



सत्यमेव जयते

File No: IA-J-11011/502/2022-IA-II(I)
Government of India
Ministry of Environment, Forest and Climate Change
IA Division



Date 27/09/2023



To,

Shri Manoj Namjoshi
M/s SYNERGIA LIFE SCIENCES PRIVATE LIMITED
6/312, Jogani Industrial Complex, V N Purav Marg, Chunabhatti (E), Mumbai-400022, Maharashtra
Email: MMNA@novozymes.com

Subject: Proposed Probiotic Manufacturing Unit with Production Capacity of 190 TPA located at Block No. 131, 132, 133, 145 (2), 147, 117 Tundav, Tundav Rania Road, Near Anjesar Village, Taluka Savli, Dist. Vadodara, Gujarat by M/s Synergia Life Sciences Pvt. Ltd. - Environmental Clearance

Sir/Madam,

This is in reference to your application submitted to MoEF&CC vide proposal number IA/GJ/IND3/437846/2023 dated 26.07.2023 for grant of prior Environmental Clearance (EC) to the proposed project under the provision of the EIA Notification 2006 and as amended thereof. The proposal is for the environmental clearance for the Proposed Probiotic Manufacturing Unit with Production Capacity of 190 TPA located at Block No. 131, 132, 133, 145 (2), 147, 117 Tundav, Tundav Rania Road, Near Anjesar Village, Taluka Savli, Dist Vadodara, Gujarat by M/s Synergia Life Sciences Pvt. Ltd.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC23A0202GJ5781868N
(ii) File No.	IA-J-11011/502/2022-IA-II(I)
(iii) Clearance Type	Fresh EC
(iv) Category	A
(v) Project/Activity Included Schedule No.	5(f) Synthetic organic chemicals industry
(vi) Sector	Industrial Projects - 3
(vii) Name of Project	Proposed Probiotic Manufacturing Unit
(viii) Name of Company/Organization	SYNERGIA LIFE SCIENCES PRIVATE LIMITED
(ix) Location of Project (District, State)	VADODARA, GUJARAT
(x) Issuing Authority	MoEF&CC

(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) (Industry-III) under the provision of EIA notification 2006 and its subsequent amendments.
2. The above-mentioned proposal has been considered by Expert Appraisal Committee (Industry-III) in the 61st EAC meeting held on 11th August, 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 https://parivesh.nic.in//utildoc/8754667_1693145012017.pdf.
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 (Industry-III) are annexed to this EC as Annexure (1).
4. The Expert Appraisal Committee (Industry-III) in the 61st EAC meeting held on 11th August, 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 Synergia Life Sciences Pvt. Ltd.** 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 upto Ten years from the date of issuance of this EC. Validity of EC becomes perpetual subject to the start of production operations by the project or activity on or before the Ten years from the date of issuance of this 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 perational 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

Copy To

1. The Principal Secretary, Forests & Environment Department, Government of Gujarat, Sachivalaya, 8th Floor, Gandhi Nagar - 382 010 (Gujarat)
2. The Deputy Director General of Forests (C) Ministry of Env., Forest and Climate Change, Integrated Regional Office, Gandhi Nagar, A-Wing – 407 & 409, Aranya Bhawan, Near CH-3 Circle, Sector-10A, Gandhi Nagar - 382010
3. The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi -32
4. The Member Secretary, Gujarat Pollution Control Board, Paryavaran Bhawan, Sector 10 A, Gandhi Nagar-382 043 (Gujarat)
5. The Member Secretary, Central Ground Water Authority, Jamnagar House, 18/11, Man Singh Road Area, New Delhi, Delhi 110001
6. The District Collector, District **Vadodara**, Gujarat.
7. Guard File/Monitoring File/PARIVESH

Annexure 1

Specific EC Conditions for (Synthetic organic chemicals industry)

1. Specific Conditions

S. No	EC Conditions
1.1	<p>(i) The PP shall maintain Greenbelt over an area of 33% by planting 2068 number of trees within a period of four months from the 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>(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 Environment Management and Monitoring functions. PP shall engage Director- General manager- Environment manager- Lab incharge- Maintenance Head- Admin Head- Operator Head. 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</p>

S. No	EC Conditions
	<p>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>(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 4.19 crore (Capital cost) and 37 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.</p> <p>(iv) The Total water requirement shall not exceed 95 m³/day, out of which fresh water requirement of 45 m³/day shall be met from CGWB 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.</p> <p>(v) Effluent of 47 KLD shall be treated through Physicochemical treatment plant followed by one stage extended aeration system, filtration, ultrafiltration, 2 stage reverse osmosis plant and reject management using multiple effect evaporator and agitated thin film dryer to comply with norms of zero liquid discharge. The plant shall be based on Zero Liquid discharge system. 10 KLD of domestic wastewater shall be generated and it shall be treated in STP capacity of 15 KLD. 9 KLD Treated sewage shall be reused.</p> <p>(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.</p> <p>(vii) The project proponent shall comply with the environment norms for synthetic organic chemical as notified by the Ministry of Environment, Forest and Climate Change, <i>vide</i> GSR 608 (E), dated 21. 7.2010 under the provisions of the Environment (Protection) Rules, 1986.</p> <p>(viii) 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>(ix) 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>(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.</p> <p>(xi) 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>

S. No	EC Conditions
	<p>(xii) 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>(xiii) 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>(xiv) 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>(xv) 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.</p> <p>(xvi) The PP shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.</p> <p>(xvii) 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 (Synthetic organic chemicals industry)

1

S. 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.

S. No	EC Conditions
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 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.

Details of the Project

S. No.	Particulars	Details	
a.	Details of the Project	Proposed Probiotic Manufacturing Unit	
b.	Latitude and Longitude of the project site	22.48239935345558,73.17930569437581	
c.	Land Requirement (in Ha) of the project or activity	Nature of Land involved	Area in Ha
		Non-Forest Land (A)	2.23
		Forest Land (B)	0
		Total Land (A+B)	2.23
d.	Date of Public Consultation	Public consultation for the project was held on	
e.	Rehabilitation and Resettlement (R&R) involvement	NO	
f.	Project Cost	9000	
g.	EMP Cost	419	
h.	Employment Details	150	

Details of Products & By-products

Name of the product /By-product	Product / By-product	Quantity	Unit	Mode of Transport / Transmission	Remarks (eg. CAS number)
Natural NM ferment which will be diluted as per customers demand	By-Product	150	Tons per Annum (TPA)	Road	
Food grade Probiotics of 10 ¹⁵ CFU/ gm. which will be diluted as per customers demand	Product	40	Tons per Annum (TPA)	Road	

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

Dated: 27.08.2023

**MINUTES OF THE 61st EXPERT APPRAISAL COMMITTEE (INDUSTRY-3 SECTOR)
MEETING HELD ON 11th August, 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 60th 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. Accordingly, the MoM were confirmed.

Agenda No. 61.1

Proposed Nano Urea Manufacturing Unit with Production Capacity of 27,375 KL/annum located at Plot nos. 5-14 GAE, Malanpur Industrial Area, Ghirongi, Bhind, Madhya Pradesh by M/s Nano Fertilizers Private Limited - Consideration of Environmental Clearance

[Proposal No. IA/MP/IND3/437826/2023; File No. IA-J-11011/232/2023-IA-II(I)]

1. The proposal is for environmental clearance for the Proposed Nano Urea Manufacturing Unit with Production Capacity of 27,375 KL/annum located at Plot nos. 5-14 GAE, Malanpur Industrial Area, Ghirongi, Bhind, Madhya Pradesh by M/s Nano Fertilizers Private 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).

- (xv) 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.
- (xvi) The PP shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.

Agenda No. 61.2.

Proposed Probiotic Manufacturing Unit with Production Capacity of 190 TPA located at Block No. 131, 132, 133, 145 (2), 147, 117 Tundav, Tundav Rania Road, Near Anjesar Village, Taluka Savli, Dist. Vadodara, Gujarat by M/s Synergia Life Sciences Pvt. Ltd. - Consideration of EC

[Proposal No. IA/GJ/IND3/437846/2023, File No. IA-J-11011/502/2022-IA-II(I)]

1. The proposal is for the environmental clearance for the Proposed Probiotic Manufacturing Unit with Production Capacity of 190 TPA located at Block No. 131, 132, 133, 145 (2), 147, 117 Tundav, Tundav Rania Road, Near Anjesar Village, Taluka Savli, Dist Vadodara, Gujarat by M/s Synergia Life Sciences 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).
3. The Standard ToR was issued by the Ministry, vide letter no. 11011/502/2022-IA-II(A); dated 26.11.2022. The PP applied for Environment Clearance in the Common Application Form and submitted EIA/EMP Report and other documents. The PP in the Form reported that it is a **Fresh EC case**. The proposal is placed in this 61st EAC meeting on 11th August, 2023, wherein the PP along with accredited Consultant, M/s. Perfact Enviro Solutions Pvt. Ltd., made a detailed presentation on the salient features of the project and informed that: (NABET Accreditation Number: NABET/EIA/2225/RA 0284 valid till 29.11.2025] 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 22405.13 m², and for the proposed project land use & land cover of the site will not be changed and no R& R is involved in the Project. The details of products to be manufactured are as follows:

S. No.	Product	Unit	Production Capacity	CAS Number	End use
1	Food grade Probiotics of 10 ¹⁵ CFU/ gm. which will be diluted as per customer's demand	TPA	40	68038-70-0	Food grade product
2	Natural NM Ferment which will be diluted as per customer's demand	TPA	150	-	Crop Enhancer
Total		TPA	190		

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 earlier CTE (obtained for non-EC products vide CTE No. 99083 dated 18.02.2019 valid upto 28.11.2025) was taken for formulation products without fermentation and partial construction was done, however due to market viability, the project never got implemented and was abandoned since 2020, with increase in new market demand in nutraceuticals sector, the PP has decided to go for complete process starting from fermentation process upto finished formulation product. The CTE has been obtained vide CTE No. 62131 dated 27.03.2023 from GPCB.
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. Nearest pond is "pond near the project" at a distance of 0.05 km in SSE direction and the nearest river, the Meni river is flowing at a distance of 0.90 km in NW direction. No Schedule-I species were observed in the 10 km radius from the proposed project.
8. The PP reported that **Ambient Air Quality Monitoring** was carried out at 8 locations during Dec 21 to Feb 2022 to and the baseline data indicates the ranges of concentrations as: PM₁₀ (52.27-102.42 µg/m³), PM_{2.5} (24.68- 50.48 µg/m³), SO₂ (4.93-10.78µg/m³) and NO₂ (11.65-28.16 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.080 µg/m³ ,0.300 µg/m³ and 0.800 µg/m³ with respect to PM₁₀, SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS) except for PM₁₀.

9. **Noise Quality Monitoring** was carried out at 10 locations and the results showed that core zone Leq values ranged from 53.9 dB(A) to 54.2 dB(A) for the day time and 46.1 dB(A) to 46.3 dB(A) for the Night time. Whereas, Buffer Zone: 55.4 dB(A) to 57.7 dB(A) for the day time and 46.2 dB(A) to 47.8 dB(A) for the Night time. It may be concluded that ambient noise level during day time at the proposed project site varies from 53.9 dB (A) to 54.2 dB(A) which is within the day time standard limit of Industrial area ~ 75 dB (A). During night the noise level at the project site varies from 46.1 dB(A) to 46.3 dB(A) which is within the night time standard limit of Industrial area 70.0 dB (A). In residential and commercial areas in the buffer zone noise level is slightly higher than the limit due to residential activity and vehicular activity.
10. **Ground water Quality Monitoring** was carried out at 8 locations; Core Zone data shows that all the parameters (Color, Odour, Turbidity, pH Value, Temperature, Conductivity, TDS, Chloride, Fluoride, Total Hardness, Ca, Mg, SO₄, Na, K, TSS, Alkalinity, Nitrate Nitrogen are within the drinking water standards and quality in buffer zone shows range of primary characteristics as pH: 7.04-7.77, Total Hardness: 148-1500 mg/l, Chlorides: 129-1419.56 mg/l, TDS: 397-4650 mg/l. **Surface Water Quality Monitoring** was carried out at 8 locations in Buffer Zone: pH: 7.26-7.83 ; DO: 4.8-5.4 mg/l and BOD: 2.4-5.4 mg/l, COD: 16-48 mg/l. The Surface water quality of the surface water sampling locations Pond near Project Site, Parevi River, Tundav Pond, Galiatha Nadi and Pond Near Moksi Village are meeting the criteria defined by class “D” as per IS 2296/ CPCB water quality criteria for designated best use. Whereas, the Surface water quality of the surface water sampling locations, Pond near Project Site and Meni River are meeting the criteria defined by class “B” as per IS 2296/ CPCB water quality criteria for designated best use. Whereas, the Surface water quality of the surface water sampling locations, Pond near Project Site, Meni River, Parevi River, Tundav Pond, Lamda Talav, Galiatha Nadi, Mahi River and Pond Near Moksi Village are meeting the criteria defined by class “E” as per IS 2296/ CPCB water quality criteria for designated best use.
11. **Soil Quality Monitoring** was carried out at 8 locations and the analysis showed that Core Zone samples had Texture- [Sand% (1.7), Silt % (69.1), Clay % (29.1)], Organic Matter- 0.55 %, Available Nitrogen (mg/kg)- 79.8, Available Potassium (mg/kg)- 15.3, Available Phosphorus (mg/kg)- 10.6. Whereas, the Buffer Zone: Texture- [Sand% (1.4-29), Silt % (4.6-76.6), Clay % (21.7-82.8)], Organic Matter-0.27-1.21 %, Available Nitrogen (mg/kg)- 54.6-119, Available Potassium (mg/kg)-11.8-68.9, Available Phosphorus (mg/kg)- 8.4-32.2. It is concluded that soil is average fertile in core Zone and buffer zone.
12. The PP reported that the total water requirement is 95 m³/day, out of which fresh water requirement of 45 m³/day shall be met from CGWB (permission has been obtained from CGWA vide letter no. CGWA/NOC/IND/ORIG/2021/10583 dated 10/01/2021 for 46 m³/day extraction and subsequent expansion to 95m³/day vide email 17th July, 2023 w.r.t application 21-4/6684/GJ/IND/2020 dated 24th June, 2023) Effluent of 47 KLD will be treated through Physicochemical treatment plant followed by one stage extended aeration system, filtration, ultrafiltration, 2 stage reverse osmosis plant and reject management using multiple effect evaporator and agitated thin film dryer to comply with norms of zero liquid discharge; hence the the plant will be based on **Zero Liquid Discharge system**. The

domestic wastewater 10 KLD will be generated from the plant and it will be treated in STP of 15 KLD. 9 KLD Treated sewage will be reused

13. The Power requirement of 1200 kW will be met from Gujarat State Electricity Corporation Limited (GSECL). Unit will have one DG set of 1200 kVA capacity with a stack height of 30m, the DG set shall be used only on standby during power failure 1 No. of boiler of 1 TPH & 1 No. of boiler of 2 TPH (One working at a time) will be installed which shall be Light Diesel Oil (LDO) fired with a minimum 30 m stack height.

- 14. Details of Process Emissions Generation and its Management: Process Gas Emission**
No process emission will be there from the manufacturing of the probiotics and NM fermen

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

S. No.	Hazardous Waste	Category (as per HWM Rules, 2016)	Quantity (TPA)	Disposal / Management
1	ETP Sludge	35.3	15	TSDF site, GIDC Nandesari
2	MEE Salt	35.3	5	
3	Empty Barrels/ Containers/ Liner Contaminated with Hz Chemicals/ wastes	33.1	3	
4	Used Spent Oil	5.1	0.2	
5	Off Specification Product	28.4	0.5	
6	Date Expired Product	28.5	0.3	
7	Contaminated cotton rags and other cleaning material	33.2	0.1	
8	Spent Ion Exchange resins	35.2	0.25	
9	Spent Carbon/Filter Medium	36.2	0.25	
10	Other HW Wastes (Boiler Suit, Contaminated PPE's, Spill Absorbent)	-	0.1	

Solid Waste Management

Category	Type of Waste	Quantity (kg/day)	Disposal Method
Biodegradable	Organic Waste	18	Sent to a solid waste disposal site
Non-Biodegradable	Recyclable Waste (Plastic, paper, wood, glass, etc)	27	Shall be given to authorized recycler
Total		45	

Domestic solid waste management

Process Waste	Unit	Quantity	Disposal
Sewage sludge	TPA	12	Used inhouse as manure for landscaping and green

			belt development
Office paper Waste	TPA	6	Sold to authorised recycler
Total		18	

Details of E-Waste and Its Battery Waste

S. No.	Name of Waste	Source of generation (Plant/Group)	Quantity (MTPA)	Disposal Method
1	E-Waste/Battery Waste	Admin	2.0	Sale to Authorized Party/ recycler

Details of Bio-Medical Waste and Its Management

S. No.	Name of Waste	Source of generation (Plant/Group)	Quantity (MTPA)	Disposal Method
1	Bio Medical Waste	OHC	3.0	TSDf site, GIDC Nandesari

16. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 4.19 crore (capital) and the Recurring Cost (operation and maintenance) will be about ₹ 37 lakh per annum. Industry proposes to allocate Rs. 70 lakhs towards Corporate Social Responsibility.
17. Industry has partially developed greenbelt over an area of 33.47 % i.e 7500 m² out of total area of the project with about 428 trees and the remaining 1447 trees shall be planted within 4 months by planting 2068 saplings considering 70% survival ratio to achieve 2500 trees/ ha green belt density.
18. The PP reported that the Public Hearing for the proposed project was successfully conducted on 16.06.2023 under the chairmanship of - Shri Hitesh Joshi (G.A.S.), Prant officer & Sub Divisional Magistrate- Savli and Shri J.M. Mahida, Regional Officer, GPCB Vadodara as representative of Member Secretary, Gujarat Pollution Control Board. The issues raised, response/commitment from the project proponent and action plan with time frame and budget are given in table below.

Issue raised	Response/Commitment from Project Proponent	Action plan with time frame and budget
Discharge on the land/ groundwater contamination	The Proposed unit will be a ZLD unit and there will be no discharge outside of the plant premises.	Provision of 150 lakh capital cost to install a ZLD compliant Wastewater Treatment plant facility at the time of start of operations with 9 lakh as annual recurring cost is made for management of wastewater.
Air emission	There will be no process	14 lakhs are provided for Air

	emission. Emission from the boiler stack will be PM, SO ₂ , NO _x . Adequate stack height of 30 meters will be provided to each boiler. Regular stack monitoring will be done as per consent.	management which shall be spent before the commencement of the production with a budget of 1 lakh INR per year to be spent on annual maintenance.
Health concerns	Probiotics to be manufactured are 100% for human consumption. However, the company will do health checkup camps under its social welfare plan	65 lakhs has been allocated under social welfare plan to be utilised in the next 5 years

19. The PP proposed to set up an Environment Management Cell (EMC) by engaging Director-General manager- Environment manager- Lab incharge- Maintenance Head- Admin Head- Operator Head for the functioning of EMC.
20. The PP reported that the total CO₂ emissions will be 3716.1 MT/annum which is equivalent to 19.6 tonne CO₂ eq / tonne Production. The Company will sequester 3,357.9 MT/annum eq. CO₂ through green belt development, use of renewable energy direct and indirect via credits etc. every operational year. Therefore, at peak production the *Residual Gate to Gate* CO₂ emissions from the proposed plant will be net 358.2 Tonne eq. CO₂/ annum which is about 1.89 tonne CO₂ eq. /tonne production.
21. The PP submitted the Disaster Management Plan and On-site and Off-site Emergency Plans in the EIA report.
22. The estimated project cost is Rs. 210 Crores. Total Employment in operation phase shall be for 150 persons out of which 80 permanent workers and 70 temporary workers.
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 to the effect 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 with 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 issue raised in the Public Hearing and budget allocation for addressing the issues, Greenbelt development plan, Treatment scheme and advised the PP to submit the following:

- Action plan for green belt development @2500 trees per hectare, in consultation with forest department
- Updated water treatment scheme.

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

The EAC deliberated the Onsite and Offsite Emergency plans and also the various mitigation measures proposed during the 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 the 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 maintain Greenbelt over an area of 33% by planting 2068 number of trees within a period of four months from the 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 Environment Management and Monitoring functions. PP shall engage Director- General manager- Environment manager- Lab incharge- Maintenance Head- Admin Head- Operator Head. 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 4.19 crore (Capital cost) and ₹ 37 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.
- (iv) The Total water requirement shall not exceed 95 m³/day, out of which fresh water requirement of 45 m³/day shall be met from CGWB 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) Effluent of 47 KLD shall be treated through Physicochemical treatment plant followed by one stage extended aeration system, filtration, ultrafiltration, 2 stage reverse osmosis plant and reject management using multiple effect evaporator and agitated thin film dryer to comply with norms of zero liquid discharge. The plant shall be based on **Zero Liquid discharge system**. 10 KLD of domestic wastewater shall be generated and it shall be treated in STP capacity of 15 KLD. 9 KLD Treated sewage shall be reused.
- (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 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) 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.
- (ix) 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.
- (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 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.
- (xii) 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.
- (xiii) 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.
- (xiv) 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.
- (xv) 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.

- (xvi) The PP shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.
- (xvii) 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. 61.3

Proposed addition of plot in the existing premises and expansion of Pesticides & Pesticide Intermediates manufacturing unit with production capacity from 12345 MT/Year to 19300 MT/Year located at Plot No: 3204/A, 3204/B, 3205 /A, & proposed 3205/B GIDC Estate, Ankleshwar, Dist.: Bharuch, Gujarat by M/s. Coromandel International Limited - Consideration of Environmental Clearance

[Proposal No. IA/GJ/IND3/433451/2023; File No. J-11011/70/99-IA-II(I)]

1. The proposal is for the environmental clearance for the Proposed addition of plot in the existing premises and expansion of Pesticides & Pesticide Intermediates manufacturing unit with production capacity from 12345 MT/Year to 19300 MT/Year located at Plot No: 3204/A, 3204/B, 3205 /A, & proposed 3205/B GIDC Estate, Ankleshwar, Dist.: Bharuch, Gujarat by M/s. Coromandel International Limited.
2. The project/activity is covered under Category 'A' of **5(b) Pesticides & Pesticide Specific Intermediates (excluding formulations)** of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended). The PP reported that the project is located in a **Critically Polluted Area (CPA)**.
3. The Standard ToR was issued by the Ministry, vide letter no. J-11011/70/99-IA-II(I) dated 12.6.2023. The PP applied for Environment Clearance in the Common Application Form and submitted EIA/EMP Report and other documents. The PP in the Form reported that it is a **Expansion EC case**. The proposal is placed in this 61st EAC meeting on 11th August, 2023, wherein the PP along with accredited Consultant, **M/s. Shree Green Consultants**, made a detailed presentation on the salient features of the project and informed that: (NABET Accreditation Number: NABET/EIA/2124/IA0072 valid till 24th February, 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 54312.68 m² and additional land area of 4175.32 m² adjacent plot. Thus, the total land area now available is 58488 m² land will be used for proposed expansion. The details of products to be manufactured are as follows:

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.	Dr. Suresh Panwar House No.4, Gayateri Green Society, NH 58 Bypass, Kankerkhara, Meerut, Uttar Pradesh Email: spcppri@gmail.com	Member
5.	Shri Tukaram M Karne "SHREYAS ORNATE" F-1, 95-Tulasibagwale Colony, Sahakarnagar-2, PUNE: 411 009, Maharashtra E-mail: tmkarne@gmail.com	Member
6.	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

7.	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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