

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

Dated: 16.02.2023

**MINUTES OF THE 46th EXPERT APPRAISAL COMMITTEE (INDUSTRY-3 SECTOR)
MEETING HELD ON 30th & 31st January and 1st February 2023**

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

(i) Opening Remarks by the Chairman

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

(ii) Details of Agenda items by the Member Secretary

The Member Secretary apprised the Expert Appraisal Committee (EAC) about the details of Agenda items to be discussed during this meeting.

(iii) Confirmation of Minutes of the 45th Meeting of the EAC (Industry-3 Sector) held during 11th to 13th January, 2023, through VC.

The EAC noted that the final minutes of the above meeting were issued after incorporating the comments offered by the members and approved by the Chairman. The EAC confirmed the MoM with the following modifications (Agenda No. 45.8, 45.9, 45.11, 45.14) based on the request of the Project Proponents (PPs) etc.

Agenda No. 45.8

Modernization of Existing Manufacturing Unit of Dyes and Dyes Intermediates by Addition of New Plots and Redevelopment of Manufacturing Plant (For Intermediates Products) located at Shed No.: C1/2 to 4, C1B/2, Plot No.: 4 – A (Proposed New) 28 to 32, 34, 35 (Proposed New), 37 to 40, 66 (Proposed New) & 67, GIDC Pandesara, District Surat, Gujarat, India by M/s Colourtex Industries Private Limited (Unit-4) - Consideration of EC (under Para 7 (ii))

[Proposal No. IA/GJ/IND3/402063/2022; File No. IA-J-11011/476/2022-IA-II(I)]

The EAC noted that the following information submitted by the PP in the EC application was not specifically mentioned in the MoM of EAC. Hence, the same may be incorporated in the MoM/EC letter.

- (i) Installation of One Multiple Effect Evaporator (Feed capacity: 15,400 kg/hr) to upgrade effluent treatment facilities for the treatment of segregated effluent in view of the product mix

within the EC and Consent capacity on the new Plot no. 66, G.I.D.C. Pandesara, Surat, located adjacent to existing premises.

- (ii) Installation of one Spray Dryer (Feed Rate: 5500 kg/hr) for treatment of MEE concentrate & one coal fired Hot Air Generator (Capacity: 38,00,000 Kcal/hr) to supply hot air to Spray Dryer on the new Plot No. 66, G.I.D.C. Pandesara, Surat, located adjacent to existing premises.
- (iii) For inclusion of quantity of generation of MEE salt (Inorganic Salt) in Hazardous waste list, generated due to the treatment of MEE concentrate in Spray Dryer.
- (iv) Installation of 05 Nos. of Scrubbers in existing industrial plant/activities located at Shed No. C-1/2 to 4, C-1 B/2, Plot No. 28 to 32, 34,37,38,39, 40,67&66, G.I.D.C. Pandesara, Surat.

Agenda No. 45.9

Establishment of API Manufacturing Unit at Gat No. 88/2/C, 96, 97, 98/1/A/1, 98/1/A/2, 98/2, 98/3, 92/1 Watwate, Post Inchgaon, Taluk Mohol, District Solapur, Maharashtra by Yenky Multiple Nutrients Pvt. Ltd. - Amendment in Environmental Clearance

[Proposal No. IA/MH/IND3/294242/2022; File No. IA-J-11011/260/2020-IA-II(I)]

1. The PP vide e-mail dated 4.2.2023 requested the following modifications in the MoM:
2. At Point 3, Page 77 of MoM, in the table of details of amendment required, the details of Hazardous Waste Quantities (point no. 10, page no. 3 of EC) and fresh water requirement (specific condition no. 9 of EC) were not mentioned. These were mentioned in presentation and Annexure-II. The details of the same are mentioned in the below table.

S r. N o.	Para of appro ved EC	Description as per approved EC					To be Revised/Read as					Justific ation/ Reason
		No	Descri ption	C at	Qty. (MT /M)	Dispo sal Facili ty	No	Descri ption	C at	Qty. (MT /M)	Dispo sal Facili ty	
4	Point No. 10 (Haza rdous Waste Table) Page No. 3	Hazardous Waste					Hazardous Waste					Hazardo us waste quantiti es will be reduced due to reductio n in producti on capacity of couple of high capacity
		1	Proces s Residu e	2 8. 1	4.5	Will be Forwa rded to CHW TSDF	1	Proces s Residu e	2 8. 1	4.5	Will be Forwa rded to CHW TSDF	
		2	Distill ation Residu e	2 0. 3	60.0 0		2	<i>Distill ation Residu e</i>	2 0. 3	<i>45.0 0</i>		
		3	ETP sludge	3 5. 3	10.0 0		3	ETP sludge	3 5. 3	10.0 0		

		4	MEE Salt	3 5. 3	100. 00		4	<i>MEE Salt</i>	3 5. 3	<i>70.0 0</i>		product s e.g. Metformin HCl & Erythromycin Thiocyanate
		5	Spent Carbon	2 8. 3	15.0 0		5	<i>Spent Carbon</i>	2 8. 3	<i>12.0 0</i>		
		6	Discarded containers / barrels / liners	3 3. 1	100 Nos. /M	Sale to Authorized Recycler.	6	<i>Discarded containers / barrels / liners</i>	3 3. 1	<i>60 Nos. /M</i>	Sale to Authorized Recycler.	
		7	Filter Medium	3 6. 2	1.50		7	<i>Filter Medium</i>	3 6. 2	1.50		
		8	Spent / Used Oil	5. 1	0.50		8	<i>Spent / Used Oil</i>	5. 1	0.50		
5	Point (ix) of Specific conditions at Page No. 5	Total fresh water requirement shall not exceed 386.2 cum/day , proposed to be met from Bhima river. Prior permission in this regard shall be obtained from the concerned regulatory authority.					Total fresh water requirement shall not exceed 380 cum/day , proposed to be met from Bhima river. Prior permission in this regard shall be obtained from the concerned regulatory authority.					The fresh water requirement will be reduced from 386.2 cum/day to 380 m³/Day .

3. The EAC noted that the said additions are factual in nature and recommended the same.

Agenda No. 45.11

Expansion of Existing Fertilizer Plant for Manufacturing of Nano-Fertilizer, Paradeep Unit located at IFFCO Paradeep Unit, Khatta no. 29 (Plot no. 401(p)) & 44 (Plot no. 400(p)), Surinder Jakhar Nagar, Village- Musadia, PO-Paradeep, Tehsil-Kujang, District Jagatsinghpur, Odisha by M/s Indian Farmers Fertilizer Cooperative Limited (IFFCO)- Consideration of EC [Proposal No. IA/OR/IND3/410256/2022; File No. J-11011/34/1997-IA-II(I)]

1. The PP vide letter dated 8.2.2023 requested the following corrections in the MoM:

Page of Minutes	Specific Point	Information as per Minutes of Meeting	Details to be corrected	Remarks
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Page 94 of 222	Point (i)	Adequate stack height as per CPCB/SPCB guidelines shall be provided. Stack emission levels shall be stringent than the existing standards in terms of the identified critical pollutants.	Request for deletion of the conditions.	The proposed project does not involve construction of any stack for source emission. The manufacturing process of nano-fertilizer plant is a closed loop reactor vessel setup with regulated control. Hence, nano-fertilizers plant will not contribute to air emissions. No additional Stack is proposed in expansion. There shall be no gaseous emission from Nano Fertilizer Unit.
Page 94 of 222	Point (ii)	The Unit shall install Continuous Emission Monitoring System (CEMS) (as per CPCB guidelines for relevant parameters) which shall be connected with GPCB/CPCB server.		
Page 95 of 222	Point (vii)	The PP shall develop Greenbelt over an area of at least 40% (851.04 acres) of the proposed project and additional 232.04 acres of green area will be developed, by planting approx. 9,07,400 numbers of saplings within a year of grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft. The budget of Rs. 990 Lakhs earmarked for the plantation shall be kept in separate account and should be audited annually. The PP should annually submit the audited statement along with proof of activities viz.	The PP shall develop Greenbelt over an area of at least 40% (851.04 Acres) of the project by plantation in additional 232.04 Acres within the premises and outside the plant. Approx. 2,78,400 no. of saplings will be planted within a year of grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft. The budget of Rs. 1136 Lakhs earmarked for the plantation shall be kept in separate account and should be audited annually. The PP should annually submit the audited statement along with proof of activities viz.	Kindly correct the details as per information provided in uploaded EIA Report and Environment Clearance Presentation.

		photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1 st July of every year for the activities carried out during previous year.	photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1 st July of every year for the activities carried out during previous year.	
Page 97 of 222	Condition (xxv)	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 servers. 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.	Request for deletion of the condition.	As there is no stack, continuous online stack monitoring system may please be considered for removal.

2. The EAC noted that the above modification is factual in nature and recommended the same. The EAC also recommended the following additional conditions:
- i. Proper Ventilation with adequate air change cycle shall be made for healthy working environment for the workers. Work Zone monitoring should be done for VOC.
 - ii. The Plastic Waste Management (Amendment) Rules, 2022 shall be duly complied w.r.t Extended Producer Responsibility (EPR) target as a brand owner.

Agenda No. 45.14

Proposed Expansion in Production capacity from 419935 Kg/Annum to 917764 Kg/Annum by addition of new API & API Intermediates at Existing unit located at Plot No. 3102/C, 3103 to 3109 and 3109/A, GIDC Estate, Ankleshwar, District: Bharuch, Gujarat by M/s. Glenmark Lifesciences Limited - Consideration of EC

[Proposal No. IA/GJ/IND3/405399/2022; File No. IA-J-11011/481/2022-IA-II(I)]

1. The PP vide e-mail dated 4.2.2023 requested the following corrections in the MoM: Details of solid waste/ hazardous waste and generation management are as follows:

MoM Page No.	As per MoM						As per Application data							
	Page No. 134	In the Details of Solid waste/ Hazardous Waste Generation and its Management, Sr. No. 11 is mentioned as Brick/19630 MT per year.						Request to give, the Details of Solid waste/ Hazardous Waste Generation and its Management, Sr. No. 11 as Discarded Plastic liners and containers / 19630 MT per year.						
	Sr. No.	Name of Waste	Cat	Quantity			Disposal Mode	Sr. No.	Name of Waste	Cat	Quantity			Disposal Mode
Existi ng				Propo sed	Total	Existi ng					Propo sed	Total		
	11	Brick	33.1	15100 Nos/Y ear	4530 Nos/Y ear	19630 Nos/Y ear	Collection, storage, transportation & final disposal at common TSDF of BEIL/ SEPPL/ECO care or authorized scrap dealer or actual end user	11	Discarded Plastic liners and containers	33.1	15100 Nos/Y ear	4530 Nos/Y ear	19630 Nos/Y ear	Collection, storage, transportation & final disposal at common TSDF of BEIL/ SEPPL/ECO care or authorized scrap dealer or actual end user

2. The EAC noted that the said modification is factual in nature and recommended the same.

Agenda No. 46.1

Proposed expansion of API manufacturing unit by increase in production capacity from 123 TPM to 193 TPM located at Plot No. N-92, MIDC Tarapur, Tehsil & District Palghar, Maharashtra by M/s. Bajaj Healthcare Ltd. - Reconsideration of EC

[Proposal No. IA/MH/IND3/248619/2021; File No. IA-J-11011/550/2021-IA-II(I)]

1. The proposal is for the environmental clearance for the Proposed expansion of API manufacturing unit by increase in production capacity from 123 TPM to 193 TPM located at Plot No. N-92, MIDC Tarapur, Tehsil & District Palghar, Maharashtra by M/s. Bajaj Healthcare Ltd.
2. The project/activity is covered under Category 'B' of item 5(f), Synthetic organic chemicals industry. However, since the project site is located in a critically polluted area, the project attracts the general condition and considered as Category 'A' at Centre.
3. The PP applied for Environment Clearance on 31.12.2021 in Form-1 and submitted PFR/EMP Report and other documents. The PP reported in Form-1 that it is an **Expansion EC**. Due to some shortcomings, the Project was referred back to PP on 3.1.2022 and reply to the same was submitted on 24.3.2022. The proposal was placed in 29th and 40th EAC meetings held on 11-12 April, 2022 and 18-19 October, 2022 respectively, wherein the EAC deferred the proposal for requisite information. The proposal is now placed in 46th EAC Meeting held on 30th & 31st January, 2023 and 1st February, 2023 wherein the Project Proponent and an accredited Consultant, M/s. Sadekar Enviro Engineers Pvt. Ltd. [Accreditation number **NABET/EIA/2124/SA0146**, valid up to 18.4.2023] made a detailed presentation on the salient features of the project and informed the following:

S. No.	Name of Product & Therapeutic Uses	CAS Nos.	Existing Quantity	Proposed Quantity	Total quantity	UOM
A.	<u>Anti-inflammatory</u>					
1	Nimesulide	51803-78-2	52	-2	50	MT/M
B.	<u>Anti-diabetics</u>					
2	Vildagliptin,	274901-16-5	0	97	97	MT/M
3	Alogliptin,	850649-62-6	0			MT/M
4	Tenagliptin,	1572583-29-9	0			MT/M
5	Sitagliptin,	486460-32-6	0			MT/M
6	Linagliptin) and similar API	668270-12-0	0			MT/M
C.	<u>ARBs (Hypertension)</u>					
7	Losartan,	114798-26-4	0	25	25	MT/M
8	Temisartan,	144701-48-4	0			MT/M
9	Valsartan and similar API	137862-53-4	0			MT/M
D.	<u>Anthelmintic</u>					
10	Satranidazole and similar API	56302-13-7	0	5	5	MT/M

E.	<u>Antipsychotics</u>					
11	Quetiapine Fumarate and similar API	111974-72-2	0	15	15	MT/M
12	Meta Bromo Anisole	--	51	-51	0	MT/M
13	Meta Chloro Anisole	--	20	-20	0	MT/M
F.	R&D Products (API)	--	--	1	1	MT/M
Total			123	70	193	MT/M

4. The PP reported that the existing land area is 1800 m², additional no land will be used for proposed expansion and no R& R is involved in the Project. The details of products are as follows:
5. The PP reported that there is no violation case as per the Notification No. S.O.804(E) dated 14.03.2017 and court notice direction (Case no. 02/22) is issued under E(P) Act/Air Act/Water Act.
6. The PP reported that the MIDC Plot Transfer Order No. MIDC/ROT/TRP/N-92/3323/2020 was received on 18/11/2020 from M/s. Nutraplus India Limited to M/s. Bajaj Healthcare Ltd. The plot was bought by M/s. Bajaj Healthcare Ltd. through Public Auction Sale by Saraswat Co-Op. Bank Ltd. The sale deed was registered with the Sub-Registrar, Palghar under Sr. No. PLR 2-3245-2020 dated 19/10/2020. At the time of purchase of the plot from Saraswat Co-Op. Bank Ltd. it had a valid MPCB Consent Order No. Format 1.0/BO/AS(T)/TN-6209-16/R/GEN-02094 dated 12/02/2016 valid upto 31/12/2020 in the name of M/s. Nutraplus India Ltd. M/s. Bajaj Healthcare Ltd. has now transferred the same MP Consent No: - Format 1.0/AS(T)/UAN No. 0000105727/CO-2110000945 dated 20/10/2021 valid upto 31/12/2025.
7. The PP reported that the certified compliance report to the conditions of CTO has been obtained from the Maharashtra Pollution Control Board vide letter no. MPCB/ROT/1174 dated 04/03/2022. All conditions mentioned in the consent were reported to be complied except the 33% green belt.
8. The PP 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. Lower Banganga River is flowing at a distance of 1.94 km in southeast direction. Only one Schedule-I Species (Peafowl) was evidenced in the 10 km study area from the project site. Accordingly, a species conservation plan is prepared wherein allocation of Rs. 6 Lakh has been done. The conservation plan has been submitted to the Office of Chief Wildlife Warden, Maharashtra and also to the DCF, Dahanu.
9. The PP reported that the total water requirement is 237.2 KLD of which fresh water requirement of 187.2 KLD will be met from Tarapur MIDC. The effluent stream will be segregated as HCOD/HTDS and LCOD/LTDS effluent. Out of the 70 CMD HCOD/HTDS effluent, around 50 CMD effluent will be treated in In-house Stripper followed by MEE and ATFD having treatment capacity of 60 CMD and the remaining 20 CMD HCOD/HTDS effluent will be sent to combined effluent treatment facility of M/s. Bajaj Healthcare Ltd. located at Plot No. L-11 having treatment capacity of 300 CMD. The R.O permeate from Plot L-11 (15.55 CMD) will be sent back to Plot No. N-92. Around 21.2 CMD LCOD/TDS effluent will be treatment within In-house ETP. The LCOD/TDS effluent along with MEE condensate and sewage from the same plot will be treated in a full-fledged ETP with Primary, Secondary and Tertiary treatment. Existing ETP will be upgraded to the tune of 120 CMD. The treated effluent from ETP will be passed through RO system. RO

permeate (58.16 CMD) will be used for cooling tower make-up and the RO reject will be sent to In-house ETP for further treatment. The total effluent sent to Plot No. L-11 is 20 CMD of HCOD/TDS effluent. The treated effluent from Plot No. L-11 will be sent back to the said premises and will be reused in cooling tower make-up.

10. The PP reported that the total power demand after expansion will be around 500 KVA. Additional electrical power will be supplied by MSEDCL. D.G Set of Capacity 400 KVA x 1 No. will be installed and it will be operational during power failure only. Fuel requirement for the DG operation will be made available through Local HSD supplier.

11. Details of Process Emissions Generation and their Management:

S. No.	Name of the Gas	Quantity in Kg/Day	Treatment Method
1	Ammonia	28	Scrubbed with dilute sulphuric acid solution
2	Bromine	18.3	Scrubbed in caustic scrubber
3	POCl ₃	10	Scrubbed in caustic scrubber
4	HCl	67	Scrubbed in caustic scrubber
5	Acetic acid	4.666	Scrubbed in caustic scrubber

12. Details of Solid Waste Generation and its Management:

Hazardous Waste Details							
S. No.	Description	Cat. of waste	UOM	Existing	Proposed	Total	Method of Disposal
1	Used / Spent Oil	5.1	MT/M	0	0.3	0.3	Sale to Authorized Reprocessing or co-processing / or CHWTSDF
2	Spent Organic Solvent	28.6	MT/M	0.3	132.3	132.6	CHWTSDF / Sent to authorized recyclers / co-processing
3	Distillation Residue	20.3	MT/M	0	71	71	CHWTSDF / Sale to Authorized party [@] / co-processing.
4	ETP Sludge*	35.3	MT/M	1	73	74	CHWTSDF/ Co-processing

5	Process dust	28.4	MT/M	0	0.1	0.1	CHWTSDF / Sale to Authorized party [@] / co- processing
6	Filter & Filter Material which have organic liquid	36.2	MT/M	0	0.5	0.5	CHWTSDF / Sale to Authorized party [@] / co- processing
7	Evaporation Residue (ATFD Salt) [#]	37.3	MT/M	0	225	225	CHWTSDF / Sale to Authorized party [@] / co- processing
8	Residue from used Ion Exchanged material in water	35.2	MT/A	0	0.5	0.5	CHWTSDF / Sale to Authorized party [@] / co- processing
9	Residue from industrial effluent (Oil & Skimming)	35.4	MT/A	0	1	1	CHWTSDF / Sale to Authorized party [@] / co- processing
10	Off Specification Product	28.4	MT/A	0	5	5	CHWTSDF / Sale to Authorized party [@] / co- processing
11	Spent Catalyst	28.2	MT/A	--	1	1	Sent to authorized vendors [@] / CHWTSDF/ co- processing
12	Spent carbon & hyflow	28.3	MT/M	0	13	13	CHWTSDF / Sale to Authorized party/Co- processing
13	Empty barrels/containers/liners contaminated with hazardous chemicals /wastes	33.1	Nos./M	-	200	200	Sent to authorized vendors/ CHWTSDF
14	Centrifuge bags	33.1	MT/M	-	0.3	0.3	Sent to

							authorized vendors/ CHWTSDF/ Co-processing
15	Recovered Acetic Acid (By-product)	--	MT/M	0	15.5	15.5	CHWTSDF / Sale to Authorized party [@]
16	Recovered Potassium carbonate (By-product)	--	MT/M	0	68.4	68.4	CHWTSDF / Sale to Authorized party [@]
17	Sodium sulphate (By-product)	-	MT/M	0	1.2	1.2	CHWTSDF / Sale to Authorized party [@]

Non-hazardous Waste Details

S. No.	Description	UOM	Existing Quantity	Proposed Quantity	Total Quantity	Method of Disposal
1	Boiler Ash	MT/M	2.0	63	65	Sale to Brick manufacturer
2	General scrap (Polythene bags, Empty containers, Glass waste, Wood waste and Metal waste)	MT/A	0	120	120	Sale to Authorized party
3	Contaminated glassware	MT/A	0	1	1	Sale to Authorized party
4	Plastic waste	MT/M	0	0.5	0.5	Sale to Authorized party

E-waste Details

S. No.	Description	Category of waste	Existing Quantity	Proposed Quantity	Total Quantity	Method of Disposal
1	E-waste	ITEW2, ITEW3, ITEW6	0	0.5 MT/A	0.5 MT/A	Sale to Authorized Recycler

Battery Waste Details

S. No.	Description	Existing Quantity	Proposed Quantity	Total Quantity	Method of Disposal
1	Battery waste	0	0.2 MT/A	0.2 MT/A	Sale to Authorized Recycler

Biomedical Waste Details						
S. No.	Description	Category of waste	Existing Quantity	Proposed Quantity	Total Quantity	Method of Disposal
1	Biomedical waste	Yellow	0	0.1 MT/A	0.1 MT/A	CHWTSDF

13. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 404.6 Lakh (capital) and the Recurring Cost (operation and maintenance) will be about ₹ 462.6 Lakh per annum, Industry proposes to allocate ₹ 12 Lakh towards CER.
14. The PP reported that Public Hearing is exempted as the project is located in the industrial area i.e MIDC Tarapur notified vide notification no. IDC-2169/23025 dated 27.05.1969.
15. Around 248.86 sq. m. (13.82%) of greenbelt will be developed inside the plot premises and about 86.50 sq. m. (4.81%) of greenbelt is developed along the south boundary of the plot outside the plot premises. Remaining greenbelt development of 625 sq. m. (34.72%) has been developed in the Open Space received from the MIDC on Plot No. OS-57 which is at an aerial distance of approximate 431 meters. Thus the total green belt area would be 53.35% of the total plot area i.e. 960.36 sq. m.
16. The PP reported that the total annual carbon footprint for the project is 2661520.24 kg CO₂ eq/year after implementation of mitigation measures. Total carbon sequestration for the project is 378042.1 kg CO₂ eq/year. Thus, considering the total percentage of carbon sequestration is 14.20%.
17. The PP submitted the Disaster and Onsite and Offsite Emergency Plans in the EIA report.
18. The estimated project cost is ₹ 21.44 Crore (Existing- Rs.15.44 Crore + proposed – Rs. 6.0 Crore). Company is having 80 nos. of Employee (Direct: 45 and Indirect: 35) strength. After expansion company proposes to employ additional 140 manpower (Direct: 125 and Indirect: 15) accounting to a total manpower of 220 nos. of employees (Direct: 170 and Indirect: 50).
19. The proposal was earlier placed in 40th EAC Meeting held on April 11-12 2022, wherein the EAC deferred the proposal for want of requisite information. Reply to the same is submitted by PP on 29.9.2022, which is as follows:

S. No.	Queries Raised by EAC	Reply by PP	Observation of EAC
1.	The PP needs to first comply the greenbelt condition and submit the details of green belt developed/number of trees along with aerial photographs and video and with time bound action plan for proposed greenbelt.	<ul style="list-style-type: none"> The Total Plot Area of Plot No. N-92 is 1800 Sq. m. The Total area of greenbelt will be 1079.69 Sq.m., out of which 274.73 Sq.m. is developed inside the plot boundary of Plot No. N-92, 84.96 Sq.m. is developed outside along the plot boundary of Plot No. N-92 and 720 Sq.m. are developed 	The EAC found the reply submitted by the PP to be satisfactory.

		<p>at Plot No. OS-57 in Tarapur MIDC.</p> <ul style="list-style-type: none"> Thus, approximately 59.98% of the total greenbelt area is allotted, with 15.26% coming from inside plot boundary of Plot No. N-92, 4.72% coming from outside along the plot boundary of Plot No. N-92 and 40% coming from Plot No. OS-57 greenbelt in Tarapur MIDC. <p>The details of the greenbelt developed and its photographs have been submitted.</p>	
2.	Undertaking for the use of agro-briquettes as a primary fuel.	The PP has made an undertaking stating agro-briquette will be used as a primary fuel for boiler and thermopack operations.	The EAC found the reply submitted by the PP to be satisfactory.
3.	Specific Action Plan to prevent the occurrence of accidents in the Unit considering the earlier accidents occurred in the area.	The details of specific actions undertaken by the PP have been submitted.	The EAC found the reply submitted by the PP to be satisfactory.
4.	Revised compliance/action plan for MoEF&CC OM dated 31.10.2019 w.r.t CPAs/SPAs by providing details of stringent stack emission standards, CER etc.	The revised compliance/action plan for MoEF&CC OM dated 31.10.2019 w.r.t CPAs/SPAs by providing details of stringent stack emission standards, CER etc. have been prepared and submitted.	The EAC found the reply submitted by the PP to be satisfactory.
5.	Revised structure of Environment Management Cell with Environment Professionals.	The revised structure of Environment Management Cell along with the details of environment professionals have been submitted.	The EAC found the reply submitted by the PP to be satisfactory.

20. Deliberations by the EAC:

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

The EAC noted that the PP 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 PP.

The EAC noted that the EIA reports are in compliance of the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental

components. The EAC deliberated on the proposed mitigation measures towards Air, Water, Noise and Soil pollutions. The EAC advised that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices.

The EAC inter-alia, deliberated on the queries raised during the 40th EAC meeting and the reply submitted by the PP found it to be satisfactory.

The EAC inter-alia, deliberated on the Greenbelt development plan/plantation and the action plan provided for the prevention of accidents, OCEMS for stack emission and advised the PP to submit the following:

- Revised greenbelt development plan for OS- 57 and OS-58.
- Details of the evidences provided for the action plan provided for the prevention of accidents.
- Undertaking for implementation of OCEMS for stack emissions and installation and commissioning of ETP at Plot no: L-11, Tarapur MIDC

The PP submitted the above information/documents and the EAC found it to be satisfactory.

The EAC deliberated on the Onsite and Offsite Emergency plans and various mitigation measures to be proposed during implementation also of the project and advised the PP to implement the provisions of the Rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

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 expert members of the EAC found the proposal in order and recommended for grant of environmental clearance.

The EAC is of the view that its recommendation and grant of environmental clearance by the regulatory authority 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 PP 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.

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

- (i) Adequate stack height as per CPCB/SPCB guidelines shall be provided. Stack emission levels shall be stringent than the existing standards in terms of the identified critical pollutants.
- (ii) CEMS shall be installed and connected to SPCB/CPCB Server.

- (iii) Effective fugitive emission control measures shall be adopted in the process, transportation, packing etc.
- (iv) The PP shall transport material through closed feed systems and shall source 40% of the raw material locally from within Tarapur MIDC. The PP shall also explore transportation of materials by rail/belt conveyer.
- (v) Agro briquettes shall be proposed as a primary fuel for boilers and thermopack. Coal shall be used only in case of contingency i.e due to non-availability of briquettes.
- (vi) The best available technology shall be used.
- (vii) The PP shall develop the greenbelt over an area of at least 59.98% (15.26% inside plot boundary of Plot No. N-92, 4.72% outside along the plot boundary of Plot No. N-92 and 40% at Plot No. OS-57 in Tarapur MIDC) by planting approx. 326 numbers of saplings within a year of grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft. The budget earmarked for the plantation shall be kept in a separate account and should be audited annually. The PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.
- (viii) The transportation load on roads shall be within their carrying capacity and adequate width of roads shall be maintained inside the industrial premises.
- (ix) As committed by the PP, a common ETP shall be established in Tarapur MIDC for treatment of effluent from all the units of M/s. Bajaj Healthcare Ltd. The High COD/HTDS effluent shall be treated in a Stripper, MEE and ATFD and the Low COD/LTDS effluent and MEE Condensate effluent shall be treated in a full-fledged ETP with primary, secondary and tertiary treatment. The entire effluent shall be passed through R.O and reused.
- (x) The PP shall provide one no. of storage tank of capacity 20 KL for collecting rain water. The rain water shall be used for cooling tower make up water during rainy season.
- (xi) 8.8 CMD of sewage shall be treated in Compact STP of 10 CMD in-house and the treated sewage shall be used for gardening and sludge shall be used as manure.
- (xii) The Hazardous waste shall be managed & disposed according to the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, category specified in Schedule I [rule 3 (1) (17) (i)]. All records shall be maintained as per Form – 4 and Form – 10 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. All the recyclable wastes suitable for co-processing having good calorific value shall be identified and utilized in co-processing.
- (xiii) Monitoring of the compliance of EC conditions shall be submitted with third party audit every year.

- (xiv) An amount of ₹ 12 lakhs shall be allocated towards CER for Zilla Parishad Primary School, Kolwade, Maharashtra lies in the southwest direction from the project plot at an approximate distance of 0.87 km and for Prathamik Arogya Kendra Salwad –Maharashtra (Community Hospital) lies in the north direction from the project plot at an approximate distance of 2.33 km.
- (xv) A separate Environmental Management Cell (having qualified persons 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. PP shall engage environment officials. In addition to this one safety & health officer as per the qualification given in Factories Act 1948 shall be engaged within a month of grant of EC. PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.
- (xvi) The company 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. The budget propose under EMP is ₹ 404.6 Lakh (Capital cost) and ₹ 462.6 lakhs per annum (Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.
- (xvii) The total water requirement is 237.2 KLD of which fresh water requirement of 187.2 KLD shall be met from Tarapur MIDC. The PP should ensure that water supply should not be above the permissible limit as mentioned in the letter and fresh water shall be withdrawn only after obtaining valid agreement from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year.
- (xviii) No banned 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.
- (xix) 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.
- (xx) The PP shall comply with the environment norms for Pharmaceutical as notified by the Ministry of Environment, Forest and Climate Change, vide GSR 541(E), dated 6.8.2021 under the provisions of the Environment (Protection) Rules, 1986.

- (xxi) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The project proponent shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.
- (xxii) 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.
- (xxiii) The PP shall explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.
- (xxiv) 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.
- (xxv) 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.
- (xxvi) Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.
- (xxvii) 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.
- (xxviii) 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.
- (xxix) 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 vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.

Agenda No. 46.2

Proposed expansion of API manufacturing unit by increase in production capacity from 15 TPM to 93 TPM located at Plot No. N-128, MIDC Tarapur, Tehsil & District Palghar, Maharashtra by M/s. Bajaj Healthcare Ltd. - Reconsideration of EC

[Proposal No. IA/MH/IND3/248472/2021; File No. IA-J-11011/549/2021-IA-II(I)]

1. The proposal is for the environmental clearance for the Proposed expansion of API manufacturing unit by increase in production capacity from 123 TPM to 193 TPM located at Plot No. N-92, MIDC Tarapur, Tehsil & District Palghar, Maharashtra by M/s. Bajaj Healthcare Ltd.
2. The project/activity is covered under Category 'B' of item 5(f), Synthetic organic chemicals industry. However, since the project site is located in a critically polluted area, the project attracts the general condition and considered as Category 'A' at Centre.
3. The PP applied for Environment Clearance vide proposal number IA/MH/IND3/248472/2021 on 31.12.2021 in Form-1 and submitted PFR /EMP Report and other documents. The PP in the Form-1 reported that it is an **Expansion EC**. Due to some shortcomings, the Project was referred back to the PP on 3.1.2022 and reply to the same was submitted on 24.3.2022. The proposal was placed in 29th and 40th EAC meeting, wherein the EAC deferred the proposal for asking requisite information, and the proposal is now placed in 46th EAC Meeting held on 30th -31st January-1st February, 2023, wherein the Project Proponent and an accredited Consultant, M/s. Sadekar Enviro Engineers Pvt. Ltd with Accreditation Number NABET/EIA/2124/SA 0146 valid till 18.4.2023 made a detailed presentation on the salient features of the project and informed the following:
4. The PP reported that the proposed land area is 2100 m² and no R& R is involved in the Project. The details of products and by-products are as follows:

S. No.	Name of Product & Therapeutic Uses	CAS Nos.	Existing Quantity	Proposed Quantity	Total Quantity	UOM
A.	<u>Anti-Convulsant</u>					
1	Carbamazepine,	298-46-4	15	23	38	MT/M
2	Oxcarbamazepine and similar API's	28721-07-5	0			
B.	<u>Anti-asthma</u>					
3	Doxofylline and similar API's	69975-86-6	0	15	15	MT/M
C.	<u>Vinotonic</u>					
4	Calcium Dobesilate and similar API's	20123-80-2	0	10	10	MT/M
D.	<u>Anti-malaria</u>					
5	Artemether	71963-77-4	0	21	21	MT/M
6	Lumifantrine and similar API's	82186-77-4	0			
E.	<u>Anti-oxidant</u>					MT/M

7	Ascorbyl Palmitate and similar API's	137-66-6	0	8	8	
F.	R&D Product (API)	--	0	1	1	MT/M
	Total	--	15	78	93	MT/M
G	Solvent Distillation for Recovery	--	0	14	14	KL/Day

5. The PP reported that there is no violation case as per the Notification No. S.O.804(E) dated 14.03.2017 and court notice direction (Case no. 02/22) is issued under E(P) Act/Air Act/Water Act.
6. The PP reported that the company was initially established in 1992, vide CTE no. RCB/SAT/E-22 of 1990/GDS/A-951 dated 3.5.1992 under the name of Vinod Organics. The entire company name transfer has taken place in 2006 to M/s Bajaj Healthcare Ltd. with the plot transfer document vide letter ROT/TRP/case no. 1014/3881 dated 19th June, 2006. Since the existing Unit was established prior to the EIA Notification, 2006, EC was not applicable to this Unit. The Certified Compliance report to the conditions of CTO has been obtained from MPCB vide letter no. MPCB/ROT/1175 dated 04/03/2022. All conditions mentioned in the consent were reported to be complied except the 33% green belt.
7. The PP 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. Lower Banganga River is flowing at a distance of 2.09 km in southeast direction. One Schedule I Species (Peafowl) was evidenced in the 10 km study area from the project site. Accordingly, a species conservation plan is prepared wherein allocation of Rs. 6 Lakh has been done. The conservation plan has been submitted to the Office of Chief Wildlife Warden, Maharashtra and also to the DCF, Dahanu.
8. The PP reported the total water requirement of the proposed expansion project for its domestic and industrial activity during its operational phase will be 129.83 CMD. The water requirement will be fulfilled from Tarapur MIDC. The effluent stream will be segregated as HCOD/HTDS and LCOD/LTDS effluent. Around 30 CMD HCOD/HTDS process effluent will be treated in Stripper followed by MEE and ATFD located at Plot No. L-11 having treatment capacity of 300 CMD. Around 10.94 CMD LTDS / COD effluent including Sewage along with the MEE condensate, excluding Boiler blowdown, will be treated in a full-fledged ETP having primary, secondary and tertiary treatment having treatment capacity 350 CMD located at Plot No. L-11. Around 1.4 CMD LTDS / COD effluent will be treated in a full-fledged ETP having primary, secondary and tertiary treatment having treatment capacity 5 CMD located at Plot No. N-219. Treated effluent will be reused for Boiler operation at Plot No. N-219. The treated effluent from ETP located at Plot No. L-11 will be passed through RO system located at same plot. RO permeate from Plot No. L-11 will be used for cooling tower make-up at Plot No. N-128 and the RO reject will be re-sent to MEE at same plot for further treatment. Thus the total effluent sent to Plot No. L-11 will be 30 CMD HCOD/HTDS process effluent. 10.94 CMD LTDS / COD effluent comprising of 1.6 CMD Sewage, 2 CMD LTDS / COD process effluent & 7.34 CMD Cooling Tower Blowdown along with 3.70 CMD RO system reject and the total effluent sent to Plot No. N-219 will be 1.4 CMD Boiler Blow down only. Around 33.26 CMD treated effluent (RO permeate) from Plot No. L-11 will be sent back to the said premises (Plot No. N-128) and will be reused in cooling tower make-up. Around 1.33 CMD treated effluent from ETP located at Plot No. N-219 will be recycled and reused in the

same plot for Boiler operation. All the treated effluent (34.59 CMD) will be recycled and reused for cooling tower make up and boiler feed making the unit a ZLD unit.

9. The PP reported the power requirement for project is made available through State Electricity Board (MSEDCL) Connected Load (Operation phase): 456 KW. Total Demand Load (Operation phase): 550 KVA D.G Set of Capacity 500 KVA No. x 1 No. will be installed and will be operational during power failure only. Fuel requirement for the DG operation will be made available through local HSD supplier.

10. Details of Process Emissions Generation and their Management:

Sr. No.	Name of the Gas	Quantity In Kg/Day	Treatment Method
1	Acetic acid	26.13	Scrubbed in caustic scrubber
2	HCl fumes	14.67	Scrubbed in caustic scrubber

11. Details of Solid Waste Generation and its Management:

Hazardous Waste Details							
S. No.	Description	Cat. of waste	UOM	Existing	Proposed	Total	Method of Disposal
1	Used / Spent Oil	5.1	MT/M	0	0.12	0.12	Sale to Authorized Reprocessing or co-processing / or CHWTSDF
2	Spent Organic Solvent	28.6	MT/M	0	221	221	CHWTSDF / Sent to authorized recyclers / co-processing
3	Distillation Residue	20.3	MT/M	0	8.8	8.8	CHWTSDF / Sale to Authorized party [@] / co-processing
4	ETP Sludge*	35.3	MT/M	0	30	30	CHWTSDF/ Co-processing
5	Process dust	28.4	MT/M	0	0.05	0.05	CHWTSDF / Sale to Authorized party [@] / co-processing
6	Filter & Filter Material	36.2	MT/M	0	0.05	0.05	CHWTSDF /

	which have organic liquid						Sale to Authorized party [@] / co-processing
7	Evaporation Residue (ATFD Salt) [#]	37.3	.0 MT/M	0	96	96	CHWTSDF / Sale to Authorized party [@] / co-processing
8	Spent carbon	28.3	MT/M	0.3	2.22	2.52	CHWTSDF / Sale to Authorized party/Co-processing
9	Spent resin ^{\$}	35.2	MT/M	--	0.01	0.01	CHWTSDF / Sale to Authorized party [@] / co-processing
10	Empty barrels/containers/liners contaminated with hazardous chemicals /wastes	33.1	Nos./M	--	60	60	Sent to authorized vendors/ CHWTSDF
11	Off specification product	28.4	MT/M	--	1.0	1.0	CHWTSDF / Sale to Authorized party [@] / co-processing
12	Calcium Sulfate (By-product)	--	MT/M	--	51	51	CHWTSDF / Sale to Authorized party [@]
<p>-Schedule I of The Hazardous and Other Wastes (Management and Trans boundary Movement) Rule, 2016. [@] Industry shall ensure disposal to the Actual user having permissions under Rule 9 of Hazardous and Other Waste (M & TM) Rules, 2016.</p> <p>[#] Evaporation Residue (ATFD Salt) will be generated and disposed from Plot No L-11.</p> <p>[*] ETP Sludge will be generated and disposed from Plot No. L-11 and Plot No. N-219.</p> <p>^{\$} Spent resin will be generated and disposed from Plot No. N-219</p>							

Non-hazardous Waste Details					
S. No.	Description	Existing Quantity	Proposed Quantity	Total Quantity	Method of Disposal
1	Boiler Ash*	2.42 MT/M	15.8MT/M	18.22 MT/M	Sale to Brick manufacturers
2	General scrap (Polythene bags, Empty containers, Glass waste, Wood waste and Metal waste)	0 MT/A	10 MT/A	10 MT/A	Sale to Authorized party
3	Contaminated glassware	0 MT/A	0.2 MT/A	0.2 MT/A	Sale to Authorized party
4	Plastic waste	0 MT/A	1 MT/A	1 MT/A	Sale to Authorized party

Note: * Boiler ash will be generated and disposed from Plot No. N-219.

E-waste Details						
S. No.	Description	Category of waste	Existing Quantity	Proposed Quantity	Total Quantity	Method of Disposal
1	E-waste	ITEW2, ITEW3, ITEW6	0	0.1 MT/A	0.1 MT/A	Sale to Authorized Recycler

Battery Waste Details					
Sr. No.	Description	Existing Quantity	Proposed Quantity	Total Quantity	Method of Disposal
1	Battery waste	0	0.1 MT/A	0.1 MT/A	Sale to Authorized Recycler

Biomedical Waste Details						
Sr. No.	Description	Category of waste	Existing Quantity	Proposed Quantity	Total Quantity	Method of Disposal
1	Biomedical waste	Yellow	0	0.1 MT/A	0.1 MT/A	CHWTSDF

12. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 194.7 Lakh (capital) and the Recurring Cost (operation and maintenance) will be about ₹ 191.1 Lakh per annum. Industry proposes to allocate 5 Lakh towards CER.
13. The PP reported that Public Hearing is exempted as the project is located in the industrial area i.e MIDC Tarapur notified vide notification no. IDC-2169/23025 dated 27.05.1969.
14. The company proposes to develop green belt over an area of **1417.65 m²**, which accounts to **67.5%** of the total project area. Greenbelt area accounting to an area of **577.65 m² (27.50%)** will be developed inside the plot premises and greenbelt of area **100 m² (4.76%)** will be developed within the area available between the MIDC internal road and plot boundary near the gate. Remaining greenbelt area accounting to **740 m² (35.24%)** has been developed on the MIDC allotted land viz.

Plot No. O.S.-57 having total plot area of **5350 m²** located within the MIDC Tarapur which will be exclusively used for greenbelt development purpose. The distance between Plot No. N-128 and OS-57 is 144 meter.

15. The PP reported that the total annual carbon footprint for the project is 443050.00 kg CO₂ eq/year. Total carbon sequestration for the project is 145718.5 kg CO₂ eq/year which is 32.89% of the total generated.
16. The PP submitted the Disaster and Onsite and Offsite Emergency Plans in the EIA report.
17. The estimated project cost is ₹ 3.47 Crore (Existing- Rs.0.97 Crore + proposed – Rs. 2.50 Crore). Total manpower = 40 Nos. (Indirect: 10 Nos. and Direct: 30 Nos.)
18. The proposal was earlier placed in 40th EAC Meeting held on 18-19 October, 2022, wherein the Committee deferred the proposal for want of requisite information. Reply to the same is submitted by PP on 27.9.2022, which is as follows:

S. No.	Queries Raised by EAC	Reply by PP	Observation of EAC
1.	The PP needs to first comply the greenbelt condition and submit the details of green belt developed/number of trees along with aerial photographs and video and with time bound action plan for proposed greenbelt.	<ul style="list-style-type: none"> • The Total Plot Area of Plot No. N-128 is 2100 Sq. m. • The Total area of greenbelt will be 1757.82 Sq.m., out of which 556.13 Sq.m. is developed inside the plot boundary of Plot No. N-128, 81.69 Sq.m. is developed outside along the plot boundary of Plot No. N-128 and 1120 Sq.m. are developed at Plot No. OS-57 in Tarapur MIDC. • Thus, approximately 83.7% of the total greenbelt area is allotted, with 26.48% coming from inside plot boundary of Plot No. N-128, 3.89% coming from outside along the plot boundary of Plot No. N-128 and 53.33% coming from Plot No. OS-57 greenbelt in Tarapur MIDC. • The details of the greenbelt developed has been submitted. 	The EAC found the reply submitted by the PP to be satisfactory.
2.	Undertaking for the use of agro-briquettes as a primary fuel.	The PP has made an undertaking stating briquettes will be used as a primary fuel for boiler operations	The EAC found the reply submitted by the PP to be satisfactory.

3.	Specific Action Plan to prevent the occurrence of accidents in the Unit considering the earlier accidents occurred in the area.	The details of specific actions taken have been submitted.	The EAC found the reply submitted by the PP to be satisfactory.
4.	Revised compliance/action plan for MoEF&CC OM dated 31.10.2019 w.r.t CPAs/SPAs by providing details of stringent stack emission standards, CER etc.	The revised compliance/action plan for MoEF&CC OM dated 31.10.2019 w.r.t CPAs/SPAs by providing details of stringent stack emission standards, CER etc. have been prepared and submitted.	The EAC found the reply submitted by the PP to be satisfactory.
5.	Revised structure of Environment Management Cell with Environment Professionals	The revised structure of Environment Management Cell alongwith the details of environment professionals have been submitted	The EAC found the reply submitted by the PP to be satisfactory.

19. **Deliberations by the EAC:**

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

The EAC noted that the PP 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 PP.

The EAC noted that the EIA reports are in compliance of the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components. The EAC deliberated on the proposed mitigation measures towards Air, Water, Noise and Soil pollutions. The EAC advised that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices.

The EAC inter-alia, deliberated on the queries raised during the 40th EAC meeting and the reply submitted by the PP found it to be satisfactory.

The EAC inter-alia, deliberated on the Greenbelt development plan/plantation and the evidence of the safety measures being provided inside the plant premises, OCEMS for stack emission and advised the PP to submit the following:

- Revised greenbelt development plan for OS- 57 and OS-58 to Regional Office MIDC
- Details of the evidences provided for the action plan provided for the prevention of accidents.

- Undertaking for implementation of OCEMS for stack emissions and installation and commissioning of ETP at Plot no: L-11, Tarapur MIDC

The PP submitted the above information/documents and the EAC found it to be satisfactory.

The EAC deliberated on the Onsite and Offsite Emergency plans and various mitigation measures to be proposed during implementation also of the project and advised the PP to implement the provisions of the Rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

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 expert members of the EAC found the proposal in order and recommended for grant of environmental clearance.

The EAC is of the view that its recommendation and grant of environmental clearance by the regulatory authority 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 PP 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.

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

- (i) Adequate stack height as per CPCB/SPCB guidelines shall be provided. Stack emission levels shall be stringent than the existing standards in terms of the identified critical pollutants.
- (ii) CEMS shall be installed and connected to SPCB/CPCB Server.
- (iii) Effective fugitive emission control measures shall be adopted in the process, transportation, packing etc.
- (iv) The PP shall transport material through closed feed systems and shall source 44% of the raw material locally from within Tarapur MIDC. The PP shall also explore transportation of materials by rail/belt conveyer.
- (v) Agro briquettes shall be proposed as a primary fuel for boilers and thermopack. Coal shall be used only in case of contingency i.e due to non-availability of briquettes.
- (vi) The best available technology shall be used.

- (vii) The PP shall develop greenbelt over an area of at least 83.7% (26.48% *inside plot boundary of Plot No. N-128*, 3.89% *outside along the plot boundary of Plot No. N-128* and 53.33% *at Plot No. OS-57 in Tarapur MIDC*) by planting approx. 528 numbers of saplings within a year of grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft. The budget earmarked for the plantation shall be kept in a separate account and should be audited annually. The PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.
- (viii) The transportation load on roads shall be within their carrying capacity and adequate width of roads shall be maintained inside the industrial premises.
- (ix) As committed by the PP, a common ETP shall be established in Tarapur MIDC for treatment of effluent from all the units of M/s. Bajaj Healthcare Ltd. The High COD/HTDS effluent shall be treated in a Stripper, MEE and ATFD and the Low COD/LTDS effluent and MEE Condensate effluent shall be treated in a full-fledged ETP with primary, secondary and tertiary treatment. The entire effluent shall be passed through R.O and reused.
- (x) The PP shall provide one no. of storage tank of capacity 15 KL for collecting rain water. The rain water shall be used for cooling tower make up water during rainy season.
- (xi) 1.6 CMD of sewage shall be treated in Compact STP of 2 CMD in-house and the treated sewage shall be used for gardening and sludge shall be used as manure.
- (xii) The treated effluent from ETP located at Plot No. N-219 shall be recycled and reused in the same plot for Boiler operation. All the treated effluent shall be recycled and reused for cooling tower make up and boiler feed.
- (xiii) The Company's Hazardous waste shall be managed & disposed according to the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, category specified in Schedule I [rule 3 (1) (17) (i)]. All records shall be maintained as per Form – 4 and Form – 10 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. All the recyclable wastes suitable for co-processing having good calorific value shall be identified and utilized in co- processing.
- (xiv) Monitoring of the compliance of EC conditions shall be submitted with third party audit every year.
- (xv) An amount of ₹ 5 lakhs shall be allocated towards CER for Zilla Parishad Primary School, Kolwade, Maharashtra lies in the southwest direction from the project plot at an approximate distance of 0.87 km, Pratham Arogya Kendra Salwad –Maharashtra (Community Hospital) lies in the north direction from the project plot at an approximate distance of 2.33 km.
- (xvi) A separate Environmental Management Cell (having qualified persons 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. PP shall engage EHS officer – ETP operator. In addition to this one safety & health officer as per the qualification given in Factories Act 1948 shall be engaged within a month of grant of EC. PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

- (xvii) The company 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. The budget propose under EMP is ₹ 194.7 Lakh (Capital cost) and ₹ 191.1 lakhs per annum (Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.
- (xviii) The total water requirement of the proposed expansion project for its domestic and industrial activity during its operational phase shall be 129.83 CMD. The water requirement shall be fulfilled from Tarapur MIDC. The PP should ensure that water supply should not be above the permissible limit as mentioned in the letter and fresh water shall be withdrawn only after obtaining valid agreement from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year.
- (xix) No banned 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.
- (xx) 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.
- (xxi) The PP shall comply with the environment norms for Pharmaceutical as notified by the Ministry of Environment, Forest and Climate Change, vide GSR 541(E), dated 6.8.2021 under the provisions of the Environment (Protection) Rules, 1986.
- (xxii) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The project proponent shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

- (xxiii) 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.
- (xxiv) The PP shall explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.
- (xxv) 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.
- (xxvi) 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.
- (xxvii) Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.
- (xxviii) 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.
- (xxix) 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.
- (xxx) 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 vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.

Agenda No. 46.3

Setting up of Specialty chemicals, Pesticides intermediates & Pesticides Technical manufacturing plant of capacity 1005 TPM at Plot No. T/75, Saykha Industrial Estate, Taluka Vagra, District Bharuch, Gujarat by M/s Krishna Solvechem Ltd. - Reconsideration of Amendment in EC

[Proposal No. IA/GJ/IND3/196841/2021; File No. IA-J-11011/48/2021-IA-II(I)]

1. The proposal is for the Amendment in Environmental Clearance for Setting up of Specialty chemicals, Pesticides intermediates & Pesticides Technical manufacturing plant of capacity 1005 TPM at Plot No. T/75, Saykha Industrial Estate, Taluka Vagra, District Bharuch, Gujarat by M/s Krishna Solvechem Ltd.
2. The proposal is for amendment in the Environmental Clearance granted by the Ministry vide EC letter dated 27th September, 2021 for Setting up of Specialty chemicals, Pesticides intermediates & Pesticides Technical manufacturing plant of capacity 1005 TPM at Plot No. T/75, Saykha Industrial Estate, Taluka Vagra, District Bharuch, Gujarat by M/s Krishna Solvechem Ltd.
3. The project proponent has requested for amendment in the EC with the details as under:

S. No.	Para of EC issued by MoEF&CC	Details as per the EC	To be revised/ read as	Justification/ reasons
1	Condition No. 3 Page No. 2 of 14	<ul style="list-style-type: none"> • Details of product and capacity in table format with 6 Group of products with 140 products and capacity of 1005 TPM 	<ul style="list-style-type: none"> • Details of product and capacity in table format with 6 Group of products with 141 products and capacity of 1005 TPM 	<ul style="list-style-type: none"> • Considering the Good demand in market we want to amend the product range with addition of 1 new product viz. 'Profenofos' in Group-5: pesticides technical products, sub-group: insecticide with no increase in total production capacity of 1005 TPM. • After the proposed amendment total production capacity will remain same @1005 TPM. • There will not be any change in Pollution load (for Water, Air, & Hazardous Waste) & any other conditions granted in our EC due to this product amendment.
2	Condition No. 4 Page No. 6 of 14	<ul style="list-style-type: none"> • It is reported that the land area available for the project is 5462 sq m. Industry will develop Greenbelt in an area of 1800 sq m covering 33 % of 	<ul style="list-style-type: none"> • It is reported that the land area available for the project is 5462 sq m. Industry will develop Greenbelt in an area of 1800 sq m covering 33 % of total project area. The 	<ul style="list-style-type: none"> • For the proposed amendment for Fuel change, MDC + Bag filter & Alkali scrubber will be installed as APCM. Hence, total capital cost and cost of

S. No.	Para of EC issued by MoEF&CC	Details as per the EC	To be revised/ read as	Justification/ reasons
		total project area. The estimated project cost is Rs. 20 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 5 Crores and the recurring cost (operation and maintenance) will be about Rs. 15 Crores per annum. The project will provide employment for 15 persons directly and 15 persons indirectly. Industry proposes to allocate of Rs. 40 Lakhs (approx.) in next 1 years towards Corporate Environment Responsibility.	estimated project cost is Rs. 20.3 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 5.3 Crores and the recurring cost (operation and maintenance) will be about Rs. 15.2 Crores per annum. The project will provide employment for 15 persons directly and 15 persons indirectly. Industry proposes to allocate of Rs. 40 Lakhs (approx.) in next 1 years towards Corporate Environment Responsibility.	EMP will increase @ 0.3 Cr.
3	Condition No. 6, Para-1 Page No. 6 of 14	<ul style="list-style-type: none"> It is noted that the Total water requirement is estimated to be 267 KLD, which includes freshwater requirement of 227 KLD, proposed to be met from GIDC Water Supply. 	<ul style="list-style-type: none"> It is noted that the Total water requirement is estimated to be 270 KLD, which includes freshwater requirement of 227 KLD, proposed to be met from GIDC Water Supply. 	<ul style="list-style-type: none"> For the proposed amendment for Fuel change, alkali scrubber will be installed to solid fuel fired installations. Hence, the Total water requirement will be increased by 3 KLD
4	Condition No. 6, Para-2 Page No. 6 & 7 of 14	<ul style="list-style-type: none"> Effluent of 188 KLD quantity will be treated through Primary treatment, MEE, RO and SBT facilities and then 	<ul style="list-style-type: none"> Effluent of 191 KLD quantity will be treated through Primary treatment, MEE, RO and SBT facilities and then 	<ul style="list-style-type: none"> For the proposed amendment for Fuel change, alkali scrubber will be installed to solid fuel fired installations. Hence, wastewater

S. No.	Para of EC issued by MoEF&CC	Details as per the EC	To be revised/ read as	Justification/ reasons
		<p>effluent will be sent to CETP for further treatment. The wastewater generations will 188.0 KL/Day (183.0 KL/Day Industrial + 5.0 KL/Day Domestic). 5.0 KL/Day from Domestic will be treated in STP & treated wastewater shall be reused for Gardening, Cooling & Washing purposes. 7.0 KL/Day Wastewater from Scrubbing System, which is mainly Hazardous Waste / By Products from respective gases such as HCl, HBr, SO₂ etc. are sold out to actual End users under Rule-9. Concentrated Stream: 161.0 KL/Day wastewater (159.0 KL/Day Process + 2.0 KL/Day from Floor/ Equipment Washings) shall be separate in to two stream. Stream – I (30 KL/Day) from specialty Chemicals will be treated in Primary ETP and then sent to RO system and RO</p>	<p>effluent will be sent to CETP for further treatment.</p> <ul style="list-style-type: none"> • The wastewater generations will 191.0 KL/Day (186.0 KL/Day Industrial + 5.0 KL/Day Domestic). • 5.0 KL/Day from Domestic will be treated in STP & treated wastewater shall be reused for Gardening, Cooling & Washing purposes. • 7.0 KL/Day Wastewater from Scrubbing System, which is mainly Hazardous Waste / By Products from respective gases such as HCl, HBr, SO₂ etc. are sold out to actual End users under Rule-9. • Lean stream @30 KLD (Process @28 KLD + Washing @2 KLD) shall be treated in Primary ETP and then sent to RO system. • Utility Stream @15 KLD (Boiler blowdown @3 KLD + Cooling Tower blowdown @12 KLD) shall diverted to RO along with Primary treated Lean stream @30 KLD. RO permeate @35 	<p>generation will be increased up to 3 KLD from utility Scrubber.</p> <ul style="list-style-type: none"> • Which will be sent to MEE and condensate form MEE @ 3 KLD will be recycled within plant premises. Hence, there will be no additional discharge after the proposed amendment.

S. No.	Para of EC issued by MoEF&CC	Details as per the EC	To be revised/ read as	Justification/ reasons
		<p>permeate will be reuse within plant premises. Stream – II (131 KL/Day) from other Products & RO reject (10 KL/Day) will be treated in primary + Fenton treatment then subjected to MEE system and MEE condensate will be sent to SBT after treatment it's finally disposed of to CETP of Saykha Industrial Estate. Utility Stream- 15.0 KL/Day effluent (3.0 KL/Day from Boiler + 12.0 KL/Day from Cooling Tower) will be treated in RO, & RO permeate (11.0 KL/Day) will be reused in industrial purpose whereas RO reject (4.0 KL/Day) will be send to the primary lamella</p>	<p>KLD shall be recycled back for industrial purpose. RO Reject shall be sent to primary lamella and then after MEE/ATFD.</p> <ul style="list-style-type: none"> • Concentrated stream @134 KLD (Process @131KLD + Utility Scrubber @3KLD) along with RO reject @10 KLD shall be given Primary +Fenton treatment and sent to MEE/ATFD and SBT facilities. • MEE/ATFD condensate @3 KLD shall be recycled back for industrial purpose, • Remaining treated effluent @136.4 KLD shall be sent to CETP for further treatment. 	
5	Condition No. 6, Para-4 Page No. 7 of 14	<ul style="list-style-type: none"> • Unit will have 1 Nos. TPH (Capacity: 1.0 Lac Kcal/Hr) and 1 Nos. of Steam Boiler (Capacity: 2.0 MT/Hr) will be installed. And 2.0 TPH Boiler, Thermic Fluid Heater (1 Lac Kcal/Hr) & D.G. 	<ul style="list-style-type: none"> • Unit will have 1 Nos. TPH (Capacity: 1.0 Lac Kcal/Hr) and 1 Nos. of Steam Boiler (Capacity: 2.0 MT/Hr). Common stack of 30 m height will be provided to 2.0 TPH Boiler, & Thermic Fluid Heater (1 Lac Kcal/Hr). MDC + Bag filter will 	<ul style="list-style-type: none"> • Considering the inconsistencies in assured NG supply & economic feasibility, we request to amend in EC for change in fuel from Natural Gas to Biomass briquettes/Coal for Steam Boiler (1 no. of 2 MT/hr) & TFH (1 no. of 1 Lac.KCal/hr).

S. No.	Para of EC issued by MoEF&CC	Details as per the EC	To be revised/ read as	Justification/ reasons
		Set with a stack of height of 18 m, 18 m & 11 m will be installed for controlling the particulate emissions (within the statutory limit of 150 mg/Nm ³) respectively. Details of process emission & management and solid waste/hazardous waste disposal are as per the plan provided in the EIA/EMP report and as deliberated in the EAC.	be installed as APCM for controlling the particulate emissions from use of Biomass briquettes/ Coal (within the statutory limit of 150 mg/Nm ³). Stack height of 11 m will be provided to D.G. Set. • Details of process emission & management and solid waste/hazardous waste disposal are as per the plan provided in the EIA/EMP report and as deliberated in the EAC.	<ul style="list-style-type: none"> • Fly ash to be generated from burning of will be sold to brick manufacturer. • The emission of PM will be maintained within the statutory limit of 150 mg/Nm³ after the amendment in fuel from Natural gas to Biomass briquettes/Coal with installation of Multicyclone + Bag filter as APCD. • The emission of SO₂ will be maintained within the statutory limit of 100 ppm after the amendment in fuel from Natural gas to Biomass briquettes/Coal with installation of Alkali scrubber as APCD.

4. The proposal was earlier placed in 43rd EAC Meeting held on December 2nd, 2022, wherein the EAC deferred the proposal for want of requisite information. Reply to the same was submitted by the PP on 4.1.2023, which is as follows:

S. No.	Queries Raised by the EAC	Reply by the PP	Observations of the EAC
1.	The PP shall submit the emission load/ dispersion modelling of PM ₁₀ , PM _{2.5} , SO _x , NO _x .	As suggested by the committee we agree to use Biomass briquettes as a primary fuel. Coal will be used only in case of shortage of Biomass briquettes. The dispersion modeling with emission load has been submitted. The results of dispersion modelling show that the emission of PM ₁₀ , PM _{2.5} , SO ₂ & NO _x from the plant will partially increase the level of air pollutants in ambient air. When superimposed over the baseline concentrations, the resultant concentrations viz. the predicted level of pollutants in the ambient air are well below	The EAC found the reply submitted by the PP to be satisfactory.

		the National Ambient Air Quality Standards. Thus, with implementation of the suggested APCM & proper provision of adequate stack height, the impacts of conventional pollutants on ambient air environment will not be significant from the proposed project during normal operation phase.	
2.	The PP shall submit the undertaking committing that PP shall use Biomass as a primary fuel.	As suggested by the committee we agree to use Biomass briquettes as a primary fuel. Coal will be used only in case of shortage of Biomass briquettes. Undertaking for the same has been submitted.	The EAC found the reply submitted by the PP to be satisfactory.
3.	The PP shall submit revised and detailed water balance.	For the proposed amendment for Fuel change, alkali scrubber will be installed to solid fuel fired installations for utilization in case of use of Coal as fuel. Hence, wastewater generation will be increased upto 3 KLD from utility Scrubber. This will be sent to MEE and condensate from MEE @3 KLD will be recycled for utilization within plant premises. Hence, there will be no additional discharge after the proposed amendment. The revised water balance diagram has been submitted.	The EAC found the reply submitted by the PP to be satisfactory.
4.	The PP shall submit revised and detailed Greenbelt development plan.	The company will develop greenbelt area in 1800 m ² area (about 33 % of total plat area) within company premises and around the plant boundary. Moreover, Green belt will also be developed in nearby villages (500 nos. of trees) as a part of CER activities after consultation with local Village panchayats. Total 460 nos. tress will be planted within the company premises Mostly would be Neem (Azadirachta indica) & Gul Mohar (Delonix regia) planted. Details of proposed plantation has been submitted. Capital cost of Greenbelt development: Rs. 7.2 Lakhs. Recurring cost of Greenbelt Maintenance: Rs 0.3 Lakhs/annum.	The EAC found the reply submitted by the PP to be satisfactory.

5.	PP shall submit the revised the capital cost and recurring cost for EMP	<p>The total cost of the proposed project was Rs. 20 Cr. Currently the project is in planning stage and designing work is going on.</p> <p>The proposed amendment is for fuel change & Addition of one new product (with no increase in production capacity & no increase in pollution load). The Gas fired utility proposed during EC application to be replaced by the solid fuel fired utility accordingly only APCM cost (MDC + Bag filter & Alkali scrubber) will increase @ Rs 0.3 Cr. Hence total project cost will be Rs. 20.3 Cr. after the proposed amendment.</p> <p>Cost Projection of EMP has been submitted.</p>	The EAC found the reply submitted by the PP to be satisfactory.
6.	The PP shall submit the details of carbon foot print and carbon sequestration study w.r.t. proposed project and based on natural gas and agro based briquettes. Proposed mitigation measures also needs to be submitted for further appraisal of the EAC.	<p>Total Production Capacity = 12060 TPA, Net CO₂eq emitted per ton of product= 0.495 T/T or 495 kg/T.</p> <p>Difference between Carbon footprint & Sequestration = (5971.22 – 301.59) CO₂eq (T/Annum) = 5669.63 CO₂eq (T/Annum)</p>	The EAC found the reply submitted by the PP to be satisfactory.
7.	The PP needs to submit details of energy conservation measures proposed in the Unit.	<ul style="list-style-type: none"> • The company will also install 50 KW solar panel to produce solar electricity within the premises and provide 5 KW solar panel in 4 nearby villages i.e., 20 KW as a part of CER activities after consultation with local Village panchayats. • Regular cleaning & maintenance of Solar System for maximization of power generation. • Minimize the freshwater consumption by reuse/recycle of 43 KLD treated water. • Utilization of hazardous non-hazardous waste by coprocessing/ recycling by giving to rule-9 approved vendors before sending it to TSDF/CHWIF site. 	The EAC found the reply submitted by the PP to be satisfactory.

		<ul style="list-style-type: none"> • Solar streetlight will be installed within premises. • Installation of improved insulation over the High Pressure (HP) steam line to reduce the heat loss. • The power factor improvement capacitors will be provided individually for AC loads. • Optimized schedule for transportation of materials & manpower for reduction in traffic frequency. • Entire manufacturing process will be carried out in closed loop to minimize the handling Losses. • A highly efficient and full fledged solvent recovery system will be installed to recover maximum possible solvent. 	
8.	The PP needs to submit the details of Onsite/Offsite emergency plan and mitigation measures to be proposed during implementation of the project.	The detailed Onsite/ Off site emergency plan has been submitted.	The EAC found the reply submitted by the PP to be satisfactory.

5. Deliberations by the EAC:

The EAC constituted under the provisions of the EIA Notification, 2006 and comprising of expert members/domain experts in various fields, examined the proposal submitted by the Project Proponent in desired form.

The EAC inter-alia, deliberated on the carbon footprint, revised water balance. The PP submitted the revised/updated information/documents of the same and the EAC found it to be satisfactory.

6. After detailed deliberations, the EAC **recommended** the amendment in EC **w.r.t change in product mix, greenbelt, water requirement, wastewater, fuel**), as detailed in above-mentioned table subject to the following additional conditions:

- (i). All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The Project proponent shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as

amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

- (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.

Agenda No. 46.4

Proposed expansion of Marine Chemicals, Fertilizers and Captive Co-Gen Power Plant from 5295 MTPM to 113908 MTPM along with 25.6 MW of Co-Gen Power Generation located at Greater Rann of Kutch, Near Village Dhordo, Tal. Bhuj, Dist. Kutch, Gujarat by M/s. Agrocel Industries Pvt. Ltd. - Reconsideration of EC

[Proposal No. IA/GJ/IND3/277411/2020; File No. IA-J- 11011/269/2020-IA-II(I)]

1. The proposal is for environmental clearance for the Proposed expansion of Marine Chemicals, Fertilizers and Captive Co-Gen Power Plant from 5295 MTPM to 113908 MTPM along with 25.6 MW of Co-Gen Power Generation located at Greater Rann of Kutch, Nr. Village Dhordo, Tal.: Bhuj, Dist. Kutch, Gujarat by M/s. Agrocel Industries Pvt. Ltd.
2. The project/activity is covered under Category 'A' of item 5(a), Chemical Fertilizer & 1(d) of the Schedule of EIA Notification, 2006 (as amended) and requires appraisal at Central Level by the EAC.
3. The standard ToR has been issued by the Ministry, vide letter No. J-11011/269/2020-IA-II(I) dated 7.11.2020. The Public Hearing was conducted by the State Pollution control board on 25.8.2021. The main issues raised during public hearing utilize CER fund for drinking water, sanitation facility and education. Action plan for the issues raised during the public hearing has been submitted. The PP applied for Environment Clearance on 11.6.2022 through CAF, and submitted the EIA/EMP Report and other documents. Due to the shortcomings, the proposal was referred back to PP on 23.6.2022 and reply for the same has been submitted on 7.12.2022. The PP reported in the Form-2 that it is an **Expansion case**. The proposal was placed in 44th EAC Meeting held on 16th & 19th December 2022, wherein the EAC deferred the proposal for requisite information. The PP submitted reply to the same and the proposal is now placed in the 46th EAC Meeting held on 30th & 31st January, 1st February 2023, wherein the PP and an accredited consultant, San Envirotech Pvt. Ltd. [Accreditation number – NABET/EIA/1922/RA 0216, Valid up to 23.12.2023] made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:
4. The PP reported that the existing land area is 27762.5 Acres (112350851.43 m²), which is lease land. Out of which, 366650 m² land is for the project and rest of the land is for salt recovery and was given by the Government of Gujarat on lease. No additional land will be required for proposed expansion. Expansion will be done within the existing unit and no R&R is involved in the Project. The details of products and by-products are as follows:

S. No	Name of the Products	CAS No.	Quantity (MT/Month)			Type of products	Schedule as per EIA Notification, 2006		
			Existing as per CCA	Proposed	Total				
1	Liquid Bromine	7726-95-6	4000	4333	8333	Inorganic Chemical	Non-EC		
2	48% Hydrobromic Acid	10035-10-6							
3	Calcium Bromide (52%) / Solid Powder	7789-41-5							
4	Phosphorus Tribromide	7789-60-8	15	10	25	Inorganic Chemical	Non-EC		
5	Sodium Bromide (45%) / Solid Powder	7647-15-6	150	1437	1667	Inorganic Chemical	Non-EC		
6	Zinc Bromide (77%)	7699-45-8	80						
7	Lithium Bromide	7550-35-8	0.0						
8	Potassium Schoenite (K ₂ SO ₄ .MgSO ₄ .6H ₂ O)	7447-40-7 5	750						
9	Syngenite (K ₂ SO ₄ .CaSO ₄ .H ₂ O)	13780-13-7	0.0	28833	29583	Fertilizer	5(a)		
10	Sulphate of Potash	7778-80-5							
11	Potassium Nitrate	7757-79-1							
12	Magnesium Sulphate (MgSO ₄)	7487-88-9							
13	Magnesium Chloride (MgCl ₂)	7786-30-3	300	57333	57633	Inorganic Chemical	Non-EC		
	Magnesium Hydroxide Mg(OH) ₂	1309-42-8						Inorganic Chemical	Non-EC
	Magnesium Oxide (MgO)	1309-48-4							
14	Enriched Mineral Salt Mix	--	0.0	16667	16667	Inorganic Chemical	Non-EC		

15	Captive Co-Gen Power Plant (6.4 MW x 4 nos.)	--	--	25.6 MW	25.6 MW	Power Plant	1(d)
Total			5295	108613	113908		

5. The PP reported that there is no violation case as per the Notification No. S.O. 804(E) dated 14.03.2017 and no direction is issued under E(P) Act/Air Act/Water Act.
6. The PP reported that unit is engaged in manufacturing of inorganic products – Marine Chemicals, so EC is not applicable to existing unit. Certified Compliance Report of CTO has been issued by the GPCB dated 9.11.2022. All the conditions are complied.
7. The PP 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. Pond of Dhordo Village is at a distance of 4.6 km in SE direction from project site.
8. The PP reported that **Ambient Air Quality** monitoring was carried out at 8 locations during October, 2020 to December, 2020 and the baseline data indicates the ranges of concentration as: PM₁₀ (54.7 – 66.1 µg/m³), PM_{2.5} (32.5 – 38.9 µg/m³), SO₂ (8.1 – 12.7 µg/m³), NO_x (12.3 – 15.7 µg/m³). AAQ modelling study for point source emission indicated that the maximum incremental GLCs after the proposed project would be 10.68 µg/m³, 5.284 µg/m³, 4.147 µg/m³, 0.226 µg/m³, 0.226 µg/m³ and 1.131 µg/m³ with respect to PM₁₀, SO₂, NO_x, Br₂, Cl₂, HBr. The resultant concentrations are within the national ambient air quality standards (NAAQS). **Noise-** The noise levels of various locations are given in Table 3.23. The monitored noise level in the day time Leq (Ld) varies from 49.7 to 56.3 dB(A) and the night time Leq (Ln) varies from 37.4 to 49.1 dB(A) within the study area. Higher noise value of 56.3 dB(A) was recorded during day time at Project Site & lower noise value of 37.4 dB(A) was recorded during night time in Village Dhord. **Water-** The PP reported that the results have been compared with the drinking water standards specified in IS: 10500-2012. It was observed that all the physicochemical parameters and heavy metals except turbidity are below stipulated drinking water standards of BIS & it is suitable for drinking and other purposes. **Soil-** The PP reported that in the study area, variations in the pH value ranging from 7.45 to 7.97 which shows that the soil is slightly alkaline in nature. Organic Matter ranges from 1.62 to 2.36 mg/kg in the soil samples. Soil of the study area is known as saline soil and no or poor for cultivation. Soil with high bulk density exhibit poor physical conditions for agriculture crops.
9. The PP reported that total water requirement is 26287 KLD, of which fresh water requirement of 22378 KLD will be met from desalination of Sea water and rejected Brine water. 3909 KLD will be recycled/treated water. Total industrial effluent generation will be 460852 KLD, of which 3858 KLD will be close loop recycle. Hence actual w/w generation will be 456994 KLD. Domestic sewage generation will be 51 KLD. Source of wastewater generation will be process effluent 453712 KLD (Process Brine W/w 435559 + others 18153 KLD), Scrubber (80.0 KLD), stripper washing (1402 KLD), cooling bleed off (150 KLD), boiler blow down (1328 KLD), RO Reject (2380 KLD), Water with Lime slurry (1800 KLD). Trade effluent will be treated in to ETP (Neutralization and Settler). Effluent from ETP will sent to evaporation pan for recovery of mineral salt, which is one of the raw materials of products. Generated 51 KLD of domestic wastewater/sewage will be treated in STP and treated sewage will be reused in greenbelt.

10. The PP reported that power requirement after expansion will be 92000 KVA will be partially met from PGVCL (Paschim Gujarat Vij Company Limited) and partially by Captive Co-gen Power Plant of 25.6 MW. Existing unit has 3 DG sets of 320 kVA, 200 kVA and 82.5 kVA capacity. After expansion, unit proposed to add 3 more DG Sets of 500 kVA x 3 nos. DG sets are used as standby during power failure. Stack (height 12 m and 21 m) will be provided as per CPCB norms to the proposed DG sets.
11. Existing unit has one common stack of 2 nos. of Lignite/Imported Coal fired Boilers (6.0 TPH and 18 TPH), one stack of LDO/HSD fired Boiler (8 TPH), 2 stacks of Wood/Lignite/Imported coal fired Hot Air Generators (2.5 lakh kcal/hr. and 4 lakh kcal/hr.). Multi cyclone Bag filter, water scrubber is installed as APCM on Boiler of 6 TPH, ESP and water scrubber on Boiler of 18 TPH, Dust Collector followed by cyclone separator on LDO/HSD fired boiler. Dust Collector is installed on Hot Air Generators. After expansion, 5 stacks of coal fired Boilers, 6 stacks of coal fired Hot Air Generators will be added. ESP + Wet scrubber will be installed as APCM to Boilers. Cyclone Separator & Bag filter will be installed as an APCM on HAG to achieve the emission norms. Stack with adequate stack height will be installed for controlling the particulate emissions within the statutory limit of 150 mg/Nm³ for the proposed utilities. Total Flue stacks after expansion will be 18 nos. (Existing: 6 nos. + Additional: 12 nos.). Details of flue gas stacks are given below.

Flue Gas Stacks

S. No.	Stack attached to	Fuel Type	Stack Height (m)	APC measures	Probable Emission
Flue Gas Stacks-Existing					
1.	Boiler-1 (6.0 TPH)	Lignite/ Imported Coal 26.4 TPD	40	Multi cyclone Bag filter, water scrubber	PM: 150 mg/Nm ³ SO ₂ : 100 ppm NO _x : 50 ppm
2.	Boiler-2 (18 TPH)	Lignite/ Imported Coal 79.2 TPD	44	ESP and water scrubber	
3.	Boiler-3 (8 TPH)	LDO/HSD 16.8 TPD	30	Dust Collector followed by cyclone separator	
4.	Hot Air Generator-1 (2.5 lakh kcal/hr)	Wood / Lignite / Imported coal 7.2 TPD	11	Dust Collector	
5.	Hot Air Generator-2 (4 lakh kcal/hr)		15	Dust Collector	
6.	DG Set-1, 2 & 3 (320 KVA, 200 KVA and 82.5 kVA) (Stand By)	HSD 245 lit/hr.	12	Adequate stack height	
Flue Gas Stacks-Proposed					
1.	Boiler-4 (30 TPH) (non-salt based products)	Coal 131 TPD	47	ESP +Wet scrubber	PM: 150 mg/Nm ³ SO ₂ : 100 ppm NO _x : 50 ppm

2.	Boiler-5 (45 TPH) (salt based products)	Coal 197 TPD	51	ESP +Wet scrubber	PM: 150 mg/Nm ³ SO ₂ : 100 ppm NO _x : 50 ppm
3.	Boiler-6 (45 TPH) (salt based products)	Coal 197 TPD	51	ESP +Wet scrubber	PM: 150 mg/Nm ³ SO ₂ : 100 ppm NO _x : 50 ppm
4.	Boiler-7 (45 TPH) (salt based products)	Coal 197 TPD	51	ESP +Wet scrubber	PM: 150 mg/Nm ³ SO ₂ : 100 ppm NO _x : 50 ppm
5.	Boiler-8 (45 TPH) (salt based products)	Coal 197 TPD	51	ESP +Wet scrubber	PM: 150 mg/Nm ³ SO ₂ : 100 ppm NO _x : 50 ppm
6.	Hot Air Generator-3 (non-salt based products) (5 Lakh kcal/hr.)	Coal 2 TPD	24	Cyclone Separator	PM: 150 mg/Nm ³ SO ₂ : 100 ppm NO _x : 50 ppm
7.	Hot Air Generator-4 (salt based products) (4 Lakh kcal/hr.)	Coal 1.6 TPD	24	Cyclone Separator	PM: 150 mg/Nm ³ SO ₂ : 100 ppm NO _x : 50 ppm
8.	Hot Air Generator-5 (salt based products) (50 Lakh kcal/hr.)	Coal 26 TPD	30	Cyclone Separator & Bag filter	PM: 150 mg/Nm ³ SO ₂ : 100 ppm NO _x : 50 ppm
9.	Hot Air Generator-6 (salt based products) (50 Lakh kcal/hr.)	Coal 26 TPD	30	Cyclone Separator & Bag filter	PM: 150 mg/Nm ³ SO ₂ : 100 ppm NO _x : 50 ppm
10.	Hot Air Generator-7 (salt based products) (50 Lakh kcal/hr.)	Coal 26 TPD	30	Cyclone Separator & Bag filter	PM: 150 mg/Nm ³ SO ₂ : 100 ppm NO _x : 50 ppm
11.	Hot Air Generator-8 (salt based products) (50 Lakh kcal/hr.)	Coal 26 TPD	30	Cyclone Separator & Bag filter	PM: 150 mg/Nm ³ SO ₂ : 100 ppm NO _x : 50 ppm
12.	DG Set-4, 5 & 6 (500 kVA x 3 nos.)	Diesel 630 lit/hr.	21	Adequate stack height	PM: 150 mg/Nm ³ SO ₂ : 100 ppm NO _x : 50 ppm

12. **Details of Process Emissions Generation and its Management:** At present, process gas emission is from stack attached with Bromine Plant-1. Process Stack is equipped with Water and Alkali scrubber. After expansion, process emissions will be from one vent of Bromine plant-2, 16 vents of Bromine Stripping plants, 3 vents of Air dryer for CaBr₂, NaBr, LiBr, 5 vents of 5 nos. of Rotary dryers (of Inorganic fertilizer) and one vent of Calciner (for MnO Plant). Vent of Bromine Plant-2 will be equipped with Water and Alkali Scrubber. 2 stage Alkali Scrubber will be installed on Bromine stripping plants and bag filter on vent of Air dryer, Rotary dryers and Calciner. Total process stacks after expansion will be 27 nos. (Existing: 1 no. + Additional: 26 nos.). Details of process gas stacks are given below.

Process Gas Stacks

S. No.	Stack attached to	Stack Height (m)	APC measures	Probable Emission
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Process Gas Stacks –Existing				
1.	Bromine plant-1	20	Water and Alkali Scrubber	Br ₂ : 2 mg/Nm ³ Cl ₂ :9 mg/Nm ³ HBr: 30 mg/Nm ³
Process Gas Stacks –Proposed				
1.	Bromine plant-2	20	Water and Alkali Scrubber	Br ₂ : 2 mg/Nm ³ Cl ₂ :9 mg/Nm ³ HBr: 30 mg/Nm ³
2.	Bromine Stripping plant-3	20	2 stage Alkali Scrubber	
3.	Bromine Stripping plant-4	20	2 stage Alkali Scrubber	
4.	Bromine Stripping plant-5	20	2 stage Alkali Scrubber	
5.	Bromine Stripping plant-6	20	2 stage Alkali Scrubber	
6.	Bromine Stripping plant-7	20	2 stage Alkali Scrubber	
7.	Bromine Stripping plant-8	20	2 stage Alkali Scrubber	
8.	Bromine Stripping plant-9	20	2 stage Alkali Scrubber	
9.	Bromine Stripping plant-10	20	2 stage Alkali Scrubber	
10.	Bromine Stripping plant-11	20	2 stage Alkali Scrubber	
11.	Bromine Stripping plant-12	20	2 stage Alkali Scrubber	
12.	Bromine Stripping plant-13	20	2 stage Alkali Scrubber	
13.	Bromine Stripping plant-14	20	2 stage Alkali Scrubber	
14.	Bromine Stripping plant-15	20	2 stage Alkali Scrubber	
15.	Bromine Stripping plant-16	20	2 stage Alkali Scrubber	
16.	Bromine Stripping plant-17	20	2 stage Alkali Scrubber	
17.	Bromine Stripping plant-18	20	2 stage Alkali Scrubber	
18.	Air dryer for CaBr ₂ solid	25	Bag filter	
19.	Air dryer for NaBr solid	25	Bag filter	PM < 45 mg/Nm ³
20.	Air dryer for LiBr	25	Bag filter	PM < 45 mg/Nm ³
21.	Rotary dryer 1 (for SOPM - Schoenite)	15	Bag filter	PM < 45 mg/Nm ³
22.	Rotary dryer 2 (for SOP - Sulphate of potash)	15	Bag filter	PM < 45 mg/Nm ³

23.	Rotary dryer 3 (for Syngenite)	15	Bag filter	PM < 45 mg/Nm ³
24.	Rotary dryer 4 (for MgSO ₄)	15	Bag filter	PM < 45 mg/Nm ³
25.	Rotary dryer 5 (for (MgOH) ₂)	15	Bag filter	PM < 45 mg/Nm ³
26.	Calciner (for MgO)	25	Bag filter	PM < 45 mg/Nm ³

13. Details of Solid Waste/ Hazardous Waste Generation and its Management:

Sr. No.	Name of waste	Category as per Haz. Rule, 2016	Source	Qty.			Disposal method
				Existing	Proposed addition	Total after expansion	
1.	Neutralizer sludge	35.3	Neutralizer	00	700000 MT/year	700000 MT/year	Collection, Storage, and reuse in Syngenite & Potassium Schoenite
2.	Discarded Containers/Liner/Bags	33.1	Material storage	500 Nos./Year 5 MT/Year	1500 Nos./Year 15 MT/Year	2000 Nos./Year 20 MT/Year	Collection, Storage, Decontamination, Transportation, Disposal by selling to Authorized Recycler
3.	Used Oil	5.1	Driving units	1 MT/Year	4 MT/Year	5 MT/Year	Collection, Storage, Transportation, Disposal by selling to Registered Reprocess
4.	Spent H ₂ SO ₄ (70-75%)	C2	From Product Bromine and 48% Hydro Bromic Acid	4800 MT/Year	46,000 MT/Year	50,800 MT/Year	Collection, Storage, Transportation and captive consumption

14. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 5.195 Crore (capital) and the Recurring cost (operation and maintenance) for EMP will be about ₹ 94.5 Lakhs per annum. Industry proposes to allocate ₹ 187.5 Lakhs towards CER.
15. The PP reported that Public Hearing for the expansion project has been conducted by the Gujarat Pollution Control Board on 25.08.2021 which was presided by the Resident Additional Collector and

Additional District Magistrate-Kutch. Most of participants have welcomed the project and advise to utilize CER fund for drinking water, sanitation facility and education.

16. The industry has developed greenbelt in an area of 30% i.e. 51225 m² and proposes to add greenbelt in an area in 48587 m² for expansion project. Hence after expansion, total greenbelt area will be 99812 m² of total project area.
17. The PP reported that the unit has established set up of Environment Management Cell (EMC), Chief operating officer- Manager (EHS) – Safety manager- Environment- Safety officer- ETP in charge- ETP for the functioning of EMC.
18. The PP submitted the Onsite and Offsite disaster management plan in their EIA report.
19. The estimated project cost is Rs. 600 Crore including existing investment of Rs. 350 Crore. Total Employment will be 600 Persons after expansion.
20. The proposal was earlier placed in 44th EAC Meeting held on December 16-19 2022, wherein the EAC deferred the proposal for want of requisite information. Reply to the same was submitted by PP on 10.1.2023, which is as follows:

S. No.	Queries Raised by EAC	Reply by PP
1.	Compliance to green belt development of 33% of the total area of the existing unit (@2500 per hectare) in consultation with forest department and accordingly, submit the details of green belt developed, number of trees and aerial photographs and video.	We have earmarked 27% i.e. 99812 m ² greenbelt area inside the factory premises and 7% i.e. 25665 m ² in surrounding and approach road of project site. This land is lease by the Company. Project location is in the desert area so greenbelt development as per the CPCB guideline 4 trees/m ² at project site is very difficult and not possible to develop 31370 nos. of trees within premises. Currently around 700 trees are developed within premises. We will try to increase this figure up to 4000 nos. within 1 year. To find out the alternative, we have already developed greenbelt in an area of 1533300 m ² with 50201 nos. of trees at different locations nearby project site. Details of greenbelt developed, number and types of trees planted, its coordinates and aerial photographs has been submitted.
2.	Similarly, detailed time bound action plan for the greenbelt development for the proposed expansion.	Additional trees around 3300 numbers in our earmarked greenbelt area within factory premises within a year of grant of EC. Time bound action plan for the greenbelt development for the proposed expansion has been submitted.

3.	Undertaking stating that Biomass/Agro Briquettes shall be used as the primary fuel.	Undertaking stating 'Biomass/Agro Briquettes shall be used as the primary fuel has been submitted
4.	Details of carbon foot print and carbon sequestration study w.r.t. existing and proposed expansion project.	<p>Total CO₂ generation from different sources (fuel, transportation of material and manpower) will be 352570.1 Ton per annum. Total reduction of CO₂ emission in terms of % is 25.1%. Detailed calculation of carbon foot print and carbon sequestration study has been submitted.</p> <p>Total CO₂ generated from different source is 352570.1 tCO₂/Annum.</p> <p>Hence total reduction of CO₂ will be A + B = 3.8 + 21.3 = 25.1%.</p>
5.	Details of energy conservation measures implemented and proposed in the Unit.	<p>Energy conservation measures implemented and proposed in the unit.</p> <ul style="list-style-type: none"> • Maximize the use of natural lighting through design, • Maximum utilization of solar light, • Installation of solar PV on rooftop of building • Ensure proper selection fuel-firing equipment's+. • Energy efficient lamps - CFLs or LED lights are used in administration building and plant premises, • Constant monitoring of energy consumption and defining targets for energy conservation, • Maximize the use of laptop over desktop computers as Laptops use less energy than desktops and leave a smaller environmental footprint at end of life, • Adjusting the settings and illumination levels to ensure minimum energy used for desired comfort levels, • Training to staffs on methods of energy conservation
6.	Confirmation from GCZMA or authorized agency of the Ministry on an authenticated map regarding the location of the project outside the CRZ area.	Confirmation letter regarding CRZ is not applicable in our case issued by GPCB with authenticated map has been submitted. This map is prepared by National Centre for Sustainable coastal management, MoEFCC, Chennai and approved by National Coastal Zone Management Authority, MoEFCC.

7.	Project and Site-specific On-site and Off-site emergency plans.	On-site and Off-site emergency plan prepared under (As per Rule-68 J (12) (1) OF GFR) has been submitted.
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21. **Deliberations by the EAC:**

The EAC inter-alia, deliberated on the greenbelt development plan within the factory premises, and advised the PP to submit an Undertaking for greenbelt development of 33% within the factory premises. The PP submitted the same and the EAC found it to be satisfactory.

After detailed deliberations, the EAC sought the following requisite documents, which were not submitted by the PP:

- (i) Confirmation from GCZMA or authorized agency of the Ministry on an authenticated map regarding the location of the project outside the CRZ area.
- (ii) Confirmation from GCZMA or authorized agency of the Ministry with supporting documents regarding the non-requirement of CRZ clearance for the drawl of sea water.

The proposal was accordingly, **deferred**.

Agenda No. 46.5

Proposed Expansion of Marine Chemicals, Fertilizers & Organic Chemicals with production capacity from 3005 MTPM to 112917 MTPM and Captive Co-Gen Power Plant from 7.675 MW to 33.275 MW located at Survey No. 164, Village Ratadia, Near Khavda, Ta. Bhuj, Dist. Kutch, Gujarat by M/s. Solaris Chemtech Industries Ltd. - Reconsideration of EC.

[Proposal No. IA/GJ/IND3/280064/2020; File No. IA-J-11011/271/2020-IA-II(I)]

1. The proposal is for the environmental clearance for the Proposed Expansion of Marine Chemicals, Fertilizers & Organic Chemicals with production capacity from 3005 MTPM to 112917 MTPM and Captive Co-Gen Power Plant from 7.675 MW to 33.275 MW located at Survey No. 164, Village: Ratadia, Near, Khavda, Ta. Bhuj, Dist. Kutch, Gujarat by M/s. Solaris Chemtech Industries Ltd.
2. The project/activity is covered under Category 'A' of item 5(a)-Chemical Fertilizers, 5(f) - Synthetic Organic Chemicals and 1(d)-Thermal Power Plants of Schedule of EIA Notification, 2006 (as amended) and requires appraisal at Central Level by the EAC.
3. The standard ToR has been issued by Ministry vide letter no. IA- J-11011/271/2020-IA-II(I) dated 07.11.2020. The PP submitted that Public Hearing for the expansion project has been conducted by the Gujarat Pollution Control Board on 15.9.2021 which was presided by the Resident Additional Collector and Additional District Magistrate-Kutch. The main issues raised during the PH are noise pollution, wastewater, employment. Action plan for the issues raised during the public hearing has been submitted. The PP applied for Environment Clearance on 28.6.2022 in CAF and submitted EIA/EMP Report and other documents. The PP reported in Form that it is an **Expansion EC**. Due to some shortcomings, the proposal was referred back to PP on 6.7.2022 and

the reply for the same has been submitted on 9.12.2022. The proposal was placed in 44th EAC Meeting held on 16th & 19th December 2022, wherein the EAC deferred the proposal for requisite information. The PP submitted reply to the same and the proposal is now placed in the 46th EAC Meeting held on 30th & 31st January, 1st February 2023, wherein the PP and an accredited consultant, San Envirotech Pvt. Ltd. [Accreditation number – NABET/EIA/1922/RA 0216, Valid up to 23.12.2023] made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

4. The PP reported that the existing land area is 222578 m² and no additional land will be required for proposed expansion. Expansion will be done within the existing unit and no R& R is involved in the Project. The details of products are as follows:

S. No.	Name of the Products	Quantity (MT/Month)			Type of products	Schedule as per EIA Notification, 2006
		Existing as per CCA	Proposed Addition	Total		
1	Liquid Bromine	1700.0	1375	3075	Inorganic Chemical	Non-EC
2	Hydrobromic Acid (48%)	180.0	2037	2217	Inorganic Chemical	Non-EC
3	6-Chloro Hexanone	5.0	00	5.0	Organic Chemicals	5(f)
4	n – Propyl Bromide	270.0	417	687	Organic Chemicals	5(f)
5	n – Butyl Bromide				Organic Chemicals	5(f)
6	TBBA-Tetra Bromo Bisphenol A	850.0	0.0	850	Organic Chemicals	5(f)
	HBr in TBBA (33% W/W)				Inorganic Chemical	Non-EC
7	Potassium Schoenite (K ₂ SO ₄ .MgSO ₄ .6H ₂ O)	0.0	29583	29583	Fertilizer	5(a)
8	Syngenite (K ₂ SO ₄ .CaSO ₄ .H ₂ O)				Fertilizer	5(a)
9	Potassium Sulphate (SOP)				Fertilizer	5(a)
10	Potassium Nitrate (KNO ₃)				Fertilizer	5(a)
11	Magnesium Sulphate (MgSO ₄)				Fertilizer	5(a)
12	Magnesium Hydroxide (Mg(OH) ₂)				0.0	57333
13	Magnesium Oxide (MgO)	Inorganic Chemical	Non-EC			
14	Magnesium Chloride (MgCl ₂)	Inorganic Chemical	Non-EC			
15	Enriched Mix Mineral Salt	0.0	16667	16667	Inorganic Chemical	Non-EC
16	Zinc Bromide (75%)	0.0	1667	1667		Non-EC

17	Lithium Bromide				Inorganic Chemical	
18	Calcium Bromide (CaBr) (52%)					
19	Calcium Bromide Solid Powder					
20	Sodium Bromide (45%)					
21	Sodium Bromide Solid Powder					
22	Di Bromo Neo Pentyl Glycol (DBNPG)	0.0	833	833	Organic Chemicals	5(f)
23	2,4,6 Tri Bromo Phenol (TBP)				Organic Chemicals	5(f)
24	Deca Bromo Diphenyl Ethane (DBDPE)				Organic Chemicals	5(f)
25	Tri Bromo Neo Pentyl Alcohol (TBNPA)				Organic Chemicals	5(f)
Total		3005	109912	112917		
Captive Co-Gen Power Plant		7.675 MW	6.4x4 = 25.6 MW	33.275 MW	CPP	1(d)

5. The PP reported that there is no violation case as per the Notification No. S.O. 804(E) dated 14.03.2017 and no direction is issued under E (P) Act/Air Act/Water Act.
6. The PP reported that Ministry had issued EC earlier vide letter no. J-11011/400/2008-IA-II (I), dated 13.05.2009 to the existing project in favour of M/s. Solaris Chemtech Limited. The same EC is transferred by MoEF&CC in favour of M/s. Solaris Chemtech Industries Limited vide letter no. J-11011/400/2008-IA-II(I), dated 08.02.2012. Certified compliance report has been issued by the IRO, Gandhinagar dated 10.10.2022, which summarizes that, out of 29 conditions, 18 are complied, 7 are partly complied and 4 are agreed to comply.
7. The PP reported that there are no national parks and Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Pond of Khavda Village is at a distance of 2.5 km in E direction from project site. Schedule I species Peacock or Indian Peafowl exist within 10 km study area of the project, for which conservation plan is submitted to Deputy Conservator of Forest dated 5.12. 2022.
8. The PP reported that 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 concentration as: PM₁₀ (58.0 – 65.9 µg/m³), PM_{2.5} (22.1 – 34.2 µg/m³), SO₂ (9.3 – 12.3 µg/m³), NO_x (11.6 – 15.9 µg/m³). AAQ modelling study for point source emission indicated that the maximum incremental GLCs after the proposed project would be 11.536 µg/m³, 7.911 µg/m³, 6.036 µg/m³, 0.168 µg/m³, 0.185 µg/m³ and 0.868 µg/m³ with respect to PM₁₀, SO₂, NO_x, Br₂, Cl₂, HBr. The resultant concentrations are within the national ambient air quality standards (NAAQS). **Noise-** The monitored noise level in the day time Leq (Ld) varies from 48.1 to 53.9 dB(A) and the night time Leq (Ln) varies from 38.6 to 42.8 dB(A) within the study area. Higher noise value of 53.9 dB(A) was recorded during day time at Project Site & lower noise value of 38.6 dB(A) was recorded

during night time in Village Ludiya. **Soil-** soil quality of the study area, analysis of all eight locations including the project site was conducted by making suspension of soil sample. The samples were examined for various physical and chemical characteristics in order to assess the impact on soil. **Water-** In the study area, variations in the pH value ranging from 7.58 to 8.06 which shows that the soil is slightly alkaline in nature. Organic Matter ranges from 0.36 to 3.59 mg/kg in the soil samples. Soil of the study area is known as saline soil and no or poor for cultivation. High bulk density and exhibit poor physical conditions for agriculture crops.

9. The PP reported that the total water requirement is 91316 KLD, of which 9614 KLD will be fresh water demand, 4101 KLD will be recycle/treated water and 77601 KLD Brine water. Fresh water requirement will be met from desalinated Sea water and rejected Brine water. Total industrial effluent generation will be 86032 KLD, of which 3596 KLD will be close loop recycle. Hence actual w/w generation will be 82436 KLD. Domestic sewage generation will be 35 KLD. Source of wastewater generation will be process effluent (75895 KLD), Scrubber (30.0 KLD), stripper washing (5811 KLD), cooling bleed off (810 KLD), boiler blow down (470 KLD), RO Reject (2316 KLD), Water with Lime slurry (700 KLD). Effluent is segregated into two streams one is from Bromides, TBBA and Organics products and second stream is from Bromine Recovery plant. Both the streams are treated separately and treated effluent will be sent to evaporation pan for recovery of mineral salt, which is one of the raw materials of products. Generated 35 KLD of domestic wastewater/sewage will be treated in STP and treated sewage will be reused in greenbelt.
10. Power requirement after expansion will be 32000 KVA will be partially met from PGVCL (Paschim Gujarat Vij Company Limited) and partially by Captive Co-gen Power Plant. Existing unit has DG sets of 500 kVA and 1735 kVA capacity. After expansion, unit proposed to add 3 more DG Sets of 500 kVA x 3 nos. DG sets are used as standby during power failure. Stack (height 12 m, 30 m and 21 m) will be provided as per CPCB norms to the proposed DG sets.
11. Total Flue stacks after expansion will be 16 nos. (Existing: 4 nos. + Additional: 12 nos.). Details of flue gas stacks are given below.

Flue Gas Stacks

S. No.	Stack attached to	Fuel Type	Stack Height (m)	APC measures	Probable Emission
Flue Gas Stacks-Existing					
1.	Boiler (15.0 TPH)	Imported Coal 63 TPD	63	ESP	PM: 50 mg/Nm ³ SO ₂ : 600 mg/Nm ³ NO _x : 300 mg/Nm ³ Hg: 0.03 mg/Nm ³
2.	Boiler (45.0 TPH)	Imported coal 189 TPD	60	ESP	
3.	DG Set (500 KVA)	HSD 150 Lit/hr.	12	Adequate stack height	
4.	DG Set (1735 KVA)	HSD 400 Lit/hr.	30	Adequate stack height	
Flue Gas Stacks-Proposed					
1.	45 TPH Boiler	Imported Coal 189 TPD	60	ESP	PM: 50 mg/Nm ³ SO ₂ : 600 mg/Nm ³ NO _x : 300 mg/Nm ³ Hg: 0.03 mg/Nm ³
2.	45 TPH Boiler	Imported Coal 189 TPD	60	ESP	

3.	45 TPH Boiler	Imported Coal 189 TPD	60	ESP	
4.	45 TPH Boiler	Imported Coal 189 TPD	60	ESP	
5.	Boiler (30 TPH) (non-salt based products)	Coal 131 TPD	47	ESP +Wet scrubber	PM: 150 mg/Nm ³ SO ₂ : 100 ppm NO _x : 50 ppm
6.	Hot Air Generator-1 (non-salt based products) 5 Lakh kcal/hr.	Coal 2 TPD	24	Cyclone Separator	PM: 150 mg/Nm ³ SO ₂ : 100 ppm NO _x : 50 ppm
7.	Hot Air Generator-2 (Salt based products) 4 Lakh kcal/hr.	Coal 1.6 TPD	24	Cyclone Separator	PM: 150 mg/Nm ³ SO ₂ : 100 ppm NO _x : 50 ppm
8.	Hot Air Generator-3 (Salt based products) 50 Lakh kcal/hr.	Coal 26 TPD	30	Cyclone Separator & Bag filter	PM: 150 mg/Nm ³ SO ₂ : 100 ppm NO _x : 50 ppm
9.	Hot Air Generator-4 (Salt based products) 50 Lakh kcal/hr.	Coal 26 TPD	30	Cyclone Separator & Bag filter	PM: 150 mg/Nm ³ SO ₂ : 100 ppm NO _x : 50 ppm
10.	Hot air generator-5 (Salt based products) 50 Lakh kcal/hr.	Coal 26 TPD	30	Cyclone Separator & Bag filter	PM: 150 mg/Nm ³ SO ₂ : 100 ppm NO _x : 50 ppm
11.	Hot air generator-6 (salt based products) 50 Lakh kcal/hr.	Coal 26 TPD	30	Cyclone Separator & Bag filter	PM: 150 mg/Nm ³ SO ₂ : 100 ppm NO _x : 50 ppm
12.	DG Set-4, 5 & 6 (500 kVA x 3 nos.)	Diesel 630 lit/hr.	21	Adequate stack height	PM: 150 mg/Nm ³ SO ₂ : 100 ppm NO _x : 50 ppm

12. **Details of emissions generation and its management:** Total process stacks after expansion will be 27 nos. (Existing: 7 nos. + Additional: 20 nos.). Details of process gas stacks are given below.

Process Gas Stacks

Sr. No.	Stack attached to	Stack Height (m)	APC measures	Probable Emission
Process Gas Stacks – Existing				
1.	Bromine Plant-1	30	Water and Alkali Scrubber	Br ₂ : 2 mg/Nm ³ Cl ₂ : 9 mg/Nm ³ HBr: 30 mg/Nm ³
2.	Bromine Plant-2	30		
3.	Bottling Plant	32	Water and Alkali Scrubber	Br ₂ : 2 mg/Nm ³
4.	Bromine Plant (HBr, n-PBr, n-BBr & 6 CH _x)	14	Water and Alkali Scrubber	Br ₂ : 2 mg/Nm ³ Cl ₂ : 9 mg/Nm ³ HBr: 30 mg/Nm ³
5.	TBBA Plant	30	Water and Alkali Scrubber	Br ₂ : 2 mg/Nm ³ HBr: 30 mg/Nm ³

6.	Bromine ETP Tank	17	Alkali Scrubber	Br ₂ : 2 mg/Nm ³ Cl ₂ : 9 mg/Nm ³
7.	Chlorine Charging Station	20	Alkali Scrubber	Cl ₂ : 9 mg/Nm ³
Process Gas Stacks – Proposed				
1.	Bromine Plant-3	20	Water and Alkali Scrubber	Br ₂ : 2 mg/Nm ³ Cl ₂ : 9 mg/Nm ³ HBr: 30 mg/Nm ³
2.	Bromine Plant Plant-4	20	Alkali Scrubber	
3.	Bromine Plant Plant-5	20	Alkali Scrubber	
4.	N Propyl Bromide	20	Alkali Scrubber	
5.	Hydrobromic Acid	30	Alkali Scrubber	
6.	ZnBr/LiBr/CaBr/ NaBr	30	Alkali Scrubber	
7.	HBr in TBBA	30	Alkali Scrubber	
8.	Process reactor of DBNPG	30	Alkali Scrubber	
9.	Process reactor of TBP	30	Alkali Scrubber	
10.	Process reactor of DBDPE	30	Alkali Scrubber	
11.	Process reactor of TBNPA	30	Alkali Scrubber	
12.	Air dryer for CaBr ₂ solid	25	Bag filter	PM<45 mg/Nm ³
13.	Air dryer for NaBr solid	25	Bag filter	PM<45 mg/Nm ³
14.	Air dryer for LiBr	25	Bag filter	PM<45 mg/Nm ³
15.	Rotary dryer 1 (for SOPM - Schoenite)	15	Bag filter	PM<45 mg/Nm ³
16.	Rotary dryer 2 (for SOP - Sulphate of potash)	15	Bag filter	PM<45 mg/Nm ³
17.	Rotary dryer 3 (for Syngenite)	15	Bag filter	PM<45 mg/Nm ³
18.	Rotary dryer 4 (for MgSO ₄)	15	Bag filter	PM<45 mg/Nm ³
19.	Rotary dryer 5 (for (MgOH) ₂)	15	Bag filter	PM<45 mg/Nm ³
20.	Calciner (for MgO)	25	Bag filter	PM<45 mg/Nm ³

13. Details of Solid Waste/ Hazardous Waste Generation and its Management:

S. No	Name of waste	Source	Category as per HAZ Rule 2016	Quantity			Disposal Method
				Existing	Proposed addition	Total after expansion	
1.	ETP sludge	ETP	35.3	1500 MT/Month	15000 MT/Month	16500 MT/Month	Collection, Storage, Transportation, and disposed of at approved TSDF site
2.	ETP sludge	ETP (Bromide Plant)	35.3	20 MT/Month	30 MT/Month	50 MT/Month	

3.	Process Sludge	Process	20.4	66 MT/Month	--	66 MT/Month	Collection, Storage, Transportation, and incinerate at common CHWIF
4.	Discarded Containers / Liner/Bags	Material storage	33.1	3.6 MT/Year	5.4 MT/Year	9.0 MT/Year	Collection, Storage, Decontamination, Transportation, Disposal by selling to Authorized Recycler
5.	Used Oil	Driving units	5.1	10.2 MT/Year	25 MT/Year	35.2 MT/Year	Collection, Storage, Transportation, Disposal by selling to Registered Reprocess

14. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 7.335 Crore (capital) and the Recurring Cost (operation and maintenance) will be about ₹ 1.445 Crore per annum, Industry proposes to allocate Rs. 1.5 Crore @0.75% of project expansion cost towards Corporate Social Responsibility
15. The industry has developed greenbelt in an area of 7350 m² and proposes to add greenbelt in an area in 12350 m² for expansion project. Hence after expansion, total greenbelt area will be 19700 m² of total project area.
16. The PP proposed to set up an Environment Management Cell (EMC) by engaging Chief Operating Officer - Manager EHS- Safety Manager- Safety Officer- Environment- ETP in charge for the functioning of EMC.
17. The PP reported that the total CO₂ generation would be 1292456386 tonnes/annum.
18. The PP submitted the Disaster and On-site and Off-site Emergency Plans in the EIA report.
19. The estimated project cost is Rs. 500 Crore including existing investment of Rs. 300 Crore. Total Employment will be 500 Persons after expansion.
20. The proposal was placed in 44th EAC Meeting held on December 16-19, 2022, wherein the EAC deferred the proposal for want of requisite information. Reply to the same is submitted by PP on 10.1.2023, which is as follows:

S. No.	Queries Raised by EAC	Reply by PP								
1.	Compliance to green belt development of 33% of the total area of the existing unit (@2500 per hectare), in consultation with forest department and accordingly, submit the details of green belt developed, number of trees and aerial photographs and video.	Industry earmarked 12% i.e. 26700 m ² greenbelt area inside the factory premises and 21% i.e. 48967.16 m ² in surrounding and approach road of project site. Project location is in the desert area so greenbelt development as per the CPCB guideline 4 trees/m ² at project site is very difficult and not possible to develop 18360 nos. of trees within premises. Currently around 3748 trees are planted within premises. We will try to increase this figure up to 10000 nos. within 1 year. To find out the alternative, we have already developed greenbelt in an area of 1390000 m ² with 22250 nos. of trees at different locations nearby project site.								
2.	Action taken report submitted to IRO, MoEF&CC for the partly complied and agreed to comply conditions of the existing EC.	<p>Action taken report submitted to IRO, MoEF&CC for the partly complied conditions of the existing EC. Total 29 conditions given in earlier EC and unit is compiled most of EC conditions.</p> <table border="1" data-bbox="703 815 1410 1115"> <thead> <tr> <th data-bbox="703 815 1050 913">Total EC conditions</th> <th data-bbox="1050 815 1410 913">29 (11 Specific, 18 General)</th> </tr> </thead> <tbody> <tr> <td data-bbox="703 913 1050 969">Fully Complied</td> <td data-bbox="1050 913 1410 969">18</td> </tr> <tr> <td data-bbox="703 969 1050 1039">Partially Complied</td> <td data-bbox="1050 969 1410 1039">7</td> </tr> <tr> <td data-bbox="703 1039 1050 1115">Agreed to comply</td> <td data-bbox="1050 1039 1410 1115">4</td> </tr> </tbody> </table>	Total EC conditions	29 (11 Specific, 18 General)	Fully Complied	18	Partially Complied	7	Agreed to comply	4
Total EC conditions	29 (11 Specific, 18 General)									
Fully Complied	18									
Partially Complied	7									
Agreed to comply	4									
3.	Confirmation from GCZMA or authorized agency of the ministry on an authenticated map regarding the location of the project outside the CRZ area.	<p>CRZ is not applicable in our case. In this regard, GPCB has given letter with reference of authenticated map by GCZMA.</p> <p>This map is prepared by National Centre for Sustainable coastal management, MoEFCC, Chennai and approved by National Coastal Zone Management Authority, MoEFCC</p>								
4.	Justification with supporting documents regarding CRZ clearance for the withdrawal of sea water for desalination.	<p>We are pumping saline water from ponds which are about 50 km far from the coastal line as well as 55 km far from our project. These ponds are filled during high tide and we are pumping required water. There is no any physical activity carried out in CRZ area.</p> <p>CRZ map prepared by National Centre for Sustainable coastal management, MoEFCC, Chennai and approved by National Coastal Zone Management Authority, MoEFCC, which showing our industrial location outside the CRZ area. Confirmation letter regarding CRZ is not applicable in our case issued by GPCB with authenticated map</p>								

5.	Quantitative and project specific carbon sequestration details of the existing unit and for the proposed expansion.	Total CO ₂ generation from different sources (fuel, transportation of material and manpower) will be 315411.34 Ton per annum. Total reduction of CO ₂ emission in terms of % is 18.0%. Total % reduction of CO ₂ emission as per the proposed action plan will be 12.9% Hence total reduction of CO ₂ will be A + B = 5.1 + 12.9 = 18.0%
6.	Fuel composition to be re-done, as that submitted seems to be erroneous.	Industry have rechecked the submitted data and found that analysis report was carried out during the rainy days and that time generally humidity is more than 90%, resulted to found higher moisture content in Coal. Analysis report of Coal imported from Indonesia is analysed by supplier and verified
7.	Undertaking for replacement of lignite with a cleaner fuel.	Undertaking stating 'Biomass/Agro Briquettes shall be used as the primary fuel has been submitted.

21. **Deliberations by the EAC:**

The EAC inter-alia, deliberated on the greenbelt development plan within the factory premises, and advised the PP to submit an Undertaking for greenbelt development of 33% within the factory premises. The PP submitted the same and the EAC found it to be satisfactory.

After detailed deliberations, the EAC sought the following requisite documents, which were not submitted by the PP:

- (i) Confirmation from GCZMA or authorized agency of the Ministry on an authenticated map regarding the location of the project outside the CRZ area.
- (ii) Confirmation from GCZMA or authorized agency of the Ministry with supporting documents regarding the non-requirement of CRZ clearance for the drawl of sea water.

The proposal was accordingly, **deferred**.

Agenda No. 46.6

Expansion of Synthetic Organic Chemicals (1067 MTPM to 4400 MTPM) at Block No. 133, Sy. No. 133 (Partly), 129,130,131, 132 (Part), 134, 136, 137, 138, 139 (Part), 140, 141, 144, 147, 148, 201, 202, 203, 204, 206, 207, 208, Village Samlaya, Taluka Savli, District Vadodara, Gujarat by M/s Jubilant Ingrevia Limited - Consideration of Amendment in EC

[Proposal No. IA/GJ/IND3/296190/2023; File No. J-11011/241/2011-IA-II(I)]

1. The proposal is for **amendment** in the **Environmental Clearance** granted by the Ministry vide F. No. J-11011/241//2011-IAII(I) dated 11.08.2022 for the Expansion of Synthetic Organic Chemicals from 1067 MTPM to 4400 MTPM located at Block No. 133, Village Samlaya Taluka Savli District Vadodara Gujarat in favor of M/s Jubilant Life Sciences Limited and Transfer of EC (Change in Name) in the Name of M/s Jubilant Ingrevia Limited on 18th May 2021.
2. The project proponent has requested for amendment in the EC with the details as under:

i) Correction and Modifications in EC

S. No.	Para of EC issued by MoEF&CC	Details as per the EC	To be revised/ read as	Justification/ reasons
1	Para 4Industrial effluent generation will be increased from 59.9 m³/day to 80 m³/day after expansion.....Industrial effluent generation & discharge will be increased from 118.4 m³/day to 186.5 m³/day after expansion.....	Waste water generated from Raw Ground water treatment through Reverse Osmosis, as RO reject, was inadvertently missed to be mentioned in effluent generation details of EIA. Further, additional options for disposal of effluent, other than CETP, requested.
2	Not Mentioned	Table 3-40: Fuel Consumption details of EIA Report. SawDust/Agrowaste fuel total allowed is 32.984 TPD	Fuel consumption details: Saw Dust – 65.968 TPD/ AgroWaste-32.984 TPD . Variation in quantity of fuel permitted proportionate to calorific value of the Biomass Fuel	Flexibility to use variety of seasonal Biomass fuel is requested without change in steam generation and utility

ii) Amendment in EIA Report and Inclusion in EC Letter

a) Table 3-34: Wastewater Generation Details (Proposed Amendment)

S. No.	Category	JLSL (JVL)			JIL (JACPL)			Total		
		Existing	Proposed	Total	Existing	Proposed	Total	Existing	Proposed	Total
1	Domestic	8	3	11	3	0	3	11	3	14

2	Industrial									
2.1	Manufacturing Process									
2.1.1	Process	6.4	3.4	9.8	0	0	0	118.4	68.1*	186.5*
2.1.2	Equipment Washing	6.2	0	6.2	26.2	0	26.2			
2.2	Boiler	2.1	2.1	4.2	0	0	0			
2.3	Cooling	10	6.6	16.6	0	0	0			
2.4	Floor Washing	1	2	3	0	0	0			
2.5	Other (Water Treatment Plant regeneration)	8	6	14	0	0	0			
3	Gardening	0	0	0	0	0	0			
4	Fire Fighting	0	0	0	0	0	0			
5	Ground water RO Reject	42.6	48.0	90.6	15.9	0	15.9			
6	Total Industrial Effluent	76.3	68.1	144.4	42.1	0.0	42.1	118.4	68.1*	186.5*
7	Total Industrial and Domestic	84.3	71.1	155.4	45.1	0.0	45.1	129.4	71.1*	200.5*

- Upto 10 KLD Organic Aqueous effluent disposal through GPCB approved 3rd party MEE, Incinerator, Cement Co-Processing, Pre-processing for Co-processing.

b) Table 3-40: Fuel Consumption Details:(Amendment in the Fuel Consumption)

Sr. No.	Equipment	Type of Fuel	Existing	Proposed	Total
1	Super Therm boiler (Existing- 2.0 Ton/Hr); Ltr/Hr	Furnace Oil	104	0	104
2	Agro Waste Steam Boiler (2.0 Ton/Hr); MT/day	Saw Dust/Agro waste	12 / 6	0	22 / 11
3	Hot Air Generator (6 Lakhs Kcal/Hr); MT/day	Saw Dust/Agro waste	10 / 5	0	
4	Agro Waste Steam Boiler (Additional- 4.0 Ton/Hr); MT/day	Saw Dust/Agro waste	0	24/12	24/12
5	Hot Air Generator (Additional- 12.0 Lacs Kcal/Hr); Kg/Hr	Saw Dust/Agro waste	0	832 / 416	832 / 416
6	HSD Burner (Dry Plant); Ltr/Hr	HSD	60	60	120
7	D. G. Set (860 KVA)- (Existing); Ltr/Hr	HSD	1000	0	1000

8	D. G. Set (2000 KVA)- (Additional); Ltr/Hr	HSD	0	2000	2000
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Note:

- a) *Calorific Value considered: Saw Dust 2000 K Cal/Kg; Agro Waste 4000 K Cal/Kg.*
- b) *Industry may use other available sources of cleaner Liquid Fuel as a substitute for Furnace Oil for generating approved quantity of Steam.*
- c) *Industry may use other available sources of Solid biomass/ Renewable fuel as a substitute for Saw Dust / Agro Waste for generating approved quantities of Steam. The fuel quantity may therefore be allowed to vary as per the Calorific value of the fuel substitute*

3. Deliberations by the EAC:

The EAC constituted under the provisions of the EIA Notification, 2006 and comprising of expert members /domain experts in various fields, examined the proposal submitted by the Project Proponent in desired form.

The EAC inter-alia, deliberated on the inadvertent errors in the EIA/EMP report, wastewater, Fuel, Greenbelt development plan, Previous EC granted and certified compliance report, and further, advised the PP to submit the following:

- i. Undertaking for seeking condonation of the inadvertent errors in the EIA/EMP report.
- ii. Undertaking for seeking amendment to the wastewater details and fuel details.
- iii. Undertaking for the Greenbelt development plan.
- iv. Undertaking to comply to the Amendment to EC granted.
- v. Self-certified compliance report.

The PP submitted the above information/documents and the EAC found it to be satisfactory.

4. After detailed deliberations, the EAC **recommended** the amendment in EC as detailed in above-mentioned table subject to the following additional conditions:
 - (i) The Project Proponent shall ensure reduction in total fresh water consumption from earlier approved 355.2 KLD to 299 KLD through implementation of water conservation measures with the commissioning of the expanded facility.
 - (ii) Domestic wastewater shall be treated in STP and utilised for Greenbelt and landscaping.
 - (iii) The PP shall use a cleaner fuel (solid biomass/renewable fuel) as a substitute for furnace oil for generating approved quantity of steam.
 - (iv) The Project Proponent shall ensure that the 33% green belt stipulated shall be completed simultaneously during the construction of the project.
 - (v) 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.

(vi) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The Project proponent shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

Agenda No. 46.7

Proposed expansion of existing API products viz Poly Ethylene Glycols (PEGs), Polysorbates of all grades and other Synthetic Organic chemicals viz Non-ionic emulsifiers & organic intermediates & setting up of R & D Laboratory located at Plot No. H-5, MIDC Taloja, Taluka Panvel, District Raigad, Maharashtra by M/s Vasudha Chemicals Private Limited - Consideration of ToR

[Proposal No. IA/MH/IND3/405295/2022; File No. IA-J-11011/501/2022-IA-II(I)]

1. The proposal is for the issue of ToR for preparation of EIA/EMP for the Proposed expansion of existing API products viz Poly Ethylene Glycols (PEGs), Polysorbates of all grades and other Synthetic Organic chemicals viz Non-ionic emulsifiers & organic intermediates & setting up of R & D Laboratory located at Plot No. H-5, MIDC Taloja, Taluka Panvel, District Raigad, Maharashtra by M/s Vasudha Chemicals Private Limited.
2. The project/activity is covered under Category ‘B’ of item 5(f), Synthetic organic chemicals industry of Schedule EIA Notification, 2006 (as amended). However, since the project site is located in a severely polluted area, the project attracts the general condition and considered as Category ‘A’ at Centre.
3. The PP applied for the ToR vide proposal number no. **IA/MH/IND3/405295/2022** dated 19.11.2022. Due to the shortcoming the proposal was referred back to PP on 25.11.2022 and reply for the same has been submitted to 6.1.2023. The proposal is now placed in 46th EAC Meeting held on 30th- 31st January and 1st February 2023, wherein the PP and an accredited Consultant, M/s. Aditya Environmental Services Pvt. Ltd. (NABET Accreditation Certificate No. NABET/EIA/2225/RA0262, Valid up to 1.5.2025] made a detailed presentation on the salient features of the project.:
4. The PP reported the proposed product details as follows:

S. No.	Name of Product	Existing Capacity (MTPM) (*)	Proposed Capacity (MTPM)	Total Capacity (MTPM)	CAS No.	Pharmacopoeia Reference /Page No.
	Poly Ethylene Glycols (PEGs)					
1.	Polyethylene Glycol 200 USP				25322-68-3	USP41-NF36-5498
2.	Polyethylene Glycol 400 BP	50	150		25322-68-3	BP2018/EP9.0-2950

3.	Polyethylene Glycol 400 USP			200	25322-68-3	USP41-NF36-5498
4.	Polyethylene Glycol 600 USP				25322-68-3	USP41-NF36-5498
5.	Polyethylene Glycol 1500 USP				25322-68-3	USP41-NF36-5498
6.	Polyethylene Glycol 3350 USP				25322-68-3	USP43-NF38-3584
7.	Polyethylene Glycol 4000 IP				25322-68-3	IP2018-2955
8.	Polyethylene Glycol 4000 BP				25322-68-3	BP2018/EP9.0-2950
9.	Polyethylene Glycol 4000 USP				25322-68-3	USP41-NF36-5498
10.	Polyethylene Glycol 6000 USP				25322-68-3	USP41-NF36-5498
11.	Polyethylene Glycol 6000 EP				25322-68-3	EP9.0-2950
12.	Polyethylene Glycol 6000 IP				25322-68-3	IP2018-2956
13.	Polyethylene Glycol 8000 USP				25322-68-3	USP41-NF36-5498
	Polysorbates of all grades					
14.	Polysorbate 20 IP				9005-64-5	IP2014-2516
15.	Polysorbate 60 USP	20	175	195	9005-67-8	USP40-NF35-7835
16.	Polysorbate 80 IP				9005-65-6	IP2014-2517
17.	Polysorbate 80 EP				9005-65-6	EP9.0-3370
	Non-Ionic Emulsifiers					
	Castor Oil Ethoxylate	20	50	70	61788-85-0	--
	Benzhydrol	20	-20	0	91-01-0	
	Total	110	355	465		

5. The PP reported that there is no violation as per the EIA notification, 2006, no court case is pending against the proposal and no direction issued under E(P) Act/Air Act/Water Act.
6. The PP reported that Existing land area is 3100, m², proposed expansion project will be developed within existing facility area and no R&R is involved.
7. The PP reported that the proposal does not involve Approval/Clearance under Forest (Conservation) Act, 1980, Wildlife (Protection) Act, 1972 and C.R.Z Notification, 2011, as amended. There is no Forest, Eco Sensitive Area/National Park/Wildlife Sanctuary in 10 km radius of the site. Kasardi River/ Waterbody is flowing at a distance of 0.30 Km in East direction.

8. The PP reported that the total water requirement is 50 m³/day. Fresh water will be fulfilled from MIDC, Talaja. Effluent of 6 m³/day quantity will be treated through Effluent Treatment Plant. Domestic sewage of 4.0 cmd will be treated in ETP (in Aeration tank). 10 cmd of Treated effluent will be discharge to CETP. MIDC has granted permission to discharge effluent to CETP and CETP has sufficient capacity to treat effluent.
9. The PP reported that the Power requirement after expansion will be 150 KVA including existing 150 KVA and will be met from Maharashtra State Electricity Distribution Corporation Limited (MSEDCL). Existing unit has 1 DG sets of 250 Capacity, no additional DG sets are proposed to be installed.
10. The PP reported that the project being in **notified MIDC industrial area (Notification No. IDC.1065/13583-(I). dated 11.3.1966), is exempted from the public hearing** as per the Ministry's O.M. J-11011/321/2016-IA. II(I) dated 27.04.2018.
11. Industry will develop Greenbelt in an area of 20% i.e. 621.12 m² out of total area of the project (Inside factory 443.12 m² + Adjacent 178 m² with due permission from MIDC). In addition, the PP has taken Open Space Plot (OS-63 admeasuring 1000 m² from MIDC for Green Belt Development), taking Total Green Belt area to 1621.12 m² (52 % of plot area) and meeting CEPI norms.
12. The estimated project cost is Rs. 8.87 Cr. including existing investment of Rs. 5.37 crores. The Total employment will be 45 persons as direct, after expansion. Industry proposes to allocate Rs.3,50,000 towards Corporate Social Responsibility.
13. **Deliberations by the EAC:**

The EAC inter-alia, deliberated on the certificate of incorporation, copy of lease agreement between MIDC and Vasudha Chemical, copy of RC of SSI unit, letter from MPCB dated 30.3.1993 for environment audit, clarification regarding violation, Greenbelt development, wastewater generation and clarification regarding location of the project in critically polluted area and advised the PP to submit the following:

- Copy of certificate of incorporation.
- Copy of lease agreement dated 2.1.1987 between MIDC and Vasudha Chemicals for Talaja factory.
- Copy of registration certificate of SSI unit
- Letter from MPCB dated 30.3.1993 asking Vasudha Chemicals to file Environment audit statement.
- Greenbelt development plan.

The PP submitted the above information/documents and the EAC found it to be satisfactory. The PP also submitted that the industry proposes to increase the production by going from existing one shift operation to two & three shift operation. By installing SCADA system we have better process control and lowered time required for batch operation. Thus, increase better utilization of plant and machinery and accommodate three shifts. This will also not increase in footprint of our manufacturing building. We have shifted over to Natural Gas use in our boilers (from earlier LDO). There is no process effluent generation as water is deterrent in reactions. However small quantity of effluent, less than 10 cu. m. per day, is generated from cooling tower blowdown and vessel washings.

Industrial audit report by UDCT is also attached herewith that confirms that increase production from one shift to three shift operation will not lead to increase trade effluent. Talaja MIDC is recently classified as Other Polluted areas due to sustained efforts by the authorities to implement the action plan prepared to reduce pollution loads. Talaja CETP is meeting discharge norms of MPCB and recently expanded to 27.5 MLD capacity. This is currently treating around 18 MLD. VSCL is member of Talaja CETP.

14. After detailed deliberations, the EAC **recommended** the project for grant of ToR (**Standard ToR [Annexure-II] and additional ToR as mentioned below**), **without public hearing** as per the provisions of the EIA Notification, 2006 and as per O.M. No. 22-23/2018-IA.III dated 05.07.2022.
- (i) The PP shall install SCADA system for better process control and lowered time required for batch operation
 - (ii) Action plan for utilization of modern technologies for capturing carbon emitted and developing carbon sink/carbon sequestration resources.
 - (iii) Detailed description of micro flora and fauna (terrestrial and aquatic) existing in the study area with special reference to rare, endemic and endangered species.
 - (iv) Explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and wastewater disposal.
 - (v) Detailed greenbelt development plan for 52% (existing and proposed 82 sqm + proposed 1339 sqm = 1621 sqm) of the total area, with a spacing of 2 m x 2 m and 2500 number of trees per hectare, that is 52 % of our plot area.
 - (vi) Detailed solvent recovery/solvent management plan
 - (vii) Detailed Volatile Organic Compounds (VOCs)/Fugitive emissions control plan
 - (viii) The status of the action plan, if any, prepared by the State Government/SPCB for the CPA needs to be provided.
 - (ix) The PP needs to submit the action plan with respect to mitigation measures for CPA mentioned in the Ministry's OMs dated 31.10.2019.
 - (x) Being in a Critically Polluted Area (CPA), the PP need to submit alternative site analysis and Environmental Cost Benefit analysis in the EIA report.
 - (xi) The PP shall submit the details of carbon foot prints and carbon sequestration study w.r.t. the proposed project. The Action Plan for utilization of modern technologies for capturing carbon emitted and developing carbon sink/carbon sequestration resources shall also be prepared and submitted.
 - (xii) The PP should submit the photographs of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this, the PP should submit the original test reports and certificates of the labs which have analyzed the samples.
 - (xiii) Details of Onsite and Offsite emergency plans as per the provisions of the MSIHC Rules need to be submitted.
 - (xiv) The PP need to conduct the Life Cycle Assessment including the impact on flora and fauna.
 - (xv) Industry shall use Natural gas as Primary Fuel for Boiler in the proposed 10 TPH capacity steam boiler.
 - (xvi) Activity-wise, a time bound action plan along with budgetary provisions for occupational health & surveillance, environment management plan, and green belt development plans shall be prepared and submitted.

- (xvii) Undertaking from the PP and the consultant in pursuant to the O.M. No. J-11013/41/2006-IA. II(I) dated 04.08.2009 and J-11013/41/2006-IA. II(I) dated 5.10.2011.
- (xviii) The PP shall submit an undertaking to the effect that the project is not a violation proposal in pursuant to the S.O. 804(E) dated 14.03.2017 and SOP dated 07.07.2021.

Agenda No. 46.8

Proposed Expansion of Herbicides Product & Pesticide Specific Intermediates with production capacity from 1200 TPM to 4350 TPM located at Plot No. 3246 to 3251, 3325 to 3329, GIDC Estate Panoli, Ankleshwar, District Bharuch, Gujarat by M/s. Aero Agro Chemical Industries Limited - Consideration of EC

[Proposal No. IA/GJ/IND3/410132/2023; File No. J-11011/938/2008-IA-II(I)]

1. The proposal is for environmental clearance to the Proposed Expansion of Herbicides Product & Pesticide Specific Intermediates with production capacity from 1200 TPM to 4350 TPM located at Plot No. 3246 to 3251, 3325 to 3329, GIDC Estate Panoli, Ankleshwar, District Bharuch, Gujarat by M/s. Aero Agro Chemical Industries Limited.
2. The project/activity is covered under Category ‘A’ of item 5(b) Pesticide Industry and pesticide specific intermediates (excluding formulations) of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) and requires appraisal at Central Level by Expert Appraisal Committee (EAC). The PP also reported that the project is located in a critically polluted area.
3. The PP applied for ToR vide proposal number. IA/GJ/IND3/284343/2022 and the ToR has been issued by the Ministry, vide letter No J-11011/938/2008-IA-II(I) dated 8.9.2022. The PP submitted as the project site is in a Notified Industrial Area i.e., GIDC Industrial Area, Panoli vide gazette no. GHU-98-GID-1098-2094-G: dated 18.11.1998. Thus, in accordance with Clause 7(i) (III) of EIA notification 2006 & OM J-11011/321/2016-IA. II(I) dated 27.04.2018. The PP applied for Environment Clearance on 10.1.2023 in Common application form and submitted EIA/EMP Report and other documents. The PP reported in Form- that it is an Expansion EC. The proposal is now placed in 46th EAC Meeting held on 30th- 31st January, 1st February 2023, wherein the PP and an accredited Consultant, M/s. Shree Green Consultants (NABET Accreditation Certificate No. NABET/EIA/2124/IA0072, Valid up to 24.2. 2024] made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:
4. The PP reported that the Existing land area is 20880.0 m² land will be used for proposed expansion and no R& R is involved in the Project. The details of products are as follows:

S. No.	CAS No.	Products	Production Capacity (TPM)		
			Existing*	Proposed	Total
Herbicides					
1	94-75-7	2,4-Dichloro Phenoxy Acetic Acid (2,4-D Acid)	250	750	1000
	7084-86-8	2,4 D sodium			
	533-23-3	2,4 D Ester			
2	2008-39-1	2,4 D Amine		1100	1350

S. No.	CAS No.	Products	Production Capacity (TPM)		
			Existing*	Proposed	Total
3	94-74-6	2- Methyl 4 – Chloro Phenoxy Acetic acid	125	50	175
	26544-20-7	2-Methyl-4- Chloro Phenoxy Acetic Acid Ester			
	2039-46-5	2-Methyl-4- Chloro Phenoxy Acetic Acid Amines			
4	23184-66-9	Butachlor Technical	50	-	50
5	51218-49-6	Pretilachlor Technical	50	-	50
6	1071-83-6	Glyphosate Technical and its salt	25	-	25
7	52315-07-8	Metribuzin Technical	25	-	25
8	52645-53-1	Pendimethalin Technical	50	-	50
9	67375-30-8	Atrazine Technical	50	-	50
10	--	Chloro Phenol	-	140	140
Total (A)			625	2040	2915
Intermediates					
11	120-83-2	2,4 Dichloro phenol	240	860	1100
12	79-11-8	Monochloro Acetic Acid	275	00	275
13	79-04-9	Chloroacetyl Chloride	60	00	60
Total (B)			575	860	1435
Grand Total (A+B)			1200	2900	4350
By products					
14		P-Toluene Sulphuric acid	27.5	00	27.5
15	7647-01-0	HCl (30 %)	570	972	1542
16	7647-15-6	Sodium Bromide (7-8%)	175	00	175
17	7664-93-9	Spent Acid	0	264	264
18	7757-83-7	Sodium sulphite	0	165	165
Total			772.5	1401	2173.5

Note: * The above-mentioned existing products as per existing EC F. No. J-11011/938/2008-IA II (I) dated 3rd June 2009.

5. The PP reported that there is no violation case as per the Notification No. S.O.804(E) dated 14.03.2017 and no direction is issued under E(P) Act/Air Act/Water Act.
6. The PP reported that the Ministry had issued EC earlier vide letter no. F. No. J-11011/938/2008-IA II (I) dated 3rd June, 2009 to the existing project for proposed manufacturing of herbicides products and intermediates unit at Plot No. 3246 to 3251, 3325 to 3329, GIDC Estate Panoli, Ankleshwar, District Bharuch, Gujarat in favour of **M/s. Aero Agro Chemical Industries Limited.**
7. The PP reported that Certified Compliance Report of existing EC has been issued by the IRO, Gandhinagar vide letter dated 14.12.2022, wherein it is reported that out of 51 conditions, 28 are complied, 7 are partially complied (hazardous/solid waste, fugitive emission, LDAR system, odour control, letters are not legible), 11 are agreed to comply and 5 are noted by the unit. The

Action Taken Report for the partially complied conditions was submitted by the PP to IRO vide letter dated 6.1.2023.

8. The PP 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. River/ water body Narmada River is flowing at a distance of 15 km in North direction. and no Schedule-I species found in the study area.
9. The PP reported that Ambient air quality monitoring was carried out at **8** locations during 1st March 2022 to 31st May 2022 to and the baseline data indicates the ranges of concentrations as: PM₁₀ (**46.2 – 79.4 µg/m³**), PM_{2.5} (**23.4 – 54.7 µg/m³**), SO₂ (**21.7 – 64.3 µg/m³**) and NO_x (**26.2 – 69.3 µg/m³**). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be **4.98 µg/m³**, **10.7 µg/m³**, **3.80 µg/m³** and **0.617 µg/m³** with respect to PM₁₀, SO_x, NO_x and CO. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). Ambient noise levels were measured at 10 locations around the existing project site and also on the project site location. Noise levels monitoring was done during the day as well as night time. Near the Industrial area the minimum and maximum noise levels recorded during the day time was **51.8 Leq dB(A) at N9** and **67.3 Leq dB(A) at N3** and during night time was **43.9 Leq dB(A) at N9** and **56.8 Leq dB(A) at N3**(Industrial Area) respectively. The maximum values may be attributed towards the nearby commercial activities and traffic movements. It was observed that the noise levels in the study area are well within the prescribed limits as prescribed by the CPCB.
10. Ground water samples were collected and analysed from 8 locations around the existing project site and also on the project site location. The pH of ground water samples varied from **7.31 to 8.04**. Turbidity was found **<1 NTU**, Total Dissolved Solids varied in the range of **554-1974 mg/l**. COD and BOD are found in range was found to be BDL. Total Hardness (as CaCO₃) varied from **110 to 515 mg/l**. Total Alkalinity varied from **200 to 560 mg/l**. Chlorides is found in the range of **110 to 515 mg/l**.
11. Surface water samples were collected and analysed from 8 locations around the existing project site pH of Surface water samples varied from **7.34 to 8.13**, Total Dissolved Solids varied in the range of **172 to 1572 mg/l**. Total Hardness (as CaCO₃) varied from **40 to 410 mg/l**. Chlorides is found in the range of **35.3 to 103 mg/l**.
12. The PP reported that total water requirement is **450.54 m³/day** of which fresh water requirement of **165.80 m³/day** will be met from Panoli GIDC water Supply System. Effluent of **364.34 m³/day** quantity will be treated through proposed in house ETP, MEE, & STP. Total waste water will be 364.34 KLD (Industrial 350.84 KLD + Domestic 13.5 KLD). Process 308.74 KLD, washing (2.1 KLD), Boiler (20 KLD) and Cooling (15 KLD) will be treated into WWTS. Total treated water (50 KLD out of 341.24 KLD) will be sent to PETL for further treatment. Remaining treated water (291.24 KLD) will be sent to MEE for further treatment. MEE Condensate 271.24 KLD will be reused in plant. MEE salt will be sent to authorized TSDF site & MEE salt will be disposed into TSDF. Domestic Effluent will be treated into STP and treated water will be reused in gardening purpose.

13. The PP reported that Power requirement after expansion will be **1375 KVA** and will be met from Dakshin Gujarat Vij Company Limited (**DGVCL**) Power Supply. Two D.G set of 200 KVA & 300 KVA will be used as standby during power failure. Stack height of 11 meter will be provided as per CPCB norms to the proposed DG sets. Existing unit has 3 TPH coal fired 2 nos boilers, out of which one boiler (i.e., Boiler-2) will be removed. Additionally, 5 TPH, 3 TPH and 2 TPH coal/briquette fired 3 nos. boilers and a D G Set (300 KVA x 1) will be installed. Multi cyclone separator followed by Alkali scrubber with a stack of height of 30 m will be installed for controlling the particulate emissions within the statutory limit of 120 mg/Nm³ for the proposed boilers. Details of utility required are given as below.

Existing Scenario

Sr. no.	Source of emission With Capacity	Stack Height (meter)	Type of Fuel	Pollutants	Permissible Limit	Air Pollution Control Measures (APCM)
1	Boiler -1 (3 TPH)	15	Coal	PM SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm	Cyclone Separator
2	Boiler -2	15				Cyclone Separator
3	Hot Air Generator - 1	10	-			Caustic Scrubber
4	Hot Air Generator – 2	10	-			Alkali Scrubber
5	Hot Air Generator – 3	10	-			Alkali Scrubber
6	D G Set 200 KVA	10	Diesel			Adequate Stack

After Proposed expansion

Sr. no.	Source of emission With Capacity	Stack Height (meter)	Type of Fuel	Pollutants	Permissible Limit	Air Pollution Control Measures (APCM)
1	Boiler -1 (3 TPH)	15	Briquettes	PM SO ₂ NO _x	120 mg/Nm ³ 80 ppm 40 ppm	Multi Cyclone Separator followed by Alkali scrubber
2	Boiler-3 (5 TPH)	30	Briquettes			Multi Cyclone Separator followed by Alkali scrubber
3	Boiler-4 (3 TPH)	30	Coal / Briquettes			Multi Cyclone Separator followed by Alkali scrubber
4	Boiler-5 (2 TPH)	30	Briquettes			Multi Cyclone Separator followed by Alkali scrubber
5	Hot Air Generator - 1	10	-			Alkali Scrubber
6	Hot Air Generator – 2	10	-			Alkali Scrubber
7	Hot Air Generator – 3	10	-			Alkali Scrubber
8	D G Set 200 KVA	11	Diesel			Adequate Stack Height

Sr. no.	Source of emission With Capacity	Stack Height (meter)	Type of Fuel	Pollutants	Permissible Limit	Air Pollution Control Measures (APCM)
9	D.G Set 300 KVA	11	Diesel			Adequate Stack Height

14. Details of Process Emissions Generation and its Management:

Sr. No.	Plant	Stack Height (m)	Type of Pollutant	Permissible Limit	APCM
Existing					
1	MPP-I (1 Nos.)	15	HCl	20 mg/Nm ³	Water scrubber + caustic scrubber
2	MPP-II (1Nos.)	15	HCl	20 mg/Nm ³	Water scrubber + caustic scrubber
Proposed					
1	MPP-I (1 Nos.)	15	HCl	20 mg/Nm ³	Water scrubber + caustic scrubber
2	MPP-II (1 Nos.)	15	HCl	20 mg/Nm ³	Water scrubber + caustic scrubber
3	MPP-III (1 Nos.)	15	HCl	20 mg/Nm ³	Water scrubber + caustic scrubber
4	Dryer (3 Nos.)	10 each	PM	20 mg/Nm ³	Bag filter

15. Details of Solid Waste/ Hazardous Waste Generation and its Management:

Sr. No.	Hazardous Waste	Source	Cat	Quantity			Mode of Disposal
				Existing	Proposed	Total	
1.	Used or spent Oil	Process Unit	I-5.1	50 Liters/Month	50 Liters/Month	100 Liters/Month	Collection, Storage, transportation and disposal by reused in plant & machinery as lubricant or sell it to authorized refiners/recycler.
2.	Discarded Drums/Containers Or Discarded Bags/Liners	Storage Facility	I-33.1	1160 Nos./Month 5000 Nos./Month	840 Nos./Month 11000 Nos./Month	2000 Nos./Month 16000 Nos./Month	Collection, Storage, decontamination, Transportation and disposal by reuse after in-house decontamination or send it to authorized decontamination

							facility/ recycler or send back to supplier
3.	ETP Sludge	ETP Plant	I-35.3	12.5 MT/Month	7 MT/Month	19.5 MT/Month	Collection, Storage, Transportation and Final Disposal at common TSDF site.
4.	MEE Salt	MEE	I-35.3	-	750 MT/Month	750 MT/Month	Collection, Storage, Transportation & disposal to common TSDF site.
5.	Filter & Filter materials/ Filter cloths	Treatment Unit	I-35.1	150 Kg/month	125 Kg/month	275 Kg/month	Collection, Storage, Transportation & Incineration at CHWIF or Sent to for AFR cement Industries & other industries for Co-processing
6.	Hy-Flow material	Manufacturing process	I-35.1	100 Kg/month	- 100 Kg/month	00	Collection, Storage, Transportation & Incineration at CHWIF or Sent to for AFR cement Industries & other industries for Co-processing
7.	Residual Material	Manufacturing process	I-29.1	25 MT/Month	5 MT/Month	30 MT/Month	Collection, Storage, Transportation & Incineration at CHWIF or Sent to for AFR cement Industries & other industries for Co-processing
8.	Process Residue	Manufacturing process	I- 29.1	-	9 MT/Month	9 MT/Month	Collection, Storage, Transportation & Incineration at CHWIF or Sent to for AFR cement Industries & other industries for Co-processing
9.	Spent Solvents	Manufacturing process	I-20.2	-	105 MT/Month	105 MT/Month	Collection, Storage, Transportation and reuse within Factory Premises or or co-processing in cement industries for AFR or incineration at CHWIF or Disposal by sell out

										to authorized users who is having authorization with valid CCA and rule 9 permission to receive this waste after making MOU.
10	Waste water from scrubber	Scrubber	-	-	150 MT/Month	150 MT/Month	150 MT/Month	150 MT/Month		Collection, Storage, Transportation and Disposal by sell out to authorized users who is having authorization with valid CCA and rule 9 permission to receive this waste after making MOU.
11	Fly Ash	From Boiler	-	15 MT/Month	25 MT/Month	40 MT/Month	40 MT/Month			Collection, Storage, Transportation and Final Disposal at bricks manufacturers or common TSDF site.

16. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ **660 Lakhs** (capital) and the Recurring Cost (operation and maintenance) will be about ₹ **26.057 Lakhs**. Industry proposes to allocate ₹ **70.5 Lakhs** towards CER.

17. The PP reported that the Industry has already developed greenbelt in an area of 20 % i.e., 4176 m² out of total area of the project. Approximately 31% i.e., 6600 m² area green belt is developed outside premises in collaboration with Panoli Industry association. This will constitute a total of 51% greenbelt area development by M/s. Aero Agro Chemical Industries Limited.

18. The PP proposed to set up an Environment Management Cell (EMC) by engaging Unit Head- EHS Head – safety manager- Environment Manager –Medical officer- safety officer- Environment Monitoring officer – Fire men- Lab chemist – wastewater treatment plant operators or the functioning of EMC.

19. The PP reported the following w.r.t carbon sequestration:

S. No.	Species	Green Weight of Tree above ground level	Green weight (including root)	Dry Weight of tree	Weight of carbon in the tree	Weight of CO ₂ lbs	Weight of CO ₂ Sequestered in tree per year	Total No of trees	kg/year	Ton/Year
1	Plumeri rubra	300.00	360.00	261.00	130.50	478.45	47.85	500	10840	10.840

2	Palm tree	591.50	709.80	514.61	257.30	943.35	94.33	10	427.41	0.427
3	Delonix regia	1620.00	1944.00	1409.40	704.70	2583.64	258.36	190	22242	22.242
4	Casia fistuala	833.00	999.60	724.71	362.36	1328.50	132.85	95	5718.5	5.718
5	Ficus religiosa	1985.50	2382.60	1727.39	863.69	3166.56	316.66	220	31565	31.565
6	Azadirac hta indica	900.00	1080.00	783.00	391.50	1435.36	143.54	234	15219	15.219
Total								1249	86011.91	86.011

20. The PP submitted the Disaster and Onsite and Offsite Emergency Plans in the EIA report.
21. The estimated project cost is **Rs. 35.25 crores**. Total Employment will be 65 persons as direct & 110 persons indirect after proposed expansion.
22. **Deliberations by the EAC:**

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

The EAC noted that the PP 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 PP.

The EAC noted that the EIA reports are in 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 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 EAC inter-alia, deliberated on the compliance of the existing unit, biodiversity report, CER activities, carbon sequestration, targeted species, fuel, Compliance to OM dated 31.10.2019 for projects falling within CPA and advised the PP to submit the following:

- Undertaking from Eco- Biodiversity Expert.
- Revised CER activities.
- Details for analysis of carbon sequestration as percentage wise in existing unit and proposed expansion
- The details of targeted species by the proposed products.
- Undertaking for fuel use.

The PP submitted the above information/documents and the EAC found it to be satisfactory.

The EAC deliberated the Onsite and Offsite Emergency plans and also the various mitigation measures proposed during implementation of the project and advised the PP to implement the provisions of the Rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996, as amended from time to time.

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.

The EAC is of the view that its recommendation and grant of environmental clearance by the regulatory authority 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 PP 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.

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

- (i) The PP shall install adequate Air pollution control measures i.e. Multi Cyclone Separator followed by Alkali scrubber, & adequate stack height with proposed flue gas emission stack and adequate two stage scrubber with process emission stacks. Stack emission levels shall be stringent than the existing standards i.e. PM < 120 mg/Nm³; SOx < 80 PPM and NOx < 40 PPM.
- (ii) CEMS shall be installed and connected to SPCB/CPCB Server.
- (iii) Effective fugitive emission control measures shall be adopted in the process, transportation, packing etc.
- (iv) Transportation of materials by rail/conveyor belt, wherever feasible, shall be explored.
- (v) Agro briquettes shall be used as a primary fuel and imported coal with less ash content shall be used during unavailability of briquettes.
- (vi) The best available technology seven recovery system & ANDF (Agitated Nutsche Filter Dryers) shall be used.
- (vii) The PP shall develop an additional greenbelt over an area of at least 6600 m² by planting approx. 2694 numbers of saplings within a year of grant of EC. The saplings selected for the

plantation should be of sufficient height, preferably 6-ft. The budget earmarked for the plantation shall be kept in a separate account and should be audited annually. The PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

- (viii) The PP shall develop 3500 Sq.m land area as greenbelt outside of the premises.
- (ix) The transportation load on roads shall be within their carrying capacity and adequate width of roads shall be maintained inside the industrial premises.
- (x) The 284.74 KLD regular treated water shall be reused in utility, process, washing, scrubbing & gardening resulting into a reuse of 63.1 % of total treated effluent.
- (xi) The PP shall operate Online TOC meter for reflecting the online monitoring results on the company's server & SPCB/ CPCB server regularly.
- (xii) The PP shall harvest rain water in surrounding villages (Panoli, Karamli, Bakrol, Bhadi, Alonj) with high rain water recharge potential.
- (xiii) 50 KLD effluent shall be sent to M/s.PETL for further treatment and final disposal into deep sea. The PP shall not dispose any additional effluent into CETP. Additional effluent generated from the proposed products shall be treated in ETP and the treated water shall be reused in the plant.
- (xiv) Domestic effluent shall be treated in STP and treated water shall be reused in Gardening and plantation within premises after achieving prescribed GPCB norms.
- (xv) Unit shall dispose the Fly ash as per Fly ash notification 2009. Unit shall dispose the fly ash to brick manufacturing or authorized SPCB TSDF site for landfilling
- (xvi) The PP shall dispose the Process Residue & Residual Waste (After Effluent Treatment), Spent carbon for co-processing after MOU.
- (xvii) Monitoring of the compliance of EC conditions shall be submitted with third party audit every year.
- (xviii) An amount of ₹ 70.5 lakhs shall be allocated towards CER for Skill Development Centre and Reading rooms/ Library at Nearby villages, Ambulance facility to the nearby hospitals, Health Camps - Free Doctor consultation and medicine, Health Awareness program on AIDS, Malaria, TB, Anaemia etc., Tree plantation and maintenance activities (Tree, Tree guard, man power, water & Fertilizer cost) nearby villages, schools, government buildings and road side in nearby villages, construction of Public Toilets and provision of Distribution of Bins (Wet & Dry) – For Segregation of Waste in nearby villages, planning and Implementation of Rainwater harvesting systems for the efficient utilization of rainwater, Lake (Khet Talavadi)

formation and Maintenance of water bodies for the villages, provision of solar panel-based Street light (Roadside) and their AMC in nearby villages.

- (xix) A separate Environmental Management Cell (having qualified persons 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 by engaging Unit Head- EHS Head – safety manager- Environment Manager –Medical officer- safety officer- Environment Monitoring officer – Fire men- Lab chemist – wastewater treatment plant operators. In addition to this, one safety & health officer as per the qualification given in Factories Act, 1948 shall be engaged within a month of grant of EC. The PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.
- (xx) The company 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. The budget proposed under EMP [₹ **660 Lakhs** (Capital cost) and ₹ **26.057 Lakhs** per annum (Recurring cost)] shall be kept in a separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.
- (xxi) The total water requirement is 450.54 m³/day of which fresh water requirement of 165.80 m³/day shall be met from Panoli GIDC water Supply System. The PP should ensure that water supply should not be above the permissible limit as mentioned in the letter and fresh water shall be withdrawal only after obtaining prior permission from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year
- (xxii) No banned chemicals shall be manufactured by the PP. No banned raw materials shall be used in the unit. The PP shall adhere to the notifications/guidelines of the Government in this regard.
- (xxiii) The PP 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.
- (xxiv) The project proponent shall comply with the environment norms for Organic Chemical Industry as notified by the Ministry of Environment, Forest and Climate Change, *vide* GSR 444(E), dated 13.6.2011 under the provisions of the Environment (Protection) Rules, 1986.
- (xxv) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The PP shall implement the onsite/offsite emergency

plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

- (xxvi) 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.
- (xxvii) The PP shall explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.
- (xxviii) 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 servers. 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.
- (xxix) 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.
- (xxx) 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.
- (xxxi) Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.
- (xxxii) The unit shall make the arrangement for the protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.
- (xxxiii) 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.
- (xxxiv) 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.

(xxxv) 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 vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.

Agenda No. 46.9

Proposed Phosphatic Fertilizer and Allied Products manufacturing unit located at Plot No. A-5/2, Nardana MIDC Area Phase – I, Tal. Sindkheda, Dist. Dhule, Maharashtra by M/s. Rama Phosphates Ltd. - Consideration of EC

[Proposal No. IA/MH/IND3/411589/2022; File No. IA-J-11011/160/2022-IA-II(I)]

1. The proposal is for the environmental clearance for the proposed Phosphatic Fertilizer and Allied Products manufacturing unit located at Plot No. A-5/2, Nardana MIDC Area Phase – I, Tal. Sindkheda, Dist. Dhule, Maharashtra by M/s. Rama Phosphates Ltd.
2. The project/activity is covered under Category ‘A’ of item 5(a) (**Chemical fertilizers**) of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) and requires appraisal at Central Level by the EAC.
3. The PP applied for the ToR vide proposal number IA/MH/IND3/271555/2022 dated 20.5.2022 and the ToR was issued by the Ministry vide letter No. IA-J-11011/160/2022-IA-II(I) dated 21st May, 2022. The PP reported that Public Hearing is exempted as the proposed project site is located in Nardana MIDC Phase - I, notified vide Notification No. IDSO 2189/944681 dated 31.08.1991. The PP applied for Environment Clearance on 22.12.2022 in CAF and submitted EIA/EMP Report and other documents. The PP reported in CAF that it is a **Fresh EC**. Due to some shortcomings, the Project was referred back to PP on 5.1.2023 and reply to the same was submitted on 13.1.2023. The proposal is now placed in 46th EAC Meeting held on 30th- 31st January, 1st February 2023, wherein the PP and an accredited Consultant, M/s. Green Circle Inc. (NABET Accreditation Certificate No. NABET/EIA/2124/RA 0219, Valid up to 26.01.2024] made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:
4. The PP reported that Total plot area is **1,26,357.00 m²** and no R& R is involved in the Project. The details of products are as follows:

S. No.	Product Details	CAS No.	Existing Quantity	Proposed Quantity	Total Quantity	Uses
1	Single Super Phosphate (powder) - SSP including Fortified Zincated & Boronated	8011-76-5	0	18000	18000	Fertiliser

2	Single Super Phosphate (Granulated) - GSSP Including Fortified Zincated, Boronated, Zincated & Boronated mix	8011-76-5	0	18000	18000	Fertiliser
3	NPK Mixture Fertiliser	66455-26-3	0	18000	18000	Fertiliser
Total Fertiliser Manufacturing Capacity			0	54000	54000	
4	Sulphuric Acid (98%) 23% Oleum	7664-93-9	0	7500	7500	Used in Production of SSP
5	Phospho Gypsum	13397-24-5	0	1500	1500	Fertiliser
6	Sodium Silico Fluoride (SSF)	16893-85-9	0	200	200	Raw Material in Glass Industry
Total Allied Product Manufacturing Capacity			0	9200	9200	

5. The PP reported that there is no violation case as per the Notification No. S. O. 804(E) dated 14.03.2017 and no direction is issued under E (P) Act/Air Act/Water Act.
6. The PP 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. River/ water body Panzara River is flowing at a distance of 5.2 in direction South East and no Schedule- I species have been envisaged in study area exist within the 10 km study area.
7. The PP reported that the Ambient air quality monitoring was carried out at 8 locations during pre-monsoon i.e. 1st March 2022 to 31st May 2022 to and the baseline data indicates the ranges of concentrations as: PM₁₀ (48.7 µg/m³ – 61.0 µg/m³), PM_{2.5} (9.0 µg/m³ - 22.4 µg/m³), SO₂ (12.0 µg/m³ - 20.8 µg/m³) and NO₂ (14.9 µg/m³ – 27.8 µg/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 4.81 µg/m³, 4.7 µg/m³ and 4.61 µg/m³ with respect to PM10, SO₂ and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).
8. Noise Quality Monitoring was carried out at 8 Locations pre-monsoon i.e. 1st March 2022 to 31st May 2022 to and the baseline data indicates the ranges of concentrations as: L_{eq} (Day) from 50.0 dB(A) to 63.3 dB(A) and L_{eq} (Night) from 40.2 dB(A) to 58.6 dB(A).
9. Surface Water Monitoring was proposed at 1 Location. But No sample was taken as the river was observed to be dry.

10. The PP reported that the Ground Water Quality Monitoring was carried out at 8 Locations pre-monsoon i.e. 1st March 2022 to 31st May 2022 to and the baseline data indicates the ranges of concentrations as: pH from 6.96 to 7.45, Total Hardness from 53.78 mg/l to 151.24 mg/l, TDS from 211.19 mg/l to 325.99 mg/l, Chloride from 24.69 mg/l to 95.61 mg/l, Fluoride from 0.24 mg/l to 0.73 mg/l, Total Coliform and Faecal Coliform was found to be Absent.
11. The PP reported that the Soil Monitoring was carried out at 8 Locations pre-monsoon i.e. 1st March 2022 to 31st May 2022 to and the baseline data indicates the ranges of concentrations as: pH from 6.85 to 7.52, EC from 281.13 to 972.96 μ s/cm, Organic Carbon from 0.08 to 0.38 %, Available Nitrogen from 30.88 to 115.2 kg/ha, Phosphorous Content from 55.11 kg/ha to 140.51 kg/ha and Sodium Adsorption Ratio from 0.49 to 1.93.
12. The PP reported that the total fresh water requirement for the proposed project during construction phase is 80 KLD whereas for operation phase is 830 KLD which will be met from MIDC. Effluent of 132.75 KLD quantity will be treated through ETP of capacity 150 KLD and reused in the process. The plant will be based on Zero Liquid Discharge system.
13. The PP reported that the total Power requirement is 2200 kW and will be met from Maharashtra State Electricity Distribution Corporation Limited (MSEDCL). 1 no. of DG set of capacity 1000 kVA is proposed as standby during power failure. Stack of 8 m above ground will be provided as per CPCB norms to the proposed DG set.
14. **Details of Process Emission Generation and its Management:** Process emissions of Fluoride and acid mist are anticipated from the manufacturing process.
1. Fluorine will be scrubbed in 4 venturi and cyclonic scrubber Towers of SSP Plant.
 2. Acid mist, SO₂ will be scrubbed in Alkali scrubber of S.A. Plant.
 3. Air emissions of Particulate Matter, SO₂ and NO_x are anticipated from Coal/ Briquette fired furnace and 1x14 TPH LDO fired waste heat Boiler. Wet scrubber will be provided as Air Pollution Control Equipment. The boiler and furnace will be provided with stack of height 30 m.
 4. In GSSP PLANT & ROCK Dryer coal /briquette will be used. The emissions from these plants will be vent to 40 m stack after scrubbing in two dry cyclones and wet Scrubbers in each stream.
 5. DG set will be utilized in case of power failure. D.G set will be placed in acoustic enclosure. 8 m stack will be provided for better dilution and dispersion of pollutants.

15. **Details of Solid / Hazardous Waste Generation and its Management: Solid Waste (Construction Phase)**

S. No.	Type of Waste	Quantity	Mode of Disposal
1.	Metal, Debris & stony waste, Wooden box/plastic/paper/corrugated box	100 MT	Metal waste & debris/stony waste shall be utilized within site for road construction and site levelling. Other waste sale to authorized scrap vendor.
2.	Dry Waste	21 kg/day	Disposed off through Local MSW Facility

3.	Wet Waste	14 kg/day	Disposed off through Local MSW Facility
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Solid Waste (Operation Phase)

S. No.	Type of Waste	Quantity	Mode of Disposal
1.	Dry Waste	120 kg/day	Disposed of through Local MSW Facility
2.	Wet Waste	80 kg/day	Disposed of through Local MSW Facility

Operation Phase

a) Hazardous Waste

S. No.	Category	Type of Waste	Quantity	Mode of Disposal
1.	17.1	Process acidic residue, filter cake, dust	520 kg/day	CHWTSDF
2.	17.2	Spent catalyst	0.36 kg/day	CHWTSDF/ Co-Processing in Cement Plant
3.	34.2	ETP Sludge from treatment of waste water arising out of cleaning/ disposal of barrels/ containers	4.16 kg/day	CHWTSDF/ Co-Processing in Cement Plant
4.	5.1	Used Oil	100 Lit/ Month	Authorised Recycler

b) Non-Hazardous Waste

S. No.	Description	UOM	Total	Treatment
1	Wooden Material	Kg/M	180	Sale to Authorized recycler
2	Glass scrap	Kg/M	10	Sale to Authorized recycler
3	HDPE Drums	Nos/M	10	Sale to Authorized recycler
4	Plastic scrap & other non-biodegradable waste	Kg/M	3000	Sale to Authorized recycler
5	Paper waste	Kg/M	10	Sale to Authorized recycler
6	e-Waste	Kg/A	120	Sale to Authorized recycler
7	Ash from Coal/ Briquette	MT/A	1000	Sold to Cement Manufacturer

16. The Budget earmarked towards Environmental Management Plan (EMP) is ₹ 730 Lakhs (capital) and the Recurring cost will be about ₹ 77 Lakhs per annum. Industry proposes to allocate Rs 2 Cr. i.e 2% of 95.85 Cr. towards CER.
17. The PP reported that Industry will develop greenbelt over an area of 33 % i.e., **41731.5** m² out of total area of the project. Approx. > 6600 plants (including trees and shrubs) are proposed for the greenbelt development.
18. The PP proposed to set up an Environment Management Cell (EMC) by engaging General Manager - Senior Dy. General Manager – Factory Manager - Manger (EHS) – Manager (Qc and lab) – safety officer for the functioning of EMC.

19. The PP submitted the Life Cycle Assessment and Carbon footprint.
20. The PP submitted the disaster and Onsite and Offsite Emergency Plans in the EIA report.
21. The estimated project cost is Rs. 95.82 Crore. Total Employment will be 257 persons as permanent & 305 persons as temporary.
22. **Deliberations by the EAC:**

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

The EAC noted that the PP 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 PP.

The EAC noted that the EIA reports are in compliance of the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components. The EAC deliberated on the proposed mitigation measures towards Air, Water, Noise and Soil pollutions. The EAC advised that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices.

The EAC inter-alia, deliberated on the Greenbelt development plan, CER, Fuel, carbon footprint study, EMP cost, water balance and advised the PP to submit the following:

- Revised Green belt development with 12600 number of trees.
- Revised CER plan to be implemented in 1 year
- Undertaking for Usage of Indonesian Coal only in case of Non - Availability of Briquette.
- Revised carbon footprint study taking into consideration 12600 number of trees.
- Revised EMP cost considering additional greenbelt development.
- water balance chart showing consumption loss and effluent.

The PP submitted the above information/documents and the EAC found it to be satisfactory.

The EAC deliberated on the Onsite and Offsite Emergency plans and various mitigation measures to be proposed during implementation also of the project and advised the PP to implement the provisions of the Rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

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 expert members of the EAC found the proposal in order and recommended for grant of environmental clearance.

The EAC is of the view that its recommendation and grant of environmental clearance by the regulatory authority 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 PP 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.

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

- (i) The PP shall develop Greenbelt over an area of at least, 41731.5 m² by planting 12600 within a period of one year of grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft (about 2 m). The budget earmarked for the plantation shall be kept in separate account and should be audited annually. PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of the expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.
- (ii) A separate Environmental Management Cell (having qualified persons 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. PP shall engage General Manager - Senior Dy. General Manager – Factory Manager - Manger (EHS) – Manager (QC and lab). In addition to this one safety & health officer as per the qualification given in Factories Act 1948 shall be engaged within a month of grant of EC. PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.
- (iii) The company 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. The budget propose under EMP is ₹ 755 Lakh (Capital cost) and ₹ 82.5 Lakh annum (Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

- (iv) As committed by the PP, the PP shall use Briquette as a primary fuel, Indonesian fuel shall be used in case of unavailability of Briquette
- (v) The total fresh water requirement for the proposed project during construction phase is 80 KLD whereas for operation phase is 830 KLD which will be provided by MIDC. The PP should ensure that water supply should not be above the permissible limit as mentioned in the letter and fresh water shall be withdrawn only after obtaining valid agreement from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year.
- (vi) Effluent of 132.75 KLD quantity shall be treated through ETP of capacity 150 KLD and reused in the process. The plant shall be based on Zero Liquid Discharge system.
- (vii) No banned 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.
- (viii) The project proponent shall comply with the environment norms for Fertilizer Industry as notified by the Ministry of Environment, Forest and Climate Change, *vide* GSR 1607(E), dated 29.12.2017 under the provisions of the Environment (Protection) Rules, 1986.
- (ix) 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.
- (x) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The project proponent shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.
- (xi) 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.
- (xii) The PP shall explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.
- (xiii) 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.
- (xiv) 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.

- (xv) Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.
- (xvi) 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.
- (xvii) 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.
- (xviii) 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 vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.

Agenda No. 46.10

Expansion of Synthetic Organic Chemicals Manufacturing Unit from 6.0 TPA to 7.50 TPA located at Gut No./S. No/ 65, H. No. 2, Paiki Village, Gatesh Budruk, Talathi Saja Kone, Tal. Wada, Dist. Palghar, Maharashtra by Synergia Life Sciences Private Limited - Consideration of EC

[Proposal No. IA/MH/IND3/410753/2022; File No. IA-J-11011/124/2022-IA-II(I)]

1. The proposal is for environmental clearance for the Expansion of Synthetic Organic Chemicals Manufacturing Unit from 6.0 TPA to 7.50 TPA located at Gut No./S. No/ 65, H. No. 2, Paiki Village, Gatesh Budruk, Talathi Saja Kone, Tal. Wada, Dist. Palghar, Maharashtra by Synergia Life Sciences Private Limited.
2. The project/activity is covered under Category 'A' of item 5(f), Synthetic Organic Chemicals industry of the Schedule of Environment Impact Assessment (EIA) Notification, 2006 and subsequent amendments as the project falls outside the notified industrial area.
3. The standard ToR has been issued by the Ministry, vide letter No. IA-J-11011/124/2022-IA-II(I) dated 20.4.2022. The PP submitted that the Public Hearing was conducted on 29.8.2022 which was presided by the Additional District Magistrate. The main issues raised during Public Hearing were steps for pollution control, employment generation, odor control, ground water contamination, utilisation of CSR funds, storage for effluent. Action plan for the issues raised during the PH was submitted. The PP applied for Environment Clearance on 16.12.2022 through

CAF and Form-1, and submitted the EIA/EMP Report and other documents. The PP in the CAF reported that it is an **Expansion case**. The proposal is now placed in 46th EAC Meeting held on 30th-31st January, 1st February 2023, wherein the PP and an accredited Consultant, M/s. Perfect Enviro Solutions Pvt. Ltd [Accreditation number NABET/EIA/1922/SA0143, and valid up to 28.2.2023], made a detailed presentation on the salient features of the project and informed the following:

4. The PP reported that the existing land area is 1.42 Ha and no R&R is involved in the Project. The details of products and by-products are as follows:

S. No.	Particulars	CAS No.	Unit	Existing	Proposed	Total after Expansion	End Use of the Products
EC Products							
1	Vitamin K2 Pure (Including Menaquinone-7) which will be diluted as per customers demand	863-61-6	TPA	6.0	1.50	7.50	Nutraceuticals
Non-EC Products							
1	Food grade Probiotics of 10 ¹⁵ CFU/ gm. which will be diluted as per customers demand	68038-70-0	TPA	2.43	1.47	3.90	Nutraceuticals
By-Products							
2	Natural NM ferment which will be diluted as per customers demand	-	TPA	365	120.00	480	Nutraceuticals
3	Used Silica Gel	7631-86-9	TPA	243.33	60.00	300	-
Total			TPA	616.74	174.64	791.4	

5. The PP reported that there is no violation case as per the Notification No. S.O.804(E) dated 14.03.2017 and no direction is issued under E(P) Act/Air Act/Water Act.
6. The PP reported that the unit has been under operation prior to the enforcement of the EIA notification 2006 and the notification and its clauses have not been applicable to the project since. The project is currently an operational unit with valid CTO's from time to time & latest CTO obtained is letter no. MPCB/22/2203000002 dated 03.03.2022 valid up to 31.02.2025. PP reported that these amendments in the CTO were obtained for the change in the formulation capacity of the

end products and changes in the by-products. The PP also reported that there is no change in the fermentation capacity since the commissioning of the plant prior to 2006.

7. The PP reported that CTO Certified Compliance issued by MPCB, Kalyan vide letter no. MPCB/ROK/135 dated 18.4.2022. All the conditions are complied.
8. The PP reported that there is a notified Tansa Wildlife sanctuary situated at a distance of 3.90 km in East and the draft ESZ of the Sanctuary is at a distance of 2.68 km East. The Wildlife Conservation Plan has been submitted to the Deputy Conservator of Forests, Wildlife with a budget of 12 Lakhs INR to be spent within 3 years of plant operation and the same is with the Thane Wildlife Division for approval and processing. Proposal (FP/MH/IND/6519/2022) for clearance of NBWL under Wildlife Protection Act 1972 has already been submitted on the PARIVESH portal by the PP; This proposal is presently under scrutiny at the office of APCCF (Wildlife West), Borivali, Mumbai.
9. The PP reported that Ambient air quality monitoring was carried out at 8 locations during winter season from October 2021 to December 2021 and the baseline data indicates the ranges of concentrations as: PM₁₀ (101 µg/m³ to 103 µg/m³), PM_{2.5} (66.54 µg/m³ to 68.97 µg/m³), SO₂ (9.88 µg/m³ to 10.15 µg/m³) and NO₂ (23.42 µg/m³ to 23.97 µg/m³).
10. **Noise - (Core Zone)** The PP reported that the ambient noise level during day time at the proposed project site varies from 57.5 dB (A) to 58.8 dB (A) which are within the day time standard limit of Industrial area ~75 dB (A). During night the noise level at the project site ranges from 48.6 dB (A) to 48.7 dB (A) which are within the night time standard limit of Industrial area 70.0 dB (A).
11. **Ground Water (Core Zone)** - The PP reported that the water quality of the core zone shows that TDS, total hardness & iron are higher than the drinking water standards (IS:10500). Thus, the water quality of the core zone is not fit for consumption.
12. **Surface water-** The PP reported that the Surface water quality of the surface water sampling locations SW1, SW5 & SW6 is meeting the criteria defined by class "D" as per the CPCB criteria. Thus it can be used for Propagation of Wildlife and Fisheries as per CPCB Designated-Best-Use criteria. The Surface water quality of the surface water sampling locations SW2, SW3 & SW4 is meeting the criteria defined by class "B" as per the CPCB criteria. Thus it can be used for Outdoor bathing (Organised) as per CPCB Designated Best-Use criteria.
13. The PP reported that the samples collected from the site, it shows that the soil texture is silt loam, Colour is Brown, pH is 6.15. Amount of primary nutrients like Organic matter is 2.31%, the available nitrogen 47.6 mg/kg is low and available Potassium 29.6 mg/kg is low while the available Phosphorus 12.6 mg/kg is in a higher range. Thus it can be concluded that soil is average fertile in the core Zone. (A) and with respect to it the Ambient Noise Levels were within the permissible levels at present.
14. The PP reported that after expansion, the total water requirement is 97.9 KLD out of which freshwater requirement shall be 51.75 KLD and will be met from CGWA (permission granted vide letter no. 21-41 1819 IMH/IND/2018 for 98 quantity). After expansion, 8 KLD wastewater from domestic purposes will be treated in in-house STP of 15KLD, through which 6 KLD shall be obtained and this treated sewage shall be used for onsite horticulture and gardening purposes. 2.9

KLD of process condensate will be used for cooling tower makeup. A combined 42.25 KLD effluent shall be generated from washing, scrubbing, cooling tower and boiler blowdown which will be treated in ETP with 60 KLD capacity consisting of Physicochemical treatment, aerobic biological treatment and dual media, carbon and ultra-filtration followed by 2 stage RO system where permeate shall be reused & the ultimate reject shall be treated in MEE (3 KLD capacity). Out of the 37.25 KLD treated effluent (RO permeate + MEE condensate) 4 KLD shall be used in. scrubber & 33.25 KLD in cooling tower make up. Thus, it will be a Zero Liquid Discharge (ZLD) unit having 100% treated water reuse system.

15. Power requirement after expansion will be 1200 kVA and will be sourced from Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL). Existing unit has DG sets with a total capacity of 320 kVA which will be dismantled and the proposed unit has DG sets with a capacity of 750 kVA. Existing unit has 2 No. of 2 TPH same will be present after expansion.

16. Details of Process Emissions Generation and its Management:

Stack No.	Name of Stack	Pollution Control Measure	Height in Mtr	Stack Dia	Emissions	Fuel used	Proposed/Expansion
1	Boiler, 2x2 TPH	Stack	30	0.5 m	TPM, SO ₂	LDO	Existing (within CTO)
2	DG 320 kVA	Acoustic enclosure with stack	3.5 above roof	0.15	PM, SO, NO _x	HSD	Existing (within CTO)
4	DG 750 kVA	Acoustic enclosure with stack	3.5 above roof	0.15	PM, SO, NO _x	HSD	New Installation

17. Details of Solid Waste/ Hazardous Waste Generation and its Management:

Category	Type of Waste	Treatment Method	Existing	Proposed	Total After Expansion
Biodegradable	Organic Waste	sent to a solid waste disposal site.	7	15	22
Non-Biodegradable	Recyclable Waste (Plastic, paper, wood, glass, etc)	Shall be given to authorised recycler	33.0	66.0	99.0

Hazardous Waste

Particular	Unit	Category (as per HWM Rules,2016)	Existing	Proposed	Total after expansion	Disposal Method
ETP Sludge	TPA	35.3	0.6	2.4	3.0	TSDF site, MIDC Talaja
MEE Salt	TPA	35.3	0.00	1.00	1.00	
Empty Barrels/ Containers/Liner Contaminated with Hz Chemicals/ wastes	TPA	33.1	0.00	3 A	3	Sale to Authorized Party after /TSDF site, MIDC Talaja
Used Spent Oil	TPA	5.1	0.00	0.20	0.20	Sale to Authorized Party /TSDF site, MIDC Talaja
Off Specification Product	TPA	28.4	0.00	0.50	0.50	TSDF site, MIDC Talaja
Date Expired Product	TPA	28.5	0.00	0.30	0.30	
Spent Solvent	TPA	28.6	0.00	2.40	2.40	
Contaminated cotton rags and other cleaning material	TPA	33.2	0.00	0.10	0.10	
Spent Ion Exchange resins	TPA	35.2	0.00	0.25	0.25	
Spent Carbon/Filter Medium	TPA	28	0.00	0.25	0.25	
Other HzW Wastes (Boiler Suit, Contaminated PPE, Spill Absorbent)	TPA		0.00	0.05	0.05	

Other Waste

Particular	Unit	Existing	Proposed	Total after expansion	Disposal Method
E - waste	TPA	0	2	2	Sale to Authorized Party/ recycler.
Bio Medical Waste	TPA	0	2.5	2.5	TSDF site, MIDC Talaja

18. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 239 Lakhs capital) and the Recurring cost (operation and maintenance) for EMP will be about ₹117.5 Lakhs . Industry proposes to allocate 200 Lakh towards CER.

19. Green belt/greenery will be developed along most of the periphery of the project area as well as along roads. Green area of 4836.16 m² will be developed (33.91 % of the plot area).
20. The PP reported that the unit has established set up of Environment Management Cell (EMC) which engage Environment Officer- maintenance incharge- air management incharge- wastewater management in charge- waste management in charge-EHS engineer maintenance operator-DG stack person – ETP operator- collection and disposal personfor the functioning of EMC.
21. The PP reported the following w.r.t carbon foot print:

PARAMTERS	Tonne CO₂ eq per year
Emissions	1854.45
Effluent	299.70
Waste	0.03
Transport	2.91
Energy	1722.00
Green area offset	~429.27
Total	3450 tonne CO₂ eq

22. The PP submitted the Onsite and Offsite disaster management plan in their EIA report.
23. The estimated project cost after expansion is INR **58.90 Crores** out of which the cost for the proposed expansion will be **Rs. 9.75 Crores**. Total Employment after expansion will be 147 people while the current phase, the employment is 45.

24. Deliberations by the EAC

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

The EAC noted that the PP 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 PP.

The EAC noted that the EIA reports are in 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 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 EAC inter-alia, deliberated on the ETP process, Greenbelt development plan and budget, EMP cost, rain water harvesting, carbon sequestration, and advised the PP to submit the following:

- Updated ETP process flow diagram.
- Revised Greenbelt Development plan and budget for the same
- Revised EMP cost.
- To monitor the collected rain water percolating rainwater and Ground water.
- Updated Carbon sequestration

The PP submitted the above and the EAC found it to be satisfactory.

The EAC also deliberated the Onsite and Offsite Emergency plans and various mitigation measures to be proposed during implementation of the project and advised the PP to implement the provisions of the Rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

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.

The EAC is of the view that its recommendation and grant of environmental clearance by regulatory authority 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 PP 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.

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

- This Environmental Clearance is subject to obtaining the NBWL clearance from the Standing Committee on Wildlife as the project boundary is located within 10 km of the Tansa Wildlife Sanctuary. If the draft ESZ notification is finalised before the issue of NBWL clearance and the project boundary falls outside the ESZ, the NBWL clearance shall not be applicable.**
- The PP shall develop Greenbelt over an area of at least 4836 m². by planting 1336 number of trees additionally it shall be covered alongside project boundary, within a period of one year grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft (about 2m). In addition to this, the budget earmarked for the green belt shall be ₹ 5.35 Lakhs and shall be kept in separate account and should be audited annually. PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of the expert agency engaged, details of species planted, number of species planted,

survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.

- (iii) A separate Environmental Management Cell (having qualified persons 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. PP shall engage Environment Officer- maintenance incharge- air management incharge- wastewater management in charge- waste management in charge-EHS engineer maintenance operator-DG stack person – ETP operator- collection and disposal person. In addition to this one safety & health officer as per the qualification given in Factories Act 1948 shall be engaged within a month of grant of EC. PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.
- (iv) The company 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. The budget proposed under EMP is ₹239 Lakhs (Capital cost) and 117.5 lakhs (Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.
- (v) The PP reported that the total water requirement is 97.9 KLD out of which freshwater requirement shall be 51.75 KLD and will be met from CGWA. The PP should ensure that water supply should not be above the permissible limit as mentioned in the letter and fresh water shall be withdrawal only after obtaining valid agreement from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year.
- (vi) No banned chemicals shall be manufactured by the PP. No banned raw materials shall be used in the unit. The PP shall adhere to the notifications/guidelines of the Government in this regard.
- (vii) The PP 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.
- (viii) The PP shall comply with the environment norms for synthetic organic Chemical as notified by the Ministry of Environment, Forest and Climate Change, vide GSR 608(E), dated 21.7.2010 under the provisions of the Environment (Protection) Rules, 1986.
- (ix) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The PP shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture,

Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

- (x) 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.
- (xi) The PP shall explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.
- (xii) As Committed by the PP, Zero Liquid Discharge shall be ensured, 42.25 KLD effluent generated from washing, scrubbing, cooling tower and boiler blowdown shall be treated in ETP with 60 KLD capacity consisting of Physicochemical treatment, aerobic biological treatment and dual media, carbon and ultra-filtration followed by 2 stage RO system where permeate shall be reused & the ultimate reject shall be treated in MEE (3 KLD capacity). Out of the 37.25 KLD treated effluent (RO permeate + MEE condensate) 4 KLD shall be used in scrubber & 33.25 KLD in cooling tower make up. The sewage shall be treated in in-house STP and the treated sewage shall be used for onsite horticulture and gardening purposes.
- (xiii) A 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 servers. 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.
- (xiv) 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.
- (xv) The occupational health centre for surveillance of the worker's health already set up shall be maintained effectively. 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.
- (xvi) Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.
- (xvii) The unit shall make the arrangement for the protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.
- (xviii) 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.

- (xix) 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.
- (xx) 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 vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.
- (xxi) The activities and the action plan proposed by the project proponent to address the issues raised during the public hearing as well as the related socio-economic issues in the study area shall be completed as per the schedule presented before the Committee and as described in the EIA report in letter and spirit.

Agenda No. 46.11

Expansion in production capacity of existing thermosetting Moulding Powder Manufacturing Unit from 820 MT/annum to 3000 MT/annum located at RIA Bhiwadi, District Alwar, Rajasthan by Ekaksh Polymers - Consideration of ToR (under violation category)

[Proposal No. IA/RJ/IND3/414842/2023; File No. IA-J-11011/519/2022-IA-II(I)]

- The proposal is for the ToR for preparation of EIA/EMP for the Expansion in production capacity of existing thermosetting Moulding Powder Manufacturing Unit from 820 MT/annum to 3000 MT/annum located at RIA Bhiwadi, District Alwar (Raj.) by Ekaksh Polymers.
- The project/activity is covered under Category ‘B’ of item 5(f), Synthetic organic chemicals industry of Schedule EIA Notification, 2006 (as amended). However, since the project site is located in a Severely polluted area, the project attracts the general condition and considered as Category ‘A’ at Centre.
- The PP applied for the ToR vide proposal number no. **IA/RJ/IND3/414842/2023** dated 18.1.2023. The proposal is now placed in 46th EAC Meeting held on 30th- 31st January, 1st February 2023, wherein the PP and an accredited Consultant, M/s. Gaurang Environmental Solutions Private Limited, (NABET Accreditation Certificate No. NABET/EIA/2023/RA0192 (Rev.02), Valid up to 7.12.2023] made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:
- The PP reported the proposed product details as follows:

S. No.	Product	Existing	Proposed	Total
1.	Thermosetting Moulding Powder Melamine Formaldehyde (MF) Moulding Powder	820 MT/Annum	2180 MT/Annum	3000 MT/Annum

	Urea Formaldehyde (UF) Moulding Powder			
	Phenol Formaldehyde(PF) Moulding Powder			

5. The PP reported that the unit was established and operated after obtaining CTE & CTO from RSPCB. However, in the matter of OA 298/2021, Vineet Nagar vs. Central Ground Water Authority & Ors., Hon'ble NGT vide its order passed on 21.12.2021 directed that all units manufacturing formaldehyde and its different resins (including melamine formaldehyde, urea formaldehyde & phenol formaldehyde) without requisite Environmental Clearance (EC) as per EIA Notification dated 14.09.2006 will be governed by the requirement of EC.
6. The PP reported that the existing land area is 1380 m² and no additional land will be used for proposed expansion and no R&R is involved.
7. The PP reported that the proposal does not involve Approval/Clearance under Forest (Conservation) Act, 1980, Wildlife (Protection) Act, 1972 and C.R.Z Notification, 2011, as amended. There is no Forest, Eco Sensitive Area/National Park/Wildlife Sanctuary in 10 km radius of the site. River/ water body flowing within 10 kms are as under: Indori Nala 4 km towards NE
8. The PP reported that the total water requirement is 8.35 m³/day of which fresh water requirement of 6.35 m³/day will be met from Ground. 1.35 KLD water is will be required for the domestic purpose and 5.5 KLD will be used for landscaping, scrubbing and cooling purpose. The domestic sewage generated to the tune of 0.8 KLD is being/will be routed to soak pit followed by septic tank. No waste water generation from cooling section as the process is completely closed conduit Waste water generated from the wet scrubber is concentrated in 4-5 months and used in the process and the dried cake is also reused in the process after drying. The plant will be based on Zero Liquid discharge system.
9. The PP reported that the Power requirement after expansion will be 300 KW including existing KVA and will be met from State Power Distribution Corporation limited (JVVNL). Existing unit has DG sets of 250 KVA capacity, additionally DG sets are used as standby during power failure. Stack (height) will be provided as per CPCB norms to the proposed D.G sets.
10. The PP reported that the project being in **notified RIICO industrial area (Notification No. Va.4 (80) Udhog/189 dated 16.4.1991), is exempted from the public hearing** as per the Ministry's O.M. J-11011/321/2016-IA. II(I) dated 27.04.2018.
11. Industry will develop greenbelt over an area of 40% i.e., 522 m² (The plant has been operating since year 2008 & the plant/machinery already covers the plant premises. Therefore, greenbelt outside the boundary of the plant premises and in government school in consultation with the concerned authorities will be done.
12. The project cost is Rs.300 lacs (Existing: Rs. 95.05 lacs + Proposed: Rs.204.95 lacs) including existing investment of Rs. 95.05 crores. Total Employment will be 30 persons as direct & Nil persons indirect after expansion.
13. **Deliberations by the EAC:**

The EAC inter-alia, deliberated on the landscape plan, greenbelt development plan, natural and community Resource Augmentation plan, compliance to the condition laid in the mechanism of Environmental management of CPA in CPCB compliance dated 25.10.2019. Critical action plan by RSPCB regarding CPA and advised the PP to submit the following:

- Revised landscape plan along the receipt of application submitted to RIICO for permission for plantation outside the plant boundary.
- Natural and community Resource Augmentation plan
- Compliance to the condition laid in the mechanism of Environmental management of CPA in CPCB compliance dated 25.10.2019
- Undertaking to the effect of plantation will be done along the periphery and will be completed within 1 year.
- Critical action plan by RSPCB regarding CPA

The PP submitted the above information/documents and the EAC found it to be satisfactory.

14. After detailed deliberations, the EAC **recommended** the project for grant of ToR (**Standard ToR [Annexure-II] and additional ToR as mentioned below**), **without public hearing** as per the provisions of the EIA Notification, 2006 and as per O.M. No. 22-23/2018-IA.III dated 05.07.2022.

- (i). The PP shall follow the Standard Operating Procedure (SoP) issued by the Ministry on 07.07.2021 for handling of violation cases under EIA Notification, 2006.
- (ii). To complete the impact assessment studies & submit Environmental Impact Assessment (EIA) report & Environmental Management Plan (EMP) (Damage Assessment, Remedial Plan and Community Augmentation Plan) in a time bound manner.
- (iii). Assessment of ecological damage with respect to air, water, land and other environmental attributes. The collection and analysis of data shall be done by an environmental laboratory duly notified under the Environment (Protection) Act, 1986, or an environmental laboratory accredited by NABL, or a laboratory of a Council of Scientific and Industrial Research (CSIR).
- (iv). Preparation of EMP comprising remediation plan and natural and community resource augmentation plan corresponding to the ecological damage assessed and economic benefits derived due to violation.
- (v). The remediation plan and the natural and community resource augmentation plan to be prepared as an independent chapter (13) in the EIA report by the accredited consultants.
- (vi). Budget of remediation plan and natural and community resource augmentation plan corresponding to the ecological damage shall be completed within three years and to be prepared accordingly.
- (vii). The project proponent shall be required to submit a bank guarantee equivalent to the amount of remediation plan and natural and community resource augmentation plan with the SPCB prior to the grant of EC. The quantum shall be recommended by the EAC and finalized by the regulatory authority. The bank guarantee shall be released after successful implementation of the EMP, followed by recommendations of the EAC and approval of the regulatory authority.

- (viii). Calculation of the penalty amount as per provision of SOP dated 07.07.2021 (i.e. 1% of the total project cost incurred up to the date of filing of application along with EIA/EMP report PLUS 0.25% of the total turnover during the period of violation) with supporting documents. In addition to this, actual production vis-a-vis CTO capacity financial year wise in a tabular format with supporting documents.
- (ix). The State Government/SPCB to take action against the project proponent under the provisions of the Environment (Protection) Act, 1986, and further no consent to operate to be issued till the project is granted EC
- (x). The status of the action plan, if any, prepared by the State Government/SPCB for the CPA needs to be provided.
- (xi). The PP needs to submit the action plan with respect to mitigation measures for CPA mentioned in the Ministry's OMs dated 31.10.2019.
- (xii). Being in a Critically Polluted Area (CPA), the PP need to submit alternative site analysis and Environmental Cost Benefit analysis in the EIA report.
- (xiii). The PP shall submit the details of carbon foot prints and carbon sequestration study w.r.t. the proposed project. The Action Plan for utilization of modern technologies for capturing carbon emitted and developing carbon sink/carbon sequestration resources shall also be prepared and submitted.
- (xiv). The PP should submit the photographs of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this, the PP should submit the original test reports and certificates of the labs which have analyzed the samples.
- (xv). Details of Onsite and Offsite emergency plans as per the provisions of the MSIHC Rules need to be submitted.
- (xvi). Activity-wise, a time bound action plan along with budgetary provisions for occupational health & surveillance, environment management plan, and green belt development plans shall be prepared and submitted.
- (xvii). Undertaking from the PP and the consultant in pursuant to the O.M. No. J-11013/41/2006-IA. II(I) dated 04.08.2009 and J-11013/41/2006-IA. II(I) dated 5.10.2011.
- (xviii). Action Plan for the management of hazardous waste and provision for its utilization in co-processing if applicable shall be prepared and submitted.
- (xix). Provision for Reuse/recycle of treated wastewater, wherever feasible shall be made. The PP shall explore the possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal. A detailed water harvesting plan also needs to be prepared and submitted. Provision for Zero Liquid Discharge whenever techno-economically feasible

shall be included. The PP shall make necessary provisions for continuous monitoring of the effluent quality/quantity.

- (xx). The PP shall clarify whether project involves ground water utilization. In case of ground water abstraction, a copy of application made to concerned authorities for the same need to be submitted.
- (xxi). The PP should develop Greenbelt over an area of 326.78 m² (within the plant) and 225.22 m² (outside the project boundary) of the total land area and that shall be completed within 1 year, accordingly plant species selected for greenbelt should 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. Approx. 167 number of plantations have to be planted considering 80% survival rate and with a spacing of 2 m x 2 m.
- (xxii). Plan for development of the green belt outside the project premises such as avenue plantation, plantation in vacant areas, social forestry, etc. shall be prepared and submitted.
- (xxiii). Assessment of the carrying capacity of transportation load on roads inside the notified industrial premises shall be carried out and submitted.
- (xxiv). In addition to the above, the EIA/EMP report shall also address issues such as i) Effective fugitive emission control measures for process, transportation, packing etc. ii) use of cleaner fuels and iii) best available technology for the plant.
- (xxv). The action plan for utilization of modern technologies for capturing carbon emitted and developing carbon sink/carbon sequestration resources.
- (xxvi). Detailed description of micro flora and fauna (terrestrial and aquatic) existing in the study area with special reference to rare, endemic and endangered species.
- (xxvii). The PP shall prepare a detailed rain water harvesting plan so as to ensure that unit will become water positive i.e. able to recharge the quantity equivalent to fresh water requirement of the plant or use only re-charged/restored water as a fresh water requirement.
- (xxviii). Detailed solvent recovery/solvent management plan
- (xxix). Detailed Volatile Organic Compounds (VOCs)/Fugitive emissions control plan

Agenda No. 46.12

Proposed Pigment Plant of production capacity 100 MTM located at Plot No. 8/19-20, GIDC Panoli, Dist. Bharuch, Gujarat by M/s. Onyx Pigments Pvt. Ltd. - Consideration of ToR

[Proposal No. IA/GJ/IND3/412112/2022; File No. IA-J-11011/9/2023-IA-II(I)]

1. The proposal is for the ToR for preparation of EIA/EMP for Proposed Pigment Plant of production capacity 100 MTM located at Plot No. 8/19-20, GIDC Panoli, Dist. Bharuch, Gujarat by M/s. Onyx Pigments Pvt. Ltd.
2. The project/activity is covered under Category 'B' of item 5(f), Synthetic organic chemicals industry of Schedule EIA Notification, 2006 (as amended). However, since the project site is located in a critically polluted area, the project attracts the general condition and considered as Category 'A' at Centre.
3. The PP applied for the ToR vide proposal number no **IA/GJ/IND3/412112/2022** dated 9.1.2023. Due to the shortcoming the proposal was referred back to PP on 18.1.2023 and reply for the same has been submitted to 19.1.2023. The proposal is now placed in 46th EAC Meeting held on 30th- 31st January, 1st February 2023, wherein the PP and an accredited Consultant, M /s. Aryan Eco Greens Pvt. Ltd. (Certificate No. NABET/EIA/2124/IA 0083, Validity: May 26, 2024] made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:
4. The PP reported the proposed product details as follows:

S. No.	Name of the Product	CAS No.	Quantity	End Use
1	C.P.C. Green - 7	1328-53-6	100 MT/Month	Dyes and Dyes Intermediates

5. The PP reported that there is no violation as per the EIA notification, 2006, no court case is pending against the proposal and no direction issued under E(P) Act/Air Act/Water Act.
6. The PP reported that the Total Land Area will be 2271.67 m² and no R&R is involved.
7. The PP reported that the proposal does not involve Approval/Clearance under Forest (Conservation) Act, 1980, Wildlife (Protection) Act, 1972 and C.R.Z Notification, 2011, as amended. There is no Forest, Eco Sensitive Area/National Park/Wildlife Sanctuary in 10 km radius of the site. River/ water body Mahi River is flowing at a distance of 2.50 km in West direction
8. The PP reported that the total water requirement is 139 m³/day of which fresh water requirement of 81 m³/day will be met from GIDC Water Supply, and 58 KLD of recycled water will be used within plant activities. Effluent of 67.8 KLD quantity will be treated through ETP. Treated water will be sent to MEE and MEE Condensate will be further treated in RO. RO reject of 21 KLD will be again sent to MEE. Hence, total 67 + 21 KLD effluent will be treated in MEE. RO permeate of 58 KLD will be recycled and reuse within plant. This way unit will be Zero Liquid Discharge (ZLD).
9. The PP reported that Proposed Power requirement will be 250 KVA will be met from Dakshin Gujarat Vij Company Limited (DGVCL). Unit has proposed DG set of 250 KVA capacity, which will be used as standby during power failure. Stack (height) will be provided as per CPCB norms to the DG set.

10. The PP reported that the project being in **notified GIDC industrial area (Notification No. GHU-98 (64)-GID-1098-2094-G dated 18.11.1998)**, is **exempted from the public hearing** as per the Ministry's O.M. J-11011/321/2016-IA. II(I) dated 27.04.2018.

11. Industry will develop greenbelt over an area of 40 % i.e., 913.06 m² out of total area of the project.

12. The estimated project cost is Rs. 12 Crore. Total Employment will be 40 persons as direct. Industry proposes to allocate Rs. 30 lakhs towards CER.

13. **Deliberations by the EAC:**

The EAC inter-alia, deliberated on the Greenbelt development plan, Justification / trend w.r.t the CEPI score of the CPA since the declaration as CPA, alternative site for the project and the PP submitted an undertaking for the same.

14. After detailed deliberations, the EAC **recommended** the project for grant of ToR (**Standard ToR [Annexure-II] and additional ToR as mentioned below**), **without public hearing** as per the provisions of the EIA Notification, 2006 and as per O.M. No. 22-23/2018-IA.III dated 05.07.2022.

- (i) The status of the action plan, if any, prepared by the State Government/SPCB for the CPA needs to be provided.
- (ii) The PP needs to submit the action plan with respect to mitigation measures for CPA mentioned in the Ministry's OMs dated 31.10.2019.
- (iii) Being in a Critically Polluted Area (CPA), the PP need to submit alternative site analysis and Environmental Cost Benefit analysis in the EIA report.
- (iv) The PP shall submit the details of carbon foot prints and carbon sequestration study w.r.t. the proposed project. The Action Plan for utilization of modern technologies for capturing carbon emitted and developing carbon sink/carbon sequestration resources shall also be prepared and submitted.
- (v) The PP should submit the photographs of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this, the PP should submit the original test reports and certificates of the labs which have analyzed the samples.
- (vi) Details of Onsite and Offsite emergency plans as per the provisions of the MSIHC Rules need to be submitted.
- (vii) Activity-wise, a time bound action plan along with budgetary provisions for occupational health & surveillance, environment management plan, and green belt development plans shall be prepared and submitted.
- (viii) Undertaking from the PP and the consultant in pursuant to the O.M. No. J-11013/41/2006-IA. II(I) dated 04.08.2009 and J-11013/41/2006-IA. II(I) dated 5.10.2011.

- (ix) The PP shall submit an undertaking to the effect that the project is not a violation proposal in pursuant to the S.O. 804(E) dated 14.03.2017 and SoP dated 07.07.2021.
- (x) Action Plan for the management of hazardous waste and provision for its utilization in co-processing if applicable shall be prepared and submitted.
- (xi) Provision for Reuse/recycle of treated wastewater, wherever feasible shall be made. The PP shall explore the possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal. A detailed water harvesting plan also needs to be prepared and submitted. Provision for Zero Liquid Discharge whenever techno-economically feasible shall be included. The PP shall make necessary provisions for continuous monitoring of the effluent quality/quantity.
- (xii) The PP shall clarify whether project involves ground water utilization. In case of ground water abstraction, a copy of application made to concerned authorities for the same need to be submitted.
- (xiii) The PP should develop Greenbelt over an area of 40.00% (i.e.913.06 m²) of the total land area, accordingly the plant species selected for greenbelt should 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. Approx. 285 number of plantations have to be planted considering 80% survival rate and with a spacing of 2 m x 2 m.
- (xiv) Plan for development of the green belt outside the project premises such as avenue plantation, plantation in vacant areas, social forestry, etc. shall be prepared and submitted.
- (xv) Assessment of the carrying capacity of transportation load on roads inside the notified industrial premises shall be carried out and submitted.
- (xvi) In addition to the above, the EIA/EMP report shall also address issues such as i) Effective fugitive emission control measures for process, transportation, packing etc. ii) use of cleaner fuels and iii) best available technology for the plant.

Agenda No. 46.13

Proposed Thermosetting Moulding Powder Manufacturing Unit with production capacity of 25 MT/day located at F-276-277, RIICO Industrial Area, Chopanki, Tehsil Tijara, District Alwar, Rajasthan by M/s Mehar Melamine Industries - Consideration of ToR (under Violation category)

[Proposal No. IA/RJ/IND3/414231/2023; File No. IA-J-11011/518/2022-IA-II(I)]

1. The proposal is for the issue of ToR for preparation of EIA/EMP for Proposed Thermosetting Moulding Powder Manufacturing Unit with production capacity of 25 MT/day located at F-276-277, RIICO Industrial Area, Chopanki, Tehsil Tijara, District Alwar, Rajasthan by M/s Mehar Melamine Industries.

2. The project/activity is covered under Category ‘B’ of item 5(f), Synthetic organic chemicals industry of Schedule EIA Notification, 2006 (as amended). and considered as Category ‘A’ at Centre due to the applicability of general condition- interstate boundary (Rajasthan –Haryana) at a distance of 4.25 kms from the project site. The PP also reported that projects is also located in the **Critically Polluted Area**.
3. The PP applied for the ToR vide proposal number no **IA/RJ/IND3/414231/2023** dated 19.1.2023. The proposal is now placed in 46th EAC Meeting held on 30th- 31st January, 1st December 2023, wherein the PP and an accredited Consultant, / M/s. Gaurang Environmental Solutions Private Limited. (Certificate No. NABET/EIA/2023/RA0192 (Rev.02), Valid up to 7.12.2023,) made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:
4. The PP reported the proposed product details as follows:

S. No.	Product	Capacity
1.	Thermosetting Moulding Powder <ul style="list-style-type: none"> • Melamine-formaldehyde (M-F) • Urea-formaldehyde (U-F) 	25 MT/day

5. The PP reported that M/s Mehar Melamine Industries is an existing Thermosetting Moulding Powder manufacturing unit established in 2019, the application for consent to operate application is under process. In the matter of O.A. 298/2021, Vineet Nagar vs. CGWA & Ors., Hon’ble NGT vide its order passed on 21.12.2021 directed that all units manufacturing formaldehyde and its different resins (including melamine formaldehyde, urea formaldehyde & phenol formaldehyde) without requisite Environmental Clearance (EC) as per EIA Notification dated 14.09.2006 will be governed by the requirement of such EC. Therefore, we understand that the project is in violation of EIA Notification, 2006.
6. The PP reported that the Land area is 4000 m² and no R&R is involved.
7. The PP reported that the proposal does not involve Approval/Clearance under Forest (Conservation) Act, 1980, Wildlife (Protection) Act, 1972 and C.R.Z Notification, 2011, as amended. There is no Forest, Eco Sensitive Area/National Park/Wildlife Sanctuary in 10 km radius of the site.
8. Total water requirement is 8.1 m³/day of which fresh water requirement of 8.1m³/day will be met from Ground. o waste water generation from cooling section as the process is completely closed conduit, Waste water generated from the wet scrubber is concentrated in 4-5 months and used in the process and the dried cake is also reused in the process after drying. Also we mention categorically that no waste water is generated in the process and hence no waste water will be drained out of the plant premises.
9. The PP reported that Power requirement after expansion will be 800 KW including existing KVA and will be met from State Power Distribution Corporation limited (JVVNL). DG set of 500 KVA capacity

will be used as standby during power failure. Stack (height) will be provided as per CPCB norms to the proposed D.G sets.

10. The PP reported that the project being in notified RIICO industrial area (**Notification No. Pa.4{23}Uo/1/93 dated 14.9.1994**), is exempted from the public hearing as per the Ministry's O.M. J-11011/321/2016-IA. II(I) dated 27.04.2018.

11. Industry will develop greenbelt over an area of 40% i.e., 600 m² (The plant has been operating since year 2019 & the plant/machinery already covers the plant premises. Therefore, greenbelt outside the boundary of the plant premises and in government school in consultation with the concerned authorities will be done.

12. The estimated project cost is Rs. 726.45. Lakhs Total Employment will be 28 persons as direct & Nil persons indirect.

13. **Deliberations by the EAC:**

The EAC inter-alia, deliberated on the landscape plan, greenbelt development plan, natural and community Resource Augmentation plan, compliance to the condition laid in the mechanism of Environmental management of CPA in CPCB compliance dated 25.10.2019., Critical action plan by RSPCB regarding CPA and advised the PP to submit the following:

- Revised landscape plan along the receipt of application submitted to RIICO for permission for plantation outside the plant boundary.
- Natural and community Resource Augmentation plan
- Compliance to the condition laid in the mechanism of Environmental management of CPA in CPCB compliance dated 25.10.2019
- Undertaking to the effect of plantation will be done along the periphery and will be completed within 1 year.
- Critical action plan by RSPCB regarding CPA

The PP submitted the above information/documents and the EAC found it to be satisfactory.

14. After detailed deliberations, the EAC **recommended** the project for grant of ToR (**Standard ToR [Annexure-II] and additional ToR as mentioned below**), **without public hearing** as per the provisions of the EIA Notification, 2006 and as per O.M. No. 22-23/2018-IA.III dated 05.07.2022.

- (i) The PP shall follow the Standard Operating Procedure (SoP) issued by the Ministry on 07.07.2021 for handling of violation cases under EIA Notification, 2006.
- (ii) To complete the impact assessment studies & submit Environmental Impact Assessment (EIA) report & Environmental Management Plan (EMP) (Damage Assessment, Remedial Plan and Community Augmentation Plan) in a time bound manner.
- (iii) Assessment of ecological damage with respect to air, water, land and other environmental attributes. The collection and analysis of data shall be done by an environmental laboratory duly

notified under the Environment (Protection) Act, 1986, or an environmental laboratory accredited by NABL, or a laboratory of a Council of Scientific and Industrial Research (CSIR).

- (iv) Preparation of EMP comprising remediation plan and natural and community resource augmentation plan corresponding to the ecological damage assessed and economic benefits derived due to violation.
- (v) The remediation plan and the natural and community resource augmentation plan to be prepared as an independent chapter (13) in the EIA report by the accredited consultants.
- (vi) Budget of remediation plan and natural and community resource augmentation plan corresponding to the ecological damage shall be completed within three years and to be prepared accordingly.
- (vii) The project proponent shall be required to submit a bank guarantee equivalent to the amount of remediation plan and natural and community resource augmentation plan with the SPCB prior to the grant of EC. The quantum shall be recommended by the EAC and finalized by the regulatory authority. The bank guarantee shall be released after successful implementation of the EMP, followed by recommendations of the EAC and approval of the regulatory authority.
- (viii) Calculation of the penalty amount as per provision of SOP dated 07.07.2021 (i.e. 1% of the total project cost incurred up to the date of filing of application along with EIA/EMP report PLUS 0.25% of the total turnover during the period of violation) with supporting documents. In addition to this, actual production vis-a-vis CTO capacity financial year wise in a tabular format with supporting documents.
- (ix) The State Government/SPCB to take action against the project proponent under the provisions of the Environment (Protection) Act, 1986, and further no consent to operate to be issued till the project is granted EC.
- (x) The status of the action plan, if any, prepared by the State Government/SPCB for the CPA needs to be provided.
- (xi) The PP needs to submit the action plan with respect to mitigation measures for CPA mentioned in the Ministry's OMs dated 31.10.2019.
- (xii) Being in a Critically Polluted Area (CPA), the PP need to submit alternative site analysis and Environmental Cost Benefit analysis in the EIA report.
- (xiii) The PP shall submit the details of carbon foot prints and carbon sequestration study w.r.t. the proposed project. The Action Plan for utilization of modern technologies for capturing carbon emitted and developing carbon sink/carbon sequestration resources shall also be prepared and submitted.
- (xiv) The PP should submit the photographs of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling

location. In addition to this, the PP should submit the original test reports and certificates of the labs which have analyzed the samples.

- (xv) Details of Onsite and Offsite emergency plans as per the provisions of the MSIHC Rules need to be submitted.
- (xvi) Activity-wise, a time bound action plan along with budgetary provisions for occupational health & surveillance, environment management plan, and green belt development plans shall be prepared and submitted.
- (xvii) Undertaking from the PP and the consultant in pursuant to the O.M. No. J-11013/41/2006-IA. II(I) dated 04.08.2009 and J-11013/41/2006-IA. II(I) dated 5.10.2011.
- (xviii) Action Plan for the management of hazardous waste and provision for its utilization in co-processing if applicable shall be prepared and submitted.
- (xix) Provision for Reuse/recycle of treated wastewater, wherever feasible shall be made. The PP shall explore the possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal. A detailed water harvesting plan also needs to be prepared and submitted. Provision for Zero Liquid Discharge whenever techno-economically feasible shall be included. The PP shall make necessary provisions for continuous monitoring of the effluent quality/quantity.
- (xx) The PP shall clarify whether project involves ground water utilization. In case of ground water abstraction, a copy of application made to concerned authorities for the same need to be submitted.
- (xxi) The PP should develop Greenbelt of 2500 saplings/ha, accordingly the plant species selected for greenbelt should 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. 240 Number of Trees within the site and 240 number of trees outside the project boundary have to be planted with spacing of 2m x 2m and has to be calculated accordingly and to be planted within one year.
- (xxii) Plan for development of the green belt outside the project premises such as avenue plantation, plantation in vacant areas, social forestry, etc. shall be prepared and submitted.
- (xxiii) Assessment of the carrying capacity of transportation load on roads inside the notified industrial premises shall be carried out and submitted.
- (xxiv) In addition to the above, the EIA/EMP report shall also address issues such as i) Effective fugitive emission control measures for process, transportation, packing etc. ii) use of cleaner fuels and iii) best available technology for the plant.
- (xxv) The action plan for utilization of modern technologies for capturing carbon emitted and developing carbon sink/carbon sequestration resources.

- (xxvi) Detailed description of micro flora and fauna (terrestrial and aquatic) existing in the study area with special reference to rare, endemic and endangered species.
- (xxvii) The PP shall prepare a detailed rain water harvesting plan so as to ensure that unit will become water positive i.e. able to recharge the quantity equivalent to fresh water requirement of the plant or use only re-charged/restored water as a fresh water requirement.
- (xxviii) Detailed solvent recovery/solvent management plan
- (xxix) Detailed Volatile Organic Compounds (VOCs)/Fugitive emissions control plan

Agenda No. 46.14

Expansion by manufacture of Synthetic Organic Resins of production capacity 1400 TPM located at Sy. Nos.: 214/6, 214/7, 214/8, 215/5, 215/6, 215/7 & 216/4, Block No.: II (UDL), Industrial Area - Pagali, Yerpedu Mandal, Sri Balaji District (Old Chittoor District), Andhra Pradesh by M/s Oswin Wood Panels Pvt. Ltd. - Consideration of EC

[Proposal No. IA/AP/IND3/407726/2022; File No. IA-J-11011/477/2021-IA-II(I)]

1. The proposal is for environmental clearance to the project for Expansion by manufacture of Synthetic Organic Resins of production capacity 1400 TPM located at Sy. Nos.: 214/6, 214/7, 214/8, 215/5, 215/6, 215/7 & 216/4, Block No.: II (UDL), Industrial Area - Pagali, Yerpedu Mandal, Sri Balaji District (Old Chittoor District), Andhra Pradesh by M/s Oswin Wood Panels Pvt. Ltd.
2. The project/activity is covered under Category 'A' of item 5(f), Synthetic Organic Chemicals industry of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) and requires appraisal at Centre by the EAC.
3. The standard ToR has been issued by the Ministry, vide letter No. IA-J11011/477/2021-IA-II(I) Dated: 01.12.2021. The PP submitted that the Public Hearing was conducted on 11.10.2022 at the project site by the District Revenue Officer & Addl. District Magistrate, & District Revenue Officer. No major issues were raised during the public hearing and minor issues like heavy vehicle parking and construction of drains was raised during public hearing and the issue related response has been given by the project authorities. The time bound budgetary action plan for the issues raised during the PH has been submitted. The PP applied for Environment Clearance on 23.11.2022 in CAF and submitted EIA/EMP Report and other documents. Due to some shortcomings, the Project was referred back to the PP on 25.11.2022, 7.12.2022, 19.1.2023 and and reply to the same was submitted on 29.11.2022, 6.1.2023, 20.1.2023 The PP in the CAF reported that it is an **Expansion case**. 2023 The proposal is now placed in 46th EAC Meeting held on 30th- 31st January, 1st February 2023, wherein the PP and an accredited Consultant, M/s Rightsource Industrial Solutions Pvt. Ltd. (Certificate No. NABET/EIA/2124/RA 0248, Validity :29.10.2024] made a detailed presentation on the salient features of the project and informed the following:

4. The PP reported that the proposed expansion project will be established in an area of **400.0 m²** of the existing land area of **15.0 Acres (60702.9 m²)**. The details of products and by-products are as follows:

S. No	Proposed Products	Capacity in MT/Month
1	Melamine urea Formaldehyde (61%)	200.0
2	Urea Formaldehyde (53%)	1200.0
	Total	1400.0
Existing CFO Permitted Products (As per CFO order No. CTR-1556/APPCB/ZO-KNL/CFO/2020 Dt.: 18.09.2020)		Capacity in MT/Month
1	Plain and Pre-lam Particle Board	5000
2	Core Veneer	5000
3	Ply Wood	1500
	Total	11500

5. The PP reported that there is no violation case as per the Notification No. S.O.804(E) dated 14.03.2017 and no direction is issued under E(P) Act/Air Act/Water Act.
6. The PP reported that the existing industrial facilities obtained Consent for Establishment (CFE) Order No.: CTR-1556/PCB/ZO-KNL/CFE/2019 on 19/08/2019 to manufacture Particle board, Core Veneer & Plywood. It also received Consent for Operation (CFO) Order No. CTR - 1556/APPCB/ZO-KNL/CFO/2020 Dated: 18.09.2020 and valid up to 31.08.2030 with total production capacity of 11500 Tons/ Month. The CFO certified compliance report vide Lr. No.: APPCB/CFO/MoEF&CC/Comp Rpt/2022 Dt.: 27.04.2022 submitted by Environmental Engineer, RO- Tirupati. All the conditions of the CFO are complied.
7. The PP 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. Water body near Guntakrindapalli – 2.45 Km (SE), Water body near Uranduru – 3.44 Km (SE), Water body near Maddiledu – 2.30 Km (S), Water body near Chindepalle – 3.92 Km (SSW), Idula Kalva – 3.09 Km (SE), Muchchavolu Cheruvu – 4.09 Km (N), Pala Kalva – 2.71 Km (NW), Yarlupudi Kalva – 5.56 Km (NNE), Valagalamanda Kalva – 7.0 Km (NE), Vudamu Lapadu Eru – 2.74 Km (NNE), Swarnamukhi River – 6.80 Km (ESE), Water body near Madhamala – 5.43 Km (NNW) Water body near Obulayapalli – 5.83 Km (N), Water body near Chodavaram – 8.14 Km (NE) Water body near Reddipalli – 8.0 Km (NNE). The PP reported that no Schedule-I species exist within 10 km study area of the project.
8. **Air** – The PP reported that the **Ambient Air Quality** monitoring was carried out at **8 locations** during **Summer Season (December, 2021 to February, 2022)** and submitted baseline data indicates that ranges of concentrations of **PM₁₀ (52.2 to 73.5 µg/ m³)**, **PM_{2.5} (18.1 to 28.3 µg/ m³)**, **SO₂ (9.1 to 21.6 µg/ m³)**, **NO_x (11.0 to 26.2 µg/ m³)**, **CO (0.1 to 0.76 mg/m³)** respectively. No new utilities are proposed for the Synthetic Resin Manufacturing unit, the existing utilities will be utilized for the proposed expansion project and the pollutants concentrations from the existing utilities were included in the Baseline monitoring, so GLC of pollutants from the stack emissions

are not done. The air quality modeling is not applicable to this proposed expansion project. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

9. **Noise - Industrial Zone:** The day time noise level at the Project site was 67.6 dB (A), which is well below the permissible limits of 75 dB (A). **Residential Zone:** The daytime noise levels in all the residential locations were observed to be in the range of 50.4 dB (A) to 53.2 dB (A). The noise levels at all the locations were below the permissible limits of 55 dB (A). **Industrial Zone:** The night time noise level in the Project site was observed to be 59.8 dB (A), **Residential Zone:** The night time noise levels in all the residential locations were observed to be in the range of 37.9 dB (A) to 40.3 dB (A). The noise levels were below the permissible limits of 45 dB (A) in night time at all the locations
10. **Ground Water** - The water quality of the study area is found to be within the permissible limits of IS: 10500, for parameters TDS, Total hardness, Total Alkalinity, Calcium, Magnesium, Fluorides. **Surface water-** pH of the water samples collected was in the range between 7.73 – 8.66. Total dissolved solids in the samples were in the range between 81– 489 mg/l. Total hardness was found to be in the range of 36 –316 mg/l. Chlorides concentration was found to vary between 15.65 – 133.1 mg/l. Fluoride concentration was found to vary between 0.3 – 0.74 mg/l. Sulphates concentration was found to vary between 6.9 – 41.1 mg/l. **Soil-** The pH of the soil quality ranged from 6.45 to 8.38. Percentage of Total Organic Carbon is observed in between 0.33 to 0.98 indicating that less and sufficient in nature.
11. The PP reported that the total water requirement after expansion is 11.5 m³/day and will be met from bore wells and the unit has obtained Ground water permissions from Ground Water Department, Govt. of Andhra Pradesh vide Lr. No.: 301/SD-OSWIN WOOD PANELS/Hg/2019, Dt.: 25.03.2019 to withdrawal of 10.0 KLD and Lr. No.: 645/SD- M/s. Oswin Wood Panels Private Limited/Hg/2020, Dt: 31.08.2020 to withdrawal of another 10.0 KLD. Hence, the industry can withdraw 20 KLD of water from bore wells located within the plant premises. The total effluent generation after expansion is 6.6 m³/day in which washing effluent of 1.5 m³/day will be sent to Forced Evaporation (FE) System and domestic effluent of 5.1 m³/day will be sent to septic tank followed by soak pit.
12. The existing power requirement of **2000 kVA** will be sufficient for the proposed expansion project and meeting through AP TRANSCO. The unit has existing **1 x 500 kVA DG Set**, Stacks (heights of 9.0 mts) will be continued which is used during the power failures and provided as per CPCB norms & **1 x 1000 kVA DG Set** will be dropped after expansion. The unit has existing **1 x 40 Lakh K.Cal/Hr Thermic Fluid Heater (TFH)** will be continued with stack height of 30 mtrs and the same will be utilized for the proposed project & **1 x 400 Lakh K.Cal/ Hr Hot air generator** will be dropped after expansion. Cyclone separator installed for controlling the particulate emissions (within statutory limit of 115 mg/ Nm³).
13. **Details of Process Emissions Generation and its Management:** No process emissions are liberating from the proposed expansion project.
14. **Details of Solid Waste/ Hazardous Waste Generation and its Management:**

S. No	Name of the Waste	Existing Quantity (As per CFO Order No.: CTR-1556/APPCCB/ZO-KNL/CFO/2020, Dt.: 18.09.2020)	Total Generation of Hazardous waste Quantity after proposed expansion	Category (As per schedule)	Disposal Method
1	FE Salts	--	5.0 Kg/Day	28.1 of Schedule-I	Will be sent to TSDF
2	Used oil/ Waste Lubrication oil	200 Ltrs/ Annum	200 Ltrs/ Annum	5.1 of Schedule-I	Shall be used as lubricant within the premises (or) shall be routed through M/s. Andhra Pradesh Environment Corporation Limited(APEMCL) so as to sent to authorized Re-processors/ Recyclers/ to the Cement industries for co-processing.
3	Discarded bags, Containers & Container Liners	--	600 No's/ Day	33.1 of Schedule-I	After de-toxification will be sent to SPCB authorized agencies.
4	Used Lead Acid Batteries	4 No's/ Annum	4 No's/ Annum	9.1 of Schedule-I	Send back to suppliers for buyback of New Batteries
Solid Waste Details					
5	Ash from Thermic Fluid heater	2.45 TPD	2.45 TPD	---	Will be sent to Brick Manufacturers
6	Chip Waste	10 TPD	10 TPD	---	Shall be reused in the heating of Thermic fluid heater

15. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 39.0 Lakhs (capital) and the Recurring cost (operation and maintenance) will be about ₹ 12.0 Lakhs. Industry proposes to allocate 2.5 Lakhs towards CER.

16. Industry will develop greenbelt in an area of **20600.0 m²** which is **33.94 %** out of **60702.9 m²** of the total project area.

17. The PP proposed to set up an Environment Management Cell (EMC) to engage Plant Manager for environmental monitoring and control EHS in-charge for the functioning of EMC.

18. The PP reported that

Sources of CO₂ Emissions	Quantity (Tons/ Annum)
From Vehicular Movement	0.082
From DG set	4.29
From Power Utilization	11.4
Total emissions	15.772
CO ₂ sequestration	
Greenbelt & Afforestation	123.44
Net contribution	107.668 (Carbon Positive)

19. The PP submitted the Onsite and Offsite disaster management plan in their EIA report.

20. The proposed expansion project cost is about **Rs. 1.25 Crores**. Total employment will be 11 persons for the proposed expansion project

21. **Deliberations by the EAC**

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

The EAC noted that the PP 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 PP.

The Committee noted that the EIA reports are in 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 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 EAC inter-alia, deliberated on the Greenbelt development plan and budget, wastewater, and advised the PP to submit the following:

- Undertaking regarding the number of plants to be planted within one year
- Undertaking regarding the domestic wastewater to be treated in STP.

The Committee also deliberated the Onsite and Offsite Emergency plans and various mitigation measures to be proposed during implementation of the project and advised the PP to implement the provisions of the Rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

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.

The Committee is of the view that recommendation of EAC and grant of environmental clearance by regulatory authority 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 PP 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.

22. The EAC, after detailed deliberations, **recommended the project for the grant of environmental clearance, subject to the compliance of the terms and conditions as under, and general terms and conditions in Annexure-I:** -
- (i) The PP shall develop Greenbelt over an area of at least **60702.9 m²** by planting 5150 number of trees within a period of one year grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft (about 2m). In addition to this, the budget earmarked for the plantation shall be kept in separate account and should be audited annually. PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of the expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.
 - (ii) A separate Environmental Management Cell (having qualified persons 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. PP shall engage Plant Manager for environmental monitoring and control EHS in-charge .In addition to this one safety & health officer as per the qualification given in Factories Act 1948 shall be engaged within a month of grant of EC. PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.
 - (iii) The company 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. The budget propose under EMP is ₹ 39.0 Lakh (Capital cost) and

₹ 12.00 Lakh Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.

- (iv) The total water requirement after expansion shall be 11.5 m³/day and shall be met from bore wells. The industry shall withdraw 20 KLD of water from bore wells located within the plant premises. The PP should ensure that water supply should not be above the permissible limit as mentioned in the letter and fresh water shall be withdrawal only after obtaining valid agreement from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year
- (v) No banned chemicals shall be manufactured by the PP. No banned raw materials shall be used in the unit. The PP shall adhere to the notifications/guidelines of the Government in this regard.
- (vi) The PP 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.
- (vii) The PP shall comply with the environment norms for synthetic organic Chemical as notified by the Ministry of Environment, Forest and Climate Change, vide GSR 608(E), dated 21.7.2010 under the provisions of the Environment (Protection) Rules, 1986.
- (viii) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The PP shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.
- (ix) 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.
- (x) The PP shall explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.
- (xi) The total effluent generation after expansion is 6.6 m³/day out of which washing effluent of 1.5 m³/day shall be sent to Forced Evaporation (FE) System and domestic effluent of 5.1 m³/day shall be treated in STP and re-used for green belt.
- (xii) A 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 servers. 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.

- (xiii) 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.
- (xiv) 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.
- (xv) Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.
- (xvi) The unit shall make the arrangement for the protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.
- (xvii) 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.
- (xviii) 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.
- (xix) 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 vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.
- (xx) The activities and the action plan proposed by the project proponent to address the issues raised during the public hearing as well as the related socio-economic issues in the study area shall be completed as per the schedule presented before the Committee and as described in the EIA report in letter and spirit.

Agenda No. 46.15

Proposed Expansion of synthetic organic chemicals in existing manufacturing plant-production capacity from 2244.1 TPM to 2244.1 TPM (- 50 & +50) located at Plot No. 13, P.C.C. Area, P.O. Petrochemicals, Baroda - 391 346. by M/s. Diamines and Chemicals Limited - Consideration of ToR

[Proposal No. IA/GJ/IND3/414881/2023; File No. IA-J-11011/183/2020-IA-II(I)]

The PP vide email dated 23.01.2023 submitted that, by mistake they have applied for TOR when applying for EC on PARIVESH. There is no option for withdrawal on the PARIVESH.

The EAC recommended to **return/delist the proposal.**

Agenda No. 46.16

Proposed Expansion in the production capacity of the existing thermosetting Moulding Powder Manufacturing Unit of production capacity from 450 MT/annum to 1800 MT/annum located at RIA Bhiwadi, District Alwar, Rajasthan by M/s Aadya Industries - Consideration of ToR (under violation category)

[Proposal No. IA/RJ/IND3/414287/2023; File No. IA-J-11011/517/2022-IA-II(I)]

1. The proposal is for the issue of ToR for preparation of EIA/EMP for Proposed Expansion in production capacity of existing thermosetting Moulding Powder Manufacturing Unit of production capacity from 450 MT/annum to 1800 MT/annum located at RIA Bhiwadi, District Alwar, Rajasthan by M/s Aadya Industries.
2. The project/activity is covered under Category 'B' of item 5(f), Synthetic organic chemicals industry of Schedule EIA Notification, 2006 (as amended). However, as the interstate boundary (Rajasthan – Haryana) at a distance of 475 m from the project site, the project attracts the general condition and considered as Category 'A' at Centre. The PP also reported that the project is located in **Critically Polluted Area.**
3. The PP applied for the ToR vide proposal number no **IA/RJ/IND3/414287/2023** dated 20.1.2023. The proposal is now placed in 46th EAC Meeting held on 30th- 31st January, 1st December 2023, wherein the PP and an accredited Consultant, M/s. Gaurang Environmental Solutions Private Limited (Certificate No. NABET/EIA/2023/RA 0192 (Rev.02), Validity:7.12.2023] made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:
4. The PP reported the proposed product details as follows:

S. No	Product	Existing	Proposed	Total
1.	Thermosetting Moulding Powder Melamine Formaldehyde (MF) Moulding Powder Urea Formaldehyde (UF)Moulding Powder	450 MT/Annum	1350 MT/Annum	1800 MT/Annum

5. The PP reported that the unit was established and operated after obtaining CTE & CTO from RSPCB. However, in the matter of OA 298/2021, Vineet Nagar vs. Central Ground Water Authority & Ors., Hon'ble NGT vide its order passed on 21.12.2021 directed that all units manufacturing formaldehyde

and its different resins (including melamine formaldehyde, urea formaldehyde & phenol formaldehyde) without requisite Environmental Clearance (EC).

6. The PP reported that the existing land area is 979 m² and no R&R is involved.
7. The PP reported that the proposal does not involve Approval/Clearance under Forest (Conservation) Act, 1980, Wildlife (Protection) Act, 1972 and C.R.Z Notification, 2011, as amended. There is no Forest, Eco Sensitive Area/National Park/Wildlife Sanctuary in 10 km radius of the site. Indori Nala 4.5 km towards NE.
8. The PP reported that total water requirement is 5.50 m³/day of which fresh water requirement of 4.0 m³/day will be met from Ground. No waste water generation from cooling section as the process is completely closed conduit, Waste water generated from the wet scrubber is concentrated in 4-5 months and used in the process and the dried cake also reused in the process after drying. Also we mention categorically that no waste water is generated in the process and hence no waste water will be drained out of the plant premises.
9. The PP reported that Power requirement after expansion nil will be 400 KW and will be met from State Power Distribution Corporation limited (JVNL). Existing unit has DG sets of 125 KVA capacity, additionally DG sets are used as standby during power failure. Stack (height) will be provided as per CPCB norms to the proposed D.G sets.
10. The PP reported that the project being in notified RIICO industrial area (**Notification No. Va.4 (80) udhyog/189 dated 16.4.1991**), is exempted from the public hearing as per the Ministry's O.M. J-11011/321/2016-IA. II(I) dated 27.04.2018.
11. Industry will develop greenbelt in an area of 40 % i.e., 391.60 m² (The plant has been operating since year 2008 & the plant/machinery already covers the plant premises. Therefore, greenbelt outside the boundary of the plant premises and in government school in consultation with the concerned authorities will be done.
12. The project cost is Rs. 227.40 lakhs (Existing: Rs.96.48 lacs +Proposed: Rs.130.92lakhs). Total Employment will be 10 persons as direct.
13. **Deliberations by the EAC:**

The EAC inter-alia, deliberated on the landscape plan, greenbelt development plan, natural and community Resource Augmentation plan, compliance to the condition laid in the mechanism of Environmental management of CPA in CPCB compliance dated 25.10.2019., Critical action plan by RSPCB regarding CPA and advised the PP to submit the following:

- Revised landscape plan along the receipt of application submitted to RIICO for permission for plantation outside the plant boundary.
- Natural and community Resource Augmentation plan
- Compliance to the condition laid in the mechanism of Environmental management of CPA in CPCB compliance dated 25.10.2019

- Undertaking to the effect of plantation will be done along the periphery and will be completed within 1 year.
- Critical action plan by RSPCB regarding CPA

The PP submitted the above information/documents and the EAC found it to be satisfactory.

14. After detailed deliberations, the EAC **recommended** the project for grant of ToR (**Standard ToR [Annexure-II]** and **additional ToR as mentioned below**), **without public hearing** as per the provisions of the EIA Notification, 2006 and as per O.M. No. 22-23/2018-IA.III dated 05.07.2022.
- (i). The PP shall follow the Standard Operating Procedure (SoP) issued by the Ministry on 07.07.2021 for handling of violation cases under EIA Notification, 2006.
 - (ii). To complete the impact assessment studies & submit Environmental Impact Assessment (EIA) report & Environmental Management Plan (EMP) (Damage Assessment, Remedial Plan and Community Augmentation Plan) in a time bound manner.
 - (iii). Assessment of ecological damage with respect to air, water, land and other environmental attributes. The collection and analysis of data shall be done by an environmental laboratory duly notified under the Environment (Protection) Act, 1986, or an environmental laboratory accredited by NABL, or a laboratory of a Council of Scientific and Industrial Research (CSIR).
 - (iv). Preparation of EMP comprising remediation plan and natural and community resource augmentation plan corresponding to the ecological damage assessed and economic benefits derived due to violation.
 - (v). The remediation plan and the natural and community resource augmentation plan to be prepared as an independent chapter (13) in the EIA report by the accredited consultants.
 - (vi). Budget of remediation plan and natural and community resource augmentation plan corresponding to the ecological damage shall be completed within three years and to be prepared accordingly.
 - (vii). The project proponent shall be required to submit a bank guarantee equivalent to the amount of remediation plan and natural and community resource augmentation plan with the SPCB prior to the grant of EC. The quantum shall be recommended by the EAC and finalized by the regulatory authority. The bank guarantee shall be released after successful implementation of the EMP, followed by recommendations of the EAC and approval of the regulatory authority.
 - (viii). Calculation of the penalty amount as per provision of SOP dated 07.07.2021 (i.e. 1% of the total project cost incurred up to the date of filing of application along with EIA/EMP report PLUS 0.25% of the total turnover during the period of violation) with supporting documents. In addition to this, actual production vis-a-vis CTO capacity financial year wise in a tabular format with supporting documents.

- (ix). The State Government/SPCB to take action against the project proponent under the provisions of the Environment (Protection) Act, 1986, and further no consent to operate to be issued till the project is granted EC
- (x). The status of the action plan, if any, prepared by the State Government/SPCB for the CPA needs to be provided.
- (xi). The PP needs to submit the action plan with respect to mitigation measures for CPA mentioned in the Ministry's OMs dated 31.10.2019.
- (xii). Being in a Critically Polluted Area (CPA), the PP need to submit alternative site analysis and Environmental Cost Benefit analysis in the EIA report.
- (xiii). The PP shall submit the details of carbon foot prints and carbon sequestration study w.r.t. the proposed project. The Action Plan for utilization of modern technologies for capturing carbon emitted and developing carbon sink/carbon sequestration resources shall also be prepared and submitted.
- (xiv). The PP should submit the photographs of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this, the PP should submit the original test reports and certificates of the labs which have analyzed the samples.
- (xv). Details of Onsite and Offsite emergency plans as per the provisions of the MSIHC Rules need to be submitted.
- (xvi). Activity-wise, a time bound action plan along with budgetary provisions for occupational health & surveillance, environment management plan, and green belt development plans shall be prepared and submitted.
- (xvii). Undertaking from the PP and the consultant in pursuant to the O.M. No. J-11013/41/2006-IA. II(I) dated 04.08.2009 and J-11013/41/2006-IA. II(I) dated 5.10.2011.
- (xviii). Action Plan for the management of hazardous waste and provision for its utilization in co-processing if applicable shall be prepared and submitted.
- (xix). Provision for Reuse/recycle of treated wastewater, wherever feasible shall be made. The PP shall explore the possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal. A detailed water harvesting plan also needs to be prepared and submitted. Provision for Zero Liquid Discharge whenever techno-economically feasible shall be included. The PP shall make necessary provisions for continuous monitoring of the effluent quality/quantity.
- (xx). The PP shall clarify whether project involves ground water utilization. In case of ground water abstraction, a copy of application made to concerned authorities for the same need to be submitted.

- (xxi). The PP should develop Greenbelt over an area of 195.8 m² with on the site and outside the project boundary of the total land area. The plant species selected for greenbelt should 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. 118 number of trees shall be planted.
- (xxii). Plan for development of the green belt outside the project premises such as avenue plantation, plantation in vacant areas, social forestry, etc. shall be prepared and submitted.
- (xxiii). Assessment of the carrying capacity of transportation load on roads inside the notified industrial premises shall be carried out and submitted.
- (xxiv). In addition to the above, the EIA/EMP report shall also address issues such as i) Effective fugitive emission control measures for process, transportation, packing etc. ii) use of cleaner fuels and iii) best available technology for the plant.
- (xxv). The action plan for utilization of modern technologies for capturing carbon emitted and developing carbon sink/carbon sequestration resources.
- (xxvi). Detailed description of micro flora and fauna (terrestrial and aquatic) existing in the study area with special reference to rare, endemic and endangered species.
- (xxvii). The PP shall prepare a detailed rain water harvesting plan so as to ensure that unit will become water positive i.e. able to recharge the quantity equivalent to fresh water requirement of the plant or use only re-charged/restored water as a fresh water requirement.
- (xxviii). Detailed solvent recovery/solvent management plan
- (xxix). Detailed Volatile Organic Compounds (VOCs)/Fugitive emissions control plan

Agenda No. 46.17

Expansion of Existing Fertilizer Plant for Manufacturing of Nano Fertilizer and Nano Micronutrients of production capacity (Ammonia- 4,01,500 MTPA, Urea (100%)- 6,75,000, Diesel Exhaust Fluid (DEF) (32.5% Urea Solution) upto 4,01,538 (Equivalent to 1,30,500 MTPA Urea), Nano Fertilizers @ Nano Urea/Nano Micronutrients (Nano Zinc/ Nano Copper/ Nano Boron/ Nano Sulphur)/Nano DAP (Nano I + Nano II)- 100375 KLPA) located at Plot no. 712/846, 855, 856 of Saij, 17-37 of Dhanej, Kasturinagar, Kalol GIDC, District Gandhinagar, Gujarat by Indian Farmers Fertilizer Cooperative Limited (IFFCO) - Consideration of EC

[Proposal No. IA/GJ/IND3/412440/2022; File No. J-11011/60/2009-IA-II(I)]

1. The proposal is for the environmental clearance for Expansion of Existing Fertilizer Plant for Manufacturing of Nano Fertilizer and Nano Micronutrients upto production capacity to (Ammonia- 4,01,500 MTPA, Urea (100%)- 6,75,000, Diesel Exhaust Fluid (DEF) (32.5% Urea Solution) Upto 4,01,538 (Equivalent to 1,30,500 MTPA Urea), Nano Fertilizers @ Nano Urea/Nano Micronutrients (Nano Zinc/ Nano Copper/ Nano Boron/ Nano Sulphur) /Nano DAP (Nano I + Nano II)- 100375

KLPA) located at Plot no. 712/846, 855, 856 of Saij,17-37 of Dhanej, Kasturinagar, Kalol GIDC, District - Gandhinagar, Gujarat by Indian Farmers Fertilizer Cooperative Limited (IFFCO).

2. The project/activity is covered under Category ‘A’ of item 5 (a) Chemical Fertilizers of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended). Therefore, the project requires appraisal at Central Level.
3. The PP applied for Environment Clearance on 11.1.2023 in CAF and submitted EIA/EMP Report and other documents. The PP in the CAF reported that it is an **Expansion EC case**. Due to some shortcomings, the Project was referred back to PP on 19.1.2023 and reply to the same was submitted on 23.1.2023. The PP reported that Public Hearing is exempted as the project is located in the industrial area notified i.e. The proposal is now placed in 46th EAC Meeting held on 30th- 31st January, 1st February 2023, wherein the PP and an accredited Consultant, M/s EQMS India Pvt. Ltd [Accreditation number NABET/EIA/1922/RA 0197 Valid up to 3.5.2023], made a detailed presentation on the salient features of the project and informed the following:
4. The PP reported that the existing land area is 95.5158 Ha. No additional land will be required for proposed expansion and no R& R is involved in the Project. The details of products are as follows:

Product	Unit	As per Latest EC granted	Additional/ Proposed	After Expansion	Remarks
Ammonia	MTPA	4,01,500	0	4,01,500	No changes
Urea (100%) (Fertiliser Grade/Tech Grade)	MTPA	6,75,000 max or	0	6,75,000 max or	
Urea (100%) or & Diesel Exhaust Fluid (32.5% of Urea Solution)	MTPA	5,44,500 & 4,01,538 i.e., (Equivalent to 1,30,500 of 100% Urea) max or #	0	5,44,500 & 4,01,538 i.e., (Equivalent to 1,30,500 of 100% Urea) max or #	
Urea (100%) or & Diesel Exhaust Fluid (40% of Urea Solution)	MTPA	5,44,500 & 3,26,250 i.e., (Equivalent to 1,30,500 of 100% Urea) max #	0	5,44,500 & 3,26,250 i.e., (Equivalent to 1,30,500 of 100% Urea) max #	
Nano Fertilizers @ Nano Urea/Nano Micronutrients (Nano Zinc/ Nano	KLPA	63875	36500	100375**	

Copper/ Nano Boron/ Nano Sulphur) /Nano DAP** (Nano I + Nano II)									(Nano Boron & Nano Sulphur)
<p>Note - # Depending upon the requirement of urea fertilizer in the market, there shall be variation in quantity of DEF (32.5% and/or 40% urea Solution) production. The total urea production shall, however, be limited to 6,75,000 MTPA (Maximum) under all the above combinations.</p> <p>** Products shall be manufactured in any combination or single product in both plants i.e., Nano I & Nano II on demand basis. However, total capacity of plant will be limited to 100375 KLPA.</p> <p>@ Nano Urea contains 40000 ppm (Min) of nitrogen, Nano Zinc contains 10000 ppm (Min) of Zinc and Nano copper contains 8000 ppm (Min) of copper.</p> <p>@ Nano Boron contains 4500 ppm (Min) of Boron, Nano Sulphur contains 10000 ppm (Min) of Sulphur and Nano DAP contains 8 % of Nitrogen (Min) and 16 % of P2O5(Min).</p>									

5. The PP reported that there is no violation case as per the Notification No. S.O.804(E) dated 14.03.2017 and no direction is issued under E (P) Act/Air Act/Water Act.
6. The PP reported that Ministry had issued EC earlier vide letter no. **J-11011/60/2009-IA-II(I) dated 24.08.2021** for the existing project, Expansion/Modernization of the Fertilizer Plant. Certified compliance was given by IRO, MoEF&CC Gandhinagar on 18.07.2022. As per the report, out of total 38 conditions, 26 are complied, 4 are partly complied and 6 are agreed to comply by the project proponent, 1 condition is noted by the unit whereas 1 condition is not applicable to the unit. Response of partly complied conditions (*copy of wildlife conservation plan, details of third party carrying out monthly monitoring of AAQ and noise, details of expenditure incurred for environment management/pollution control measures*) was submitted by IFFCO to IRO, MoEF&CC on 01.11.2022.
7. The PP 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. Two river/Canal/water bodies are present in 10 Km radius of project site i.e., Narmada Canal (2.8 Km, S) and Sabarmati River (12.8 Km, ESE). The PP reported that no forest area is involved in the proposed project and two Schedule-I species i.e Pavo cristatus (Indian Peafowl), **Indian Monitor/Lizard** exist within 10 km study area of the project for which conservation plan has been submitted to Chief wildlife warden dated 9.8.2021
8. The PP reported that Ambient air quality monitoring was carried out at 8 locations during 1st October 2021 to 31st December 2021 and the baseline data indicates the range of concentrations as PM₁₀ (43 – 90 µg/m³), PM_{2.5} (19 - 49 µg/m³), SO₂ (5.14 – 16.20 µg/m³) and NO₂ (13.40 – 29.20 µg/m³), NH₃ (18.50 – 48.40 µg/m³) and CO (0.58 – 1.32 mg/m³). All parameters are within the National Ambient Air Quality Standards (NAAQS). Ambient Noise quality monitoring was carried out at 8 locations during the 1st October 2021 to 31st December 2021 and baseline data indicates the range of concentrations as Day Noise (49.9-62.4 dB(A)) and Night Noise (37.1-52.1 dB(A)). The noise level is within the prescribed limit in all the monitoring stations except at N3 (Kalol (Nr. Institute of Pharmacy)) and N8 (Nirma University Tragad). The noise level exceeded at these

locations due to nearby residential areas leading to community noise as well vehicular traffic in the area contributes to noise levels in the area.

9. Ground water quality monitoring was carried out at 8 locations during the 1st October 2021 to 31st December 2021 and baseline data indicates pH ranged between to 6.79 to 7.69 which are well within the specified standard of 6.5 to 8.5 limit. Total hardness levels were recorded in the range between 328 to 684 mg/l which is within the permissible limit 600 mg/l at all locations except at GW6 i.e., Ramnagar. The Total Dissolved Solids (TDS) concentration recorded ranged between 765 to 2160 mg/l and was within the permissible limits (2000 mg/l) at all locations except at GW1 (nearby project site). Chlorides at all the locations were within the permissible limits (1000 mg/l) as it ranged between 215 – 716 mg/l. Sulphates at all the locations were within the permissible limits (400 mg/l) as it ranged between 65 – 226 mg/l. Bacteriological studies reveal that no coliform bacterial are present in the samples. The heavy metal contents were observed to be in below detectable limits. All physical and general parameters were observed within the permissible limit as per IS10500:2012 (Second Revision). Thus, it is recommended that water be filtered and disinfected prior to be given for drinking water requirements.
10. Surface water quality monitoring was carried out at 3 locations during the 1st October 2021 to 31st December 2021 and baseline data indicates pH values of all analysed samples ranged between 7.52 to 7.63. TDS levels were observed to be in range from 204 to 1220 mg/l. Total hardness levels were observed to be in the range of 142 to 286 mg/l. Dissolved Oxygen values ranged between 6.6 to 7.3 mg/l. The chlorides level was observed to be in range of 36 to 369 mg/l. Sulphate level were found to be ranging from 10 to 118 mg/l. Nitrate levels were found to be observed within the range of 9.4 to 26.5 mg/l. Total Coliform levels were found to be in the range of 120 to 4600 MPN/100 ml. Biochemical Oxygen Demand (BOD) was observed to be in range of 2.1 to 4.3 mg/l. Comparing the values of pH, DO, BOD and Total Coliforms with ‘Use based classification of surface waters’ published by Central Pollution Control Board; it can be seen that the analysed surface waters is moderately polluted and classified as “**Class ‘C’**” and can be used for as Drinking water source after conventional treatment and disinfection.
11. The PP reported that total freshwater requirement after expansion will be 10190 KLD (in Phase-I) and 10614 KLD (in Phase-II). Fresh water will be met by Sardar Sarovar Narmada Nigam Ltd. (SSNNL). The total wastewater generation after expansion in Phase I and Phase II will increase from 1449.5 KLD (Phase I) to 1459 KLD (Phase I) and 1509.5 KLD (Phase II) to 1519 KLD (Phase II) respectively. Wastewater streams are segregated into two categories i.e., Weak effluent containing – Low TDS and Strong effluent containing - High TDS. Normally weak effluent (Containing less TDS) from water treatment plant, HCl storage tanks fumes scrubber is collected in Neutralization tank. The effluents collected from domestic open channel network including cooling water blow down, sand filters back wash, effluents from knockout drums & surface drain are collected in bulk effluent tank by an underground line of 350 mm dia. The strong / off-spec. effluent especially from urea plant (in case of upset condition) and partly from DM plant during regeneration of ion exchange units (after segregation) is collected in strong effluent storage tanks in ETP. Same is pumped to Off-Spec effluent pond having capacity of 40,000 m³ and is allowed for natural evaporation. Treated water from Bulk Effluent tank is being used for horticulture/ gardening/ green belt development purpose within the plant area. In existing plant, the domestic wastewater is partially treated in the existing ETP and flushing wastewater is discharged to soak pits. For nano fertilizer plant, ETP plant will be set up which will have total capacity of 35 KLD.

Out of 35 KLD, MEE, Stripper and AFFD will have capacity of 25 KLD. Treated water will be reused for horticulture/ gardening/ green belt development purposes.

12. The PP reported that the power requirement after expansion will be 282 MWH in Phase-I and 305 MWH in Phase-II which will be sourced from Uttar Gujarat Vij Company Ltd. (UGVCL). Existing unit has DG set of capacity 2200 KVA & 860 KVA as power backup. No additional DG set is proposed. Stack (24 m for 2200 KVA & 22 m for 860 KVA) is provided as per CPCB norms to the existing DG sets.
13. Existing unit has 1 nos. of Natural gas-based boilers (80,000 Kg/hr). During normal course of operation of Nano Fertiliser Plant, surplus LP Steam available from Urea-Ammonia Plant will be used. However, during shutdown of Ammonia-Urea plant, there shall be requirement of LP steam for normal operation of Nano Fertilizer Plant. Therefore, a standby boiler of 6TPH natural gas based will be installed to meet steam requirement of Nano-Fertilizer plant. Stack of 35 m has been provided for existing Boilers and 30 m stack is proposed for new 6 TPH Boiler.

14. Details of Process Emissions Generation and its Management:

S. No.	Stack Attached	Fuel Used	APCM	Expected Pollutants
Existing Stacks				
1	Steam Boiler – 80000 kg/hr	Natural gas	35 m Stack height	PM, SO ₂ & NO _x
2	DG Set –2200 KW & 860 KW	HSD	24 m for 2200 KW & 22 m for 860 KW	PM, SO ₂ & NO _x
Proposed Stacks				
3	Steam Boiler (6 TPH)	Natural Gas	30 m stack Height	PM, SO ₂ & NO _x
Process Stacks / Vents				
Existing Stacks				
1	Prilling Tower – 4 Nos	-	Stack Height 68.5 m with Induced Draft, Vibropriller.	PM
2	Ammonia Scrubber	-	Venturi Water scrubber & 71 m stack Height	NH ₃
3	Ammonia Plant Primary Reformer	-	Stack Height of 40 m	PM, SO ₂ & NO _x

15. Details of Solid Waste/ Hazardous Waste Generation and its Management:

S. No	Name of Waste	Source of Generation	Category No. (As per Sch-I&II 2016)	Quantity			Mode of Treatment & Disposal Method
				As per granted EC	Addition	Total after Expansion	

1	Discarded Barrels/ Containers / Liners contaminated with hazardous chemicals / wastes	Storage & Handling of Raw Materials	Sch-I/33.1	1500 Nos. /year	15000 Nos. HDPE Drums	1500 Nos. Containers/Barrels /Year, & 15000 Nos. HDPE Drums	Collection, Storage, Decontamination and sale to authorized decontamination facility/ authorized recycler.
2	Bags contaminated with hazardous chemicals / wastes	Storage & Handling of Raw Materials	Sch-I/33.1	-	150 MT/Year HDPE Bags	150 MT/Year HDPE Bags	Collection, Storage, and sale to authorized recycler.
3	Used oil/ Spent Oil	Process	Sch-I/5.1	88.8 MTPA	0	88.8 MTPA	Collection, storage in MS drum, transportation and disposal by selling to registered Refiners.
4	ETP Sludge	In-house ETP	Sch-I/35.3	180 MTPA	0	180 MTPA	Collected in Drying Pits, stored in HDPE bags, Transported and disposed off to GPCB approved TSDF site.
5	Phosphoric acid Sludge	From solids settling in Phosphoric acid storage tank	-	-	150 MTPA	150 MTPA	This will be collected, dried, stored in HDPE bags and transported to IFFCO Kandla by road for use in DAP Manufacture.
6	Spent Catalyst	Ammonia/Urea Process	Sch -I/ 18.1	100 MTPA	0	100 MTPA	Collection, storage, transportatio

							n and disposal by selling to registered and authorized recyclers.
7	Spent Carbon	Ammonia/DM Plant Process	Sch-I/18.2	228 MTPA	0	228 MTPA	Collection, storage in HDPE bags, Transportation and disposal to authorized TSDF site / Co-processing at authorized cement industries.
8	Spent Resin	DM Plant Process	Sch-I/35.2	228 M ³ /Year	0	228 M ³ /Year	Collected and stored in HDPE bags, Transported and disposed off to authorized TSDF site / Co-processing at authorized cement industries.
9	MEE Sludge	In-house MEE & ETP (Proposed Nano Fertiliser plant)	Sch-I/35.3	0	91.25 MTPA	91.25 MTPA	Shall be Collected in Drying Pits, stored in HDPE bags, Transported and disposed off to GPCB approved TSDF site.

16. The budget earmarked towards Environmental Management Plan (EMP) is ₹ 932.9 crores (capital) and the Recurring cost (operation and maintenance) will be about ₹116 Crores per annum. Industry proposed to allocate Rs. 0.62 Crores @ 0.1% of total expansion cost towards CER.

17. The PP reported that Industry will maintain green area of 47.4266 Ha which is 49.65% of total plot area. As per MoEF&CC requirement, it is mandated to have 33% of green area exclusively for green belt thus, 33.43 Ha of area which is 35% of plot area is provided with green belt area having dense trees and rest area within green area is provided with shrubs, herbs and lawn.

18. The PP proposed to set up an Environment Management Cell (EMC) by engaging Director, Environment Health and safety officials - for the functioning of EMC.

19. The PP reported the following w.r.t carbon sequestration:

S. No.	Species	Green Weight of Tree above ground level	Green weight (including root) (Kg)	Dry Weight of tree (Kg)	Weight of carbon in the tree (Kg)	Weight of CO ₂ (Kg)	Weight of CO ₂ Sequestered in tree per year (Kg)	No of tree proposed	Weight of CO ₂ Sequestered in tree per year (Tonnes)
1	<i>Acacia senegal</i>	676	811.2	588.12	294.06	1078.11	107.81	1650	79.41
2	<i>Aegle marmelos</i>	784	940.8	682.08	341.04	1250.35	125.04	1840	102.71
3	<i>Albizia lebbeck</i>	956.25	1147.5	831.94	415.97	1525.07	152.51	2430	165.44
4	<i>Azadirachta indica</i>	784	940.8	682.08	341.04	1250.35	125.04	2200	122.80
5	<i>Bauhinia racemose</i>	676	811.2	588.12	294.06	1078.11	107.81	3600	173.27
6	<i>Bauhinia variegata</i>	676	811.2	588.12	294.06	1078.11	107.81	2760	132.84
7	<i>Bauhinia purpurea</i>	676	811.2	588.12	294.06	1078.11	107.81	1200	57.76
8	<i>Bougainvillea spectabilis</i>	345.6	414.72	300.67	150.34	551.18	55.12	890	21.90
9	<i>Cassia fistula</i>	843.75	1012.5	734.06	367.03	1345.65	134.56	1650	99.12
10	<i>Dalbergia sissoo</i>	1152	1382.4	1002.24	501.12	1837.26	183.73	1850	151.74
11	<i>Delonix regia</i>	1152	1382.4	1002.24	501.12	1837.26	183.73	2800	229.66
12	<i>Ficus benghalensis</i>	1152	1382.4	1002.24	501.12	1837.26	183.73	3950	323.98

13	<i>Ficus racemose</i>	1216	1459.2	1057.92	528.96	1939.33	193.93	3200	277.05
14	<i>Ficus religiosa</i>	1088	1305.6	946.56	473.28	1735.19	173.52	3000	232.39
15	<i>Madhuca indica</i>	735	882	639.45	319.73	1172.21	117.22	3000	156.99
16	<i>Mangifera indica</i>	784	940.8	682.08	341.04	1250.35	125.04	1880	104.94
17	<i>Melia azedarach</i>	633.75	760.5	551.36	275.68	1010.73	101.07	1650	74.45
18	<i>Pongamia pinnata</i>	735	882	639.45	319.73	1172.21	117.22	1800	94.20
19	<i>Syzygium cumini</i>	1012.5	1215	880.88	440.44	1614.78	161.48	1890	136.25
20	<i>Tamarindus indica</i>	980	1176	852.60	426.30	1562.94	156.29	2920	203.74
21	<i>Tectona grandis</i>	833	999.6	724.71	362.36	1328.50	132.85	3210	190.38
22	<i>Terminalia arjuna</i>	784	940.8	682.08	341.04	1250.35	125.04	1740	97.13
23	<i>Terminalia bellirica</i>	784	940.8	682.08	341.04	1250.35	125.04	1640	91.54
24	<i>Terminalia catappa</i>	14.4	17.28	12.53	6.26	22.97	2.30	1490	1.53
25	<i>Thevetia peruviana</i>	6.75	8.1	5.87	2.94	10.77	1.08	760	0.37
							Total	55000	3321.22
									100

20. The PP submitted the disaster and Onsite and Offsite Emergency Plans in the EIA report.

21. The estimated project cost of new Nano Plant is Rs. 490 crores and additional Rs. 50 Crore for CDR in case of lean gas supply in ammonia plant. Total Employment will be 2000 persons during operation phase after expansion.

22. The PP reported that Public Hearing is exempted as the project is located in the industrial area i.e GIDC Kalol notified on 07.09.1993.

23. **Deliberations by the EAC:**

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

The EAC noted that the PP 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 PP.

The EAC noted that the EIA reports are in 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 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 EAC inter-alia, deliberated on the Greenbelt development plan, Effluent treatment plant, DAP product and advised the PP to submit the following:

- Undertaking for planting during 1st year and 2nd Year
- Revised ETP flow diagram
- Revised block diagram of Nano DAP.

The PP submitted the above information/documents and the EAC found it to be satisfactory.

The EAC deliberated the Onsite and Offsite Emergency plans and also the various mitigation measures proposed during implementation of the project and advised the PP to implement the provisions of the Rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996, as amended from time to time.

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.

The EAC is of the view that its recommendation and grant of environmental clearance by the regulatory authority 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 PP 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.

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

- (i) The PP shall develop Greenbelt over an area of at least, 16165.45 m² by planting 40,000(1st year) number of trees within a period of one year of grant of EC and 15,000 (2nd year) (2024). The saplings selected for the plantation should be of sufficient height, preferably 6-ft (about 2m). The budget earmarked for the plantation shall be kept in separate account and should be

audited annually. PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of the expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.

- (ii) A separate Environmental Management Cell (having qualified persons 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 by engaging Director- environment officials, in addition to this, one safety & health officer as per the qualification given in Factories Act, 1948 shall be engaged within a month of grant of EC. The PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.
- (iii) The company 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. The budget proposed under EMP [₹932.9 crores (Capital cost) and ₹ 116 crores (Recurring cost)] shall be kept in a separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.
- (iv) The total freshwater requirement after expansion will be 10190 KLD (in Phase-I) and 10614 KLD (in Phase-II). Fresh water will be met by Sardar Sarovar Narmada Nigam Ltd. (SSNNL). The PP should ensure that water supply should not be above the permissible limit as mentioned in the letter and fresh water shall be withdrawal only after obtaining prior agreement from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year
- (v) No banned chemicals shall be manufactured by the PP. No banned raw materials shall be used in the unit. The PP shall adhere to the notifications/guidelines of the Government in this regard.
- (vi) The PP 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.
- (vii) The project proponent shall comply with the environment norms for Fertilizer as notified by the Ministry of Environment, Forest and Climate Change, *vide* GSR 1607(E), dated 29.12.2017 under the provisions of the Environment (Protection) Rules, 1986.
- (viii) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The PP shall implement the onsite/offsite emergency plan/mock drill

etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

- (ix) 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.
- (x) The PP shall explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.
- (xi) As committed by the PP, Zero Liquid Discharge shall be ensured. the domestic wastewater shall be partially treated in the existing ETP and flushing wastewater shall be discharged to soak pits. ETP plant shall be installed total capacity of 35 KLD. Out of 35 KLD, MEE, Stripper and AFFD will have capacity of 25 KLD. Treated water shall be reused for horticulture/ gardening/ green belt development purposes.
- (xii) 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 servers. 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.
- (xiii) 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.
- (xiv) 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.
- (xv) Proper Ventilation with adequate air change cycle shall be made for healthy working environment for the workers. Work Zone monitoring should be done for VOC.
- (xvi) Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.
- (xvii) The unit shall make the arrangement for the protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.
- (xviii) 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.

- (xix) 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.
- (xx) 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 vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.
- (xxi) The Plastic Waste Management (Amendment) Rules, 2022 shall be duly complied w.r.t Extended Producer Responsibility (EPR) target as a brand owner.
- (xxii) The activities and the action plan proposed by the project proponent to address the issues raised during the public hearing as well as the related socio-economic issues in the study area shall be completed as per the schedule presented before the Committee and as described in the EIA report in letter and spirit.

Agenda No. 46.18

Proposed Expansion of Fertilizer Manufacturing Unit (Pulgaon) of production capacity [Single Super Phosphate (SSP): 1,50,000 MTPA; Triple Super Phosphate (TSP): 50,000 MTPA; Granulated Fertilizer (GSSP/BGSSP/ZGSSP/ZBGSSP/NPK/Customized Fertilizer): 2,00,000 MTPA; Sulphuric Acid: 50,000 MTPA, Sodium Silica Fluoride (SSF): 750 MTPA] located at Survey No. 375/I-K, Village-Gunjkheda, District- Wardha, Pulgaon, Maharashtra by M/s Bhilai Engineering Corporation Limited - Consideration of EC

[Proposal No. IA/MH/IND3/414089/2023; File No. IA-J-11011/182/2022-IA-II(I)]

1. The proposal is for the environmental clearance for Proposed Expansion of Fertilizer Manufacturing Unit (Pulgaon) of production capacity [Single Super Phosphate (SSP): 1,50,000 MTPA; Triple Super Phosphate (TSP): 50,000 MTPA; Granulated Fertilizer (GSSP/BGSSP/ZGSSP/ZBGSSP/NPK/Customized Fertilizer): 2,00,000 MTPA; Sulphuric Acid: 50,000 MTPA, Sodium Silica Fluoride (SSF): 750 MTPA] located at Survey No. 375/I-K, Village-Gunjkheda, District- Wardha, Pulgaon-442302, Maharashtra by M/s Bhilai Engineering Corporation Limited
2. The project/activity is covered under Category 'A' of item 5 (a) Chemical Fertilizers of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended). Therefore, the project requires appraisal at Central Level.

3. The PP applied for Environment Clearance on 12.1.2023 in CAF and submitted EIA/EMP Report and other documents. The PP in the CAF reported that it is an **Expansion EC case**. Due to some shortcomings, the Project was referred back to PP on 19.1.2023 and reply to the same was submitted on 23.1.2023. The PP reported that the Public Hearing for the proposed expansion was successfully conducted on **07.12.2022** under the chairmanship of District Magistrate, Wardha. The main issues raised during the public hearing were employment, environment pollution control, green belt etc. and the issue related response has been given by the project authorities. The time bound budgetary action plan for the issues raised during the PH has been submitted. The proposal is now placed in 46th EAC Meeting held on 30th- 31st January, 1st February 2023, wherein the PP and an accredited Consultant, M/s EQMS India Pvt. Ltd [Accreditation number NABET/EIA/1922/RA 0197 Valid up to 3.5.2023], made a detailed presentation on the salient features of the project and informed the following:
4. The PP reported that the Existing land area of the project is 20.235 Ha. Proposed expansion will be done in within existing project premises and no R& R is involved in the Project. The details of products are as follows:

Sr. No.	Name of Product	CAS No.	Unit	Total Production Capacity		
				Existing	Proposed/ Additional Production	Total after Expansion
1	Single Super Phosphate (SSP)	8011-76-5	MTPA	66000	84000	150000
2	Triple Super Phosphate (TSP)	8011-76-5	MTPA	0	50000	50000
3	Granulated Fertilizer/ (Granulated SSP, Boronated Granulated SSP, Zincated Granulated SSP, Zincated Boronated Granulated SSP), NPK, Fertilizer/ Customized Fertilizer	66455-26-3	MTPA	60000	140000	200000
4	Sulphuric Acid	7704-34-9	MTPA	33000	17000	50000
5	Sodium Silica Fluoride (SSF)	1689-85-9	MTPA	180	570	750

5. The PP reported that there is no violation case as per the Notification No. S.O.804(E) dated 14.03.2017 and no direction is issued under E (P) Act/Air Act/Water Act.
6. The PP reported that the project was established before the purview of EIA Notification 1994 & its subsequent amendments. The existing unit is operational in accordance to Consent to Operate granted by Maharashtra Pollution Control Board (MPCB) vide File No.- RED/M.S.I. (R52) No.- Format 1.0/AS (T)/JAN No. 0000106963/CR-21000077 dated 04.10.2021 (valid upto 31.03.2026). The certified compliance of CTO has been obtained from MPCB on 07.02.2023 based on the site visit dated 02.02.2023. All the conditions are complied.

7. The PP 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. There are 3 no. of rivers flowing around the project site i.e, Wardha River (2.8 km, W), Bhog River (4.18 km, NW) & Chandrabhog River (9.78 km, W).The PP reported that no forest area is involved in the proposed project and one Schedule-I species exist within 10 km study area of the project for which conservation plan has been submitted to Principal Chief conservator of Forest.
8. The PP reported that Ambient air quality monitoring was carried out at eight (9) locations during March,2022 to May,2022 and the baseline data indicates that ranges of concentrations as: PM₁₀ (32-98 µg/m³), PM_{2.5} (18-54 µg/m³), SO₂ (6.4-22.8 µg/m³) and NO_x (5.2-28.1 µg/m³), CO (0.2- 2.1 mg/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.61 µg/m³, 1.21 µg/m³, 0.290 µg/m³ & 0.199 µg/m³ with respect to PM₁₀, PM_{2.5}, F and Acid Mist. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). **Noise** - Ambient noise quality monitoring was done at nine (9) locations during study period. Noise level values were ranged from 48 to 68 dB(A) during day and 33 to 54 dB(A) during night-time. The noise levels at all locations were observed to be within CPCB limits.
9. **Ground water** quality monitoring was done at eight (8) locations during the study period. pH levels ranged between 7.12-8.26. Total hardness was ranged from 152 to 310 mg/l. The Total Dissolved Solids (TDS) concentration recorded ranged between 286 to 536 mg/l. Chlorides levels were ranged between 15 to 92 mg/l. Sulphate levels were ranged between 17.2 to 34 mg/l. Bacteriological studies reveal that no coliform bacterial are present in the samples. All physical and general parameters were observed within the permissible limits as per IS10500:2012 (Second Revision).
10. **Surface water** quality monitoring was done at six (6) locations during study period. pH values of all analysed samples ranged between 7.02- 7.98. TDS levels were observed to be in range from 240-298 mg/l. Dissolved Oxygen values ranged between 5.4 to 7 mg/l. The chlorides level was observed to be in range of 25 to 33 mg/l. Total Coliform levels were found to be in the range of 1240- 2670 MPN/100 ml. Biochemical Oxygen Demand (BOD) was observed to be in range of 2.4 to 4.4 mg/l. Comparing the values of pH, DO, BOD and Total Coliforms with 'Use based classification of surface waters' published by Central Pollution Control Board; the analysed surface waters is moderately polluted and classified as "Class 'C'" and can be used for as Drinking water source after conventional treatment and disinfection. Thus, all the analysed parameters were within the limits specified for suitable for meeting drinking water requirements after conventional treatment and disinfection.
11. Soil quality monitoring was done at four (7) locations during study period. As per the grain size distribution the percentage of sand in all sampled soil was found varied from 18% to 58%, silt varied from 20 to 40% and clay from 12% to 62% during summer season. The soil pH ranges were observed from 7.48 to 7.85. Available nitrogen content in the surface soils ranges between 278.5 to 374.8 kg/ha. Available phosphorus content ranges between 16.2 kg/ha to 22.5 kg/ha. Available potassium content in these soils' ranges between 210.4 kg/ha to 266.2 kg/ha. Based on Nutrient Index Value for N, P & K, the soils of study area fall into "Medium" Fertility Status.

12. The PP reported that the existing freshwater requirement of the project is 310 KLD being sourced by Wardha River. Freshwater required for proposed expansion will be 186 KLD. The total freshwater requirement of plant after expansion will be 496 KLD sourced from existing water supply. In existing unit, wastewater generation from the project is 98 KLD (Industrial Effluent-68 KLD; Domestic Sewage & Miscellaneous Wastewater- 30 KLD). 68 KLD industrial effluent is being discharged into Effluent Collection Pit and is being directly reused in the plant. 30 KLD of domestic sewage & misc. wastewater is being treated in Biodigester Unit. 98 KLD of treated water is being completely reused in the plant. It is a “ZLD” Project. After Expansion, the total wastewater generation will get increased to 170 KLD (Industrial Effluent- 130 KLD; Domestic Sewage & Miscellaneous Wastewater-40 KLD). 130 KLD industrial effluent will be discharged into Effluent Collection Pit and is directly reused in the plant. 40 KLD domestic sewage & misc. wastewater will be treated in Bio digester Unit. 170 KLD treated water will be completely reused in the plant for purposes like gardening, granulation and SSP/TSP process. The project will be a “ZLD” project after expansion also. All the standards of SPCB and MoEF&CC shall be maintained.
13. The PP reported that the existing power requirement of the plant is 0.75 MW being supplied by MSEB (Maharashtra State Electricity Board) and in-house Turbo Generator (2x562.5 kVA). Under existing plant, 2 no. of TG Sets of capacity 1125 kVA (562.5 kVA each) have been installed. The total power requirement after expansion will be 1.5 MW. Under proposed expansion, 1 no. of Turbo generator set of capacity 1125 kVA will be installed in the unit. DG Sets of capacity 1x380 kVA and 1x125 kVA have already been installed to be used exclusively for backup purposes. No additional DG sets will be installed under proposed expansion.

14. Details of Process Emissions Generation and its Management:

AIR EMISSION DETAILS

S. No	Stack	Stack Height	Dia	Temp. (°C)	Flow (m ³ /hr)	Type of Pollutant	APCM
		(m)	(mm)				
1.	D.G. SET (325 KVA)	8	400	80	2000	CO ₂	Carbon Filter
2.	D.G. SET (125 KVA)	8	400	60	1000	CO ₂	Carbon Filter
3.	SULPHURIC ACID PLANT	50	600	70	8300	SO ₂	Caustic Alkali Scrubber
						SO ₃	Caustic Alkali Scrubber
						ACID MIST	Demester Pad
4.	SINGLE SUPER PHOSPHATE	50	2000	55	25000	FLUORINE	Venturi & 3 Cyclonic Scruber
5.	GRANULATION PLANT GSSP/NPK	25	600	60	20000	DUST PARTICLES	Twin Cyclonic Separator

6.	ROCK PHOSPHATE DRYING UNIT (Incidental operational only when Raw material is wet)	15	500	70	15000	DUST PARTICLES	Cyclone & Dust Collector Filter Bag
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15. Details of Solid Waste/Hazardous Waste Generation and its Management:

HAZARDOUS WASTE

Sr. No.	Type of Waste	Hazardous Waste Category	Unit	Quantity			Treatment /Disposal
				Existing	Proposed	Total after Expansion	
1	Spent Catalyst	17.2	Kg/month	0.10	0.13	0.23	Sale to MoEF&CC approved recycler.
2	Empty Discarded Containers/Bags	33.3	No./month	12000	20000	32000	Sale to MoEF&CC approved recycler.
3	Sludge containing Sulphur	D1	TPM	14	22	56	Stored and reused as filler for SSP

**Silica Sludge will be reused as filler within manufacturing process.*

SOLID WASTE: Existing solid waste generation from the project is 8 kg/day that is being treated in Composting Pit for conversion to manure and is being reused for horticultural purposes. Similar practices will be followed in the proposed expansion.

16. The budget earmarked towards Environmental Management Plan (EMP) is ₹ 274 Lakhs (capital) and the Recurring cost (operation and maintenance) will be about. 67 Lakhs per annum. Industry proposes to allocate Rs. 0.20 Crores towards CER/CSR/ESC.
17. The PP reported that Industry has developed a dense greenbelt in 68800 m² i.e., 34 % of total plot area. There are 12075 no. of trees located within the plot of various species like Subabbul, Glasindia, neem, thornberry, banyan, pipal, teak, badam. Development will be done in such a planned manner that no uprooting or transplantation of trees will be done. Under proposed expansion, additional 5638 no. of trees will be planted within the plant
18. The PP proposed to set up an Environment Management Cell (EMC) by engaging Plant Manager, Environment officer- Environment officials for the functioning of EMC.
19. The PP reported the following w.r.t carbon sequestration:

S. No.	Species	Green Weight of Tree above ground level (Lbs)	Green weight (including root) (Lbs)	Dry Weight of tree (Lbs)	Weight of carbon in the tree (Lbs)	Weight of CO ₂ (Lbs)	Weight of CO ₂ Sequestered in tree per year (Lbs)	No of tree proposed	CO ₂ Sequestered (Ton/Year)
1	<i>Acacia auriculiformis</i>	784	940.8	682.08	341.04	1250.35	125.04	450	25.12
2	<i>Albizia lebbek</i>	787.5	945	685.12	342.56	1255.94	125.59	350	19.62
3	<i>Alstonia scholaris</i>	540	648	469.8	234.90	861.21	86.12	380	14.61
4	<i>Bougainvillea spectabilis</i>	37.5	45	32.62	16.31	59.81	5.98	180	0.48
5	<i>Cassia fistula</i>	896	1075.2	779.52	389.76	1428.98	142.90	420	26.79
6	<i>Dalbergia latifolia</i>	731.25	877.5	636.18	318.09	1166.23	116.62	340	17.70
7	<i>Delonix regia</i>	718.25	861.9	624.87	312.43	1145.49	114.55	290	14.83
8	<i>Ficus bengalensis</i>	1024	1228.8	890.88	445.44	1633.12	163.31	505	36.82
9	<i>Ficus variens</i>	843.75	1012.5	734.06	367.03	1345.65	134.56	560	33.64
10	<i>Hibiscus rosa-sinensis</i>	19.2	23.04	16.70	8.352	30.62	3.06	90	0.12
11	<i>Terminalia Cattapa</i>	686	823.2	596.82	298.41	1094.06	109.41	379	18.51
12	<i>Narium indicum</i>	6.75	8.1	5.87	2.93	10.77	1.08	480	0.23
13	<i>Tectona grandis</i>	1012.5	1215	880.87	440.43	1614.78	161.48	680	49.02
14	<i>Syzygium cumini</i>	784	940.8	682.08	341.04	1250.35	125.04	534	29.81
TOTAL								5638	287.31

20. The PP submitted the disaster and Onsite and Offsite Emergency Plans in the EIA report.

21. The estimated cost for proposed expansion is Rs 10 Crores. Total employment of the project after expansion will be 55 no

22. **Deliberations by the EAC:**

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

The EAC noted that the PP 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 PP.

The EAC noted that the EIA reports are in 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 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 EAC inter-alia, deliberated on the green development plan, compliance of CTO, carbon sequestration, budget of EMP, wastewater and advised the PP to submit the following:

- Revised list of proposed plantation along with the cost for greenbelt development.
- Compliance of CTO
- Updated Carbon Sequestration details for revised plantation
- Updated cost on Environment Management Plan.
- Revised flow diagram of bio-digester/ bio-tanks for treatment of domestic sewage

The PP submitted the above information/documents and the EAC found it to be satisfactory.

The EAC deliberated the Onsite and Offsite Emergency plans and also the various mitigation measures proposed during implementation of the project and advised the PP to implement the provisions of the Rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996, as amended from time to time.

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.

The EAC is of the view that its recommendation and grant of environmental clearance by the regulatory authority 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 PP 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.

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

- (i) The PP shall develop Greenbelt over an area of at least, 6.88 Ha by planting 18225 number of trees within a period of one year of grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft (about 2m). The budget earmarked for the plantation shall be kept in separate account and should be audited annually. PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of the expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.
- (ii) A separate Environmental Management Cell (having qualified persons 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 by engaging Plant Manager, Environment officer- Environment official. In addition to this, one safety & health officer as per the qualification given in Factories Act, 1948 shall be engaged within a month of grant of EC. The PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.
- (iii) The company 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. The budget proposed under EMP [₹281.9 Lakh (Capital cost) and ₹ 72 Lakhs (Recurring cost)] shall be kept in a separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.
- (iv) The Freshwater required for proposed expansion shall be 186 KLD. The total freshwater requirement of plant after expansion shall be 496 KLD sourced from existing water supply (Wardha River). The PP should ensure that water supply should not be above the permissible limit as mentioned in the letter and fresh water shall be withdrawal only after obtaining prior agreement from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year.

- (v) No banned chemicals shall be manufactured by the PP. No banned raw materials shall be used in the unit. The PP shall adhere to the notifications/guidelines of the Government in this regard.
- (vi) The PP 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.
- (vii) The project proponent shall comply with the environment norms for Fertilizer as notified by the Ministry of Environment, Forest and Climate Change, *vide* GSR 1607(E), dated 29.12.2017 under the provisions of the Environment (Protection) Rules, 1986.
- (viii) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The PP shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.
- (ix) 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.
- (x) The PP shall explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.
- (xi) As committed by the PP, Zero Liquid Discharge shall be ensured. the total wastewater generation shall get increased to 170 KLD (Industrial Effluent- 130 KLD; Domestic Sewage & Miscellaneous Wastewater-40 KLD). 130 KLD industrial effluent shall be discharged into Effluent Collection Pit and is directly reused in the plant. 40 KLD domestic sewage & misc. Wastewater shall be treated in Biodigester Unit. 170 KLD treated water will be completely reused in the plant for purposes like gardening, granulation and SSP/TSP process.
- (xii) 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 servers. 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.
- (xiii) 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.
- (xiv) 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.

- (xv) Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.
- (xvi) The unit shall make the arrangement for the protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.
- (xvii) 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.
- (xviii) 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.
- (xix) 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 vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.
- (xx) The activities and the action plan proposed by the project proponent to address the issues raised during the public hearing as well as the related socio-economic issues in the study area shall be completed as per the schedule presented before the Committee and as described in the EIA report in letter and spirit.

GENERAL EC CONDITIONS

- 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.
- The PP 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.
- The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.
- 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).
- 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.
- 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.
- A copy of the clearance letter shall be sent by the PP to concerned Panchayat, ZillaParishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.
- The PP 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.
- 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.
- The PP 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.

- 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.
- 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.

STANDARD TERMS OF REFERENCE**A. GENERIC TERMS OF REFERENCE****1) Executive Summary****2) Introduction**

- i. Details of the EIA Consultant including NABET accreditation
- ii. Information about the PP
- 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. 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.
- vi. List of raw materials required and their source along with mode of transportation.
- vii. Other chemicals and materials required with quantities and storage capacities
- viii. Details of Emission, effluents, hazardous waste generation and their management.
- ix. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract)
- x. Details of boiler/gensets (including stacks/exhausts) and fuels to be use
- xi. Details of boiler/gensets (including stacks/exhausts) and fuels to be used
- xii. Process description along with major equipment's and machineries, process flow sheet (quantitative) from raw materials to products to be provided
- xiii. Hazard identification and details of proposed safety systems.
- xiv. 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 up to 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) **Forest, wildlife and CRZ related issues (if applicable):**

- i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable)
- ii. 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 PP 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 1986.

- 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.

11) 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 carried out 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.

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

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

B. SPECIFIC TERMS OF REFERENCE FOR EIA STUDIES FOR 5(f) CATEGORY 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 NH₃*,chlorine*,HCl*,HBr*,H₂S*,HF*,*etc.*,(*-as applicable)
4. Work zone monitoring arrangements for hazardous chemicals.
5. Detailed effluent treatment scheme including segregation of effluent streams for units adopting 'Zero' liquid discharge.
6. Action plan for odour control to be submitted.
7. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they co-process organic solid/hazardous waste generated.
8. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
9. Action plan for utilization of MEE/dryers salts.
10. Material Safety Data Sheet for all the Chemicals are being used/will be used.
11. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
12. Details of incinerator if to be installed.
13. Risk assessment for storage and handling of hazardous chemicals/solvents. Action plan for handling & safety system to be incorporated.
14. Arrangements for ensuring health and safety of workers engaged in handling of toxic materials.

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

S. No.	Name of Member	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	Chairman
2.	Dr. Ashok Kumar Saxena, IFS Bungalow 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.) 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
5.	Shri Santosh Gondhalkar 'Shree' Apartment, Flat 401, Plot No. 22, Tukaram Society, Santnagar, Pune- 411009 E-mail: santoshgo@gmail.com	Member
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