the project for setting up of pesticides and pesticide specific intermediates manufacturing unit of capacity 12930 MTPA at Plot No. 19/1, GIDC Industrial Estate, Panoli, tehsil Ankleshwar, District Bharuch (Gujarat) by M/s KrishiRasayan Exports Pvt. Ltd.

(ii) The ToR has been issued by Ministry vide letter No. IA-J-11011/488/2017-IA-II (I); dated 6/11/2017.

(iii) All Pesticides industry and pesticide specific intermediates (excluding formulations) units are listed at S.N. 5(b) of Schedule of Environmental Impact Assessment (EIA) Notification, 2006 under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

(iv) Proposed land area is 37242 m<sup>2</sup>. Industry will develop greenbelt in an area of 33% i.e. 12551 m<sup>2</sup>. The estimated project cost will be Rs.35 crores. Total capital cost earmarked

towards environmental pollution control measures will be Rs.3.5 crores and the Recurring cost (operation and maintenance) will be about Rs. 5.4crores per annum.

(v) Total employment including direct and indirect will be 120 persons. Industry proposes to allocate Rs.87.5Lakh of 2.5% of total project cost towards Corporate Social Responsibility.

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

(vii) Ambient air quality monitoring was carried out at 8 locations during January, 2018 to March, 2018 and submitted baseline data indicates that ranges of concentrations of PM<sub>10</sub> (52.8-80.2 µg/m<sup>3</sup>), PM<sub>2.5</sub> (27.8-48.9 µg/m<sup>3</sup>), SO<sub>2</sub> (12.4-20.2 µg/m<sup>3</sup>) and NO<sub>x</sub> (16.0-27.2 µg/m<sup>3</sup>) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs from the proposed project would be 4.067 µg/m<sup>3</sup>, 2.345 µg/m<sup>3</sup>, 1.416 µg/m<sup>3</sup> and 1.285 µg/m<sup>3</sup> with respect to PM, SO<sub>2</sub>, NO<sub>x</sub> & HCl. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(viii) Total water requirement will be 326 cum/day of which fresh water requirement of 172 cum/day will be met from GIDC water supply.

(ix) The wastewater generated will be separated into two streams for treatment. Process and lab wastewater (97 cum/day) will be treated in ETP'1-MEE setup. Wastewater from utilities (cooling & boiler), washing and scrubber (71 cum/day) will be treated in ETP'2-RO-MEE setup. MEE Condensate (113 cum/day) and RO permeate (41 cum/day) will be reused. Domestic wastewater (8 cum/day) will be discharged into soak pit. The plant will be based on Zero Liquid discharge system.

(x) Power requirement will be 750 kVA proposed to be met from DGVCL. One D G of 500 kVA capacity will be installed and used as standby during power failure. Stack (height 11 meters) will be provided as per CPCB norms to the proposed DG sets.

(xi) One coal fired boiler of 4 TPH capacity and one Thermic Fluid Heater of 10 lakhs kcal/hr capacity will be installed and Cyclone separator followed by bag filter (with stack height - 30 m for boiler & 21 m for TFH) will be provided to control the particulate emissions within the statutory limit of 150 mg/Nm<sup>3</sup>.

(xii) Venturi water scrubber followed by alkali scrubber will be provided to process vent of 2,4 D Acid and Water Scrubber followed by alkali scrubber will be provided to the rest of the process vents.

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

S. No.	Type of waste	Quantity (MTPM)	Method of Disposal
1.	ETP Sludge & MEE salt	35 & 125	Collection, Storage, Transportation & Disposal at TSDF site approved by GPCB.
2.	Distillation Residue	40	Collection, Storage, transportation and send to cement industry for co-processing or incinerated at CHWIF approved by GPCB.
3.	Process Residue	50	Collection, Storage, Transportation & Disposal at TSDF site approved by GPCB.

	(Inorganic Salt)		
4.	Spent Catalyst	1.0	Collection, Storage and Send for regeneration to suppliers.
5.	Off specific products	As & when generated	Collection, Storage, transportation and send to cement industry for co-processing or incinerated at CHWIF approved by GPCB.
6.	Discarded containers/liners	Drum:800 Nos./month Liner:0.5 MT/month	Being used for packing of ETP sludge in case of excess it will be sold to approved recycler or traders.
7.	Used Lubricating Oil	1.0 KI/Year	Collection, Storage, Transportation & disposal by selling to Registered Recyclers.

(xiv) Public Hearing for the proposed project is exempted as the industry is located in notified industrial area at Panoli GIDC.

(xv) No Litigation is pending against the proposal.

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

Sr. No.	Name of product	Quantity (MT/Annum)	Quantity (MT/Month)
1	2-4 D Acid	2000	166.5
2	Azoxystrobin	250	20.75
3	Bispyribac Sodium	200	16.5
4	ClodinafopPropargyl	100	8.25
5	Carbendazim	1000	83
6	Captan	300	25
7	Diafenthuron	300	25
8	Difenconazole	300	25
9	Ethephon	500	41.5
10	Glyphosate	2000	166.5
11	Imizathapyr	100	8.25
12	Metribuzine	500	41.5
13	Metalaxyl	100	8.25
14	MPBD	1000	83
15	Met Sulfuron Methyl	30	2.5
16	Permethrin	200	16.5
17	Pendimethalin	500	41.5
18	Profenophos	500	41.5
19	Propiconazole	500	41.5
20	Sulfosulfuron	50	4
21	Tebuconazole	300	25
22	Tricyclazole	500	41.5
23	Thiomethoxam	400	33.25
24	Thiram	500	41.5
25	Thiophanate Methyl	500	41.5
26	Ziram	300	25
<b>TOTAL</b>		<b>12930</b>	<b>1074.25</b>

**Products - Bifenthrin, Chlorpyrifos, CMAC, Cypermethrin, Deltamethrin, Fipronil, and Lambda cyhalothrin (having LD50 less than 100 mg/kg or not available) are removed from the proposal.**

**1.3.13.2** During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for setting up of pesticides and pesticide specific intermediates manufacturing unit of capacity 12930 MTPA by M/s Krishi Rasayan Exports Pvt Ltd in an area of 37242 sqm at Plot No.19/1, GIDC Industrial Estate, Panoli, tehsil Ankleshwar, District Bharuch (Gujarat)

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 6<sup>th</sup> November, 2017. Public hearing is exempted as the project is located in the Industrial area as provided under the Ministry's OM dated 27<sup>th</sup> April, 2018.

Total water requirement is estimated to be 326 cum/day of which fresh water demand of 172 cum/day is to be met from GIDC water supply.

Total effluent generated from different industrial operations is estimated to be 168 cum/day, which will be taken to the effluent treatment plant (ETP) followed by MEE & RO for treatment. MEE Condensate (113 cum/day) and RO permeate (41 cum/day) will be reused. Domestic wastewater (8 cum/day) will sent to septic tank followed by soak pit. There will be no discharge of treated/untreated waste water from the unit, and thus conforming to Zero Liquid Discharge.

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

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

**1.3.13.3** *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.*
- *National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21<sup>st</sup> 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 172 cum/day is 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, 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:-*
  - (m) *Metering and control of quantities of active ingredients to minimize waste.*
  - (n) *Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.*
  - (o) *Use of automated filling to minimize spillage.*
  - (p) *Use of Close Feed system into batch reactors.*
  - (q) *Venting equipment through vapour recovery system.*
  - (r) *Use of high pressure hoses for equipment clearing to reduce wastewater generation.*
- *The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.*
- *As committed, funds allocation for the Corporate Environment Responsibility (CER) shall be 2.5% of the total project cost. Item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.*
- *Safety and visual reality training shall be provided to employees.*
- *For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.*

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

#### **Agenda No.1.3.14**

**Expansion of Sugar Plant (4500 TCD to 7500 TCD) & Cogeneration Power Plant (14 MW to 30 MW) and Establishment of Distillery (60 KLPD) & Installation of Incineration Boiler (3 MW) at Sy.No.411/1, 411/2, 413/1, 412 Saundatti Village, District Belgaum (Karnataka) by M/s Harsha Sugars Ltd - For Environmental Clearance**

**[IA/KA/IND2/64689/2017, IA-J-11011/236/2017-IA-II(I)]**

**1.3.14.1** The project proponent vide email dated 15<sup>th</sup> December, 2018 has informed that they are unable to attend the EAC meeting and requested to consider the proposal in next meeting.

*The proposal was, therefore, deferred.*

#### **Agenda No.1.3.15**

**Setting up of Molasses based Distillery of 45 KLD along with co-generation power plant of 1.4 MW at P.O. Rohana Mill, Block Charthawal, Tehsil & District Muzaffarnagar (UP) by M/s Indian Potash Limited (Distillery Unit) - For Environmental Clearance**

**[IA/UP/IND2/82774/2017, J-11011/310/2016 - IA II (I)]**

**1.3.15.1** 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 Based Distillery of 45 KLD (Rectified Spirit/Extra Neutral alcohol/Absolute Alcohol) at P.O. Rohana Mill, Block Charthawal, Tehsil Muzaffarnagar, District Muzaffarnagar (UP) by M/s Indian Potash Limited (Distillery Unit).

(ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 22<sup>nd</sup> meeting held during 17<sup>th</sup> to 18<sup>th</sup> April 2016 and recommended Terms of References (ToRs) for the Project. The ToR has been issued by Ministry vide letter No.J-11011/310/2016-1A.II dated 15<sup>th</sup> June 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) Industry -2.

(iv) The total land area is 8.1 acres. Green belt will be developed in an area of 36% i.e., 11,845 sqm out of total area of the project.

(v) The estimated project cost is Rs. 8200 Lakhs. Total capital cost earmarked towards environmental pollution control measures is Rs.2500 Lakhs and the recurring cost (operation and maintenance) will be about Rs 80 Lakhs per annum.

(vi) Total Employment will be 80 persons as direct 50 & 30 persons as indirect during operation phase. Unit proposes to allocate 2% of the annual total profit towards Corporate Social Responsibility.

(vii) There are no any National parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc within 10 km distance from the project site. River Kali is flowing at a distance of 2.5 km in East direction and Rohana Minor canal is at a distance of 2 km in West Direction.

(viii) Ambient air quality monitoring was carried out at 8 locations during 1<sup>st</sup> December 2016 to 28<sup>th</sup> February 2017 and the baseline data indicates the ranges of concentrations as PM<sub>10</sub> (45.3-82.8 µg/m<sup>3</sup>), PM<sub>2.5</sub> (26.0-46.8µg/m<sup>3</sup>), SO<sub>2</sub> (6.8-15.6.µg/m<sup>3</sup>) and NO<sub>2</sub> (9.2-20.6 µg/m<sup>3</sup>). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 83.01 µg/m<sup>3</sup>, 13.33 µg/m<sup>3</sup> and 20.78µg/m<sup>3</sup> with respect to PM<sub>10</sub>, SO<sub>x</sub> and NO<sub>x</sub>. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(ix) Total water requirement is 756 cum/day (first run) of which fresh water requirement of 270 cum/day will be met from Rohana Minor Canal.

(x) Spent wash of 355 KLPD will be treated through Concentration in MEE then concentrate from MEE will be incinerated in Slop fired boiler. Other Effluent of 532 KLPD quantity will be treated through CPU. The plant will be based on Zero Liquid discharge system.

(xi) Power requirement will be 1.0 MW which shall be met from own Co-Generation plant. Unit will install one slop fired boiler of 18 TPH capacity along with bag filter and stack height of 55 meter to control of particulate emissions within the statutory limit.

(xii) CO<sub>2</sub> Scrubber will installed to recover from the process and will be sold to the Vendor (Beverage Industry).

(xiii) Ash (15 TPD) will be mixed with fermenter sludge and utilized as manure. Used oil and Grease will be sold to authorised vendor for end disposal.

(xiv) Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 25<sup>th</sup> September 2018. The main issues raised during the public hearing are related to, Employment Generation, Health Issues, Waste Water and water sources and Odour Issues etc.

(xv) No any Litigation is pending against the proposal.

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

S. No	Product	Quantity
1.	Rectified Spirit / Extra Neutral alcohol / Ethanol	45 KLD
2.	Co-Generation	1.4MW

	Power	
No. of working days:365 days/annum		

**1.3.15.2** During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for setting up Molasses Based Distillery of 45 KLD (Rectified Spirit/Extra Neutral alcohol/Absolute Alcohol) by M/s Indian Potash Limited (Distillery Unit) in an area of 8.1 acres located at P.O. Rohana Mill, Block Charthawal, Tehsil & District Muzaffarnagar (U P)

The project/activity is covered under category A of item 5 (g) 'Molasses based distilleries' 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 15<sup>th</sup> June 2017. Public hearing was conducted by the Maharashtra State Pollution Control Board on 25<sup>th</sup> September 2018.

Total water requirement is estimated to be 756 cum/day (first run), including fresh water requirement of 270 cum/day proposed to be met from Rohana Minor Canal. Permission for water withdrawal of 450 cum/day has been obtained from O/o the Chief Engineer (Ganga), Irrigation Department, Government of UP vide letter dated 12<sup>th</sup> December, 2018.

Entire spent wash of 225 KLPD will be treated through multi effect evaporators (MEE) followed by incineration in boiler. Other Effluent of 318 KLPD quantity will be treated through CPU. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

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

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

PESO has given approval vide letter dated 12<sup>th</sup> December, 2018 for the site and layout plan of storage (Petroleum storage Class A installation) to enable the mandatory licence in Form XV as per the Petroleum Rules, 2002.

**1.3.15.3** *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 270 cum/day proposed to be met from Rohana Minor Canal. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard.*
- *The spent wash shall be taken to multi effect evaporators (MEE) and the concentrated spent wash shall be incinerated in the boiler along with bagasse.*
- *The distillery shall be permitted to operate throughout the year as proposed.*
- *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.*
- *CO<sub>2</sub> generated from the process shall be bottled/made solid ice 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.1.3.16**

**Expansion of sugar factory from 5000 TCD to 10000 TCD located at Ganganagar, Ichalkaranji, Taluka Hathkanangale, District Kolhapur (Karnataka) by M/s Desh Bhakt Ratnappa Kumbhar Panchganga Sahakari Sakhar Karkhana Ltd - For Environmental Clearance**

**[IA/MH/IND2/84951/2000, J-11011/116/2017-IA II (I)]**

**1.3.16.1** The project proponent and the accredited Consultant M/s Equinox Environments (I) 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 expansion of sugar factory from 5000 TCD to 10000 TCD at Ganganagar, Ichalkaranji, Taluka Hatkanangale, District Kolhapur (Maharashtra) by D.B.R.K. Panchganga S.S.K. Ltd. (DBRKPSKL).

ii. Standard ToR has been issued by Ministry vide letter no. J-11011/116/2017-IA- II (I) dated 22nd February 2018.

iii. All sugar manufacturing unit are listed at S.N. 5 (j) of Schedule to the Environmental Impact Assessment (EIA) Notification, 2006 under category 'B'. However due to applicability of General Condition (interstate boundary is within 5 Km), the p and are appraised at Central Level by Expert Appraisal Committee (EAC).

iv. The existing Sugar manufacturing unit of 5000 TCD was setup long back in year 1978. Since then, MPCB is regularly granting renewal of Consent to Operate (CTO). This means existing 5000 TCD industry does not attract any requirement of EC under EIA notification of 2006.

v. Total plot area acquired by industry is 59.46 Ha. Existing built up area of industry is 21.22 Ha. Industry has already developed Green belt in an area 8.9 Ha. (15 % of total plot area). DBRKPSKL will develop an area of about 10.7 Ha. (18 % of total plot area). Total green belt will be 33 % of total plot area.

vi. The estimated cost for expansion of sugar factory is Rs.80.90 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs.454 Crores and the recurring cost (operation and maintenance) will be about Rs.12.9 Crores per annum.

vii. Total Employment is of 637 persons as direct as well as indirect under existing. Industry proposes to allocate Rs. 2Crores @ of 2.5 % towards Corporate Environmental Responsibility.

viii. There are no National Parks, Wild life Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 Km distance from the project site. River Panchganga is flowing at a distance of 4.8 Km.

ix. Ambient air quality monitoring was carried out at 8 locations during October 2017 – December 2017 and submitted baseline data indicates that ranges of concentrations of PM<sub>10</sub> (52.89 - 64.53 µg/m<sup>3</sup>), PM<sub>2.5</sub> (20.79 - 24.85 µg/m<sup>3</sup>), SO<sub>2</sub> (30.29 - 41.66 µg/m<sup>3</sup>) and NO<sub>2</sub> (38.42 -

55.65 $\mu\text{g}/\text{m}^3$ ) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the failure of existing APC equipment would be 8.77  $\mu\text{g}/\text{m}^3$ , 1.65  $\mu\text{g}/\text{m}^3$  and 0.1  $\mu\text{g}/\text{m}^3$  with respect to  $\text{PM}_{10}$ ,  $\text{PM}_{2.5}$  and  $\text{SO}_2$  respectively. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

x. Total water requirement for 10000 TCD after expansion will be 2280  $\text{M}^3/\text{Day}$  for industrial purpose and 50  $\text{M}^3/\text{Day}$  for domestic purpose. Out of 2330  $\text{M}^3/\text{Day}$  water requirement; 50  $\text{M}^3/\text{Day}$  will be fresh water taken from River Panchganga while 2280  $\text{M}^3/\text{Day}$  (98% recycle) will be Cane condensate water.

xi. Effluent of 890 cum/day will be treated in existing ETP which will be upgraded under expansion project.

xii. Power requirement after expansion will be 13 MW including 7 MW and same will be met from own co-gen power plant. Existing unit has 2 DG Sets of 11 KVA each capacity, no additional DG sets will be required under proposed expansion project.

xiii. Existing unit has 140 TPH bagasse fired boiler. Additionally no boiler will be installed. Electrostatic Precipitator (ESP) with stack height for controlling the particulate emission within the statutory limit of 115  $\text{mg}/\text{Nm}^3$  for the propose boiler.

xiv. There are no sources of process emissions from existing sugar and co-gen unit.

xv. Details of Solid waste/hazardous waste generation and its management are as under:-

S. No.	Solid Waste	Existing	After Expansion	Disposal
1	Boiler Ash	21.6 MT/D	21.6 MT/D	Farmers / sale to bricks manufacturers
2	ETP Sludge	2.5 MT/Yr.	3.5 MT/Yr.	Used for Plantation as Manure

S. No.	Hazardous Waste	Quantity			Disposal
		Existing	Expansion	Total	
1	Spent Oil	2.5 MT/Yr	2.5 MT/Yr	5 MT/Yr	Burnt in Boiler
2.	Residue Oil	2.5 MT/Yr	2.5 MT/Yr	5 MT/Yr	

xvi. Public Hearing for the proposed project was conducted by the Maharashtra Pollution Control Board on 4.09.2018. The main issues raised during the public hearing are related to (1) air pollution due to bagasse particles suspended from overhead conveyor belt, (2) Improper environmental management at distillery in project complex and (3) air pollution due to fly ash

xvii. Details of Certified compliance report submitted by RO, MoEF & CC.

xviii. EC compliance report in respect of 30 MW Co-gen plant of DBRKPSSKL was submitted. MoEFCC Certified report No. F. No.Ec – 786 /RON / 218 – NGP / 4134 was received on 20.08.2018.

xix. Status of Litigation pending against the proposal, if any : Yes

xx. Following are the list of existing and proposed products:

Industrial unit	Product& By-product	Quantity		
		Existing	Expansion	Total
<b>Sugar Factory</b>	<b>Capacity</b>	<b>(5000 TCD)</b>	<b>(5000 TCD)</b>	<b>(10,000 TCD)</b>
	Sugar (13%)*	650 MT/D	650 MT/D	1300 MT/D
	Molasses (4.5%)*	225 MT/D	225 MT/D	450 MT/D
	Bagasse (30%)*	1500 MT/D	1500 MT/D	3000 MT/D
	Press Mud (4%)*	200 MT/D	200 MT/D	400 MT/D
<b>Co-Gen</b>	Electricity	30 MW	--	30 MW

**1.3.16.2** During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for expansion of sugar factory from 5000 to 10000 TCD by M/s D.B.R.K. Panchganga S.S.K. Ltd. (DBRKPSKL) in an area of 59.46 Ha at Ganganagar, Ichalkaranji, Taluka Hatkanangale, District Kolhapur (Maharashtra).

The project/activity is covered under category B of item 5 (j) 'Sugar Industry' of the Schedule to the Environment Impact Assessment Notification, 2006 and requires appraisal at state level by the SEIAA/SEAC. However due to applicability of general condition (interstate boundary within 5 km), the proposal requires appraisal at Central level.

The ToR for the project was granted on 22<sup>nd</sup> February 2018. Public hearing was conducted by the Maharashtra State Pollution Control Board on 4<sup>th</sup> September, 2018.

Total water requirement after expansion will be 2330 cum/day including fresh water requirement of 50 cum/day proposed to be met from River Panchganga and remaining will be met from cane condensate water.

Effluent of 890 cum/day will be treated in existing ETP which will be upgraded under expansion project. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

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

Co-generation plant of 30 MW was earlier granted EC by SEIAA, Maharashtra vide letter dated 17<sup>th</sup> November, 2009. The monitoring report on compliance status of EC conditions has been forwarded by the Regional Office at Nagpur vide their letter dated 20<sup>th</sup> August, 2018. The said report contains the following observations:-

'As per the consent to operate granted by MPCB, PA carried out excess crushing over 5000 TCD without obtaining environmental clearance from Government of Maharashtra. Project proponent has been directed to submit Board resolution and bank guarantee to MPCB within 15 days of the issue of above consent to operate letter. The project proponent submitted affidavit vide dated 4<sup>th</sup> May, 2017 stating that excess crushing will not be carried out in future'.

Consent issued by MPCB vide dated 4<sup>th</sup> December, 2015 for 5000 TCD Sugar & 30 MW Co-generation unit.

It was informed that the MPCB, while considering the proposal for renewal of consent under the Air/Water Act for the present capacity of 5000 TCD, has imposed certain conditions as (i) Industry shall extend existing bank guarantee of Rs.25 lakhs submitted towards O&M of pollution control systems & (ii) Industry shall extend existing bank guarantee of Rs.25 lakhs submitted towards not to carry out excess crushing in future. It was further informed that complaint case R.C.C. No.132/2018 has been filed by the State Pollution Control Board in the court of CJMM, District Kolhapur.

**1.3.16.3** *The EAC, after deliberations and especially in view of observations of the Ministry's Regional Office regarding excess cane crushing (more than the consented capacity of 5000 TCD), resolved that the case involves violation of the EIA Notification, 2006 and needs consideration in pursuance of this Ministry's Notification dated 14<sup>th</sup> March, 2017. The proposal was, therefore, not taken forward.*

### **Agenda No.1.3.17**

**Setting up 45 KLPD Distillery at Satling Nagar, Ruddhewadi, Post Dudhani, Taluka Akkalkot, District Solapur (Maharashtra) by M/s Matoshri Laxmi Sugar and Cogeneration Industries Limited - For Environmental Clearance**

**[IA/MH/IND2/86873/2016, J-11011/308/2016 – IA II (I)]**

**1.3.17.1** The project proponent and the accredited Consultant M/s Equinox Environments (I) Pvt Ltd gave 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 45 KLPD molasses based distillery in an existing sugar factory by M/s Matoshri Laxmi Sugar and Cogeneration Industries Ltd (MLSCIL) located at Satling Nagar, Ruddhewadi, Post Dudhani, Taluka Akkalkot, District Solapur (Maharashtra).

(ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 13<sup>th</sup> EAC meeting held during 26-27 September 2016 and recommended Terms of Reference (ToRs) for the Project. The ToR has been issued by Ministry vide letter no. J-11011/308/2016-IA II (I) dated 21<sup>st</sup> November, 2016.

(iii) All molasses based distilleries are listed at S.N. 5(g) Schedule of Environmental Impact Assessment (EIA) Notification 2006, listed under category 'A'. Therefore are appraised at Central Level by Expert Appraisal Committee (EAC).

(iv) Total land area is 44.49 Ha. Proposed project will be set up in an area of 4.26 Ha. Industry will develop green belt in an area of 15.6 Ha i.e. 35% of total plot area.

(v) The estimated proposed project cost is Rs.68.50 Crore. Total capital cost earmarked towards environmental pollution control measures for proposed project shall be Rs. 8.85 Crores and the recurring cost (operation and maintenance) will be about Rs.1.75 Crores per annum.

(vi) Total employment will be 30 persons as direct and 40 persons indirect in proposed distillery unit. Industry proposes to allocate Rs.4.51 Crores towards Corporate Environment Responsibility.

(vii) It is reported that as per Form-I, no any National Parks, Wildlife Sanctuaries, Biospheres Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc lies within 10 Km distance. River Bori is flowing at a distance of 1.80 Km.

(viii) Ambient air quality monitoring was carried out at eight locations during October 2016-December 2016 and submitted baseline data indicates that ranges of concentrations of PM<sub>10</sub> (44.15 - 63.82 µg/m<sup>3</sup>), PM<sub>2.5</sub> (12.88 – 18.76 µg/m<sup>3</sup>), SO<sub>2</sub> (13.53 – 23.78 µg/m<sup>3</sup>) and NO<sub>x</sub> (18.97 - 29.31 µg/m<sup>3</sup>) respectively. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(ix) The total water requirement for 45 KLPD distillery project would be 439 M<sup>3</sup>/Day. During sugar cane crushing season (180 days) out of total water required 210 M<sup>3</sup>/Day would be sugar cane condensate & 224 M<sup>3</sup>/Day would be recycled water from proposed CPU, 4 M<sup>3</sup>/Day would be treated water from STP. It could be seen that during sugar cane crushing season 100% recycled water will be used for proposed distillery. Only 1 M<sup>3</sup>/Day fresh water will be fresh water required during crushing season. During non crushing season of sugar factory out of total water requirement only 215 M<sup>3</sup>/Day fresh water taken from river Sangolgi Bk.Bandhara will be required for distillery. Remaining 224 M<sup>3</sup>/Day (52% recycled) would be recycled water from proposed CPU and 4 M<sup>3</sup>/Day would be treated water from STP.

(x) Spentwash of 335 M<sup>3</sup>/Day will be primarily treated in Bio-methanation Plant followed by concentration in Multi Effect Evaporator (Five Effect). Concentrated spentwash of 200 M<sup>3</sup>/Day will be send for Bio-composting along with filler material MEE condensate (130 CMD), spent lees (90 CMD), cooling blow down (5) Lab & Washing (5 CMD) shall be treated in proposed distillery CPU and recycled back in process. This achieves Zero Liquid Discharge (ZLD).

(xi) Existing power requirement is 3.3 MW. Power requirement for proposed project will be 0.8 MW proposed to be met from own co-gen plant. Existing unit has 2 DG Sets of 160 KVA and 500 KVA capacities respectively. No additional DG set will be required for proposed expansion.

(xii) Existing sugar factory & co-gen plant has 50 TPH and 30 TPH bagasse fired boilers. A common stack of 65 M height along with Wet scrubber as Air Pollution Control (APC) Equipment is provided to the same for controlling the particulate emissions within the statutory limit of 115 mg/Nm<sup>3</sup>.

(xiii) This CO<sub>2</sub> contains ethanol, which will be recovered by collecting water from CO<sub>2</sub> scrubber into fermenters.

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

S. No.	Solid waste	Quantity	Storage	Disposal
1.	Yeast Sludge	10 KL/Day (300 KL/M)	Immediate utilization	To be consumed during spent wash composting process.
	CPU sludge	0.5 MT/M		
2.	Boiler Ash	30 MT/D (900 MT/M)	Silo of cap. 50 MT	Sold to brick manufacturers
3.	Biological sludge from ETP	15 MT/D (450 MT/M)	--	Used as fertilizer in own land

S. No.	Hazardous Waste	Quantity	Storage	Disposal
1	Spent Oil	5.0 Kg/Day	HDPE Drums	Reuse in own boiler as fuel

S. No.	Hazardous Waste	Quantity	Storage	Disposal
2	Spent Oil	1.8 MT/Yr	HDPE Drums	Would be burnt with bagasse in co-gen boiler.

(i) Public hearing for proposed project has been conducted by Maharashtra Pollution Control Board (MPCB) on 25.05.2018.

(ii) No any litigation is pending against the proposal.

(iii) Following are the list of proposed products:

Industrial Unit	Products	Quantity
Distillery (45 KLPD) (Proposed)	Rectified Spirit (RS)	1,350 KL/M (45 KLPD)
	Extra Neutral Alcohol (ENA)	1,350 KL/M (45 KLPD)
	Ethanol	1,350 KL/M (45 KLPD)
	Impure Spirit	75 KL/M (2.5 KLPD)
	<b>By-products</b>	
	Compost	39,110 MT/Season
	Biogas	28,800 M <sup>3</sup> /Day
	CO <sub>2</sub> Gas	32 MT/Day

**1.3.17.2** During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for setting up of 45 KLPD molasses based distillery by M/s Matoshri Laxmi Sugar and Cogeneration Industries Ltd (MLSCIL) in an area of 4.26 ha in the existing sugar plant premises of total area 44.96 ha located at Satling Nagar, Ruddhewadi, Post Dudhani, Taluka Akkalkot, District Solapur (Maharashtra).

The project/activity is covered under category A of item 5 (g) 'Molasses based distilleries' 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 21<sup>st</sup> November, 2016. Public hearing was conducted by the Maharashtra State Pollution Control Board on 25<sup>th</sup> May, 2018.

Total water requirement is estimated to be 439 cum/day including fresh water requirement of 1 cum/day (during crushing season) and 215 cum/day (during non crushing season) proposed to be met from river Sangolgi Bk. Bandhara.

Spent wash of 335 KLPD will be treated through bio-methanation followed by Multi Effect Evaporators (MEE) Concentrated spentwash of 200 M<sup>3</sup>/Day will be send for Bio-composting. Other Effluent of 532 KLPD quantity will be treated through CPU. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

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

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

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

- *Prior approval shall be obtained from the Petroleum & Explosives Safety Organization (PESO) for the site and layout plan submitted to this Ministry along with the proposal for EC. In case of any change therein post PESO approval, the proposal shall require fresh appraisal by the sectoral EAC.*
- *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 1 cum/day (during crushing season) and 215 cum/day (during non crushing season) proposed to be met from river Sangolgi Bk.Bandhara. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard.*
- *The spent wash shall be taken to multi effect evaporators (MEE) and the concentrated spent wash shall be incinerated in the boiler along with bagasse.*
- *The distillery shall be permitted to operate throughout the year as proposed.*
- *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.
- CO<sub>2</sub> generated from the process shall be bottled/made solid ice 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.1.3.18**

**Expansion of distillery from 200 KLPD to 350 KLPD (Molasses/Grain based) along with 10.5 MW (3 MW Existing &7.5 MW New) co-generation power plant at Bijnor (UP) by M/s Dhampur Sugar Mills - For reconsideration of Environmental Clearance**

**[IA/UP/IND2/71876/2017, IA-J-11011/586/2017-IA-II(I)]**

**1.3.18.1** The project proponent and their consultant M/s Enviro Infra Solutions 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 Expansion of Existing Distillery Plant from 200 KLPD to 350 KLPD (Molasses/Grain Based) along With 10.5 MW (3 MW Existing & 7.5 MW New) Co-Generation Power Plant at village Alhaipur, Tehsil - Dhampur and District Bijnor, Uttar Pradesh by M/s Dhampur Sugar Mills Limited, Dhampur, Chemical Division.

(ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 33<sup>rd</sup> meeting held during 22<sup>nd</sup> January 2018 and recommended Terms of Reference (ToRs) for the Project. The ToR has been issued by Ministry vide letter No.J-1011/586/2017-IA-II(I) dated 28<sup>th</sup> January, 2018.

(iii) All projects related to Distilleries 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) Ministry had issued EC earlier vide letter no. J-11011/605/2007-IA II(I) dated 17-09-2007 to the project Expansion of existing 100 KLPD plant to 200 KLPD Distillery unit at village

Alhaipur, Tehsil Dhampur, District Bijnor, Uttar Pradesh in favour of M/s M/S Dhampur Sugar Mills Limited, Dhampur, Chemical Division.

(v) Existing land area is 160000 sqm and no additional land will be used for proposed expansion. Industry has already developed greenbelt in an area of 33 % i.e., 52600 sqm out of total area of the project.

(vi) The estimated project cost is Rs.151.65 crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 70.13 crores and the Recurring cost (operation and maintenance) will be about Rs. 2.75 crores per annum.

(vii) Total Employment will be for 200 persons as direct & 100 persons indirectly after expansion. Industry proposes to allocate Rs. 83 Lakhs @ of 1 % towards Corporate Social Responsibility.

(viii) There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. River Khoh is flowing at a distance of 3.2 km in North direction.

(ix) Ambient air quality monitoring was carried out at 08 locations during 01-12-2017 to 28-02-2018 and the baseline data indicates the ranges of concentrations as: PM10 (92-62  $\mu\text{g}/\text{m}^3$ ), PM2.5 (44.2 – 27.5 $\mu\text{g}/\text{m}^3$ ), SO2 (12.85 – 8.0  $\mu\text{g}/\text{m}^3$ ) and NOX (19.2 – 7.2  $\mu\text{g}/\text{m}^3$ ). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 2.5  $\mu\text{g}/\text{m}^3$  and 9  $\mu\text{g}/\text{m}^3$  with respect to PM, Sox . The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(x) Total water requirement is 6050 m<sup>3</sup>/day of which fresh water requirement of 3275 m<sup>3</sup>/day will be met from ground water.

(xi) Effluent of 2775 KLD quantity will be treated through ETP and slope boiler. The plant will be based on Zero Liquid discharge system.

(xii) Power requirement after expansion will be 10500 KVA including existing 3000 KVA and will be met from captive power plant.

(xiii) Existing unit has 40 TPH incinerator fired boiler. Additionally 75 TPH incinerator fired boiler will be installed. Bag filter with a stack of height of 84 m will be installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm<sup>3</sup> for the proposed boilers.

(xiv) Details of Process emissions generation and its management is given below in table:

S. No.	Item	Capacity	Process	Emission
1	Air pollution	75 TPH	Boiler	50 mg/Nm <sup>3</sup>

(xv) Details of Solid waste/ Hazardous waste generation and its management is given below in table

Solid Waste Generation & Management:					
S. No.	Item	Quantity Per	Distance from Site	Mode of Transport	Mode of Disposal

		<b>Annum</b>			
1	Solid waste	940 MT/Day	At site	Road	Yeast sludge will be used in incinerator boiler & Boiler furnace ash will be used as manure/fly ash brick.
2	Hazardous waste	3.5 KL/year	At site	Road	It will be stored on site and sold to authorized recyclers

(xvi) Public hearing for the proposed project has been conducted by the State Pollution Control Board on 28-05-2018. The main issues raised during the public hearing are related to the negative impact on farmers and people of project area after the expansion of capacity of Distillery plant, pollution from effluents, emission of fly ash, adverse/ unfavourable effect on labour and staff etc.

(xvii). Details of Certified compliance report submitted by RO, MoEF&CC.

<b>Details of certified report on compliance of earlier environmental clearance conditions</b>		
(i)	Details of Regional Office of MoEFCC / Zonal Office of CPCB / SPCB / UTPCC from which certified report on compliance of earlier environmental clearance conditions	MoEFCC, Regional Office, Kendriya Bhawan, Fifth Floor, Sector-H ,Aliganj, Lucknow.
(ii)	Letter No	VII/ENV/UP/Ind-34/106/1997
(iii)	Status of Compliance	Done
(iv)	Certified report on compliance of earlier environmental clearance conditions (Including Monitoring Report) ( <i>Upload pdf only</i> )	Yes
(v)	Date of site visit	June, 2018

(xvii) No Litigation Pending against the proposal

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

<b>S. No</b>	<b>Product</b>	<b>Existing</b>	<b>Proposed</b>	<b>Total</b>
1	Distillery Plant	200 KLD	150 KLD	350 KLD
2	Power Plant	3 MW	7.5 MW	10.5 MW

**1.3.18.2** The proposal was last considered by the EAC in its meeting held on 29-31 October, 2018, wherein the EAC desired for inputs and clarifications in respect of the following:

- Approval by PESO for the site and layout plan for Ethanol storage facilities from safety considerations.
- Non-compliance of the conditions stipulated in the EC dated 17<sup>th</sup> September, 2007 in respect of number of operating days for the distillery.

- Action Taken Report submitted to the Regional Office on their observations contained in their monitoring report dated 3<sup>rd</sup> July, 2018.
- Comparative statement of environmental concerns/impacts including water balance and spent wash treatment mechanism in different scenario i.e. utilizing different proportions of molasses and/or non-molasses.

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

<b>S. No.</b>	<b>Clarifications/inputs sought by the EAC</b>	<b>Reply submitted by the project proponent</b>
1	Approval by PESO for the site and layout plan for Ethanol storage facilities from safety considerations.	The project proponent has submitted the copy of PESO licence for a storage capacity of 4840 KL.
2	Non-compliance of the conditions stipulated in the EC dated	The project proponent has submitted that after installation of Incinerator/ Slop Boiler the UP Pollution Control Board granted us permission to operate in rainy season as well. However the Distillery was operated only for 280 days in the previous year. A copy of the Certificate issued by Excise Department is enclosed. Project proponent has also submitted the action taken report to the Regional Director (Central Region), MoEF & CC Lucknow. A copy of the ATR is enclosed.
3	Action Taken Report submitted to the Regional Office on their observations contained in their monitoring report dated 3 <sup>rd</sup> July, 2018.	Action Taken Report submitted to the Regional Director (Central Region), MoEF & CC Lucknow.
4	Comparative statement of Environmental concerns/impacts including water balance and spent wash treatment mechanism in different scenario i.e. utilizing different proportions of molasses and/or non-molasses.	The project proponent has submitted comparative statement for molasses/molasses plus grain based proposed operation.

**1.3.18.3** During deliberations, the EAC noted the following:

The proposal is for environmental clearance to the project for expansion of Molasses/Grain based Distillery from 200 KLPD to 350 KLPD and Co-Generation Power Plant from 3 MW to 10.5 MW by M/s Dhampur Sugar Mills Limited in a total area of 160000 sqm located at Village Alhaipur, Tehsil Dhampur, District Bijnor (UP).

The project/activity is covered under category A of item 5 (g) 'Distilleries' 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 28<sup>th</sup> January, 2018. Public hearing was conducted by the SPCB on 28<sup>th</sup> May, 2018.

Total water requirement is estimated to be 5175 cum/day, including fresh water requirement of 2275 cum/day proposed to be met from ground water. Permission for ground water withdrawal of 2400 cum/day has been obtained from the CGWA vide letter dated 8<sup>th</sup> April, 2016 and request for additional 875 KLD has been submitted vide letter dated 20<sup>th</sup> August, 2018.

Effluent of 2775 KLD will be treated through MEE followed by incineration in slop fired boiler. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

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

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

Earlier, the Ministry had granted EC vide letter dated 17<sup>th</sup> September, 2007 to the project for expansion of existing 100 KLPD plant to 200 KLPD Distillery unit at Village Alhaipur, Tehsil Dhampur, District Bijnor, Uttar Pradesh in favour of M/s Dhampur Sugar Mills Limited, Dhampur, Chemical Division. The monitoring report on compliance status of EC conditions (site visit June, 2018) has been forwarded by the Regional Office at Lucknow vide their letter dated 3<sup>rd</sup> July, 2018. The same reflects non-compliance of EC conditions, in respect of number of operating days, spent wash treatment during monsoon season, submission of AAQ, ground water quality, noise quality etc data.

As desired by the Committee, the project proponent has submitted action taken report in respect of non complied points vide letter dated 12<sup>th</sup> November, 2018 to the Ministry's Regional Office at Lucknow. The Regional office vide letter dated 3<sup>rd</sup> December, 2018 has clarified that distillery working days is to be read as 280 days instead of 270 days. The action taken report dated 12<sup>th</sup> November, 2018, read with the fresh observations/comments of the Regional Office, was found to be satisfactory.

PESO has given approval vide letter dated 6<sup>th</sup> October, 2016 for the site and layout plan of storage (Petroleum storage Class A installation) to enable the mandatory licence in Form XV as per the Petroleum Rules, 2002.

Consent to Operate for the existing capacity has been obtained from the State PCB vide letter dated 27<sup>th</sup> December, 2017, which is valid up to 31<sup>st</sup> December, 2019.

**1.3.18.4** *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.*
- *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 2275 cum/day proposed to be met from ground water. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard.*
- *The spent wash shall be taken to multi effect evaporators (MEE) and the concentrated spent wash shall be incinerated in the boiler along with bagasse.*
- *The distillery shall be permitted to operate throughout the year as proposed.*
- *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:-*
  - (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 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.*
- *CO<sub>2</sub> generated from the process shall be bottled/made solid ice 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.1.3.19**

#### **Expansion for development and production of Uber-2 well and Group Gathering Station by M/s Oil and Natural Gas Corporation at Jambusar, District Bharuch (Gujarat) - For Environmental Clearance**

**[IA-J-11011/227/2017-IA-II(I), Proposal No.IA/GJ/IND2/64683/2017]**

**1.3.19.1** The project proponent made a detailed presentation on salient features of the project and informed that:

(i) The proposal is for environmental clearance to the project Expansion for development and production of Uber-2 well and Group Gathering Station, Jambusar (Gujarat) by M/s Oil and Natural Gas Corporation (ONGC).

(ii) The standard ToR has been issued by Ministry vide letter No.IA-J-11011/227/2017-IA-II(I) dated 22<sup>nd</sup> March, 2018.

(iii) All Offshore and onshore oil and gas exploration, development & production are listed at S.No.1(b) 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-11011/390/2007-IA.II (I); dated 14<sup>th</sup> November 2018 to the existing project Exploratory drilling in CB-ONN-2004/3 (NELP – VI) in Gujarat in favour of M/s. ONGC Ltd..

(v) This project involves Conversion of Exploratory Well UBER-2 to Development Well for taking production from the well and no new drilling activity is involved. Hence no additional land will be used.

(vi) The estimated project cost is Rs.29.5 Crores including EMP investment. Total capital cost earmarked towards environmental pollution control measures is Rs. 0.02 Crores and the recurring cost (operation and maintenance) will be about Rs.0.02 Crores.

(vii) Total Employment will be 15 persons as direct & indirect for proposed project. Industry proposes to allocate Rs. 0.9 Crores towards Corporate Environmental Responsibility (CER).

(viii) The Environmental sensitive area as follows:

<b>Particulars</b>	<b>Details</b>
Nearest river	Mahi River
Protected areas as per Wildlife Protection Act, 1972 (Tiger reserve, Elephant reserve, Biospheres, National parks, Wildlife sanctuaries, community reserves and conservation reserves)	No eco-sensitive area lies within 10 km distance from project site.
Reserved / Protected Forests	No eco-sensitive area lies within 10 km distance from project site.

(ix) Ambient air quality monitoring was carried out at 08 locations during March to May 2018.

<b>Pollutant</b>	<b>Baseline Concentration (<math>\mu\text{g}/\text{m}^3</math>) Study Period</b>	<b>Maximum AAQ concentration (<math>\mu\text{g}/\text{m}^3</math>) Study period</b>	<b>Incremental concentration (<math>\mu\text{g}/\text{m}^3</math>) due to drilling</b>	<b>Resultant concentration (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Limits as per NAAQS</b>
PM <sub>10</sub>	37-78	78	1.5	79.5	100
SO <sub>2</sub>	4-10.6	10.6	0.97	11.57	80
NO <sub>2</sub>	9-27.6	27.6	46.9	73.5	80

(x) Since no fresh drilling activity is involved, no water requirement is envisaged.

(xi) Uber field development envisages production from one well (Uber-2) only. Peak production expected from the field is 40,000 m<sup>3</sup>/d of gas and 21 m<sup>3</sup>/d of condensate.

(xii) Public Hearing for the proposed project has been conducted by the Gujarat State Pollution Control Board on 18<sup>th</sup> August 2018 at Sarod village, Jambusar Taluka, District Bharuch (Gujarat). The main issues raised during the public hearing are related to CSR activities such as construction of Panchayat building and other infrastructure development.

(xiii) No litigation is pending against the proposal.

**1.3.19.2** During deliberations, the EAC noted the following: -

The proposal is for environmental clearance to the project for development and production of oil/gas from Uber-2 well at Jambusar (Gujarat) by M/s Oil and Natural Gas Corporation (ONGC) Ltd. The project involves conversion of Uber-2 exploratory well into development/production well and installation of one Group Gathering Station at site.

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

The ToR for the project was granted on 22<sup>nd</sup> March 2018 and public hearing was conducted by Gujarat State Pollution Control Board at Bharuch district on 18<sup>th</sup> August 2018.

Project proponent has confirmed that as no fresh drilling activity is involved, no water will be required for the proposed project.



The project proponent has confirmed the expenditure towards CER @ 0.5% of the total project cost.

The EIA/EMP report prepared by the project proponent themselves, 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.

**1.3.19.3** *The EAC, after deliberations, recommended the project for grant of environmental clearance, subject to validation of the data contained in the EIA/EMP report by a third party (NABET accredited EIA Consultant) and further 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 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 16<sup>th</sup> November, 2009 for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, CH<sub>4</sub>, 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 CO<sub>2</sub> 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.*
- *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 30<sup>th</sup> 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 H<sub>2</sub>S release including all necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal H<sub>2</sub>S 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 0.5% 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.*

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

<b>S. No.</b>	<b>Name and Address</b>	<b>Designation</b>
1.	Dr. J. P. Gupta	Chairman
2.	Dr Ajay Gairola	Member
3.	Dr. Y.V. Rami Reddy	Member
4.	Dr Tudi Indrasen Reddy	Member
5.	Shri Narender Surana	Member
6.	Dr J S Sharma	Member
7.	Shri S C Mann	Member
8.	Shri Ashok Agarwal	Member
9.	Dr T K Joshi	Member
10.	Shri S.K. Srivastava	Member Secretary

\*\*\*\*\*