



सत्यमेव जयते

File No: IA-J-11011/216/2021-IA-II(I)
Government of India
Ministry of Environment, Forest and Climate Change
IA Division



Date 11/08/2023



To,

Shri Anil Mathur
RASHTRIYA CHEMICALS AND FERTILIZERS LIMITED
Priyadarshini Building, Eastern Express Highway, Sion , MUMBAI, MAHARASHTRA-400022
corpotech@rcfltd.com

Subject: Installation of New Nano-Urea Fertilizer Plant of total capacity 27,375 KL/annum located at RCF Trombay Unit Industrial Area, Chembur, Suburban Mumbai, Maharashtra by M/s Rashtriya Chemicals and Fertilizers Limited (RCF) - Grant of prior Environmental Clearance (EC) to the proposed project under the provision of the EIA Notification 2006 -regarding.

Sir/Madam,

This is in reference to your application submitted to MoEF&CC vide proposal number IA/MH/IND3/426519/2023 dated 19.04.2023 for grant of prior Environmental Clearance (EC) to the proposed project under the provision of the EIA Notification 2006 and as amended thereof.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC23A1904MH5528105E
(ii) File No.	IA-J-11011/216/2021-IA-II(I)
(iii) Clearance Type	Fresh EC
(iv) Category	A
(v) Project/Activity Included Schedule No.	5(a) Chemical fertilizers
(vi) Sector	Industrial Projects - 3 Installation of New Nano-Urea Fertilizer Plant at RCF Trombay, Chembur, Suburban Mumbai, Maharashtra-400074 by M/s Rashtriya Chemicals and Fertilizers Limited (Government of India Undertaking)
(vii) Name of Project	RASHTRIYA CHEMICALS AND FERTILIZERS LIMITED
(viii) Name of Company/Organization	MUMBAI SUBURBAN, MAHARASHTRA
(ix) Location of Project (District, State)	MoEF&CC
(x) Issuing Authority	

(xi) Applicability of General Conditions as per EIA Notification, 2006 No

1. In view of the particulars given in the Para 1 above, the project proposal interalia including Form-1(Part A, B and C)/ EIA & EMP Reports were submitted to the MoEF&CC for an appraisal by the Expert Appraisal Committee (EAC) under the provision of EIA notification 2006 and its subsequent amendments.
2. The above-mentioned proposal has been considered by Expert Appraisal Committee (Industry-3) in the meeting held on 16-05-2023. The minutes of the meeting and all the project documents are available on PARIVESH portal which can be accessed from the PARIVESH portal by scanning the QR Code above or through the following web link [click here](#).
3. The brief about configuration of products and byproducts as submitted by the Project Proponent in Form-1 (Part A, B and C)/ EIA & EMP Reports / presented during EAC are annexed to this EC as Annexure (1).
4. The EAC, in its meeting held on 16-05-2023, based on information submitted viz: Form 1 (Part A, B and C), EIA/EMP report etc & clarifications provided by the project proponent and after detailed deliberations on all technical aspects and public hearing issues and compliance thereto furnished by the Project Proponent, recommended the proposal for grant of Environment Clearance under the provision of EIA Notification, 2006 and as amended thereof subject to compliance of Specific and Standard EC conditions as given in this letter.
5. The MoEF&CC has examined the proposal in accordance with the provisions contained in the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and based on the recommendations of the Expert Appraisal Committee hereby accords Environment Clearance to the instant proposal of M/s. RASHTRIYA CHEMICALS AND FERTILIZERS LIMITED under the provisions of EIA Notification, 2006 and as amended thereof subject to compliance of the Specific and Standard EC conditions as given in Annexure (1)
6. The Ministry reserves the right to stipulate additional conditions, if found necessary.
7. The Environmental Clearance to the aforementioned project is under provisions of EIA Notification, 2006. It does not tantamount to approvals/consent/permissions etc. required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.
8. The Project Proponent is under obligation to implement commitments made in the Environment Management Plan, which forms part of this EC.
9. Validity of EC is up to 10 years from the date of grant of EC to the start of production operations by the project or activity. Validity of EC becomes perpetual subject to the start of production operations by the project or activity on or before the 10 years from the date of grant of EC. In case the project proponent fails to start the production operations within the EC validity date, application for EC validity extension shall be submitted to the regulatory authority as per the provision contained in the Para 9.0 of EIA notification, 2006 and its amendment.
10. General Instructions:
 - (a) The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEF&CC/SEIAA website where it is displayed.
 - (b) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
 - (c) The project proponent shall have a well laid down environmental policy duly approved by the Board of Directors (in case of Company) or competent authority, duly prescribing standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions.
 - (d) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the project proponent (during construction phase) and authorized entity mandated with compliance of conditions (during operational phase) shall be prepared. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Six monthly

progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.

(e) Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

(f) The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

(g) Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

11. This issues with the approval of the Competent Authority

Annexure 1

Specific EC Conditions for (Chemical fertilizers)

1. Specific conditions

Sr. No	EC Conditions
1.1	<p>The PP shall develop Greenbelt over an area of atleast, 57.93Ha (34.43 Ha in Trombay unit & 23.5 Ha in RCF Trombay Township) by planting 33306 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.</p> <p>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 executive director- dy. general manager (HSE)- Assistant general manager chem (Env)- chief manager (chem) Env- Engineer chem (Env). 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.</p> <p>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 129 Lakh (Capital cost) and 54.12 Lakhs /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.</p> <p>The total water requirement for the proposed project shall be 90 KLD Out of 90 KLD. 5 KLD freshwater shall be provided by BMC for drinking purposes. The PP should ensure that water</p>

Sr. No	EC Conditions
	<p>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.</p> <p>The wastewater generation shall not exceed 9.25 KLD (sewage: 4 KLD, Industrial Effluent 5.25 KLD), Sewage shall be treated in STP & reused for horticultural purposes while Industrial effluent shall be treated in ETP & reused in gardening purposes. The plant shall achieve ZLD.</p> <p>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.</p> <p>The project proponent shall comply with the environment norms for fertilizer Industry as notified by the Ministry of Environment, Forest and Climate Change, <i>vide</i> GSR 1607(E), dated 29.12.2017 under the provisions of the Environment (Protection) Rules, 1986.</p> <p>The species-specific conservation plan of Schedule-I species shall be implemented within time limit and as per the approval of the Chief Wildlife Warden of the State Government.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>

Sr. No	EC Conditions
	<p>(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.</p> <p>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.</p> <p>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.</p>

Standard EC Conditions for (Chemical fertilizers)

1

Sr. No	EC Conditions
1.1	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.
1.2	The Project proponent shall strictly comply with the rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996, and Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016 and other rules notified under various Acts.
1.3	The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.
1.4	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).
1.5	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.
1.6	The company shall earmark sufficient funds towards capital cost and recurring cost per annum to

Sr. No	EC Conditions
	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.
1.7	A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.
1.8	The project proponent shall also upload/submit six monthly reports on Parivesh Portal on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data to the respective Integrated Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.
1.9	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.
1.10	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry and at https://parivesh.nic.in/ . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.
1.11	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.
1.12	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.

Annexure 2

Details of the Project

Sr. No.	Particulars	Details
a.	Details of the Project	Installation of New Nano-Urea Fertilizer Plant at RCF Trombay, Chembur, Suburban Mumbai, Maharashtra-400074 by M/s Rashtriya Chemicals and Fertilizers Limited (Government of India Undertaking)

Sr. No.	Particulars	Details	
b.	Latitude and Longitude of the project site	19.02781275659988,72.87984751502617 19.05288799153847,72.89410751034782	
c.	Land Requirement (in Ha) of the project or activity	Nature of Land involved	Area in Ha
		Non-Forest Land (A)	216.41
		Forest Land (B)	0
		Total Land (A+B)	216.41
d.	Date of Public Consultation	Public consultation for the project was held on 2023-03-02	
e.	Rehabilitation and Resettlement (R&R) involvement	NO	
f.	Project Cost	289764	
g.	EMP Cost	8560.11	
h.	Employment Details	604075	

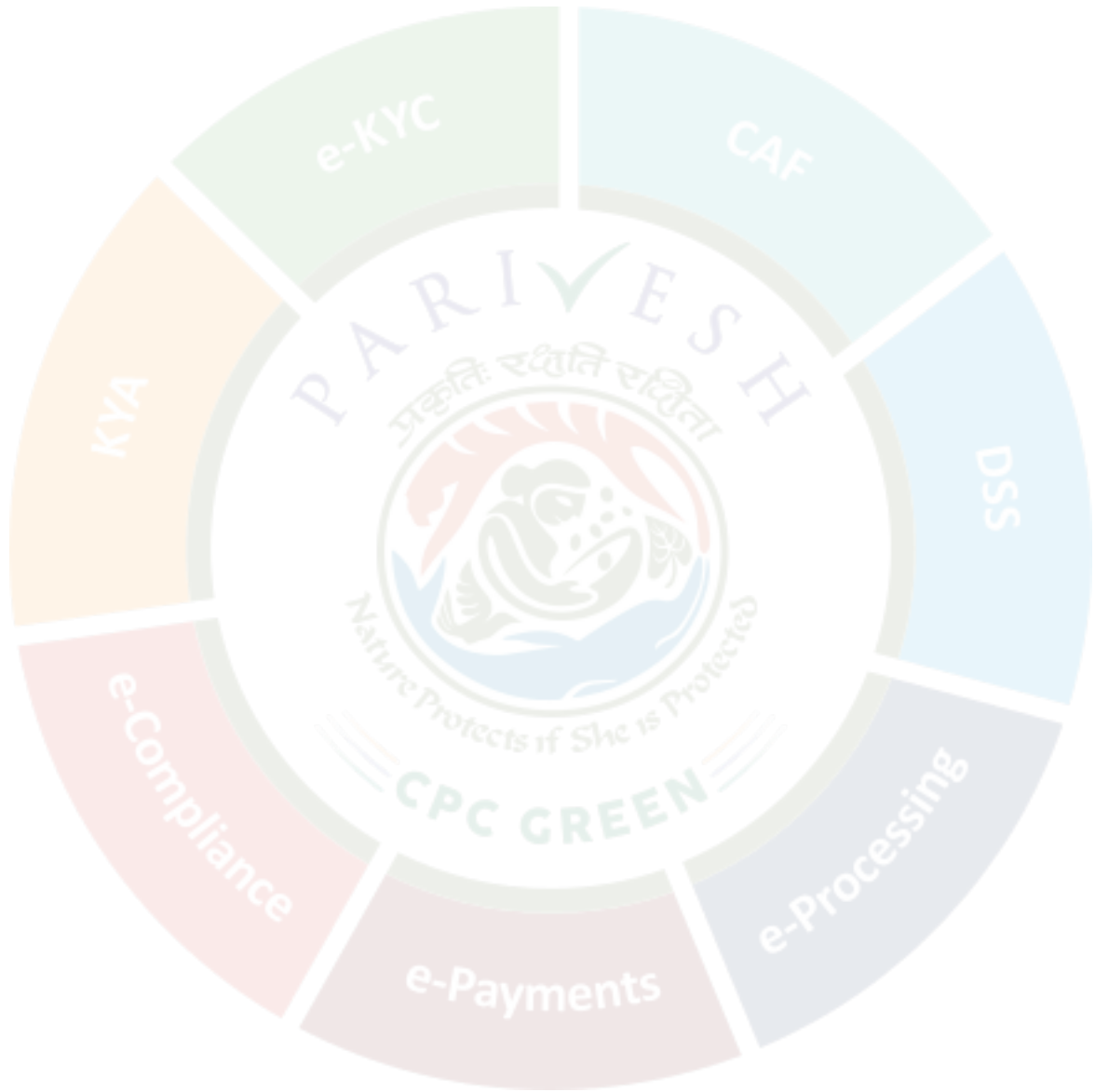
Details of Products & By-products

Name of the product /By-product	Product / By-product	Existing	Proposed	Total	Unit	Mode of Transport / Transmission
Nano Urea	Product	0	27375	27375	Kilolitre per annum (kL/annum)	Combination of two or three modes

Copy To

1. Deputy Director General of Forests (C), Ministry of Environment, Forest and Climate Change, Integrated Regional Office, Ground Floor, East Wing, New Secretariat Building, Civil Lines, Nagpur- 440001.
2. The Secretary, Environment and Climate Change Department, Govt. of Maharashtra, New Administrative Bhavan, 15th Floor, Madame Cama Road, Mantralaya, MUMBAI - 400032, Maharashtra, India.
3. Office of the Principal Chief Conservator of Forests (Head of Forests Force) M.S. Nagpur, 3rd Floor Van Bhavan Ramgiri Road Civil Lines Nagpur 440 001.
4. The Member Secretary, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi-110032.
5. The Member, Central Ground Water Authority, 18/11, Jamnagar House, Mansingh Road, New Delhi – 110011.
6. Chairman, Maharashtra Pollution Control Board, Kalpataru Point, 3rd and 4th floor, Opp. PVR Cinema, Sion Circle, Mumbai-400 022.

- 7. District Collector, Chembur, Suburban Mumbai, Maharashtra.
- 8. Guard File/Monitoring File/PARIVESH



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

Dated: 29.05.2023

**MINUTES OF THE 51st EXPERT APPRAISAL COMMITTEE (INDUSTRY-3 SECTOR)
MEETING HELD ON 16th –17th MAY, 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 Committee about the details of Agenda items to be discussed during this Expert Appraisal Committee (EAC) meeting.

(iii) Confirmation of Minutes of the 50th EAC Meeting of the EAC (Industry-3 Sector).

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 (50.4, 50.12) based on the request of the Project Proponents (PPs).

Agenda No. 50.4

Setting up a new Unit for Manufacturing of Agrochemicals with a Production Capacity 48290 MTA located at Plot No. D/3/21/2/1 Dahej III, GIDC Industrial Estate, Village Sambheti Vagra, District Bharuch, Gujarat by M/s Bharat Rasayan Limited - Consideration of EC

[Proposal No. IA/GJ/IND3/424990/2023; File No. IA-J-11011/25/2023-IA-II(I)]

1. The proposal was recommended by the EAC in its 50th Meeting held on 19th - 21st April, 2023 and the MoM were published on 2.5.2023. Subsequently, the PP vide e-mail dated 4.5.2023 requested the following modification in the MoM:

[Proposal No. IA/MH/IND3/300093/2023; File No. IA-J-11011/124/2022-IA-II(I)]

The PP vide email dated 13.5.2023 informed that they had applied for corrigendum in the EC issued under Parivesh 2.0 under amendment route vide SW No. SW/111167/2022 dated 15.04.2023 vide Proposal No. IA/MH/IND3/426153/2023. However, later PP managed to upload the corrigendum route available in Parivesh portal 1.0 and applied for corrigendum in EC under Parivesh 1.0 under new application SW No. SW/300089/2023 dated 11.05.2023. Hence, the PP requested to return the proposal.

The proposal was accordingly, **returned** in its present form.

Agenda No. 51.7

Installation of New Nano-Urea Fertilizer Plant of total capacity 27,375 KL/annum located at RCF Trombay Unit Industrial Area, Chembur, Suburban Mumbai, Maharashtra by M/s Rashtriya Chemicals and Fertilizers Limited (RCF) - Consideration of EC

[Proposal No. IA/MH/IND3/426519/2023; File No. IA-J-11011/216/2021-IA-II(I)]

1. The proposal is for environmental clearance for the Installation of New Nano-Urea Fertilizer Plant of total capacity 27,375 KL/annum located at RCF Trombay Unit Industrial Area, Chembur, Suburban Mumbai, Maharashtra by M/s Rashtriya Chemicals and Fertilizers Limited (RCF).
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 Centre by the EAC.
3. The standard ToR was issued by the Ministry, vide letter no. IA-J-11011/216/2021-IA-II(I) dated 13.7.2022. The PP applied for Environment Clearance in Common Application Form and submitted the EIA/EMP Report and other documents. The PP in the CAF reported that it is Expansion case. The proposal is now placed in 51st EAC Meeting held on 16th- 17th May, 2023, wherein the Project Proponent and an accredited Consultant, M/s EQMS India Pvt. Ltd. [Accreditation number NABET/EIA/1922/RA0197, valid up to: 2.08.2023, made a detailed presentation on the salient features of the project and informed the following:
4. The PP reported that the proposed nano urea plant will be developed in an area of 1.19 Ha. within existing premises and no R& R is involved in the Project. The details of products and capacity: New Nano-Urea Fertilizer Plant (Capacity 27,375 kL/annum).
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 issued under E (P) Act/Air Act/Water Act.
6. The PP reported that the RCF Trombay is operational as per Consent to Operate granted by Maharashtra Pollution Control Board (MPCB) vide Letter No. 'RED/L.S. I (R52) No.: - Format 1.0/CAC /UAN No. 0000114391/CR/2206001329 dated 23/06/2022 valid till 31.07.2026.

Certified Compliance for earlier granted environmental clearance has been granted by Integrated Regional Office, Nagpur vide File No. 1701/RON/2022-NGP/11042 dated 27.01.2023.

7. The PP reported that there are no ecologically sensitive areas located within 10 km of the project. However, there is one recently declared RAMSAR Wetland Site on 13.08.2022 i.e., Thane Creek. There are a few mangroves located in the vicinity of project site. The nearest mangrove present from project is 1.31 km in south direction of project site. The nearest surface water body from the project site is Mahim/Mithi River flowing at 1.52 km, NW from site. and one Schedule- I species exist within the 10 km study area for which conservation plan has been prepared.
8. The **Ambient air quality** monitoring was carried out at nine (9) locations during 1st December 2021 to 28th February 2022. The baseline data indicates that ranges of concentrations as: PM₁₀ (81-176 µg/m³), PM_{2.5} (35-77 µg/m³), SO₂ (10- 24 µg/m³) and NO_x (20-39 µg/m³), CO (0.3-1.3 mg/m³). The 98%tile observed to be within the limits of standards prescribed by NAAQS, 2009 only for NO_x & SO₂. However, PM₁₀ & PM_{2.5} levels during the season were found to be exceeding than the permissible limits of 100 µg/m³ & 60 µg/m³ respectively. The results have also been validated by live ambient air data located at Mumbai Airport collected by Central Pollution Control Board (CPCB). Since the manufacturing process of nano-fertilizer plants is a closed loop reactor vessel setup with regulated control, the nano-fertilizer plant will not contribute to process gas emissions. No stack has been proposed in expansion. Therefore, AAQ Modelling studies were not done. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). **Noise-** Ambient noise quality monitoring was done at eleven (11) locations during study period. Noise level values ranged from 50.9 to 69.4 dB(A) during day and 41.6 to 62.3 dB(A) during night-time. The noise levels observed in the project site and study are within prescribed limits except at N-8 i.e., Dadar located 3.81 km, in WSW direction of the project due community noise and vehicular movement at residential area. As per the results, it has been observed that noise levels are higher at residential areas than industrial areas. Vehicular traffic in the area also contribute to the increased noise levels in the area.
9. **Groundwater quality** monitoring was done at eight (8) locations during the study period. pH levels ranged between 6.35 to 7.24. Total hardness levels were recorded in the range between 28 to 478 mg/l. Total dissolved solids were recorded in the range of 45 to 1034 mg/l. Chloride levels were recorded between 12 to 226 mg/l. Sulphate levels were observed in the range of 2 to 78 mg/l. Bacteriological studies reveal that no coliform bacterial are present in the samples. The heavy metal contents were observed to be below detectable limits. Parameters for toxic substances were recorded within the permissible 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. **Surface water quality** monitoring was done at seven (7) locations during study period. pH levels ranged between 6.25-7.35. Total hardness ranged from 212 to 4846 mg/l. The Total Dissolved Solids (TDS) concentration recorded ranged between 660 to 65268 mg/l. Chlorides levels ranged between 195 to 35490 mg/l. Sulphate levels were ranged between 10 to 558 mg/l. Total coliform levels were found the range of 4.9×10^3 to 4.8×10^7 MPN/100 ml. Comparing the values as per classification for designated best use water quality criteria by

CPCB, 5 surface water locations (SW-1 to SW-5) were classified under “Below E Category as the parameters were found to be exceeding the permissible limits as per CPCB while SW-6 & SW-7 were classified under “Class-D i.e., suitable for propagation of wildlife and fisheries.” **Soil quality monitoring** was done at eight (8) locations during the study period. As per the grain size distribution the percentage of sand in all sampled soil varied from 30.4% to 63.7%, silt varied from 16.8 to 51.3% and clay from 15.5 to 22.5% during winter season. The soil pH ranges were observed from 6.38 to 7.62. Available nitrogen content in the surface soils ranges between 86 kg/ha to 208 kg/ha. Available phosphorus content ranges between 3.11 kg/ha to 11.7 kg/ha. Available potassium content in these soils’ ranges between 154 to 356 kg/ha. Based on Nutrient Index Value for N, P & K, the soils of study area fall into “Low to Medium” Fertility Status.

10. The PP reported that the existing water requirement of the Trombay Unit is 34165 KLD being sourced from BMC Supply & In-house STP (Capacity-2 x 22.75 MLD). For the proposed Nano Urea Fertilizer plant, approx. 90 KLD of water will be required. Out of 90 KLD, 5 KLD freshwater will be provided by BMC for drinking purposes while 85 KLD of water for industrial uses will be sourced from in-house STP. The existing permitted discharge of Effluent from the RCF Trombay unit is 15,788.80 KLD (Domestic Effluent: 2,700 KLD; Industrial Effluent: 13,088.80 KLD). Industrial effluent is being treated in ETP and treated effluent water is being reused for gardening and washing purposes to maximum extent & rest is being discharged to nearby creek (Mahul Creek). Domestic sewage sourced from BMC is treated in STP’s (Capacity 2 x 22.75 MLD of sewage) and the treated water generated in this STPs is used as process water in the RCF Trombay Unit. Wastewater generation from proposed Nano-Urea fertilizer plant will be 9.25 KLD (Domestic Sewage-4 KLD; Industrial Effluent-5.25 KLD). After setting-up Nano Urea Plant, the permitted discharge of effluent from the RCF Trombay unit will be 15,798.05 KLD (Domestic Effluent: 2,704 KLD; Industrial Effluent: 13,094.05 KLD). Existing practices will be followed for the proposed Nano Urea Fertilizer Plant also. Existing ETP has the capacity to treat the wastewater generated in proposed Nano Urea Fertilizer Plant.
11. The PP reported the contract demand of the RCF Trombay Unit is 42000 kVA, being met through power generated from in-house Gas Turbine Generators. Power supply from M/s TATA Power is also available as an alternate source of power sourced. For emergency backup, DG sets of capacities 1x250 kVA, 1x625 kVA, 2x750 kVA, 1x690 kVA, 1x600 kVA, 1x320 kVA & 1x312 kVA have been installed at the RCF Trombay Unit. For the proposed project, 1.3 MW (1300 kVA) of power will be required. The power requirement for Nano Urea Project shall be fulfilled by these two sources.
12. **Details of Process Emissions Generation and its Management:** The manufacturing process of Nano Urea fertilizer plant is a closed loop mixing reactor vessel setup with regulated control. Steam produced in other existing plants of Trombay unit is to be used for operation of plant. Hence, the Nano Urea fertilizers plant will not contribute to process gas emissions. No additional Stack is proposed for the proposed Nano Urea Plant
13. **Details of Solid/ Hazardous Waste Generation and its Management:** There will not be any hazardous solid waste generation from the proposed Nano Urea Plant during its operation for Trombay Unit. Authorization under Hazardous Waste Management Rules has been obtained

from MPCB vide Letter No. 'RED/L.S. I (R52) No.: - Format 1.0/CAC /UAN No. 0000114391/CR/2206001329 dated 23/06/2022 valid till 31.07.2026. RCF strictly complies with the rules and regulations with regards to handling and disposal of hazardous waste in accordance with Hazardous & Other Waste (Management and Transboundary Movement) Amendment Rules, 2022. Total solid waste generated from the proposed Nano Urea fertilizer plant will be carefully segregated into biodegradable and non-biodegradable waste. Biodegradable waste will be disposed of to BMC approved vendors and Recyclable Waste will be sent to respective authorized vendors/recyclers.

14. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 129 Lakhs (capital) and the Recurring cost (operation and maintenance) will be about 54.12 Lakhs per annum. Industry proposes to allocate ₹ 1170 Lakh towards CER.
15. The PP reported that the Public Hearing for the project was successfully conducted on 2nd March 2023, 11:00 AM at Gangadhar Deshmukh Hall, RCF Colony, Chembur, Mumbai 400074 under the chairmanship of Additional District Magistrate, Mumbai Suburban District. The main issues raised during the public hearing were Employment, CSR activities, Pollution, etc. for which appropriate responses were addressed in the action plan.

PUBLIC HEARING PROCEEDINGS WITH ACTION PLAN

S. No.	Objections/ Suggestions/ Questions raised by Participant	Comments made by Project Proponent	Action Plan
1.	What is the process of making Nano Urea? What are the raw materials used to make Nano Urea? Briefly explain the benefits of this product (Nano Urea) to farmers as well as to the country.	The Project Proponent stated that, Nanoparticles and Nanoparticle based production processes are also known as "kitchen chemistry", i.e., processes that are carried out using simple home cooking methods. Technical grade Urea is the main raw material for making Nano Urea. Along with that, some natural carbohydrates like starch & chitosan are also used. The process involves very little use of harsh or synthetic raw materials. The process of making Nano Urea does not require high pressure or high temperature. It is a simple blending process in which Nano sized particles are formed on carbohydrates to form Nano Urea. It is a slow-release type of fertilizer.	The manufacturing process of nano urea fertilizer a closed loop mixing reactor vessel setup with regulated control. Overall benefits of proposed nano-urea fertilizer project. <ol style="list-style-type: none"> 1. Reduction in subsidy burden of GOI. 2. Maintenance of Stability in indigenous/domestic market. 3. Reduction in import of urea fertilizers. 4. Increase in yield

2.	<p>Many people have lost their jobs during the covid period. So, first, I congratulate the management that this project will provide employment to local people. My question is how many environmental monitoring stations are there in RCF and how much cost is incurred on the maintenance and repair of these environmental monitoring stations?</p>	<p>The Project Proponent stated that RCF has four environmental monitoring stations in four strategic locations wherein SO_x, NO_x, Ammonia and Particulate Matter are continuously monitored. These monitoring stations have been set up as per the direction of IIT, Mumbai and National Environmental Engineering Research Institute, Nagpur (NEERI). The readings of two monitoring stations located inside and outside the factory are linked to the Maharashtra Pollution Control Board portal. Also, RCF has installed a display board outside factory gate no. 1 on which the monitoring readings of all four stations are continuously displayed. The cost of maintenance and repair of the Environment Monitoring Centre is around Rs.25.00 lakhs per annum.</p>	<p>There are 4 no. of ambient air quality monitoring stations based on Enviro 2000 software installed within the premises of Trombay Unit. Additionally, there is an in-house laboratory for analysis of final treated water from ETP & STP. Additionally, outlet from ETP & STP, Supply water, GW are being examined by the lab & third party as per norms. 8 locations within the plant are being analysed once in a month by NABL accredited laboratory. Similarly, for noise, work zone and near boundary wall locations are assessed once in 3 months. For proposed nano-fertilizer plant, approx. Rs. 58 Lakhs (Capital) has been proposed for the same.</p>
3.	<p>We have no objection to the Nano Urea project. A project like Nano Urea will surely benefit the local community by creating employment. As mentioned, Nano Urea is in liquid form, so will it have any side effect? By bringing a project like Nano Urea, it will create employment opportunities, so we agree on this project.</p>	<p>The Project Proponent informed that the toxicity test (toxicological study) of Nano Urea has been done as per the international guidelines of Organization for Economic Co-operation and Development (OECD). It has been studied on every human organ like skin, eyes, respiratory tract and lungs (by using cell lines). Also, the impact of Nano Urea on the micro-organisms, macro-organisms and aquatic organisms present in the soil have also been studied. All these studies show that Nano Urea is very safe. Moreover, it did not show any adverse effect on agricultural</p>	<p>Nano-Urea has been tested by OECD & will not have any side-effect on human, soil & animals. Construction Phase: Approx. 150 no. of temporary employment will be generated during installation phase via contractor/supplier. Operation Phase: The existing manpower (permanent) of the RCF Trombay unit is 1455 as on 01.10.2022. For proposed Nano-Urea fertilizer plant, existing manpower of RCF Trombay Unit will be</p>

		produce either. About 11,000 field trials of Nano Urea were conducted and subsequently it was included in the Fertilizer Control Order (FCO) by the Government of India.	utilized with proper deployment planning.
4.	Is the information you have given available on any website?	The Project Proponent stated that, RCF's Nano Urea plant is based on IFFCO's technology, and its information is available on the website https://nanourea.in . Also, a comprehensive research paper on Nano Urea has been published in Fertilizer Association of India (FAI) seminar last year which we can make available to you. We will also make this relevant information available on the website of RCF.	The details of Nano Urea is based on IFFCO's technology & is provided on https://nanourea.in . After the grant of Environmental Clearance, RCF shall provide information of Nano Urea on company website along with compliance reports and related documents.
5.	For manufacturing of Urea, Ammonia is used. Is there a possibility of Ammonia leakage? Please give detailed information about the measures taken for the same.	The Project Proponent stated that, as Ammonia is not used in the process of making Nano Urea, there is no possibility of Ammonia leakage from the Nano Urea plant. Urea itself will be converted into Nano form to make liquid Nano Urea. Hence, there is no possibility of Ammonia leakage from Nano Urea plant.	Ammonia is not being used in manufacturing process of Nano Urea. However, in the unit has implemented appropriate Onsite & Offsite Emergency Plan.
6.	In today's Environmental Public Hearing on the Nano Urea Project, RCF has given the information about the project and we - the residents, welcome the project.	---	---
7.	In the field we use 7 to 8 bags of Urea per acre which is about 300 to 400 kg of Urea. If I want to use Nano Urea, how much Nano Urea will I	The Project Proponent stated that, the technology of Nano Urea has been developed by IFFCO. According to a study conducted by IFFCO, one 500 mL bottle of Nano Urea is	Usage of 1 bag of 45 kg will be replaced by using 1 Nano Urea bottle of 500 ml. Nano Urea particles being very fine is sprayed onto leaves. Due to its

	<p>need and what benefits will I get by using Nano Urea? Also, how the wastage of Urea can be reduced by using Nano Urea?</p>	<p>equivalent to 1 bag (45 kg) of conventional neem coated urea. Considering the same, about 7 to 8 number of 500 ml bottles of Nano Urea will be required. The particles of Nano Urea are very fine i.e., 20 to 50 nanometers. The finer size increases the surface area of this Urea and makes it more reactive. Also, Nano Urea is sprayed on the leaves and due to this, its Nutrient Use Efficiency (NUE) is high. Nutrient Use Efficiency (NUE) of conventional urea is only about 30 percent. According to the information published by IFFCO, the Nutrient Use Efficiency of Nano Urea is about 80 percent. Field trials have shown that application of Nano Urea increases yield by an average of 3 to 8 percent. Also, a 500 ml bottle of Nano Urea is easier to store and transport as compared to a 45 kg Urea bag. Looking at the demand for Urea, our country has to import 50 to 80 lakh metric tonnes of Urea. Nano Urea will reduce this shortage. Further, Nano Urea production will not require any subsidy, making it a beneficial project from the Indian government's point of view.</p>	<p>increased surface area, nano urea is more reactive. As per field trials by IFFCO, it has been recorded that yield will get increased by an average 3 to 8%.</p> <p>BENEFITS FROM NANO-UREA FERTILIZER:</p> <ol style="list-style-type: none"> 1. Nano Urea has emerged as one of the alternatives to conventional Urea. 2. Nano Urea releases plant nutrients in a controlled manner contributing to higher nutrient use efficiency. 3. The increased use of Nano Urea may result in economic savings to the farmers, increase the crop productivity and reduce India's dependence on Urea Imports. 4. This shall also help in making India "Atmanirbhar" in the field of fertilizers and reduce subsidy burden on Government of India.
8.	<p>What is the price difference between Neem coated Urea and Nano Urea? Which of</p>	<p>The Project Proponent stated that, the cost of a 500 ml bottle of Nano Urea is same as that of 45 kg bag of Neem Coated Urea i.e., Rs.242/- (excluding tax).</p>	-

	these Urea is wasted more?	The Project Proponent stated that, about 50 percent of conventional Urea is wasted during its application. Whereas by spraying of Nano Urea on the leaves (of crop) and its fine particles are absorbed into the leaves due to this, its Nutrient Use Efficiency (NUE) increases. So Nano Urea is more beneficial compared to conventional Urea.	
9.	Is Nano Urea safe for storage, transportation, and handling by the farmer? Can Nano urea be used for all crops? Will it have to be sprayed (on leaves of crop) or can it be used in the soil? How much liquid Nano Urea should be added in one liter of water?	<p>The Project Proponent stated that, Nano Urea is safe for storage, transportation, and handling by the farmer. Nano Urea should be stored away from direct sunlight and in a cool place. Nano Urea has been tested according to the international guidelines of the Organization for Economic Co-operation and Development (OECD) and is very safe for humans, soil, and animals.</p> <p>The Project Proponent explained that Nano Urea contains Nitrogen - a nutrient that is required by all crops. Hence, Nano Urea can be used for all crops. Nano Urea application is done through spraying. Around 1 to 2 ml of Nano Urea is added to 1 litre of water before application.</p>	Nano Urea will be safe for storage and handling by farmer. It has been tested by OECD & declared safe for human, soil & animals. Urea fertilizer is used as a source of nitrogen and being used for all crops. Therefore, Nano Urea will be used for all crops.
10.	Where will Nano Urea be available?	The Project Proponent stated that, Nano Urea will be sold through their dealer network as per RCF's current practice for sale of fertilizers.	Nano Urea Fertilizer will be developed within 15 months post grant of Environmental Clearance.
11.	Is the company providing the technology for the Nano Urea project foreign or indigenous? How Nano	The Project Proponent stated that, the technology for RCF's Nano Urea project is being provided by IFFCO, which is an Indian company. No support	The technology has been developed by indigenous organization i.e., IFFCO. The nano-urea technology has been invented by

	Urea Project is useful in view of Atmanirbhar Bharat Abhiyaan.	from any foreign company is required for this project. With Nano Urea, Urea wastage will be reduced by 50 to 60%. This could reduce India's dependence on imports of Urea and consequently make us self-reliant – “Atmanirbhar” in meeting the domestic Urea demand of Indian farmers.	IFFCO which is an Indian Fertilizer Organization. Domestic production of nano-urea will lead to decrease in import demand and hence shall support “Atmanirbhar Abhiyaan”.
12.	What is the shelf life of Nano Urea?	The Project Proponent stated that, the shelf life of Nano Urea is 1 year. Research is underway to extend the shelf life of Nano Urea.	-
13.	In the presentation about the Nano Urea Project, there was a mention of 'Zero Effluent Discharge'. Has RCF been successful in achieving 'Zero Effluent Discharge'? What measures have been taken for the treatment of effluent generated in this new project?	The Project Proponent stated that, the manufacturing process of Nano Urea is simple and generates minimum effluent. Therefore, the Nano Urea project will result in negligible increase in effluent, and it will be treated in the existing centralised Effluent Treatment Plant of RCF.	Under proposed nano-urea fertilizer plant, wastewater generation will be 9.25 KLD (Sewage: 4 KLD; Industrial Effluent: 5.25 KLD). Sewage will be treated in STP & reused for horticultural purposes while Industrial effluent will be treated in ETP & reused in gardening purposes. Hence, the plant is ZLD.
14.	I thank the Union Government for setting up this Nano Urea Project in Mumbai, Maharashtra under the Atmanirbhar Bharat initiative. All of us should approve and welcome this project to create employment in Chembur, Mumbai.	---	-
15.	If RCF first manufactures Urea and then produces liquid Nano Urea, will it increase the cost of	The Project Proponent stated that, the Nano Urea project is based on advanced technology so the cost of production is low. Also, as mentioned earlier, the	-

	<p>production? For convenience of farmers RCF should provide Nano Urea at an affordable price.</p>	<p>nutrient utilization efficiency of Nano Urea is about 80 percent and it will benefit the farmers by increasing the production of the farmers by an average of 3 to 8 percent.</p> <p>Shri Dhananjaya Pathak, Wadvali village, Shri Christopher D'Melo, Marvali Church and shri Navin Vidyadhar Acharya, Wadvali village, raised issues other than environment related. In this regard, Hon. Chairman, Public Hearing Committee said that, this committee has very limited powers and objectives. He stated that this is not the right forum to put-up other issues non-related to the subject project. He further stated that RCF officials may take appropriate note of these queries and provide a separate forum for addressing such issues.</p>	
16.	<p>I extend a warm welcome to all those present at this public hearing. Information about Nano Urea product should be made available at RCF website.</p>	-----	--

16. The PP reported that Industry has already developed approx. 34.43 Ha. of green area in the available open land in RCF Trombay Unit i.e. 93.27 Ha. RCF has also developed green belt/cover in its township in about 23.5 Ha. Considering this, the percentage of the green cover developed by Trombay Unit is approx. 62% of Open area (considering both township & industry).
17. The PP proposed to set up an Environment Management Cell (EMC) to engage executive director- dy. general manager (HSE)- Assistant general manager chem (Env)- chief manager (chem) Env- Engineer chem (Env) for the functioning of EMC.
18. The PP reported that from the existing Greenbelt of 117245 trees at current stage, the total Carbon sequestered per year by the existing greenbelt is estimated to be 1769.67 tons per year.

The total Carbon sequestered per year by the proposed additional plantation under existing greenbelt at its initial age will be 1161.44 tons per year

19. The PP submitted the disaster and Onsite and Offsite Emergency Plans in the EIA report.
20. The estimated cost for the proposed nano urea fertilizer project is Rs 150 Crores Existing manpower of the plant is 1455 no. (as on 01.10.2022). For proposed Nano-Urea fertilizer plant, existing manpower of RCF Trombay Unit will be utilized with proper deployment planning.
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 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 green belt development and its budget, conservation plan for schedule- I species and advised the PP to submit the following:

- Revised list of proposed plantations along with detailed budget of greenbelt development.
- Wildlife conservation plan for Schedule-I species.

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

The EAC deliberated on the Onsite and Offsite Emergency plans and various mitigation measures to be proposed during the 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.

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 atleast, 57.93Ha (34.43 Ha in Trombay unit & 23.5 Ha in RCF Trombay Township) by planting 33306 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 executive director- dy. general manager (HSE)- Assistant general manager chem (Env)- chief manager (chem) Env- Engineer chem (Env). 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 ₹ 129 Lakh (Capital cost) and ₹ 54.12 Lakhs /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) The total water requirement for the proposed project shall be 90 KLD Out of 90 KLD. 5 KLD freshwater shall be provided by BMC for drinking purposes. 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.
- (v) The wastewater generation shall not exceed 9.25 KLD (sewage: 4 KLD, Industrial Effluent 5.25 KLD), Sewage shall be treated in STP & reused for horticultural purposes while Industrial effluent shall be treated in ETP & reused in gardening purposes. The plant shall achieve ZLD.
- (vi) 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.
- (vii) 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.
- (viii) The species-specific conservation plan of Schedule-I species shall be implemented within time limit and as per the approval of the Chief Wildlife Warden of the State Government.
- (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 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.
- (xiii) 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.
- (xiv) 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.
- (xv) 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.
- (xvi) 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.
- (xvii) 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.
- (xviii) 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. 51.8

Proposed expansion of Synthetic Organic Chemical Manufacturing Unit from 13,266 TPA to 11,066 TPA along with R&D facility, located at Plot No. N-14/2, MIDC Tarapur, Taluka & District Palghar, Maharashtra by M/s VE Caps LLP – Amendment in Terms of Reference (ToR)

[Proposal No. IA/MH/IND3/426409/2023; File No. IA-J-11011/145/2022-IA-II(I)]

Annexure-III

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.	Shri Santosh Gondhalkar 'Shree' Apartment, Flat 401, Plot No. 22, Tukaram Society, Santnagar, Pune- 411009 E-mail: santoshgo@gmail.com	Member
5.	Dr. Suresh Panwar House No.4, Gayateri Green Society, NH 58 Bypass,Kankerkhara, Meerut, Uttar Pradesh Email- spcpri@gmail.com	Member
6.	Shri Tukaram M Karne "SHREYAS ORNATE" F-1, 95-Tulasibagwale Colony, Sahakarnagar-2, PUNE: 411 009, Maharashtra E-mail: tmkarne@gmail.com	Member
7.	Shri Dinabandhu Gouda Additional Director, DH IPC-I, Room No. 309A, Third Floor, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi – 110032 E-mail: dinabandhu.cpcb@nic.in	Member

8.	Dr. M. Ramesh Scientist 'E' Ministry of Environment, Forest and Climate Change Indira Paryavaran Bhawan, Room No. V-203, Vayu Wing, Jor Bagh Road, New Delhi-110003 Tel. 011-20819338 E-mail: ramesh.motipalli@nic.in	Member Secretary
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