GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(IA DIVISION-INDUSTRY-3 SECTOR)
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Dated: 19.01.2022

MINUTES OF THE 24th EXPERT APPRAISAL COMMITTEE (INDUSTRY-3 SECTOR) MEETING HELD ON JANUARY 12-13, 2022

Venue: **Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-110003 through Video Conferencing (VC)**

Time: 10:30 AM onwards

DAY-1 : JANUARY 12, 2022 [WEDNESDAY]

(i) Opening Remarks by the Chairman, EAC

Prof. (Dr.) A.B. Pandit, Chairman EAC welcomed the Committee members and opened the EAC meeting for further deliberations.

Prof. Pandit also appreciated the efforts of the Ministry's Team (Industry 3 Sector) for preparation and uploading the agenda of the EAC meetings and draft record of discussion very scientifically, systematically and timely on Parivesh Portal.

(ii) Details of Proposals and Agenda by the Member Secretary

Dr. R. B. Lal, Scientist 'E' & Member Secretary, EAC appraised to the Committee about the details of Agenda items to be discussed during this EAC meeting.

(iii) Confirmation of the Minutes of the 23rd Meeting of the EAC (Industry-3 Sector) held during December 29, 2021 at MoEFCC through VC.

The EAC, having taken note that final minutes were issued after incorporating comments offered by the EAC (Industry-3 Sector) members on the minutes of its **23rd Meeting of the EAC (Industry-3 Sector) held during December 29, 2021** conducted through Video Conferencing (VC), and as such no request has been received for modifications/factual correction, in the minutes of the project/activities, **confirmed the same.**

After welcoming the Committee Members, discussion on each of the agenda items was taken up ad-seriatim.

Details of the proposals considered during the meeting **conducted through Video Conferencing (VC)**, deliberations made and the recommendations of the Committee are explained in the respective agenda items as under: -

Consideration of Environmental Clearance Proposals

Agenda No. 24.1

Setting up of Pesticides Manufacturing Unit with proposed capacity of 3500 MTPA (excluding formulation), located at 529/2 3-15, 530/2 5-15, 531/1 0-10, Village- Hassanpur Tehsil- Rajpura, District- Patiala, Punjab by M/s. Safe Agrochemicals LLP – Consideration of Environmental Clearance-regarding. [Proposal No. IA/PB/IND3/214382/2021; File No. IA-J-11011/239/2021-IA-II(I)]

Project Proponent and the accredited Consultant M/s. EQMS India Pvt. Ltd. having accreditation number **NABET/EIA/1922/RA0197 valid till 23.11.2022** made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project for Setting up of Pesticides Manufacturing Unit with proposed capacity of 3500 MTPA (excluding formulation), located at 529/2 3-15, 530/2 5-15, 531/1 0-10, Village- Hassanpur Tehsil- Rajpura, District- Patiala, Punjab by M/s. Safe Agrochemicals LLP.

The details of products and capacity as under:

S. No.	Name of Product	Type	Proposed capacity (MT/Annum)	CAS No.
A. INSECTICIDE GROUP				
1	Lambda Cyhalothrin	SOLID	**1100**	91465-08-6
2	Bifenthrin	SOLID		82657-04-3
3	Profenofos	LIQUID		41198-08-7
4	Thiamenthoxam	SOLID		153719-23-4
5	Imidacloprid	SOLID		138261-41-3
6	Diafenthiuron	SOLID		80060-09-9
7	Chlorpyrifos	SOLID		2921-88-2
8	Dinotefuran	SOLID		165252-70-0
9	Pymetrozine	SOLID		123312-89-0
10	Pyproxifen	SOLID		95737-68-1
11	Acetamiprid	SOLID		135410-20-7
12	Chlorantraniliprole	SOLID		500008-45-7
13	Flubendiamide	SOLID		272451-65-7
14	Fipronil	SOLID		120068-37-3
B. FUNGICIDE GROUP				

15	Pyraclostrobin	SOLID	**300**	175013-18-0
16	Azoxystrobin	SOLID		131860-33-8
17	Tebuconazole	SOLID		107534-96-3
18	Difenoconozole	SOLID		119446-68-3
19	Metalaxyl	SOLID		57837-19-1
C. HERBICIDE GROUP				
20	Penoxsulam	SOLID	**800**	219714-96-2
21	Glyphosate	SOLID		1071-83-6
22	Pretilachlor	LIQUID		51218-49-6
23	Clodinofop Propargyl	SOLID		105512-06-9
24	Quizalofop Ethyl	SOLID		100646-51-3
25	Metribuzine	SOLID		21087-64-9
26	Cloquintocet Mexyl	SOLID		99607-70-2
D. ADVANCED PESTICIDE SPECIFIC INTERMEDIATES				
27	1,2,4 Triazole	SOLID	**1000**	288-88-0
28	2- Chloro 5- Chloromethyl Thiazole (CCMT)	LIQUID		105827-91-6
29	1,2,4 Triazinone	SOLID		33509-43-2
30	Meta Phenoxy Benzaldehyde (MPBD)	LIQUID		39515-51-0
31	Phosphonomethyliminodiacetic Acid (PMIDA)	SOLID		5994-61-6
32	2,2—Dimethylcyclo propanecarboxylic acid (Lambda cyhalothric acid)	SOLID		68127-59-3
E. Research and Development Based Products			**300**	**--**
		TOTAL	**3500**	**--**
F. Pesticide Formulations Not requiring EC			**5000**	--

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

The Standard ToR has been issued by Ministry vide letter No IA-J-11011/239/2021-IA-II(I); dated 15th June, 2021. Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 12th October 2021 which was presided over by the District Additional Deputy Commissioner (UD), Patiala. The main issues raised during the public hearing are inter-alia w.r.t. measures to be taken by industry for replenishment of groundwater, qualification of the employment, concern related to pollution of other industry in nearby, use of Surface water instead of ground water, to provide Fire Brigade at site, problem of parking of trucks along the roadside. The Committee deliberated the action plan and found in order.

PP reported that the total land area of the project site is 8417.46 m^2 Industry will develop greenbelt in an area of 33.28 % i.e., 2801.33 m^2 out of total area of the project. The estimated

project cost is Rs. 8.95 crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 180 Lacs and the Recurring cost (operation and maintenance) will be about Rs. 65 Lacs per annum. Total Employment will be 115 persons during operation phase. Industry proposes to allocate Rs. 14.0 Lakhs towards CER.

Project proponent reported that there are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Ghaggar River is flowing at a distance 5.10 km, SE in direction. It was also informed that no litigation is pending against the project.

The Ambient air quality monitoring was carried out at 8 locations during December 2020 - February 2021 to and the baseline data indicates the ranges of concentrations as: PM_{10} (42-87 µg/m^3), $PM_{2.5}$ (18-48 µg/m^3), SO_2 (5.6-16.2 µg/m^3) and NO_2 (7.5 -24.5 µg/m^3). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would increase by 0.612 µg/m^3, 0.489 µg/m3, 1.25 µg/m^3, 2.56 µg/m^3, 0.0058 µg/m^3, 0.086 µg/m^3 and 0.00579 µg/m^3 with respect to PM10, $PM_{2.5}$, NOx, Sox, HBr, HCl and Cl_2. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total water requirement is 110 m3/day of which freshwater requirement of 79 m^3/day will be met from borewell (ground water). Effluent of 38 KLD (Industrial Effluent- 35 KLD; Domestic Sewage- 3 KLD) quantity will be treated through ETP (10 KLD), Vacuum Distillation (35 KLD) & STP (10 KLD). The plant will be based on Zero Liquid discharge system.

The power requirement of the plant will be 1000 kVA which will be met through Punjab State Power Corporation Limited (PSPCL). DG sets of capacity 1x380 kVA and 1x500 kVA (Stack-25 m) are proposed as power backup. 2 nos. of Stream boiler (2 TPH & 3 TPH) will be installed. Bag filter will cyclone with a stack of height of 32m will be installed for controlling the particulate emissions within the statutory limit of 800 mg/Nm3 for the proposed boilers.

Details of process emissions generation and its management are given below:

S. No.	Source	APCM	Stack (m)	Expected Pollutants	Maximum Emission (mg/Nm^3)
1	Process Reactor Vents	Two stage water scrubbers	32	HCl	HCl < 20
2	Process Reactor Vents	Two stage water scrubbers	32	HBr	HBr < 5
3	Process Reactor Vents	Two stage Alkali Scrubber (1st Stage- Water & 2nd Stage- Alkali)	32	HCl & SO_2	HCl < 20
4	Process Reactor Vents	Two stage Alkali Scrubber (1st Stage- Water &	32	HCl & Cl_2	HCl < 20 Cl_2 < 5

		2nd Stage-Alkali)			

Details of solid waste/ hazardous waste generation and its management is given below:

S. No	Type of waste	Category (As per Schedule I & II, of HW Rules, 2016)	Quantity (Per Annum)	Mode of Treatment & Disposal Method
Hazardous Waste				
1	Chemical Sludge from wastewater Treatment (ETP sludge + Waste left after Evaporation)	35.3	200 MT	Collection, Storage, Transportation, and disposal at Nearest common TSDF site
2	Concentration & evaporation Residue.	37.3	120 MT	Collection, Storage, Transportation, and disposal at Nearest common TSDF site
3	Spent Solvents	5.1	60 MT	Solvent Recovery System
4	Discarded Containers/barrel/liners/contaminated with wastes/chemicals	33.1	5000 Nos	Authorised Vendors
5	Used/spent oil	5.1	0.5MT	Authorised Vendors
7	Carton/liners contaminated with hazardous chemicals & waste	33.1	2500 Nos	Authorised Vendors
Non-Hazardous/Industrial				
8	Ash from Boilers	-	50 MT	Brick Manufacturers
9	Empty barrels (used for non-hazardous material)	-	6000 Nos	Authorised Recyclers
10	Scrap metals	-	18MT	Authorised Recyclers

Deliberations in the EAC:

The EAC, constituted under the provision of the EIA Notification, 2006 comprising Experts Members/domain experts in various fields, examined the proposal submitted by the Project Proponent in the desired format along with EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

The EAC noted that the Project Proponent has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

The Committee noted that the EIA/EMP reports are in order and compliance of the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components. The Committee deliberated on the proposed mitigation measure towards Air, Water, Noise and Soil pollutions. The Committee also suggested that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices. The Committee also deliberated on the pesticide usage and the effect of pesticide on Crops and pests. The Committee also deliberated on the water balance data and found it satisfactory. The Committee deliberated on the action plan and budget allocation for green belt development and noted that as committed by the PP the green belt development shall be completed within one year.

The Committee noted that the Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 12th October 2021 as per the provisions of the EIA Notification, 2006. The main issues raised during the public hearing were inter-alia w.r.t. measures to be taken by industry for replenishment of groundwater, qualification of the employment, concerns related to pollution of other industry in nearby, use of Surface water instead of ground water, to provide Fire Brigade at site, problem of parking of trucks along the roadside. The Committee deliberated the action plan prepared by the PP and found it in order.

The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC found the proposal in order and recommended for the grant of environmental clearance.

Accordingly, the EAC recommended for the grant of environmental clearance to the proposal subject to following conditions:

The environmental clearance granted to the project/activity is strictly under the provisions of the EIA Notification 2006 and its subsequent amendments. It does not tantamount/construe to approvals/consent/permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to the project. The project proponent shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

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

(i) The project proponent shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.

(ii) The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

(iii) No banned chemicals/pesticides shall be manufactured by the project proponent. No banned raw materials shall be used in the unit. The project proponent shall adhere to the notifications/guidelines of the Government in this regard.

(iv) As already committed by the project proponent, Zero Liquid Discharge (ZLD) shall be ensured and no waste/treated water shall be discharged outside the premises. Treated effluent shall be reused in the process/utilities.

(v) 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.

(vi) The project proponent shall commence the microbial flora fauna study and its impact on soil and the report and its finding shall be submitted within one year.

(vii) The storage of toxic/hazardous raw material shall be bare minimum with respect to quantity and inventory. Quantity and days of storage shall be submitted to the Regional Office of Ministry and SPCB along with the compliance report.

(viii) The occupational health centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.

(ix) Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.

(x) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.

(xi) Necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents.

(xii) The 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) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

(xiii) Volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.97% with effective chillers/modern technology.

(xiv) Total fresh water requirement shall not exceed 79 KLD. Prior permission in this regard shall be obtained from the concerned regulatory authority.

(xv) The storm water from the roof top shall be channelized through pipes to the storage tank constructed for harvesting of rain water in the premises and harvested water shall be used for various industrial processes in the unit. No recharge shall be permitted within the premises. Process effluent/ any wastewater shall not be allowed to mix with storm water.

(xvi) The PP 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.

(xvii) 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/adjacent areas. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map. Trees have to be planted with spacing of 2m x 2m and number of trees has to be increased accordingly. The plant species can be selected that will give better carbon sequestration and plantation shall be completed within one year.

(xviii) The activities and the action plan proposed by the project proponent to address the issues raised during public hearing and socio-economic issues in the study area and its action plan, shall be completed as per the schedule presented before the Committee and as described in the EMP report in letter and spirit.

(xix) A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

Agenda No. 24.2

Setting up of API Manufacturing unit of production capacity 49,500 MTPA located at F-112, Chicholi MIDC, Taluka- Mohol, District- Solapur Maharashtra by M/s-Glenmark Life Sciences Limited Consideration of Environmental Clearance

[Proposal No. IA/MH/IND3/244471/2021; File no. J-11011/ 516/2021-IAII (I)]

The project proponent and the consultant M/s. Technogreen Environmental Solutions, having accreditation for Cat. B project from QCI/NABET, have attended the EAC meeting and informed that:

The proposal is for environmental clearance to the project for setting up of API Manufacturing

unit of production capacity 49,500 MTPA, located at F-112, Chicholi MIDC, Taluka- Mohol, District- Solapur Maharashtra by M/s-Glenmark Life Sciences Limited.

The project/activity is covered under Category 'B2'-API of item 5 (f) 'Synthetic, Organic Chemicals Industry' of the schedule to the Environment Impact Assessment (EIA) Notification, 2006 (amendment on 27.03.2020, 15.10.2020 & 16.07.2021). But, due to presence of Great Indian Bustard (GIB) sanctuary within 5 Km from Project Site, General condition is applicable to project and requires appraisal at Centre Level by the EAC. The GIB sanctuary is located about 3.35 Km from project site in Chincholi MIDC. ESZ for GIB is finalized and located at 2.16 Km from project site. However, proponent reported that the Unit is outside of the ESZ.

The PP reported that the proposed land area is 161875m^2. Industry will develop greenbelt in an area of 33 % i.e., 54626 m2 out of total area of the project. The estimated project cost is Rs. 550 Crore. Total capital cost earmarked towards environmental pollution control measures is Rs. 31.80 Crore and the Recurring cost (operation and maintenance) will be about Rs. 6.04 Crore per annum. Total Employment will be 750 persons. Industry proposes to allocate Rs. 5.5 Crore towards CER.

The PP reported that the total water requirement is 2160m^3/day of which fresh water requirement of m3/day will be met from MIDC, Chicholi. Effluent of 1098 CMD quantity will be treated through 1200 CMD The plant will be based on Zero Liquid discharge system. Power requirement of connected load will be 6000 KW and maximum demand load will be 4800KW and it will be met from MSEDCL State power distribution corporation limited. DG sets back up will be 15000 KVAx1 (W) & 15000 KVAx1(SB) capacity, additionally DG sets are used as standby during power failure. Stack (height) 8m will be provided as per CPCB norms to the proposed DG sets**.**

Details of process emissions generation and its management:

S. No.	Particulars	Fuel	Stack height	Pollutant	Emission Norms	APCM
1	Boiler (15 TPH – 02 Nos.) one stand-by	Briquettes	30m	PM	150 mg/Nm3	Dust collector
				SO2	100 ppm	
				NOx	50 ppm	
2	D.G. Set (1500 KVA), 2 nos.	HSD	8m	PM	150 mg/Nm3	8 m Stack height
				SO2	100 ppm	
				NOx	50 ppm	

Details of Solid waste/Hazardous waste generation and its management:

S. No.	Type of Waste	Category no.	Quantity per Annum	Unit	Mode of Disposal
1	Chemical Sludge form Waste Water Treatment	35.3	14045	MT	Collection, Storage, Transportation and final disposal at common CHWSTDF/Coprocess site.

	Evaporator salt from ATFD				
2	Discarded containers / drums/Barrels Discarded Liners / Bags	33.1	50000	Nos.	Collection, Storage, Decontamination, Transportation, Reuse / Sale to authorized traders.
3	Spent Catalyst	28.3	73	MT	Collection, Storage, Decontamination, Transportation, Reuse / Sale to authorized traders.
4	Spent carbon	28.3	149	MT	Collection, Storage, Transportation and final disposal at common CHWSTDF/Coprocess site.
5	Spent Oil/Used Oil	5.1	5	KL	Collection, Storage, Transportation, Sale to register re-processors/ Co-Processing for cement industries.
6	Process Residue & waste (from Aqueous ML from process)	28.1	3078	MT	Collection, Storage, Transportation and final disposal at common CHWSTDF/Coprocess site.
7	distillation Residue	20.3	4960	MT	Collection, Storage, Transportation and final disposal at common CHWSTDF/Coprocess site.
8	Date expired, discarded and Off-Specification Drugs / Products / RMs	28.5	7	MT	Collection, Storage, Transportation and final disposal at common CHWSTDF/Coprocess site.
9	Off-Specification Drugs / Products / RMs	28.4	5	MT	Collection, Storage, Transportation and final disposal at common CHWSTDF/Coprocess site.
10	Glass wool/Insulation waste	XO2	80	MT	Collection, Storage, Transportation and final disposal at common CHWSTDF/ Coprocess site./authorized person.
11	Resins from DM plant	35.2	2	MT	Collection, Storage, Transportation and final disposal at common CHWSTDF/ Coprocess site.
12	RO Membrane	35.2	1	MT	Collection, Storage, Transportation and final disposal at common CHWSTDF/ Coprocess site.
13	Spent Acid	D-2	As and when generates	MT	Collection, Storage, Disposal by reuse/treatment within premises.
14	Stripper Solvent from Striper	28.6	5267	MT	Collection, Storage, Transportation and final disposal at common Coprocess/ authorized re-cyclers site.

15	Spent Solvent	28.6	4167	MT	Sold to authorised distillation unit under rule 9
16	Sludge from scrubber	36.1	12	MT	Collection, Storage, Transportation and final disposal at common CHWSTDF/Coprocess site.

Deliberations by the EAC:

The EAC, constituted under the provision of the EIA Notification, 2006 comprising Expert Members/domain experts in various fields, examined the proposal.

The EAC, after detailed deliberations, noted that the PP/Consultant has not prepared the EMP report as per the provisions of the EIA Notification, 2006. PP reported different distances of the GIB sanctuary from the project sire in Form-1, PFR and EMP. It has also been noted that the Project falls under the B2-API category as per provision of EIA Notification, 2006, but PP/consultant has mentioned Category 'A' in Form-1 and the consultant is accredited for category B projects not for category 'A'. EAC also noted that the Consultant has not prepared the Presentation as per template provided in the Agenda. The EAC warned the Consultant/PP not to submit the incomplete proposal and read the various provisions of the EIA Notification, 2006 before submitting the application on Parivesh Portal.

The Committee, after detailed deliberations, **deferred** the proposal and desired for requisite information/inputs in respect of the following:

(i). The EAC noted that Taluka Mohol comes under ESZ Notification. As the instant Unit is located in an ESZ notified area, the PP needs to superimpose project boundary on the ESZ map so that distance from the project boundary to the ESZ could be clarified. A clarification letter regarding location of the Unit outside of ESZ from the CWLW of State Govt. needs to be submitted. The maps shall be authenticated by the Wildlife Department.

(ii). The Complete application w.r.t. Form-1, PFR, EMP Reports shall be revised as per the provisions of the EIA Notification, 2006.

(iii). The Consultant has uploaded the documents in Regional language. It is requested that while uploading such documents PP also needs to submit the translation copy so that EAC may read and take a call accordingly.

(iv). The Consultant to provide copy of valid category accreditation certificate from the QCI/NABET, for preparation of the EMP report and its various mitigation measures as per provisions of the EIA Notification, 2006.

(v). The PP needs to submit detailed Greenbelt Design with different species have greater ecological value and should be of great utility value to the local population with emphasis on local and native species and the species which are tolerant to air pollution with revised layout with budgetary provisions and time lines.

(vi). The PP shall resubmit the complete and adequate reply of EDS which was sought by the Ministry on 21.12.2021.

(vii). As per the Ministry OM No. 22-23/2019-IA.III, dated 28.01.2021, the PP/Consultant

needs to submit the details of pollution load i.e. quantity and quality, including composition, of emissions, discharges and waste (hazardous, solid & industrial) generation from the activities for further deliberations before the EAC.

(viii). The EAC warned the Consultant/PP not to submit the incomplete proposal and read the various provisions of the EIA Notification, 2006 before submitting the application on Parivesh Portal.

Agenda No. 24.3

Setting up of technical grade Pesticides manufacturing unit of production capacity 400 MTPA, located at Plot No-C-32-33 Industrial Growth Center Mansa Road, District Bhatinda Punjab by M/s Hindustan Rasayan Private Limited – Consideration of Environmental Clearance-Regarding.

[Proposal No. IA/PB/IND2/171090/2020 ; File no. J-11011/ 195/2020-IAII(I)]

The proposal for consideration of Environmental Clearance for Setting up of technical grade Pesticides manufacturing unit of production capacity 400 MTPA, located at Plot No-C-32-33 Industrial Growth Center Mansa Road, District Bhatinda Punjab by M/s Hindustan Rasayan Private Limited.

The Project Proponent and the accredited Consultant M/s. Wolkem India Limited, having Accreditation number **NABET/EIA/2124/RA0216, Valid till 05.02.2024** made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance to the project for Setting up of technical grade Pesticides manufacturing unit of production capacity 400 MTPA, located at Plot No-C-32-33 Industrial Growth Center Mansa Road, District Bhatinda Punjab by M/s Hindustan Rasayan Private Limited

The details of products and capacity as under:

S. No.	Product Details	Existing Quantity (MTPA)	Proposed Quantity (MTPA)	CAS No.
1	Clodinafop Propargyl	NIL	50	105512-06-9
2	Pretilachlor	NIL	50	51218-49-6
3	Lembdacyhelothrin	NIL	50	91465-08-6
4	Fipronil	NIL	50	120068-37-3
5	Imidacloprid	NIL	50	138261-41-3
6	Cypermithrin	NIL	50	52315-07-8
7	Alphamithrin	NIL	50	67375-30-8
8	Thiamethoxam	NIL	50	153719-23-4
Total			**400 MTPA**	

The formulation product is tabulated below for which CTO has been granted by PPCB.

S. No.	Formulation products	Capacity (TPD)
1	Solid formulation (Powder & WDG)	07
2	Liquid Formulation (including weedicide)	33
3	Granule formation	40

The project/activities are covered under Category 'A' of item 5(b) 'Pesticides industry and pesticide specific intermediates' of the Schedule to the Environment Impact Assessment Notification, 2006, and requires appraisal at Central Level by the Expert Appraisal Committee (EAC) in the Ministry.

The Standard ToR has been issued by the Ministry, vide letter no. IA-J-11011/195/2020-IA-II (I) dated 6th December, 2020. Certified compliance of CTO (formulation unit) has been issued by PPCB vide no. CTOA/Renewal/BTI/2021/16146366, Water - CTOW/16146366(Air Act), 16165019 (Water Act) validity upto -30/09/2026. Public Hearing is exempted as the project is located in the notified industrial area (Industrial growth center.

PP reported that the Existing Land area is 8361.274 Sq.m. Industry has already developed 218 sq.m and will develop 2542 sq.m greenbelt in an area of 33 % i.e., 2760m^2 out of total area of the project. The estimated project cost is Rs. 11.25 Crore including Existing investment 7.15 crore. Total capital cost earmarked towards environmental pollution control measures is Rs.1.65 Crore and the Recurring cost (operation and maintenance) will be about Rs 0.17 Crore. Total Employment will be 93 persons. Industry proposes to allocate Rs 0.12 Crore towards CER.

PP reported that there are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km distance from the project site. Phusmandi Pond-3.58 km in E, Jassi Pauwali Pond- 2.51 km in SSE, Gehri Bhagi Pond, Jodhpur Pond-4.38 km in SW, Bhatinda Lake 8.59 km in NNW, Balrajnager Pond- 2.91 km in NW, Kot Shamir Pond- 8.80 km in SE, Bahman Distributary- 9.04 in N, Sirhind canal- 6.47 in NW, Bathinda Distributary- 0.64 km in W, Mahta Minor- 2.27 km in SW, Bhagwangarh Minor – 1.64 km in SW, Tungwali Minor – 3.32 km in SE, Shamir Minor-7.42 km in SE, Gahri Minor – 7.64 in SSE. It was informed that no litigation is pending against the proposal.

The Ambient air quality monitoring was carried out at 8 locations during October 2020 to December 2020 and the baseline data indicates the ranges of concentrations as: PM10 (92.18µg/m^3), PM2.5 (48.26µg/m3), SO2 (15.66 µg/m^3) and NO2 (17.79µg/m3). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.11 µg/m3, 0.18µg/m3 and 0.13µg/m3 with respect to PM10, Sox and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

Total water requirement is 19.85 m3/day of which fresh water requirement of 10.00 m3/day will be met from in house bore-well (CGWA permission for ground water withdrawal, Application has been submitted to Punjab Water Regulation and Development Authority (PWRDA) on Email dated 16th June 2021 as per Punjab Guidelines for Groundwater Extraction

&Conservation, 2020). Effluent of 12.66 KLD quantity will be treated through ETP, STP, RO& MEE. The plant will be based on Zero Liquid discharge system

The PP reported that the Power requirement will be 500kVA and will be met from PSPCL (Punjab State Power Corporation Limited). Unit proposes 1 no. of DG set of 62.5 kVAadditionally 62.5 Kva (existing) DG set is used as standby during power failure. Stack (height 15 m above the roof of DG set) shall be provided as per CPCB norms to the proposed DG set.

The PP reported that Unit propose 0.6 TPH Risk Husk Briquette fired Boiler. Additionally, No boiler will be installed. Multi cyclone separator/ bag filter with a stack of height of 30 m shall be installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm3 for the proposed boilers.

Details of Process emissions generation and its management: HCl and SO2 gases will be generated during manufacturing of “Lambdacyhalothrin” and “Pretilachlor” product which will be scrubbed in dual scrubbing system using caustic lye. VOC shall be generated during solvent recovery and same will controlled by VOC control system and activated carbon adsorption system to avoid release any VOC in atmosphere

Details of Solid waste/ Hazardous waste generation and its management:

S. No.	HW/Solid Waste	Category as per HW Rules 2016	Proposed (MTPA)	Disposal Method
1	Process Residue	28.1	48.00	In House Incineration
2	ETP Sludge	35.3	30.60	Collection, Storage & send to
3	MEE Sludge	35.3	210.00	Collection, Storage & send to
4	Empty Drums/container	-	120 No	Collection, Storage, Decontamination & Detoxification, sale to Authorized
5	Used/spent oil	5.1	50 L/M or 0.6 KL/Yr.	Collection, Storage, Transportation & Disposal by selling to Registered. Re-
7	Fly Ash (Boiler)	….	86.40	Collection, Storage, Transportation, Sale to brick

Deliberations in the EAC:

The EAC, constituted under the provision of the EIA Notification, 2006 comprising Expert Members/domain experts in various fields, examined the proposal submitted by the Project Proponent in desired format along with EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

The EAC noted that the Project Proponent has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the

project proponent.

The Committee noted that the EIA/EMP reports are in compliance of the ToR issued for the project, considering the present environmental concerns and the projected scenario for all the environmental components. The Committee deliberated on the proposed mitigation measure towards Air, Water, Noise and Soil pollutions. The Committee also suggested that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices. The committee deliberated on the pesticide usage and effect of pesticide on Crops and pests. The committee also deliberated on the water balance data and found it satisfactory.

The Committee deliberated on the plantation schedule and budget and suggested to plant the 208 number of trees to be planted in first year and in subsequent years' casualty replacement of damaged plants will be taken care for which recurring cost proposed @ Rs. 50,000/-.Year. The Committee suggested that the greenbelt development shall be taken up actively by the PP and trees shall be planted considered 2m x 2m ratio. The Committee deliberated on the action plan and budget allocation for green belt development and as committed by the PP the green belt development shall be completed within one year.

The Committee suggested for the use of septic tank for the treatment of domestic wastewater 1.8KLD. PP committed for the same. The Committee deliberated on the Disposal Method of ETP Sludge and MEE Sludge and on the inspection report of the Punjab Pollution Control Board. The committee suggested to the PP to opt Mitigative measures to control particulate matter (PM) emission due to proposed project. PP committed for the same. The Committee also deliberated the compliances status of CTO which was issued for the formulation project and found in order.

The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC found the proposal in order and recommended for grant of environmental clearance.

Accordingly, the EAC recommended for the grant of environmental clearance to the proposal subject to following conditions:

The environmental clearance granted to the project/activity is strictly under the provisions of the EIA Notification 2006 and its subsequent amendments. It does not tantamount/construe to approvals/consent/permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to the project. The project proponent shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

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

(i). The PP shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in

the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.

(i). The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

(ii). No banned pesticides/chemicals shall be manufactured by the project proponent. No banned raw materials shall be used in the unit. The project proponent shall adhere to the notifications/guidelines of the Government in this regard.

(iii). This EC is subject to obtaining necessary clearances/approvals from the Government/Regulatory Authorities. Project Proponent shall not start the Unit without necessary clearances under various Acts/Rules.

(iv). The volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.97 % with effective chillers/modern technology. Regular monitoring of VOCs shall be carried out.

(v). The project proponent shall explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.

(vi). As already committed by the project proponent, Zero Liquid Discharge (ZLD) shall be ensured and no waste/treated water shall be discharged outside the premises. Treated effluent shall be reused in the process/utilities.

(vii). 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.

(viii). The storage of toxic/hazardous raw material shall be bare minimum with respect to quantity and inventory. Quantity and days of storage shall be submitted to the Regional Office of Ministry and SPCB along with the compliance report.

(ix). Occupational health centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.

(x). Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.

(xi). Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.

(xii). 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.

(xiii). The 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) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the

electrical equipment wherever solvent handling is done. (e) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

(xiv). Total fresh water requirement shall not exceed 10.00 m^3/day will be met from in house bore-well. Prior permission in this regard shall be obtained from the concerned regulatory authority/CGWA and renewed from time to time.

(xv). The storm water from the roof top shall be channelized through pipes to the storage tank constructed for harvesting of rain water in the premises and harvested water shall be used for various industrial processes in the unit. No recharge shall be permitted within the premises. Process effluent/ any wastewater shall not be allowed to mix with storm water.

(xvi). The PP 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.

(xvii). The green belt of at least 5-10 m width shall be developed in at least 33% of the total project area, mainly along the plant periphery/ additional land. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map. Trees have to be planted with spacing of 2m x 2m ratio and as committed by PP shall plant 208 nos. will be planted within 1 year and capital expenditure of an amount rates 4 lakh will be incurred. In subsequent years casualty replacement of damaged plants will be taken care for which recurring cost proposed @50,000/-.Year. The plant species can be selected that will give better carbon sequestration.

(xviii). The Project proponent shall commence the microbial flora fauna study and its impact on soil and the report and its finding shall be submitted within one year.

(xix). The activities and the action plan proposed by the project proponent to address the socio-economic issues in the study area, shall be completed as per the schedule presented before the Committee and as described in the EIA/EMP report in letter and spirit.

(xx). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

Agenda No. 24.4

Modernization and Expansion of Existing Fertilizer Plant for Manufacturing of Nano Fertilizer with proposed production capacity of 36,500 KLA, located at IFFCO Aonla, Paul Pothen Nagar, P.O. IFFCO Township, District- Bareilly, Uttar Pradesh by M/s Indian Farmers Fertiliser Cooperative Limited (IFFCO) – Consideration of Environmental Clearance

[Proposal No. IA/UP/IND3/249409/2005; File no. J-11011/430/2005-IAII(I)]

The project proponent and the accredited consultant M/s. EQMS India Pvt. Ltd. having accreditation number **NABET/EIA/1922/RA 0197 valid till 23.11.2022** made a detailed presentation on the salient features of the project and informed that:

The proposal is for environmental clearance for the Modernization and Expansion of Existing Fertilizer Plant for Manufacturing of Nano Fertilizer with proposed production capacity of 36,500 KLA, located at IFFCO Aonla, Paul Pothen Nagar, P.O. IFFCO Township, District-Bareilly, Uttar Pradesh by M/s Indian Farmers Fertiliser Cooperative Limited

The details of existing and expansion products and their capacity as under:

S. No.	Product	Unit	As per EC dated 13.03.2006	As per CTO dated 06.03.2020	As per No Increase in Pollution certificate granted from UPPCB dated 18.06.2021	After Proposed Modernization & Expansion	Impact
1.	Urea	MT PA	19,80,000	6000 TPD (19,80,000 MTPA (considering 330 Days)	23,26,500	23,26,500	No Change
2.	Ammonia	MT PA	11,38,500	11,38,500	13,20,000	13,20,000	
3.	Captive Power	MW	50 MW	50 MW	50 MW	50 MW	
4.	**Nano-Urea Nano-Sulphur / Nano-Micronutrients**	**KL/ Annum**	**0**	**0**	**0**	**36,500**	**Additional Product**

Proposed Expenditure

S. No.	Activity	Amount allocated in Expansion	Remark
1.	Total Cost	Rs. 190 Crores	Cost of Proposed Expansion

2.	EMP Cost	Rs 309 Lacs	EMP of Nano Urea plant, no additional cost proposed in existing operating plant.
3.	Recurring Cost	Rs 17 Lacs	For proposed Expansion
4.	CSR/CER Cost	Rs. 200 Lacs	Considering 4 years plan
5.	Public Hearing commitment	3.2 lacs	On spray machines
6.	Green Belt	Rs. 40 Lacs	Additional Green Belt
7.	Wild life Conservation Plan	Rs. 8.6 Lacs	-

The project is covered under the category 'A' of item 5(a) - chemical fertilizer of the Schedule to the Environment Impact Assessment (EIA) Notification, 2006 and its subsequent amendments.

The PP reported that Aonla Unit has proposed Modernization and Expansion in the existing plant to produce Nano-Urea/Nano-Sulphur/Nano-Micronutrients of capacity 36,500 KL/year. The proposal includes installation of manufacturing unit of Nano Fertilizer and Bottling unit besides Auxiliary facilities. The plant will be established over area of 3.864 Hectares in existing premises.

The Ministry had granted earlier EC to the existing project vide letter no. J-11011/430/2005-IA-II(I), dated 13.03.2006 for capacity enhancement/de-bottlenecking of existing Aonla Ammonia-Urea Complex in favour of M/s Indian Farmers Fertiliser Cooperative Limited (IFFCO). PP reported that over a time, plant has adopted many conservation measures to increase the efficiency of plant and reduce the pollution load and energy. The existing plant is operating on full load with less resources. Considering the S.O. 980 (E) dated 02.03.2021 notification of MoEF&CC, plant has obtained NOC/Approval under no increase in pollution load for expansion in the production of Urea and Ammonia by 17.5% and 15.9% respectively from UPPCB, vide letter no. H625प्र/सी-7/जल-762/21 dated 18.06.2021.

The PP reported that the Consent to Operate was issued by UP PCB, vide letter No. 71802/UPPCB/Bareilly(UPPCBRO)/CTO/air/BAREILLY/2019 and 71787/UPPCB/Bareilly (UPPCBRO)/CTO/water/BAREILLY/2019, dated 06.03.2020 and valid upto 31.12.2024. As per latest certified compliance report issued by IRO, MoEF&CC, Lucknow few condition are partially complied for which ATR has been submitted vide letter no AP/Tech/Env/MOEFCC/2021 dated 23.7.2021. The Committee deliberated the ATR and found in order.

The Standard TOR was granted by the Ministry on 16.11.2021. Public Hearing for the proposed project was conducted by the State Pollution Control Board on 27.12.2021 and was presided by the Additional District Magistrate. The Main issues raised during the public hearing are related to use of Nano Fertilizer in different crops and farmers asked to provide spray machine in the area for using product.

PP reported that the existing land area is 515.16 Ha and expansion is proposed within the existing land area. Industry has already developed greenbelt in an area of 183 Ha which will

increase to 184.163 Ha i.e., 35.7% after expansion. The estimated project cost for expansion including EMP cost is Rs. 190 Crores. The capital cost earmarked towards environmental pollution control measures in expansion is Rs. 3.09 Crores and recurring cost (Operation and maintenance) for proposed project will be about Rs. 0.17 Crores per annum. Total additional Employment will be 200 persons as direct & indirect. Industry proposed to allocate Rs. 2 Crores towards Corporate Environment Responsibility.

The PP reported that there is no Wildlife Sanctuary, no National Parks, no Biosphere Reserves, no Tiger/Elephant Reserves, etc. are present within 10 km distance from the project site. Four Reserved Forest are present at East, South & West Boundary of plant. Aril River is the nearest river flowing at 0.51 km (W) from the project site.

The PP reported that the Ambient air quality monitoring was carried out during earlier EIA study at 8 locations during October to December, 2020 and the baseline data indicates the ranges of mean concentrations as: PM10 (52.45-83.18µg/m3), PM2.5 (24.56-50.06µg/m3), SO2 (5.18-14.52µg/m3), NO2 (10.52-23.19µg/m3) and NH3 (30.61-42.5µg/m3). All parameter concentrations are within the National Ambient Air Quality Standards (NAAQS). Proposed Nano Urea Plant does not emit air pollutants from production process.

The PP reported that the freshwater requirement of plant will be 34150 KLD. Water will be available from existing bore-wells. There is no generation of effluent from manufacturing process of Nano-fertilizer. However, there will be generation of additional 1 KLD wastewater from washing of Vessels /Reactor, etc. and operation of Cooling Tower in the plant along with 9 KLD domestic sewage generated. It has been proposed to install ETP cum neutralization tank for industrial effluent and 10 KLD of STP for domestic effluent. Treated water shall be reused in the internal Horticulture proposed to be provided in the Nano Plant boundary. However, industrial wastewater generation shall be limited within the existing sanctioned quantity i.e., 5712 KLD.

Total Power requirement after expansion& modernization shall be limited within the existing sanctioned quantity i.e., 50 MW. Same is being met by Captive power and Grid Supply. The electrical power generated in CPP (Captive Power Plant) is used to fulfill most of the requirement of entire plant and electrical power supplied by UPPCL through 132 KV line is also being used in non-critical areas.

Existing unit has two no. of DG Sets of Capacity 2188 KW as standby during power failure. Stack Height of 30 m is provided as per CPCB norms. Existing unit has Natural gas based 150 TPH steam boiler with 120 m stack and 2 x 80 TPH GT/HRSG- I & II with 30 m stack for power plant. No additional Boiler is proposed. Particulate emission is within the statutory limit given by CPCB & UPPCB.

Details of Process emissions generation and its management

S. No.	Stack Attached	Fuel Used	APCM	Expected Pollutants
Process Stacks / Vents (Existing)				
1	Prilling Tower-I	-	96 m	PM, NH_3
2	Prilling Tower-II	-	104 m	PM, NH_3
Note: No additional Stack is proposed in expansion and there shall be no gaseous emission from Nano Urea Plant.				

The PP reported that there will not be any Hazardous and Solid waste generation from proposed Nano Fertiliser plant during its operation. However, there will be generation of Hazardous and other solid waste from associated activities like bottling plant, Offsite facilities etc. which will be disposed as per the applicable law. There is generation of different kind of Industrial hazardous wastes from existing production process and other activities. Industrial hazardous wastes such as spent lube oil, spent catalyst are sold to recyclers. All waste is disposed as per The Hazardous & Other Waste (Management and Transboundary Movement) Amendment Rules, 2021. Similar practices will be followed after expansion also.

Details of Solid Hazardous Waste Management:

S. No	Name of Waste	Source of Generation	Category No. (As per Sch-I&II HW Rules, 2016)	Quantity (MTPA)			Mode of Treatment & Disposal Method
				Existing	Proposed	After Expansion	
1	Discarded Containers/Bags /Liners	Storage & Handling of Raw Materials	Sch-I/33.3	-	1500 Nos/ year	1500 Nos/ year	All the discarded drums / containers / bags shall be collected and stored in Scrap yard. From scrapyard, these shall be sold to authorized recycler.
2	Used/Spent Oil	Used/Spent Oil	Sch-I/5.1	100	0.8	100.8	Used/spent oil shall be collected, stored at well identified scrapyard and then will be disposed by selling to Registered recycler.
3	ETP Sludge	In-house ETP	Sch-I/34.3	-	0.06	0.06	The sludge generated

							from the Effluent collection pits will be collected, dried and stored within the plant premises in HDPE bags and then disposed-off to TSDF Site through registered transporter
Process Waste							
4	Spent Catalyst	Process	Sch –I/ 18.1	300	-	300	Collected and stored in MS drum / HDPE drums, Sold to UPPCB/CPCB approved registered recyclers.
5	Plastic Waste	Bottling plant of Nano Fertilizer	-	-	0.6 MTPA	0.6 MTPA	Recyclable waste will be sold off to authorized Recycler.

The Project Proponent has also informed the benefits of proposed Nano-Fertilizer Plant, as described below:

(i) Nanotechnology is an emerging field with potential to provide Efficient Nutrient Management as compared to existing fertilizer management practices. With the use of Nanotechnology, the consumption of chemical fertilizer will be reduced.

(ii) Nano Urea reduces fertilizer consumption compared to Conventional Urea. 1No. 500 ml Nano Urea Bottle is equivalent to 45 Kg Urea (1 bag).

(iii) Nano Urea provides Better Nutrient & Increases Production. It also has a Cost Advantage over Conventional Urea.

(iv) It is Environment Friendly and Non-Toxic to Flora & Fauna, Humans.

(v) No source of air emission/effluent generation/hazardous waste generation is involved in the production process. As a matter of fact, the Nano-fertilizer plant will pose an example of Environmental Sustainability and profitability for both farmers

and government.

(vi) It will maintain stability in Domestic market for Fertilizer.

(vii) It will reduce the import possibility of Urea fertilizers to some extent and contribute to National saving.

(viii) Nano Fertilizer application improves soil health and reduces the demand of conventional fertilizer like Urea on farmer's field for achieving optimum or targeted crop yields.

(ix) Nano fertilizers enhance the seed germination.

(x) It helps in growth of plant height, leaf area and numbers of leaves per plant.

(xi) Nano fertilizer enhances the chlorophyll production as well as rate of the photosynthesis which result in more production.

(xii) All these factors result in more yield and better-quality parameters derived from usage of Nano-fertilizers as compared to conventional fertilizer usage.

(xiii) It is possible to increase the production of the crop by about 15 to 20 percent.

Deliberations by the EAC:

The EAC, constituted under the provision of the EIA Notification, 2006 comprising Experts Members/domain experts in various fields, examined the proposal submitted by the Project Proponent in desired format along with EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the project proponent.

The EAC noted that the project proponent has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

The Committee noted that the EIA/EMP report are in compliance of the ToR issued for the project, considering the present environmental concerns and the projected scenario for all the environmental components. The Committee found the baseline data and incremental GLC due to the proposed project within NAAQ standards. The Committee also deliberated on the toxicity of the Nano urea and the cost comparison between the urea and the nano-fertlizers. The Committee suggested that the storage of toxic/explosive raw material shall be bare minimum in quantity and inventory.

The Committee suggested that the greenbelt development shall be taken up actively by the PP and trees shall be planted considered 2m x 2m ratio. The Committee opined that the industry shall undertake studies on the impact of fertilizers on the soil characteristics and ecology. The Committee noted that the unit is in operation with EC obtained from the MoEFCC and valid CTO obtained from Uttar Pradesh Pollution Control Board. The EAC also deliberated the latest certified compliance report issued by IRO, MoEF&CC, Lucknow and accordingly few condition is partially complied for which ATR has been submitted vide letter no AP/Tech/Env/MOEFCC/2021 dated 23.07.2021. The Committee deliberated the compliance status of earlier EC and its Action taken Report and found in order and adequate.

The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC found the proposal in order and recommended for grant of environmental clearance.

Accordingly, the EAC recommended for the grant of environmental clearance to the proposal subject to following conditions:

The environmental clearance granted to the project/activity is strictly under the provisions of the EIA Notification 2006 and its amendments. It does not tantamount/construe to approvals/consent/permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to the project. The project proponent shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

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

(i). The PP shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.

(ii). The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

(iii). As committed by the project proponent, PP shall install ETP cum neutralization tank for industrial effluent and 10 KLD of STP for domestic effluent.

(iv). 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.

(v). The storage of toxic/hazardous raw material shall be bare minimum with respect to quantity and inventory. Quantity and days of storage shall be submitted to the Regional Office of Ministry and SPCB along with the compliance report.

(vi). Occupational health centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.

(vii). Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.

(viii). 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.

(ix). Necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents.

(x). The 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) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

(xi). Volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.97% with effective chillers/modern technology.

(xii). Total fresh water requirement shall not exceed 34150 KLD. Prior permission in this regard shall be obtained from the concerned regulatory authority.

(xiii). The storm water from the roof top shall be channelized through pipes to the storage tank constructed for harvesting of rain water in the premises and harvested water shall be used for various industrial processes in the unit. No recharge shall be permitted within the premises. Process effluent/ any wastewater shall not be allowed to mix with storm water.

(xiv). The PP 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.

(xv). The green belt of at least 5-10 m width shall be developed in nearly 36% of the total project area mainly along the plant periphery/adjacent areas, as committed by the PP. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map. Trees have to be planted with spacing of 2m x 2m and number of trees have to be increased accordingly (2500 trees/hectare). The plant species can be selected that will give better carbon sequestration and plantation shall be completed within six months.

(xvi). The activities and the action plan proposed by the project proponent to address the socio-economic and public hearing issues in the study area, shall be completed as per the

schedule presented before the Committee and as described in the EMP report in letter and spirit.

(xvii). As committed by PP, the project proponent shall assist in development of rain water harvesting system in the adjoining villages/areas.

(xviii). As committed by the PP, the project proponent shall organize training/intern program for the nearby College/University students and report may be submitted to the Integrated Regional Office of the MoEFCC.

(xix). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

Agenda No. 24.5

Extension of validity of Environment Clearance for project of M/s. Panoli Intermediates (India) Pvt. Ltd (UNIT- VI), located at Plot no: 756/11 A & B, GIDC Jhagadia, Dist.: Bharuch, Gujarat- Validity in Environmental Clearance

[Proposal No. IA/GJ/IND3/248492/2021; File No. J-11011/168/2010–IAII(I)]

The project proponent, neither attended the meeting nor communicated to the EAC/Ministry reason for not attending the same. PP has not submitted any documents to the EAC. The Committee warned the Consultant and PP for wasting valuable time of the EAC/Ministry. The Committee tried to appraise the proposal but no body was present to address the queries raised by the EAC.The EAC accordingly **returned** the proposal in its present form.

Agenda No. 24.6

Extension of the validity of Environmental Clearance for Synthetic Resin Manufacturing Unit (4,500 TPM), located at Sy. No. 72, Village Sampa, Tehsil Dehgam, District- Gandhi Nagar Gujarat by M/s Ace Mica Private Limited – Extension of validity of Environmental Clearance.

[Proposal No. IA/GJ/IND3/247687/2021; File No. J-11011/379/2013-IA II (I)]

The project proponent and the consultant M/s. En-vision Enviro Technologies Pvt. Ltd. made a presentation on the salient features of the project and informed that:

The proposal is for extension of validity of EC for which Environmental Clearance has been granted by the Ministry vide letter No. J-11011/379/2013-IA-II (I) dated 30.01.2015 and transfer of EC from M/s. Vince Decor Pvt. Ltd to M/s Ace Mica Private Limited on 14.08.2015, for

Synthetic Resin Manufacturing Unit (4,500 TPM), located at Sy. No. 72, Village Sampa, Tehsil Dehgam, District- Gandhi Nagar Gujarat

The PP reported that the CTO for partially products has been obtained by the Gujarat Pollution Control Board vide consent order No. AWH-46486 valid till 13.04.2026. The EC was granted for 4500 TPM in 30.01.2015. However, PP has completed the half project and accordingly CTO for 2600 TPM was issued by SPCB. PP reported that there are several reason for the delay in the project and requested for extension of validity of EC.

Deliberations in the EAC

The Committee noted that the Environmental Clearance has been granted by the Ministry vide letter No. J-11011/379/2013-IA-II (I) dated 30.1.2015 and further transferred from M/s. Vince Decor Pvt. Ltd to M/s Ace Mica Private Limited on 14.08.2015.

The Committee, however, was very annoyed on the compliance status of the existing EC conditions. The Committee has advised the project proponent to complete the greenbelt development along the periphery of the plant, to combat the pollution and emissions from the unit. The Committee had suggested PP to comply with the EC conditions and submit the monitoring report from the Regional Office of the Ministry.

The Committee also noted that PP was not able to show the location of the project on the KML and was not able to provide any satisfactory reason for the delay in the project.

The Committee, after detailed deliberations, desired for requisite information/inputs in respect of the following:

(i). EAC observed that PP had never submitted the compliance report to the IRO, MoEFCC. This is very serious concern. Even the Consultant [M/s. En-vision Enviro Technologies Pvt. Ltd.] did not know the status of implementation of the EC conditions and submission of the compliance report to the IRO, MoEFCC by six-monthly.

(ii). The Ministry may take necessary action against the PP for non-submission of compliances of EC conditions to the IRO, MoEFCC. This proposal can only be considered for further verification of EC conditions by the IRO, MoEFCC.

(iii). The implementation status of green belt development needs to be submitted.

(iv). Details of court case, and its implication on the project, present status along with copy of petition and affidavits need sto be submitted.

(v). **The Committee again took a serious note on the unsatisfactory presentation prepared by the consultant [M/s. En-vision Enviro Technologies Pvt. Ltd.] for their repeated casual approach in the preparation of report and its presentations. Committee warned that the Consultant shall read the various provisions of the EIA Notification, 2006 and guidelines issued by the Ministry from time to time and shall advise PP to comply the conditions mentioned in the EC.**

The Committee after detailed deliberation **returned** to revise the proposal for the needful.

DAY-2 : JANUARY 13, 2022 [THURSDAY]

Agenda No. 24.7

Modernization of Existing Project by way of addition of two new plot no. 5035-5036 for the project of Agrochemicals and Intermediates products (259.4 TPM to 1495 TPM) within the existing premises located at Plot No. 5001/B, 5027 to 5034 & 5037, 4707/B & 4707/P, GIDC Estate Ankleshwar, District Bharuch, Gujarat by M/s Meghmani Organics Limited - Consideration for Modernization in Environmental Clearance

[Proposal No. IA/GJ/IND3/244344/2018; File No. 23-13/2020-IA.III(V)]

The proposal is for modernization in the Environmental Clearance granted by the Ministry vide File No. J-11011/90/2020-IA-II(I) dated on 11th January, 2021 and further EC Identification No. EC21A017GJ111135 on 3rd November, 2021 for the project of new Agrochemicals and Intermediates products located at Ankleshwar in favour of M/s Meghmani Organics Limited.

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

S. No.	Para of EC issued by MoEF & CC	Details as per the EC	To be revised / read as	Justification / Reasons
1.	Subject	Proposed Expansion in production capacity of existing products as well as addition of new agrochemicals and intermediates products capacity (259.4 MT/Month to 1495 MT/Month) within the existing premises by M/s. Meghmani Organics Limited located at Plot No. 5001/B, 5027 to 5034 & 5037, 4707/B & 4707/P, GIDC Estate, Ankleshwar, District-Bharuch- 393001, Gujarat – Consideration of Environment Clearance regarding.	Proposed Expansion in production capacity of existing products as well as addition of new agrochemicals and intermediates products capacity (259.4 MT/Month to 1495 MT/Month) within the existing premises by M/s. Meghmani Organics Limited located at Plot No. 5001/B, 5027 to 5034 & **5035, 5036,** 5037, 4707/B & 4707/P, GIDC Estate, Ankleshwar, District- Bharuch-	The unit has recently purchased the adjoining plots. On this plots, the unit will develop admin building, ware house and also would like to develop manufacturing facility. The manufacturing facility will be developed based on the compatibility of process/raw materials. Hence, unit will make dedicated manufacturing facilities for dedicated products. This change will bring positive impacts as the existing plant will become more spacious.

			393001, Gujarat – Consideration of Environment Clearance regarding.	

Deliberations in the EAC

The Committee noted that the instant proposal is for addition of two new plot no. 5035-5036 in the existing Unit and the same plots were transferred to M/s Meghmani Organics Limited in September 2021 and the EC was granted on 3rd November 2021, However PP has not informed to the EAC/Ministry. If they PP on-time the same proposal can be appraised by the EAC accordingly as the instant project is located at industrial estate. PP has agreed the mistake.

The Committee noted that earlier the project proponent has submitted proposal to the Ministry for consideration in pursuance of the Ministry's Notification dated 14th March 2017 due to violation of the EIA Notification, 2006. The EAC deliberated on the project and considering the fact that EC has been granted to the PP on merit, considered the additional ToR issued for the damage assessment. The Ministry has issued additional terms of reference (ToR) to the project for remediation for preparation of EIA/EMP reports, vide letter dated 17th March, 2021.

The Committee also noted that the project proponent proposed Rs. 40 lakhs for Remediation, Natural Resource Augmentation and Community Resource Augmentation Plan. In this context, the EAC wanted to know the implementation status of Remediation, Natural Resource Augmentation and Community Resource Augmentation Plan, as it was earlier deliberated by the EAC in August 2021 and now about 5 months completed. PP was not able to present the action taken so far for the implementation of remedial plans. PP also failed to show the Green belt development plan status and action taken so far for the Green belt development.

It was informed to the EAC that the para 7(ii) of the EIA Notification, 2006, inter-alia, mentions that *all applications seeking prior environmental clearance for expansion with increase in the production capacity beyond the capacity for which prior environmental clearance has been granted under this notification or* ***with increase in either lease area*** *or production capacity in the case of mining projects or for the modernisation of an existing unit with increase in the total production capacity beyond the threshold limit prescribed in the Schedule to this notification through change in process and or technology or involving a change in the product –mix shall be made in Form I and they shall be considered by the concerned Expert Appraisal Committee or State Level Expert Appraisal Committee within sixty days, who will decide on the due diligence necessary including preparation of Environment Impact Assessment and public consultations and the application shall be appraised accordingly for grant of environmental clearance.*

The Committee noted that as the application had been submitted under para 7(ii) of the EIA Notification, 2006, but the compliance status submitted by PP in December, 2020 which

had some major non-compliances. The Committee advised PP to submit latest certified compliance report and its implementation status of the remedial plans as approved by the Committee during earlier appraisal in August 2021.

The Committee after detailed deliberation, **deferred** the proposal for the needful.

Agenda No. 24.8

Setting up of production of Melamine Urea Formaldehyde Resin (1500 MT/Month), Urea Formaldehyde Resin (1500 MT/Month), Melamine Formaldehyde Resin (100 MT/Month), Unsaturated Polyester Resin (400 MT/Month) and Adhesive (1000 MT/Month) with total production capacity of 4500 MT/Month at Survey no. 24 P2/P2 Tankara – Latipar Road, Village Hirapar, Taluka Tankara, District Morbi, Gujarat by M/s. Finova Polymer LLP – Consideration of Environmental Clearance.

[Proposal No. IA/GJ/IND3/219055/2021; File No. IA-J-11011/275/2021-IA-II(I)]

The Project Proponent and the accredited Consultant M/s. T. R. Associates having accreditation number **NABET/EIA/1922/RA0142 dated 09.10.2022** made a detailed presentation on the salient features of the project and informed that:

The proposal is for grant of environmental clearance (EC) to the proposed project for Setting up of production of Melamine Urea Formaldehyde Resin (1500 MT/Month), Urea Formaldehyde Resin (1500 MT/Month), Melamine Formaldehyde Resin (100 MT/Month), Unsaturated Polyester Resin (400 MT/Month) and Adhesive (1000 MT/Month) with total production capacity of 4500 MT/Month at Survey no. 24 P2/P2 Tankara – Latipar Road, Village Hirapar, Taluka Tankara, District Morbi, Gujarat by M/s. Finova Polymer LLP.

The details of products and capacity as under:

S. No.	Name of the Product	Production Capacity (MT/Month)	CAS Number
1.	M.F. Resin	100	82115-62-6
2.	U.F. Resin	1500	9011-05-6
3.	M.U.F. Resin	1500	Not available
4.	Unsaturated Polyester Resin	400	Not available
5.	Adhesive	1000	Not available
Total Production Capacity		**4500**	--

The project comes under Item 5(f) of the Schedule, “Synthetic Organic Chemical” as Category A, as per EIA Notification 2006 and its subsequent amendments and, therefore requires appraisal at central level by Expert Appraisal Committee (EAC) in the Ministry.

The Standard ToR was granted by the Ministry vide letter No. No. IA-J-11011/275/2021-IA-II(I) dated 31st July, 2021.Public Hearing for the proposed project has been conducted by the Gujarat State Pollution Control Board on 10/12/2021 which was presided over by the District

Collector and District Magistrate. The main issues raised during the public hearing were related to the health and safety of workers. It was informed that no litigation is pending against the proposal. The Committee deliberated the action plan on the issues raised during Public Hearing and found in order.

The PP reported that the proposed project will be established in a land area of 4047 m^2. Industry will develop greenbelt in an area of 35.10 % i.e, 1420.73 m^2 out of total area (4047.0 m^2) of the project. The estimated project cost is Rs.250 lakhs. The estimated project cost is Rs. 250 lakhs. Total capital cost earmarked towards environmental pollution control measures is Rs.55.21 lakhs and the Recurring cost (operation and maintenance) will be about Rs.26.47 lakh per annum. Total Employment will be 13 persons as direct. Industry proposes to allocate Rs. 5 Lakhs towards Corporate Environment Responsibility.

The Project Proponent reported that there are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Indian Peafowl Schedule –I species are reported to be found in the project area.

The ambient air quality monitoring was carried out at 8 locations during March to May 2021 and the baseline data indicates the ranges of concentrations as: PM10 (57.20 µg/m^3 to 84.92 µg/m^3), PM2.5 (22.14 µg/m^3 to 50.68 µg/m^3), SO2 (6.24 µg/m^3 to 17.74 µg/m^3) and NO2 (13.79 µg/m^3 to 39.25 µg/m^3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.1 µg/m^3, 0.7 µg/m^3 and 0.001 µg/m^3 with respect to PM10, SO2, NO2. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). The EAC deliberated the baseline data and found in order.

The PP reported that total water requirement will be 62.20 m^3/day (Fresh 53.0 KLD + Reuse 9.20 KLD) which will be met from Bore Well. The unit will provide 1 tank of 50 kl for rainwater harvesting for proposed unit. Effluent of 11.59 m^3/day quantity will be treated through Effluent Treatment Plant. The plant will be based on Zero Liquid Discharge System. Power requirement will be 300 kVA and will be met from Paschim Gujarat Vij Corporation limited (PGVCL).

Details of Flue Gas Emissions unit with Air Pollution Control Measures:

S. No.	Stack attached to	Height of the stack In meter	Fuel & its Consumption	APC System	Expected Pollutant	GPCB Limit
1	Thermic Fluid Heater 10,00,000 Kcal/hr.	30 m	Diesel – 1.85 MT/Day	Bag filter	SPM SO2 NO2	As per GPCB Norms SPM ≤ 150 mg/Nm3 SO2 ≤ 100 ppm NO2 ≤ 50 ppm

2	Thermic Fluid Heater 4,00,000 Kcal/hr.	30 m	Briquettes – 2.0 MT/Day	Multicyclone Separator followed by Bag Filter followed by Alkali Scrubber	SPM SO2 NO2	As per GPCB Norms SPM ≤ 150 mg/Nm3 SO2 ≤ 100 ppm NO2 ≤ 50 ppm
3	Boiler (3 TPH)		Briquettes – 10.3 MT/Day			
4	D.G. Set (150 KVA)	12 m	30 litres/hr.	12 m Stack height	SPM CO HC	As per GPCB Norms SPM ≤ 150 mg/Nm3

Details of Solid waste/ Hazardous waste generation and its management:

S. No.	Description	Category as per HW Rules 2016	Total Quantity	Mode of Disposal
1.	ETP Sludge	35.3	34.47	Collection, storage and disposal at Approved TSDF site
2.	Evaporator residue	35.3	9.74	Collection, storage and disposal at Approved TSDF site
3.	Used Oil	5.1	0.024	Collection, storage and used within premises as a lubricant / sold to registered recycler.
4.	Discarded Plastic Bags / Barrels	33.1	50.76	Collection, storage & sold to authorized vendor.
5.	Process Residue	23.1	27.00	Collection, storage and disposal at Approved CHWIF site
6.	Vinyl Acetate Monomer Spillage material	33.2	6	Collection, storage and disposal at Approved CHWIF site

Deliberations by the EAC:

The EAC, constituted under the provision of the EIA Notification, 2006 comprising Expert Members/domain experts in various fields, examined the proposal submitted by the Project Proponent in desired format along with EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

The EAC noted that the Project Proponent has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and

belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

The Committee noted that the EIA/EMP reports are in compliance of the ToR issued for the project, considering the present environmental concerns and the projected scenario for all the environmental components. The committee also deliberated the water balance and found the reply of PP to be satisfactory.

The Committee deliberated on the proposed mitigation measures towards Air, Water, Noise and Soil pollutions. The Committee also suggested that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices. The Committee suggested to use the bag filter instead of Multicyclone separator in the APCM plan. The PP agreed the same.

The Committee also deliberated on the action plan and budget allocation for green belt development and suggested to complete plantation in one year. The Committee also suggested that the greenbelt development shall be taken up actively by the PP and trees shall be planted considered 2m x 2m ratio.

The EAC deliberated on the proposal with due diligence using the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC also found the proposal in order and recommended for the grant of environmental clearance.

Accordingly, the EAC recommended for the grant of environmental clearance to the proposal subject to following conditions:

The environmental clearance granted to the project/activity is strictly under the provisions of the EIA Notification 2006 and its subsequent amendments. It does not tantamount/construe to approvals/consent/permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to the project. The project proponent shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

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

(i). The PP shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.

(ii). The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of

capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

(iii). Volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.97% with effective chillers/modern technology. Regular monitoring of VOCs shall be carried out.

(iv). No banned Chemicals/Products shall be manufactured by the project proponent. No banned raw materials/chemicals shall be used in the unit. The project proponent shall adhere to the notifications/guidelines of the Government issued in this regard.

(v). An Occupational health centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.

(vi). As already committed by the project proponent, Zero Liquid Discharge (ZLD) shall be ensured and no waste/treated water shall be discharged outside the premises. Treated effluent shall be reused in the process/utilities. Treated Industrial effluent shall not be used for gardening/greenbelt development/horticulture purpose.

(vii). The unit shall make the arrangement for the prevention and protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms. Mock drill shall be conducted regularly.

(viii). Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.

(ix). Total fresh water requirement, sourced from Ground Water, shall not exceed 53.0 KLD. Prior permission in this regard shall be obtained from the concerned regulatory authority.

(x). The Storm water from the roof top shall be channelized through pipes to the storage tank constructed for harvesting of rain water in the premises and harvested water shall be used for various industrial processes in the unit. No recharge shall be permitted within the premises. Process effluent/ any wastewater shall not be allowed to mix with storm water.

(xi). 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 ZLD, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises (if applicable).

(xii). The 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) Solvents shall be stored in a separate space provided with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather

valves to prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

(xiii). Process organic residue and spent carbon, if any, shall be sent to Cement or other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF. There shall be commitment from the brick manufacturer to take the fly ash from the plant. The Unit is to be started after getting the commitment from the brick manufacturer / cement plant.

(xiv). The PP 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.

(xv). The green belt of at least 5-10 m width shall be developed in at least 33% of the total project area, mainly along the plant periphery/ additional land. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map. Trees have to be planted with spacing of 2m x 2m and the number of trees has to be increased accordingly. The plant species can be selected that will give better carbon sequestration. The greenbelt development shall be completed within one year.

(xvi). The activities and the action plan proposed by the project proponent to address the socio-economic and public hearing issues in the study area, shall be completed as per the schedule presented before the Committee and as described in the EMP report in letter and spirit. All the commitments made during public hearing shall be satisfactorily implemented.

(xvii). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

Agenda No. 24.9

Amendment in Environmental Clearance for Change the proposed active Pharmaceutical Ingredients and Mineral Salts Manufacturing with production capacity of 1710 MTPA, located at Plot No.81-A, SIPCOT Phase-I Industrial Complex, Village Zuzuvadi, Taluk Hosur, District Krishnagiri, Tamil Nadu by M/s Quest Healthcare Private Limited - Amendment in Environmental Clearance.

[Proposal No. IA/TN/IND3/211083/2021; File No. J-11011/36/2013 IA II(I)]

The proposal is for Amendment in Environmental Clearance granted by Ministry vide J-11011/36/2013-IA-II (I) dated 10.07.2017 for proposed active Pharmaceutical Ingredients and Mineral Salts Manufacturing with production capacity of 1710 MTPA, located at Plot No.81-A,

SIPCOT Phase-I Industrial Complex, Village Zuzuvadi, Taluk Hosur, District Krishnagiri, Tamil Nadu by M/s Quest Healthcare Private Limited.

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

S. No.	PRODUCT	QTY	UNIT	
			As in EC	AMENDMENT REQUESTED AS
1.	Mineral Salts of Gluconate, Citrate, Lactate, Lactobionate, Fumerate, Orotate, Pidolate, Aspartate, Ascorbate, Glubionate, Etc	1500	TPM	TPA
2.	Perazindimaleate	9	TPM	TPA
3.	GlyceroPhosphates	30	TPM	TPA
4.	Carbasalate Calcium	9	TPM	TPA
5.	Iron Sucrose	36	TPM	TPA
6.	TMS (Tiemonium Methyl Sulphate)	18	TPM	TPA
7.	Alendronate Sodium	15	TPM	TPA
8.	Beta Glycero Phosphate	11.9	TPM	TPA
9.	Phenrocoumon	3	TPM	TPA
10.	Strontium Ranelate	6	TPM	TPA
11.	Calcium D Saccarate	18	TPM	TPA
12.	Calcium Dobesylate	15	TPM	TPA
13.	Ethamslate	6	TPM	TPA
14.	Benfotiaine	18	TPM	TPA
15.	Tolperisone HCL	9	TPM	TPA
16.	Dobutamine HCL	6	TPM	TPA
17.	Calcium Folinate	0.1	TPM	TPA
TOTAL		**1710**	**TPM**	**TPA**

S. No.	EC condition	Amendment sought by PP	Remarks
1.	POINT No 4.0	TPA (Tonne per Annum)	Unit of Production to be Changed from TPM to TPA
2. .	POINT No 2.0	Proposed API and mineral salt manufacturing (Total Capacity -40 MTPA)	Proposed API and mineral salt manufacturing (Total Capacity - 1710 MTPA)

Deliberations in the EAC:

The EAC requested to show the changes requested by PP in the comparative tabular form but PP failed to do so. The EAC also noted that there may be change in the production capacity after converting the unit from TPM to TPA. The Committee asked to show the details of products mentioned in Form-1, PFR, EIA/EMP, Various deliberations of the EAC meetings and other Reports which were submitted by the PP to the EAC/Ministry while obtaining the EC.

In this context, PP did not provide the detail and even consultant is unable to explain the details.

The EAC also sought the compliance status of the earlier EC granted by the Ministry in 2017 and the compliance reports submitted to the IRO, MoEFCC Chennai but the same was also not shown by PP/Consultant. The Committee advised to submit the certified compliance report of earlier EC to assess the action taken by PP for compliance of the environmental conditions.

The Committee after, detailed deliberation, **returned** the proposal in its present form for submission of revised application with all the details as deliberated above.

Agenda No. 24.10

Setting up of Insecticides (Veterinary Animal Health & Household Use, located at Plot No. 300, Village Indrad, Taluka Kadi, Distict Mehsana, Gujarat by M/s Synergia Sciences Pvt. Ltd –Reconsideration of Amendment in Environmental Clearance

[Proposal No. IA/GJ/IND3/222368/2021; File No. IA-J-11011/197/2019-IA-II(I)]

The proposal was earlier considered in the 18th EAC meeting held on 5-6th October, 2021, wherein EAC deferred the proposal and desired for certain requisite information/inputs. Information desired by the EAC and response submitted by the project proponent is as under:

The proposal is for amendment in the Environmental Clearance granted by the Ministry vide letter F.No. IA-J-11011/197/2019-IA II(I) dated 01/12/2020 for the project for manufacturing of various Insecticides for veterinary animal health & household use (757.2 TPA) located at Plot No. 18, Survey No. 300, Village Indrad, Taluka Kadi, District Mehsana, Gujarat in favour of M/s Synergia Sciences Pvt. Ltd.

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

S. No.	Reference of EC issued by MoEF&CC	Details as per the EC	To be revised / read as	Justification / Reasons
1.	Specific Condition A (ii) at Page 2 of 7	As already committed by the project proponent, zero liquid discharge shall be ensured and no waste/treated water shall be discharge outside the premises. Treated effluent shall be reused in the process/ utilities. Treated industrial effluent shall not be used for	During initial phase of the project till the high concentration effluent from process with ETP-RO Reject reaches 15.0 KLD, it will be sent for Common Spray Drying at Chhatral Enviro Management	It is not technically/ environmentally feasible and economically viable to achieve zero liquid discharge within plant premise during initial phase till the effluent quantity reaches 15 KLD. Energy requirement and thus the environmental impact will be less for disposal of effluent at Common Spray Drying

		gardening/greenbelt development/ horticulture.	System Pvt. Ltd. (CEMSPL). As the project gradually advances and high concentration effluent from process with ETP-RO Reject generation increases beyond 15 KLD, unit will switch over to in-house MEE treatment system and will achieve Zero Liquid Discharge.	CEMSPL as compared to captive in-hose MEE. Summary of Energy Requirement & Environmental Impact is given in subsequent slide. Unit operating cost for spray drying is more economical compared to treatment in in-house system for the lower quantity of effluent. Summary of techno-economic feasibility and detailed evaluation of CAPEX and OPEX of effluent treatment prepared by M/s. Projectplus Consultants LLP. Membership certificate of CEMPSL and CTE and CC&A of CEMPSL from Gujarat Pollution Control Board (GPCB)

Deliberations in the EAC:

The EAC deliberated on the compliance status of the earlier EC granted by Ministry in 2020 and as per the details shown through the KML file, it was observed by the Committee that Green Belt development plan has been poorly implemented by the Project Proponent. The Committee showed strong displeasure to the casual nature of the PP and advised PP to submit first compliance status of the EC conditions and action taken report to check whether the compliance of the EC has been taken care by the PP or not.

The EAC also advised that the compliance of EC conditions should be the ultimate goal for prevention of pollution related accident and to check the environmental degradation due to non-compliance.

The EAC is of the view that the IRO, MoEFCC may be requested to first visit the project site and submit the certified compliance status of earlier EC conditions granted to the project, afterwards the EAC may deliberate the proposal. The Committee after, detailed deliberation, **returned** the proposal in its present form for doing the needful.

Agenda No. 24.11

Manufacturing of Chlor Alkali with production capacity of Chlorine @ 3000 KTA, Sodium Hydroxide @ 3500 KTA, Ammonia @ 6000 KTA and Urea @ 3900 KTA by M/s Reliance Industries Limited, located at Jamnagar, PO Reliance Greens, Sub-Post Ofiice, Motikhavdi, District-Jamnagar, Gujarat– Consideration of TOR

[Proposal No. IA/GJ/IND3/239010/2021; File No. IA-J-11011/351/2018-IA-II(I)]

The project proponent and their accredited Consultant M/s National Environmental Engineering Research Institute, Nagpur with Accreditation number NABET/EIA/2124/RA0227 valid till 21.7.2024 made a detailed presentation on the salient features of the project and informed that:

The proposal is for Terms of Reference to the project for Manufacturing of Chlor Alkali with production capacity of Chlorine @ 3000 KTA, Sodium Hydroxide @ 3500 KTA, Ammonia @ 6000 KTA and Urea @ 3900 KTA, located at Jamnagar, PO Reliance Greens, Sub-Post Ofiice, Motikhavdi, Dist. Jamnagar, Gujarat by M/s Reliance Industries Limited.

The details of products and capacity are as under:

S. No	Product Details	Existing Quantity	Proposed Quantity	Total Quantity
1	Chlorine	Nil	3,000 KTA	3,000 KTA
2	NaOH	Nil	3,500 KTA	3,500 KTA
3	Ammonia	Nil	6,000 KTA	6,000 KTA
4	Urea	Nil	3,900 KTA	3,900 KTA

The PP informed that M/s Reliance Industries Limited's (RIL) Jamnagar Manufacturing Division (JMD) shall boost India's development and prosperity objectives. The following strategies have been adopted to attain the aforesaid objectives:

- Upgrade advantage Jamnagar feeds, via molecule management, to value-added petrochemicals and thereby reduce India's high chemical imports.
- Employ disruptive technology innovation to minimize the cost of chemicals to ensure global competitiveness
- Supply competitive chemicals for labour-intensive secondary and tertiary processing sectors to boost India's employment potential
- Usher in future-forward digitization technology for "Smart Manufacturing"
- Leverage existing assets to cost-efficiently transform Jamnagar for crude-to-chemical mission
- Ensure responsible, circular use of chemicals to eliminate the scourge of plastic waste.

The proposed crude-to-chemical mission leverages the following advantage feeds for

competitive chemicals:

- Reroute petcoke gasification derived syngas + CO from fuel to C1 chemicals
- Upgrade refinery streams, to olefins based C2 + C3 chemicals.
- Value add C6 - C11 streams to aromatics-based chemicals
- Production of Nitrogenous fertilizer utilizing available hydrogen and CO2 from Gasifiers
- Recovery of Vanadium and Nickel for Battery manufacture to support indigenous Renewable Energy sourcing
- Create infrastructure for seawater desalination, captive power generation etc. for supporting the development. The ultimate goal of the crude-to-chemical mission is to maximize value.

The projects under Chlor Alkali industry and Chemical Fertilizer industry are proposed to be setup as interlinked projects within the refinery and petrochemical complex of RIL at Jamnagar. The PP reported that above project applied for ToR to the Industry 3 Sector Committee are interlinked to the other projects proposed in the Jamnagar complex. The linkage between the projects will be by inter dependence for supply of power, water, raw materials and supply of products to other manufacturing units within the complex. The proposed expansion of existing refinery and petrochemical complex comprises of units in the following other sectors covering the scope of the project:

- 1(d)Thermal Power, [Thermal Sector]
- 3(a)Metallurgical Industries [Ind – I Sector]
- 4(a) Petroleum Refining, [Ind-II Sector]
- 5(c) Petrochemical complexes, [Ind-II Sector]

The project comes under Item listed at S.N. 4(d) and 5(a) of Schedule of Environment Impact Assessment (EIA) Notification under category 'A' and requires appraisal at Central Level by Expert Appraisal Committee (EAC).

The PP reported the total existing land area is 7100 ha, additional 19.5 ha land will be used for proposed chlor-alkali and fertilizers plants. Industry will develop greenbelt in an area of 33 % i.e. 6.4 ha out of total area of the project. The total estimated integrated project cost is Rs. 70,000 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 3,500 Crore and the Recurring cost (operation and maintenance) will be about Rs. 35 Crore per annum. Total Employment will be 150 persons as direct & 500 persons indirect after expansion.

The PP reported that there is 1 Marine National Parks, located within 10 km distance from the project site. Pannadam water body is located at a distance of 2.75 km in Eastern direction. Total water requirement will be 2,500 m^3/ hour of which fresh water requirement of m3/day, which will be met from seawater desalination of 25,000 m^3/hour capacity proposed to be set up as part of this project.

The PP reported that Power requirement after expansion will be 160 MW for these units including existing KVA and will be met from State power distribution corporation limited (…SPDCL) proposed captive power plant of 3000 MW, which is proposed to be set up as a part of the overall project.

The PP reported that Inventory of emissions from proposed production processes will be available post detailed design, which will take into account the prescribed norms for relevant parameters. The design will ensure that the process emissions will comply with the stipulated limits.

The PP reported that Municipal Solid Waste (MSW) will be generated to the extent of 25 T/month during construction phase and less than 5 T/month during operation phase, which will be handled as per applicable norms / regulations. Hazardous wastes like Used oil, spent catalyst and oil-contaminated rags generated from the Chlor Alkali unit, Ammonia and Urea plant will be disposed as per Hazardous Waste Rules 2016. Quantification of waste generated will be available after detailed design of all the units.

Deliberations on the EDS Reply:

The Ministry sought certain requisite information/inputs dated 24.11.2021. The Information desired by the Ministry and response submitted by the project proponent is as under:

S. No.	Queries Raised by Ministry through EDS	Reply by PP vide letter dated 13.01.2022
1.	On perusal it is observed that Form-1 filled without adequate technical and scientific details. In Many places in Form -1 Annexures are quoted and mentioned that "Refer PFR". It is informed that the whole process is online on Parivesh portal therefore the gist of answers with justification in the Form 1 needs to be revised and uploaded. Form 1/PFR shall be filled in line with the EIA Notification, 2006 providing all the scientific/technical details This needs to be corrected and details needs to be filled.	In response to the EDS, Form-I was revised and the updated PFR was uploaded on Parivesh portal.
2.	This is existing project. The proposed Project is also not clear. What PP want to do? Please explain in the detail.	The proposed projects are for establishing Chlor Alkali unit and Chemical fertilizer units to manufacture Ammonia and Urea. They are new projects in the RIL JMD complex. However, they are interlinked to the overall expansion of the Jamnagar complex as detailed during the ToR meeting and are categorized under 4(d) and 5(a) respectively which fall under the purview of Industry III.

		The capacities of the proposed projects are: 1. Chlorine - 3000 KTA, 2. NaOH - 3500 KTA, 3. Ammonia - 6000 KTA, 4. Urea - 3900 KTA
3.	Please confirm whether the land used for this proposed project is part of existing refinery or not. Details of status of land needs to be submitted.	The land for the proposed projects (Chlor Alkali - 11.6 Ha & Chemical Fertilizers - 7.9 Ha) is already in RIL's possession. The land is earmarked for industrial use.
4.	Details of interlinked projects and their application status in the various sector needs to be submitted.	The above projects applied for ToR to Industry III committee are interlinked to the other projects proposed for expansion of the Jamnagar complex. The linkage between the projects will be by interdependence for supply of power, water, raw materials and supply of products to other manufacturing units within the complex. The proposed expansion of existing refinery and petrochemical complex comprises of units in the following other sectors: i.4(a) Petroleum Refining, [Ind-II] ii.5(c) Petrochemical complexes, [Ind-II] iii.1(d)Thermal Power, [Thermal] iv.3(a)Metallurgical Industries [Ind - I] Applications have been filed to all the sectors covering the scope of the expansion.
5.	KML/SHP file along with maps needs to be submitted.	The kml file in response to this query has been uploaded in the portal.
6.	The details of products need to be submitted in tabular form showing its details of EC/CTO vis-à-vis production capacity to check the violation, if any. All old CTEs/CTOs/ HW Authorization to be uploaded to verify the violation, if any.	The proposed projects that have been applied for ToR are new projects to be established. The term "expansion" refers to the overall expansion of the Jamnagar complex as listed in # (iv) above. There are presently no units that manufacture these products and accordingly there is no CTE/CTO/HW Authorization that have these products listed under it.
7.	Details of court cases and SCN issued by the SPCB in last 2 years, if any, needs to be submitted.	There are no ongoing court cases against the RIL Jamnagar complex. GPCB has not issued show-cause notices during the last 2 years.
8.	Details of proposed water treatment facilities and waste management	**Water Treatment facilities:** Seawater desalination facilities are

	needs to be spell out.	proposed to be setup for the overall expansion project and ~2,500 m3/h of desalinated water will be used for the proposed projects. **Waste management:** The proposed plants are expected to mainly generate used oil, spent catalyst and oil-contaminated rags as Hazardous Waste. Wastes will be collected / treated/ stored, if required, and disposed as per the requirements prescribed in HOW(M&TM) Rules 2016. As is the present practice, it will be endeavored to recycle / reuse / co-process the wastes to the maximum extent possible.
9.	It is mentioned that the processing of EC proposal, in the Ministry, is through Parivesh Portal only, therefore providing the requisite information/documents shall be in compliance as per Form and accordingly the PP are kindly requested to revise the application in the Form and resubmit the same.	Noted and the necessary updating has been carried out as above.

Deliberations in the EAC:

The EAC, constituted under the provision of the EIA Notification, 2006 comprising Experts Members/domain experts in various fields, examined the proposal submitted by the Project Proponent in the desired format along with Form-I & PFR reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

The EAC noted that the Project Proponent has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the Form-I & PFR reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and TOR given, if any, will be revoked at the risk and cost of the project proponent.

The EAC deliberated on the proposal. The Committee deliberated water recycling plan, green belt development plan and other uses of other pollution control devises for mitigation of air, water and noise pollution. Based on the KML file presented by the PP, the proposed Unit is green filed project.

It was informed to the EAC that the Ministry sought certain EDS on Parivesh Portal and during deliberation the Form-I and PFR was seen by the EAC and noted that EDS is not visible in the Parivesh portal. The EAC is of the view that since the whole process is online on Parivesh

portal therefore the PP shall upload the EDS reply on Parivesh Portal. PP has emailed the EDS reply to the EAC and after detailed deliberations, reply found to be satisfactory.

The Committee, after detailed deliberations, **recommended** for issuing **Standard ToR [Annexure-I]** **subject to uploading the EDS reply on Parivesh portal**, in addition to the **additional ToR with public hearing**, as per the provision of the EIA Notification, 2006, as the project site is not located in the notified industrial area :

1. SPECIFIC TERMS OF REFERENCE FOR EIA STUDIES FOR CHEMICAL FERTILIZER

(i) Details on requirement of energy and water alongwith its source and authorization from the concerned department.

(ii) Energy conservation in ammonia synthesis for urea production and comparison with best technology.

(iii) Details of ammonia storage and risk assessment thereof.

(iv) Measures for control of urea dust emissions from prilling tower.

(v) Measures for reduction of fresh water requirement.

(vi) Details of proposed source-specific pollution control schemes and equipments to meet the national standards for fertilizer.

(vii) Details of fluorine recovery system in case of phosphoric acid plants and SSP to recover fluorine as hydrofluorosilicicacid (H_2SiF_6) and its uses.

(viii) Management plan for solid/hazardous waste including storage, utilization and disposal of bye products viz., chalk, spent catalyst, hydro fluoro silicic acid and phosphor gypsum, sulphur muck, *etc*.

(ix) Details on existing ambient air quality for PM10, PM2.5, Urea dust*, NH_3*, SO_2*, NOx*,HF*,F*,Hydrocarbon (Methane and Non-Methane) *etc*., and expected, stack and fugitive emissions and evaluation of the adequacy of the proposed pollution control devices to meet standards for point sources and to meet AAQ standards.(*as applicable)

(x) Details on water quality parameters in and around study area such as pH, Total Kjeldhal Nitrogen, Free Ammonical Nitrogen, free ammonia, Cyanide, Vanadium, Arsenic, Suspended Solids, Oil and Grease, *Cr as Cr^{+6}, *Total Chromium, Fluoride, *etc*.

2. SPECIFIC TERMS OF REFERENCE FOR EIA STUDIES FOR CHLOR ALKALI INDUSTRIES

(i). Details on demand of the product – chlorine and its associated products.

(ii). Details on raw materials used in the production of chlorine (sodium chloride, potassium chloride, *etc*.), its storage and handling.

(iii). Details of proposed source-specific pollution control schemes (salt washing, filtration, cell ventilation as, chlorine handling and safety, *etc*.) and equipments to meet the national standards.

(iv). Detailed effluent treatment scheme including ssegregation for units adopting 'Zero' liquid discharge.

(v). Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.

(vi). Details on products to rage and handling–chlorine, caustic soda, *etc*.

(vii). Details on tail gas treatment.

(viii). Details on requirement of energy and water alongwith its source and authorization from the concerned department.

(ix). Incase of modernization of existing mercury based chlor-alkali plants with membrane cell Process (MBCP) industries or new unit in the existing industry premises, remediation measures adopted to restore the environmental quality of the ground water, soil, crop, air, etc., are affected due to salinity and a detailed compliance to the prior environmental clearance/ consent conditions.

(x). Details on ground water quality and surface water quality of near by water sources and other surface drains. The parameters of water quality may include Residual chlorine*, TDS*, alkalinity*, pH* &Mercury* (in water & sediment), etc. (*- As applicable)

(xi). Details on existing ambient air quality and expected, emissions for PM10, PM2.5, SO2*, NOx*,CO2*, CO*, Chlorine*, acid mist* etc., and evaluation of the adequacy of the proposed pollution control devices to meet standards for point sources and to meet AAQ standards. (*-As applicable))

(xii). Specific programme to monitor safety and health protection of workers.

(xiii). Risk assessment using advanced/latest models should also include leakages and location near to caustic soda plant & proposed measures for risk reduction

(xiv). Details of the emergency preparedness plan for chlorine/ Hydrogen storage, handling and transportation and on- site and off- site disaster management plan.

Agenda No. 24.12

Setting up of Active Pharmaceutical Ingredients (APIs) and API Intermediates Manufacturing Unit along with R&D facility of production capacity of 1501.8 TPA, Located at Plot Nos. 315 & 316, Sy. No(s). 438, 439 & 440 in Kadechur & Badiyal Industrial Area comprised in Kadechur, Yadgir Taluk &Yadgir District, Karnataka by M/s. Astragen Laboratories Private Limited – Consideration of TOR-regarding.

[Proposal No. IA/KA/IND3/249394/2022; File No IA-J-11011/3/2022-IA-II(I)]

The proposal for the grant of Terms of References (TOR) for Setting up of Active Pharmaceutical Ingredients (APIs) and API Intermediates Manufacturing Unit along with R&D facility, Located at Plot Nos. 315 & 316, Sy. No(s). 438, 439 & 440 in Kadechur&Badiyal Industrial Area comprised in Kadechur, Yadgir Taluk &Yadgir District, Karnataka by M/s. Astragen Laboratories Private Limited was presented before 24th EAC on 13.01.2022.

The Project Proponent and the **accredited Consultant M/s. KKB Envirocare Consultants**

Pvt. Ltd., Hyderabad made a detailed presentation on the salient features of the project and informed that:

The proposal is for grant of Terms of References (TOR) to the project for Setting up of Active Pharmaceutical Ingredients (APIs) and API Intermediates Manufacturing Unit along with R&D facility, Located at Plot Nos. 315 & 316, Sy. No(s). 438, 439 & 440 in Kadechur&Badiyal Industrial Area comprised in Kadechur, Yadgir Taluk &Yadgir District, Karnataka by M/s. Astragen Laboratories Private Limited

The details of products and capacity as under,

S. No.	Product List	Production Quantity	
		TPM	TPA
1	Solifenacin Succinate	1.00	12.00
2	Aprepitant	1.00	12.00
3	Lamotrigine	1.00	12.00
4	Dexlansoprazole	3.00	36.00
5	Amlodipine Besylate	20.00	240.00
6	ClopidogrelHydrogensulfate	10.00	120.00
7	Olanzapine	5.00	60.00
8	Montelukast Sodium	10.00	120.00
9	Valsartan	5.00	60.00
10	Biperiden Hydrochloride	1.00	12.00
11	Esomeprazole Magnesium Trihydrate	10.00	120.00
12	Capecitabine	3.00	36.00
13	Duloxetine Hydrochloride	5.00	60.00
14	Darunavir	1.00	12.00
15	Carisoprodol	1.00	12.00
16	Erlotinib Hydrochloride	0.50	6.00
17	Lansoprazole	3.00	36.00
18	Letrozole	1.00	12.00
19	Pazopanib Hydrochloride	0.50	6.00
20	Oseltamivir Phosphate	2.00	24.00
21	Valacyclovir Hydrochloride	1.00	12.00
22	Famciclovir	1.00	12.00
23	Omeprazole	20.00	240.00
24	Fluconazole	10.00	120.00
25	Itraconazole	15.00	180.00
26	Telmisartan	10.00	120.00
27	Lopinavir	2.00	24.00
28	Fenofibrate	1.00	12.00
29	Glimepiride	1.00	12.00
30	ImatinibMesylate	2.00	24.00
31	Ranolazine	2.00	24.00
32	Ritonavir	2.00	24.00
33	Vildagliptin	3.00	36.00
34	Temozolomide	1.00	12.00
35	Olmesartan	5.00	60.00
36	Lacosamide	2.00	24.00
37	Nebivolol Hydrochloride	1.00	12.00
38	Moxifloxacin Hydrochloride	5.00	60.00
39	SorafenibTosylate	2.00	24.00
40	Rabeprazole Sodium	5.00	60.00
41	Tadalafil	1.00	12.00
42	Palbociclib	0.50	6.00
43	Dasatinib	0.50	6.00

S. No.	Product List	Production Quantity	
		TPM	TPA
44	FosaprepitantDimeglumine	1.00	12.00
45	Voriconazole	1.00	12.00
46	Irbesartan	3.00	36.00
47	Tamsulosin Hydrochloride	2.00	24.00
48	Luliconazole	2.00	24.00
49	Axitinib	1.00	12.00
50	OsimertinibMesylate	0.50	6.00
51	Citicoline Sodium	1.00	12.00
52	Tranexamic Acid	5.00	60.00
53	Levosulpiride	5.00	60.00
54	Fosinopril Sodium	1.00	12.00
55	Amisulpride	5.00	60.00
Total production capacity from any 6 APIs		**85**	**1020**
56	Ethyl-4-[2-(1,3-Dioxo-1,3-dihydro-2H-isoindol-2-yl)-ethoxy]-3-oxobutanoate	10.00	120.00
57	MontelukastDicyclohexylamine	5.00	60.00
58	4-[2-(2,4-Difluoro-phenyl)oxiranylmethyl]-4H-[1,2,4]triazole	10.00	120.00
59	1-[2-(2,4-Dichloro-phenyl)-4-ethyl-[1,3]dioxolan -2-ylmet hyl]-1H-[1,2,4]triazole	15.00	180.00
60	4-Amino-2-methyl-10H-thieno [2,3-b] [1,5] benzodiazepine hydrochloride	2.50	30.00
61	(R)-2-amino-N-benzyl-3-methoxypropanamide	1.00	12.00
62	2-[4-(3-Methoxy-propoxy)-3-methylpyridin-2-ylmethanes ulfinyl]1H-benzoimidazole	5.00	60.00
63	2-[4-[[7-methyl-5-(1-methylbenzimidazol-2-yl)-2-propylbenzimidazol-1-yl]methyl]phenyl]benzoic acid	5.00	60.00
64	4-(2-(N-Methyl Carbamoyl)-4-pyrodyloxy)aniline	1.00	12.00
65	Methyl-N-Valeryl-N-[(2-Cyano biphenyl-4- yl) methyl]-L-valinate	2.50	30.00
Total production capacity from any 4 API Intermediates		**40**	**480**

S. No.	Product List	Production Quantity	
		TPM	TPA
66	R&D Products	0.15	1.80
Total Production Capacity (6 APIs and 4 API Intermediates along with R&D at a point of time)		**125.15**	**1501.8**

List of By-Products

S. No.	Name of By-product	Quantity (kg/day)	Product from which this is generated	End use
1	Stannic Chloride	873.95	1. Olanzapine 2. 4-Amino-2-methyl-10H-thieno [2,3-b] [1,5] benzodiazepine hydrochloride	Reuse / sale
2	Alpha Pinene	412.4	1. Montelukast Sodium 2. MontelukastDicyclohexylamine	

All Synthetic Organic Chemicals Industry (bulk drug and intermediates excluding drug formulations) are listed at S.N. 5 (f) of Schedule of Environment Impact Assessment (EIA) Notification and located in Notified Industrial Estate are under Category – A as per EIA Notification 2006, amended till date, however, the Plant Site is located at a distance of 3.5 km (SE) to interstate boundary i.e. Karnataka & Telangana states and general condition being applicable and hence considered as category 'A' and requires appraisal at Central Level by Expert Appraisal Committee (EAC).

The PP reported that the Unit Proposed land area is 4.0470 Ha (40470 m^2). Industry will develop greenbelt in an area of 1.34 Ha (33%) out of 4.047 Ha out of total area of the project. The estimated project cost is Rs. 49.5 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs 5.6 Crores and the Recurring cost (operation and maintenance) will be about Rs.5 Crores per annum. Total Employment will be 100 nos. 60 persons as direct and 40 persons as indirect. Industry proposes to allocate Rs. 99 lakhs towards CER.

The PP reported that there are No National parks, Wildlife Sanctuaries/ Eco sensitive areas, Biosphere Reserves, Tiger / Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Water bodies viz., Bheema River – 8.44 km (WSW); Ponds near Kadechur - 2.07 km (E) & 4 km (ESE); Pond near Sowrashtrahalli – 3.53 km (ENE); Pond near Rachanhalli – 2.23 km (NNW); Pond near Balched – 3.6 km (NNE); Canal (Seasonal) – 0.55 km (SE); Canal near Rachanhalli – 1.56 km (NW); Hindupur vagu – 7.08 km (SSE).

The PP reported that total water requirement is 386.5 KLD KLD will be met from Karnataka Industrial Area Development Board (KIADB) supply. Effluent of 264.4 KLD, which will be segregated into HTDS/HCOD & LTDS/LCOD and collected by gravity into a collection tank separately. These individual effluents will be pumped to the above ground level RCC lined tanks for storage and neutralization then sent to CETP

Power requirement will be 1000 KVA (CMD) will be met from Karnataka State Power Distribution Corporation Limited (KSPDCL). Proposed DG sets of 320 KVA & 500 KVA. DG sets are used as standby during power failure.

Proposed 3 TPH and 5 TPH Coal fired boilers will be used for steam requirement. About 32 TPD coal will be used in the boilers. Proposed 1 lakh Kcal/hr Furnace oil fired Thermic Fluid Heater (TFH). About 10 lph of Furnace oil will be used in the TFH. Multi-cyclone separator followed by Bag filter will be installed for 3 & 5 TPH boilers to control the particulate (PM) emissions within statutory limit of 115 mg/$Nm^{3.}$ To facilitate wider dispersion of pollutants, 30m height stack for 3 & 5 TPH boilers will be installed.

Deliberations by the EAC:

The EAC, constituted under the provision of the EIA Notification, 2006 comprising Experts Members/domain experts in various fields, examined the proposal submitted by the Project Proponent in the desired format along with Form-I & PFR reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

The EAC noted that the Project Proponent has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the Form-I & PFR reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and TOR given, if any, will be revoked at the risk and cost of the project proponent.

It was informed to the EAC that the PP is requested to use the baseline data for some other Unit (namely M/s. Bheema Fine Chemicals Pvt. Ltd.), accordingly the proposal is placed before the EAC. The Committee deliberated the issues and noted that since the distance of the monitored data is 720 m (SE) to the proposed project site, PP may utilize the Baseline data collected for the unit during the period December 2020 – Feb 2021 (Winter Season). However, the Consultant shall also monitor one month more data in Feb 2022 to validate the existing data and accordingly prepare EIA/EMP Report.

The EAC also noted that the Ministry has granted EC on 14.10.2016 for the industrial estate. The Committee deliberated on the water recycling plan, existing green belt development plan and other uses of other pollution control devises for mitigation of air, water and noise pollution and suggested that Consultant shall prepare the EIA/EMP Report as per provisions of the EIA Notification, 2006. .

The Committee after detailed deliberations recommended for issuing **Standard ToR [Annexure-I]** in addition to the **additional ToR** with exemption from public hearing as the project site is in the notified industrial area:

(i) Action plan for utilization of modern technologies for capturing carbon emitted and developing carbon sink/carbon sequestration resources.

(ii) Detailed description of micro flora and fauna (terrestrial and aquatic) existing in the study area with special reference to rare, endemic and endangered species.

(iii) Explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.

(iv) Compliance of greenbelt development. Trees have to be planted with spacing of 2m x 2m and 2500 number of trees per hectare have to be calculated accordingly.

(v) Adequate Solvent recovery/solvent management plan

(vi) Adequate Volatile organic compounds (VOCs)/Fugitive emissions control plan.

The meeting ended with thanks to the Chair.

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Annexure-I

Standard TOR

A. STANDARD TERMS OF REFERENCE

1) **Executive Summary**
2) **Introduction**
   i. Details of the EIA Consultant including NABET accreditation
   ii. Information about the project proponent
   iii. Importance and benefits of the project

3) **Project Description**
   i. Cost of project and time of completion.
   ii. Products with capacities for the proposed project.
   iii. If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.
   iv. Details of existing products and production, if any, along with present product/production details in tabular format, to verify the compliance of the EIA Notifications.
   v. List of raw materials required and their source along with mode of transportation.
   vi. Other chemicals and materials required with quantities and storage capacities
   vii. Details of Emission, effluents, hazardous waste generation and their management.
   viii. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract)
   ix. Details of boiler/gensets (including stacks/exhausts) and fuels to be used
   x. Process description along with major equipment's and machineries, process flow sheet (quantitative) from raw materials to products to be provided
   xi. Hazard identification and details of proposed safety systems.
   xii. Expansion/modernization proposals:
      a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Integrated Regional Office of the Ministry of Environment, Forest and Climate Change as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, copy of the latest CTO and status of compliance of Consent to Operate for the ongoing/existing operation of the project from SPCB shall be attached with the EIA-EMP report.
      b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.

4) Site Details

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

5) <u>Forest, wildlife and CRZ related issues (if applicable):</u>

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

vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife
vii. Recommendations and NOC from the concerned State/UT Coastal Zone Management Authority on CRZ angle

6) Environmental Status

i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
   - AAQ data (except monsoon) at 8 locations for PM10, PM2.5, SO2, NOX, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Study should indicate minimum, maximum value of different parameters for the period (3 months) collected. Collected data should be supported by the reference data of either CPCB or SPCB. AAQ data & GLC of pollutants from stack emissions should suggest technology/ measures- Best Practiced Technology (BPT) indicating best achieved results.

ii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
iii. Surface water quality of nearby River (100m upstream and downstream of discharge point) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.
iv. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC, if yes give details.
v. Ground water monitoring at minimum at 8 locations shall be included.
vi. Noise levels monitoring at 8 locations within the study area.
vii. Soil Characteristic as per CPCB guidelines.
viii. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
ix. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
x. Socio-economic status of the study area.

7) Environment Impact and Environment Management Plan

i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.

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

8) Occupational health

i. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers
ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre-placement and periodical examinations give the details of the same. Details regarding last month analyzed data of above mentioned parameters as per age, sex, duration of exposure and department wise.
iii. Details of existing Occupational & Safety Hazards. What are the exposure levels of hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,

iv. Annual report of health status of workers with special reference to Occupational Health and Safety.

9) Corporate Environment Policy

i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
iv. Does the company have system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report
v. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.

10) Corporate Environmental Responsibility (CER)

i. Adequate funds, as per the Ministry's OM/Guidelines, shall be earmarked towards the Corporate Environmental Responsibility based on Public Hearing issues/socio-economic issues and item-wise details along with time bound action plan shall be included (CER activities shall be related to environment). Socio-economic development activities need to be elaborated upon. For the projects where public hearing is not conducted, CER plan shall be provided based on socio-economic study of the area.

10) Additional studies/Measures to be considered

(i). Provide latest and ecofriendly technology for product manufacturing.
(ii). Emphasize on Green chemistry/Clean Manufacturing
(iii). Provide CAS No. of products along with product list.
(iv). Provide details of amount of carbon sequestered in their unit through greenbelt/other modes, in case of expansion project.
(v). Life structure and sustainability for carbon and water foot print.
(vi). Detailed pollution Load estimation.
(vii). Transportation of Hazardous substance, effluents etc shall be carriedout through authorized and GPS enable vehicles/Trucks only.
(viii). Category of Hazardous Wastes shall be mentioned in the EIA/EMP report and in presentation.
(ix). Details of greenhouse gases and emissions shall be provided.
(x). Greenbelt shall be developed in the first year of the project and wind breaks shall be erected.
(xi). Study area map shall be overlapped with all the associated features.
(xii). Emphasize on green fuels.
(xiii). The project from NCR shall not use Coal as fuel. Further, PP shall avoid use of Coal in the CPAs and elsewhere also if alternatives are available.

(xiv). Provide the Cost-Benefit analysis with respect to the environment due to the project.

11) Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.

12) A tabular chart with index for point wise compliance of above TORs and its details needs to be submitted in the EIA/EMP Report.

B. SPECIFIC TERMS OF REFERENCE FOR EIA STUDIES FOR 5(f) CATOGORY SYNTHETIC ORGANIC CHEMICALS INDUSTRY (DYES & DYE INTERMEDIATES; BULK DRUGS AND INTERMEDIATES EXCLUDING DRUG FORMULATIONS; SYNTHETIC RUBBERS; BASIC ORGANIC CHEMICALS, OTHER SYNTHETIC ORGANIC CHEMICALS AND CHEMICAL INTERMEDIATES)

1. Details on solvents to be used, measures for solvent recovery and for emissions control.
2. Details of process emissions from the proposed unit and its arrangement to control.
3. Ambient air quality data should include VOC, other process-specific pollutants* like NH_3*,chlorine*,HCl*,HBr*,H_2S*,HF*,*etc*.,(*-as applicable)
4. Work zone monitoring arrangements for hazardous chemicals.
5. Detailed effluent treatment scheme including segregation of effluent streams for units adopting 'Zero' liquid discharge.
6. Action plan for odour control to be submitted.
7. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they co-process organic solid/hazardous waste generated.
8. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
9. Action plan for utilization of MEE/dryers salts.
10. Material Safety Data Sheet for all the Chemicals are being used/will be used.
11. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
12. Details of incinerator if to be installed.
13. Risk assessment for storage and handling of hazardous chemicals/solvents. Action plan for handling & safety system to be incorporated.
14. Arrangements for ensuring health and safety of workers engaged in handling of toxic materials.

C. SPECIFIC TERMS OF REFERENCE FOR EIA STUDIES FOR CHEMICAL FERTILIZER

1. Details on requirement of energy and water alongwith its source and authorization from the concerned department.
2. Energy conservation in ammonia synthesis for urea production and comparison with best technology.
3. Details of ammonia storage and risk assessment thereof.
4. Measures for control of urea dust emissions from prilling tower.
5. Measures for reduction of fresh water requirement.
6. Details of proposed source-specific pollution control schemes and equipments to meet the national standards for fertilizer.
7. Details of fluorine recovery system in case of phosphoric acid plants and SSP to recover fluorine as hydrofluorosilicicacid (H_2SiF_6) and its uses.
8. Management plan for solid/hazardous waste including storage, utilization and disposal of bye products viz., chalk, spent catalyst, hydro fluoro silicic acid and phosphor gypsum, sulphur muck, *etc*.
9. Details on existing ambient air quality for PM10, PM2.5, Urea dust*, NH_3*, SO_2*, NOx*,HF*,F*,Hydrocarbon (Methane and Non-Methane) *etc*., and expected, stack and fugitive emissions and evaluation of the adequacy of the proposed pollution control devices to meet standards for point sources and to meet AAQ standards.(*as applicable)
10. Details on water quality parameters in and around study area such as pH, Total Kjeldhal Nitrogen, Free Ammonical Nitrogen, free ammonia, Cyanide, Vanadium, Arsenic, Suspended Solids, Oil and Grease, *Cr as Cr^{+6}, *Total Chromium, Fluoride, *etc*.

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D. SPECIFIC TERMS OF REFERENCE FOR EIA STUDIES FOR CHLOR ALKALI INDUSTRIES

1. Details on demand of the product – chlorine and its associated products.
2. Details on raw materials used in the production of chlorine (sodium chloride, potassium chloride, *etc*.), its storage and handling.
3. Details of proposed source-specific pollution control schemes (salt washing, filtration, cell ventilation as, chlorine handling and safety, *etc*.) and equipments to meet the national standards.
4. Detailed effluent treatment scheme including ssegregation for units adopting 'Zero' liquid discharge.
5. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
6. Details on products to rage and handling–chlorine, caustic soda, *etc*.
7. Details on tail gas treatment.

8. Details on requirement of energy and water alongwith its source and authorization from the concerned department.
9. Incase of modernization of existing mercury based chlor-alkali plants with membrane cell Process (MBCP) industries or new unit in the existing industry premises, remediation measures adopted to restore the environmental quality of the ground water, soil, crop, air, etc., are affected due to salinity and a detailed compliance to the prior environmental clearance/ consent conditions.
10. Details on ground water quality and surface water quality of near by water sources and other surface drains. The parameters of water quality may include Residual chlorine*, TDS*, alkalinity*, pH* &Mercury* (in water & sediment), etc. (*- As applicable)
11. Details on existing ambient air quality and expected, emissions for PM10, PM2.5, SO2*, NOx*,CO2*, CO*, Chlorine*, acid mist* etc., and evaluation of the adequacy of the proposed pollution control devices to meet standards for point sources and to meet AAQ standards. (*-As applicable))
12. Specific programme to monitor safety and health protection of workers.
13. Risk assessment using advanced/latest models should also include leakages and location near to caustic soda plant & proposed measures for risk reduction
14. Details of the emergency preparedness plan for chlorine/ Hydrogen storage, handling and transportation and on- site and off- site disaster management plan.

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ANNEXURE

GENERAL EC CONDITIONS

(i) No further expansion or modifications in the plant, other than mentioned in the EIA Notification, 2006 and its amendments, shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change/SEIAA, as applicable. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry/SEIAA, as applicable, to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.

(ii) The Project proponent shall strictly comply with the rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996, and Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016 and other rules notified under various Acts.

(iii) The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.

(iv) The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under the Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).

(v) The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. The activities shall be undertaken by involving local villages and administration. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.

(vi) The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.

(vii) A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.

(viii) The project proponent shall also upload/submit six monthly reports on Parivesh Portal on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data to the respective Integrated Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.

(ix) The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as

prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Integrated Regional Office of MoEF&CC by e-mail.

(x) The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry and at **https://parivesh.nic.in/**. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.

(xi) The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.

(xii) This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.

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Annexure-II

List of the Expert Appraisal Committee (Industry-3) members participated during Video Conferencing (VC) meeting

S. No.	Name of Members	Designation
1.	**Prof. (Dr.) A.B. Pandit** Vice Chancellor, Institute of Chemical Technology, Mumbai, Sir JC Bose Fellow, Government of India Email: ab.pandit@ictmumbai.edu.in	EAC Chairman
2.	**Dr. Ashok Kumar Saxena, IFS** Bunglow No. 38, Sector-8A, Gandhinagar, Gujarat – 382008 E-mail: ashoksaxena1159@gmail.com	Member
3.	**Prof. (Dr.) S. N.Upadhyay** Research Professor(Hon.), Department of Chemical Engineering & Technology, Indian Institute of Technology (Banaras Hindu University), Varanasi E-mail:snupadhyay.che@iitbhu.ac.in	Member
4.	**Prof. (Dr.) Vijay S. Moholkar** Professor in Department of Chemical Engineering, Block-K (Academic complex), Room No. 111, Inidia Institute of Technology Gawahati, Gawahati – 781039 E-mail: vmoholkar@iitg.ac.in	Member
5.	**Shri Santosh Gondhalkar** 'Shree' Apartment, Flat 401, Plot No. 22, Tukaram Society, Santnagar, Pune- 411009 E-mail: santoshgo@gmail.com	Member
6.	**Dr. Suresh Panwar** House No.4, Gayateri Green Society, NH 58 Bypass, Kankerkhera, Meerut, Uttar Pradesh Email-spcppri@gmail.com	Member
7.	**Shri Tukaram M Karne** "SHREYAS ORNATE" F-1, 95-Tulasibagwale Colony, Sahakarnagar-2, PUNE: 411 009, Maharashtra E-mail: tmkarne@gmail.com	Member
8.	**Prof. (Dr.) Suneet Dwivedi,** Professor in K Banerjee Centre of Atmospheric and Ocean Studies, University of Allahabad, Allahabad - 02 Uttar Pradesh E-mail:dwivedisuneet@rediffmail.com /suneetdwivedi@gmail.com	Member
9.	**Shri Sanjay Bisht** Scientist 'E', Room No. 517, Office of the Director General	Member

	of Meteorology, Indian Meteorological Department, Musam Bhawan, Lodhi Road, New Delhi -110003 E-mail: sanjay.bist@imd.gov.in	
10.	**Dr. Rakesh Kushwaha**, Sr. Scientist, Central Ground Water Authority 18/11, Jamnagar House, Mansingh Road New Delhi - 110011 E-mail ID- kushwaha-cgwb@gov.in	Member
11.	**Dr. R. B. Lal** Scientist 'E'/Additional Director Ministry of Environment, Forest and Climate Change Indira Paryavaran Bhawan, Room No. V-304, Vayu Wing, Jor Bag Road, New Delhi-110003 Telefax: 011-24695362 E-mail: rb.lal@nic.in	Member Secretary

MoEFCC		
1.	**Dr. Abhilasha S Mathuriya** Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bag Road, New Delhi-110003	Scientist D
2.	**Dr. Bhawana K Negi** Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bag Road, New Delhi-110003	Technical Officer
3.	**Mr. Ritin Raj** Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bag Road, New Delhi-110003	Research Assistant

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Annexure-III

Approval of EAC Chairman

Email **Additional Director MoEFCC Dr R B LAL**

Re: Zero Draft Minutes of the 24th EAC (Industry 3 Sector) meeting held during 12-13, January 2022 (through Video Conferencing) for comments of the EAC and approval of the Chairman Sir.

From : ab pandit <ab.pandit@ictmumbai.edu.in> Tue, Jan 18, 2022 06:34 PM

Subject : Re: Zero Draft Minutes of the 24th EAC (Industry 3 Sector) meeting held during 12-13, January 2022 (through Video Conferencing) for comments of the EAC and approval of the Chairman Sir. 1 attachment

To : Additional Director MoEFCC Dr R B LAL <rb.lal@nic.in>, ashoksaxena1159@gmail.com, snupadhyay che <snupadhyay.che@iitbhu.ac.in>, dwivedisuneet@rediffmail.com, suneetdwivedi@gmail.com, santoshgo@gmail.com, pkmishra che <pkmishra.che@itbhu.ac.in>, drpkm18@gmail.com, spcppri@gmail.com, tmkarne@gmail.com, Dinabandhu Gouda <dinabandhu.cpcb@nic.in>, Sanjay Bist <sanjay.bist@imd.gov.in>, vmoholkar@iitg.ac.in, Rakesh kushwaha <kushwaha-cgwb@gov.in>

Dear Dr. Lal,

Please find attached the signed minutes as required.

I will be available for OTP when you upload till midnight today and the whole day tomorrow,

Thanks and Warm Regards

Pandit

Approved as Above

(Prof Aniruddha B Pandit)