ENVIRONMENTAL CLEARANCE

PARIVESH

(Pro-Active and Responsive Facilitation by Interactive, and Virtuous Environmental Single-Window Hub)

Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment Authority(SEIAA), Tamil Nadu)

To,

The PlantLeader

DOW CHEMICAL INTERNATIONAL PRIVATE LIMITED

Plot No.L7, SIPCOT Industrial Park -Phase2, Mambakkam Post, Sriperumpudur, Kancheepuram District, Tamil Nadu -602106

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the SEIAA vide proposal number SIA/TN/IND2/21287/2017 dated 07 Dec 2017. The particulars of the environmental clearance granted to the project are as below.

1.	**EC Identification No.**	**EC22B000TN160174**
2.	**File No.**	6439/2017
3.	**Project Type**	Expansion
4.	**Category**	B
5.	**Project/Activity including Schedule No.**	N/A
6.	**Name of Project**	Proposed capacity Expansion in DOW Emulsion Plant
7.	**Name of Company/Organization**	DOW CHEMICAL INTERNATIONAL PRIVATE LIMITED
8.	**Location of Project**	Tamil Nadu
9.	**TOR Date**	09 Oct 2017

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 16/12/2022

(e-signed)
Thiru.Deepak S.Bilgi
Member Secretary
SEIAA - (Tamil Nadu)

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH.Please quote identification number in all future correspondence.

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THIRU.DEEPAK S.BILGI, I.F.S.
MEMBER SECRETARY

सत्यमेव जयते

STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY-TAMILNADU
3rd Floor, Panagal Maaligai,
No.1, Jeenis Road, Saidapet,
Chennai - 600 015.
Phone No. 044-24359973
Fax No. 044-24359975

ENVIRONMENTAL CLEARANCE (EC)

Letter No. SEIAA-TN/F.No.6439/EC/5(f)/101/2022 dated:08.11.2022

To

M/s. Dow Chemical International Pvt Ltd,
Plot No. L-7, SIPCOT Industrial Park (Phase-II),
Mambakkam Post,
Sriperumbudur Village,
Kancheepuram District – 602 106.

Sir,

Sub: SEIAA-TN – Environmental Clearance – Expansion in Production of Water based Latex Polymer from 40000 MTA to 70000 MTA & Latex Polymer cake from 407 MTA to 1462 MTA in two phases in existing Emulsion Plant by M/s. Dow Chemical International Private Limited at Plot No. L-7, SIPCOT Industrial Park (Phase - II), Mambakkam Post, Sriperumbudur Village, Kancheepuram District, Tamil Nadu – Category - "B1" and Schedule 5(f) - "Synthetic organic chemicals industry" under the EIA Notification, 2006 as amended – Issued – Regarding.

Ref: 1. ToR issued by SEIAA-TN vide Lr.No. SEIAA-TN/F.No. 6439/2017/5(f)/SOC/ToR-291/2017 dated:09.10.2017.
2. Online Proposal No. SIA/TN/IND2/21287/2017 dated: 07.12.2017 .
3. EIA report submitted to SEIAA-TN on 08.12.2017.
4. Lr.No.SEIAA-TN/F.No.6439/2017 dated 18.01.2018.
5. PP reply dated 31.01.2018.
6. Minutes of 102nd SEAC meeting held on 01.02.2018.
7. Minutes of 103rd SEAC meeting held on 23.02.2018.

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8. Lr.No.SEIAA-TN/F.No.6439/SEAC/2017 dated 27.02.2018.
9. Proponent reply dated 16.03.2018 & 26.06.2018.
10. Minutes of 325th SEIAA meeting held on 19.07.2018.
11. Minutes of 117th SEAC meeting held on 28.07.2018.
12. Minutes of 333rd SEIAA meeting held on 29.11.2018.
13. Lr.No.SEIAA-TN/F.No.6439/SEAC/2017 dated 12.12.2018 (Lr to MoEF&CC).
14. MoEF&CC reply vide F.No.22-7/2019-IA.III dated 25.03.2019 received dt. 03.04.2019.
15. Minutes of 343rd SEIAA meeting held on 03.05.2019.
16. Minutes of 131st SEAC meeting held on 17.07.2019.
17. Minutes of 355th SEIAA meeting held on 17.09.2019.
18. Minutes of 153rd SEAC meeting held on 04.06.2020.
19. Minutes of 382nd SEIAA meeting held on 23.06.2020.
20. Minutes of 164th SEAC meeting held on 20.07.2020.
21. Minutes of 4th EAC meeting held on 14.01.2021 & 15.01.2021.
22. MoEF&CC Letter vide F.No. 22-7/2019-IA.III dated 03.02.2021.
23. Proponent reply dated 18.02.2021.
24. Minutes of 426th SEIAA meeting held on 24.02.2021.
25. Minutes of 209th SEAC meeting held on 09.04.2021 .
26. Minutes of 229th SEAC meeting held on 27.08.2021.
27. Minutes of 276th SEAC meeting held on 21.05.2022.
28. Minutes of 307th SEAC meeting held on 26.08.2022.
29. Minutes of 552nd SEIAA meeting held on 20.09.2022.
30. Minutes of 322nd SEAC meeting held on 19.10.2022.
31. Minutes of 567th SEIAA meeting held on 07.11.2022 & 08.11.2022.

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This has reference to your application under reference 2nd & 3rd cited, wherein you have submitted proposal for obtaining Environmental Clearance for the Expansion in Production of Water based Latex Polymer from 40000 MTA to 70000 MTA & Latex Polymer cake from 407 MTA to 1462 MTA in two phases in existing Emulsion Plant at Plot No. L-7, SIPCOT Industrial Park (Phase - II), Mambakkam Post, Sriperumbudur Village, Kancheepuram District, Tamil Nadu under Item No. 5(f) – "Synthetic organic chemicals industry" & Category 'B1' of the Schedule to the EIA Notification, 2006.

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<table>
<tr><th>S. No</th><th>Description</th><th>Details</th></tr>
<tr><td>1.</td><td>Name of the Project</td><td>Expansion in Production of Water based Latex Polymer from 40000 MTA to 70000 MTA & Latex Polymer cake from 407 MTA to 1462 MTA in two phases in existing Emulsion Plant by M/s. Dow Chemical International Private Limited at Plot No. L-7, SIPCOT Industrial Park (Phase - II), Mambakkam Post, Sriperumbudur Village, Kancheepuram District, Tamil Nadu</td></tr>
<tr><td>2.</td><td>Location</td><td>Plot No. L-7, SIPCOT Industrial Park (Phase - II), Mambakkam Post, Sriperumbudur Village, Kancheepuram District, Tamil Nadu
<table>
<tr><th>Pt</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>1</td><td>12°55'32.16"N</td><td>79°54'34.60"E</td></tr>
<tr><td>2</td><td>12°55'24.98"N</td><td>79°54'41.18"E</td></tr>
<tr><td>3</td><td>12°55'29.40"N</td><td>79°54'46.50"E</td></tr>
<tr><td>4</td><td>12°55'36.80"N</td><td>79°54'39.69"E</td></tr>
</table></td></tr>
<tr><td>3.</td><td>Type of Project</td><td>Schedule 5(f) - Synthetic organic chemicals industry</td></tr>
<tr><td>4.</td><td>Total Area</td><td>
<table>
<tr><th>Land Use Breakup Details</th><th>Area (Sq.m.)</th></tr>
<tr><td>Process Building Area</td><td>515</td></tr>
<tr><td>Non-Process Building Area</td><td>3293</td></tr>
<tr><td>Storage Area</td><td>3600</td></tr>
<tr><td>Parking Area</td><td>600</td></tr>
<tr><td>Driveway & Pathway Area</td><td>5500</td></tr>
<tr><td>Future Expansion Area</td><td>1000</td></tr>
<tr><td>Green Belt Development Area</td><td>21766</td></tr>
<tr><td>Open Area (Including lawns)</td><td>25426</td></tr>
<tr><td>Total Area</td><td>61700</td></tr>
</table></td></tr>
<tr><td>5.</td><td>Cost of Project (INR)</td><td>Rs. 6 Crores</td></tr>
<tr><td>6.</td><td>Details of Proposed Product</td><td>
<table>
<tr><th rowspan="2">Product</th><th colspan="2">Production Capacity</th></tr>
<tr><th>Existing</th><th>After expansion</th></tr>
<tr><td>Water Based Latex polymer (MT/Year)</td><td>40000</td><td>70000</td></tr>
<tr><td>Latex Polymer Cake (MT/Year)</td><td>407</td><td>1462</td></tr>
</table>
Details of Raw Materials Consumption</td></tr>
</table>

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		Product	**Raw material**	**Quantity – MT/day**	
				Existing	**After Expansion**
		Styrene Acrylic & VAM Acrylic Emulsions	Styrene	12	21.4
			Butyl Acralate	8.4	14.9
			Additives	1.4	2.45
			Water	51	89.25
			VAM	3	5.5
		Pure acrylic emulsion	Methyl methacralate	5.5	9.8
			Butyl Acralate	3.6	6.5
			Additives	0.55	0.9625
			Water	23	40.25
			2 EHA	5	8.75
		Special Acrylics	Ethyl acralate	1.7	3.2
			AN	1	1.8
			Additives	0.05	0.0875
			Water	3	5.25
7.	TOR issued? (If yes then specify the details)	ToR issued by SEIAA-TN vide Lr.No. SEIAA-TN/F.No. 6439/2017/5(f)/SOC/ ToR- 291/2017 dated:09.10.2017			
8.	a) Water requirement	**S. No.**	**Particulars**	**Water requirement (KLD)**	
				Existing	**After expansion**
		1	Process	122	218.2
		2	Cleaning & Vessel Washing	60	105
		3	Cooling	64	112
		4	Domestic	10.0	11.8
		5	Greenbelt	2.2	38.2
		Actual Requirement		**258.5**	**485.3**
		Fresh water requirement		129.3	265.2
		Combined treated effluent I (ETP with RO)		101	173
		Combined treated effluent II (MEE condensate)		24.75	41.52
		Condensate from boiler		3.2	5.6
		Total water requirement		**258.25**	**485.32**
	b) Source of water	SIPCOT			

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9. Sewage / Effluent generation, treatment & Mode of disposal

Sl. No.	Source	Quantity (KLD)
	Effluent	
1	Cooling Water – Blow Down	23
2	Boiler Feed – Blow Down	3.5
3	RO plant I - Reject	41.4
4	Vessel washing	105
5	Equipment Flushing	33
	Sewage	
1	Domestic Waste	9.5
	Total	**215.4**

S.No.	Description of Outlet	Quantity (KLD)	Disposal
1	Effluent generated from vessel washing and equipment flushing along with domestic wastewater is treated in ETP	147.5	ETP
2	Blow down from Boiler Feed & Cooling Water, Reject from RO plant I along with the outlet from ETP will be treated in RO plant II	215.4 (147.5 + 67.9)	Reject from RO plant II will be evaporated using Multistage Evaporator (Zero Liquid Discharge)

ETP components:

1. Equalization Tank
2. Aeration Tank
3. Clarifier
4. Surge Tank
5. Multigrade Filter
6. Ultra Filter System
7. RO Plant – I stage
8. RO Plant – II stage
9. Evaporator Feed Tank
10. Multi Effect Evaporator System

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10.	Quantity of Solid Waste generated per day (in Kgs), Mode of treatment and Disposal of Solid Waste	

Nature of Solid Waste	Quantity (Kg/day)	Mode of Disposal
Municipal Solid waste (Existing)	30	Municipal Disposal
Municipal Solid waste (Proposed)	60	Municipal Disposal

11.	Hazardous waste Management	

Name of Process Waste (Category No.)	Quantity Prod: 40000 MT (Existing)	Quantity Prod: 70000 MT (After Expansion)	Waste Disposal
5.1-Used or spent oil	2 T/Annum	3.5 T/Annum	Recovery and Reuse - Authorized r ecyclers (Presently MM Traders)
20.1-Contaminated aromatic, aliphatic or napthenic solvents may or may not be fit for reuse	40 T/Annum	70 T/Annum	Incineration - TSDF, Gummidipoondi (M/s. TNWML)
33.1-Empty barrels/ containers/liners contaminated with hazardous chemicals / wastes	250 T/Annum	437.5 T/Annum	Recovery and Reuse - Authorized recyclers (Presently MM Traders, Muthu Barrel Trades & Sathyanarayana chetty)
	2 T/Annum	3.5 T/Annum	Incineration - TSDF, Gummidipoondi (M/s. TNWML)
35.3-Chemical sludge from waste water treatment	1 T/Annum	1.75 T/Annum	Common Landfill - TSDF, Gummidpoondi (M/s. TNWML)
	1 T/Annum	1.75 T/Annum	Common Landfill - TSDF, Gummidpoondi (M/s. TNWML)

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<table>
<tr><td>12.</td><td>Power requirement</td><td>900 kVA from TANGEDCO
1 No. of 500 kVA & 1 No. of 320 kVA DG sets</td></tr>
<tr><td>13.</td><td>Air Pollution Control Measures (Stack)</td><td>
<table>
<tr><th>Stack No.</th><th>Source</th><th>Control Measures</th><th>Top Dimension</th><th>Height above GL (m)</th></tr>
<tr><td>1</td><td>Stack attached to Polymer Plant</td><td>Wet Scrubber with a stack</td><td>0.4</td><td>35</td></tr>
<tr><td>2</td><td>Stack attached to Boiler 2 tons/hr capacity</td><td>Stack</td><td>0.3</td><td>45</td></tr>
<tr><td>3</td><td>Stack attached to DG set 320 kVA</td><td>Stack</td><td>0.15</td><td>16</td></tr>
<tr><td>4</td><td>Stack attached to DG set 500 kVA</td><td>Stack</td><td>0.15</td><td>16</td></tr>
</table>
</td></tr>
<tr><td>14.</td><td>Details of man power</td><td>34 Nos. (After expansion)</td></tr>
<tr><td>15.</td><td>Details of Green Belt Area</td><td>21766 Sq.m.</td></tr>
<tr><td>16.</td><td>Details of Parking Area</td><td>600 Sq.m.</td></tr>
<tr><td>17.</td><td>Provision for rain water harvesting</td><td>• Rain water harvesting facility already provided to the existing site.
• Runoff from top area is collected by means of down take pipes and diverted to rain water collection pit (1000 KL), the water collected is tested for its quality and reused.</td></tr>
<tr><td>18.</td><td>EMP Cost (INR)</td><td>Capital Cost: Rs. 437 Lakhs (Existing) & Rs. 108.96648 Lakhs (Proposed)
Recurring Cost: Rs. 39.5 Lakhs</td></tr>
<tr><td>19.</td><td>CER Cost</td><td>Rs. 66,77,942/-</td></tr>
</table>

Affidavit

I Mr. Brijesh Kumar – Senior Operational Leader and Authorized signatory, of **Dow Chemical International Private Limited** having its registered office at Unit No. 801, 8th Floor, Building No. 9, Gigaplex, TTC Industrial Area, MIDC, Airoli, Navi Mumbai – 400 708, India, hereby submit this affidavit to State Environmental Impact Assessment Authority for the "**Capacity expansion in existing emulsion plant of Water based Latex Polymer from 40000 MTA to 70000 MTA & Latex polymer**

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cake from 407 MTA from 1462 MTA. This will be done in two phases as per the submitted application in existing Emulsion plant for our manufacturing site at Plot No L-7, Phase - II, SIPCOT Industrial Park, Mampakkam Post, Kancheepuram District, Tamil Nadu – 602106

We confirm that an application submitted by us seeking Environmental Clearance under the EIA notification, 2006 is under scrutiny in the Authority. We are furnishing the following undertaking to the Authority.

1. A total water requirement of the project is 485.32 KLD (Fresh water 265.2 & recycled water 214.52 KLD). All the fresh water requirement will be sourced from SIPCOT
2. The Effluent will be generated from the production process after full expansion as 147.5 KLD and it will be treated in 150 KLD capacity of proposed Effluent Treatment Plant to achieve ZLD. Effluent Treatment Plant RO permeate (173 KLD) and MEE Condensate 41.52 KLD will be reused for Cooling tower and vessel wash. A Salt from MEE/ATFD disposed to TNPCB Authorized persons.
3. Our company will be responsible for the operation and maintenance of ETP & MEE.
4. The Hazardous waste 518 Kg/day will be stored on roofed concrete platform, in leak proof barrels/Containers in designated areas. All the Hazardous waste will be sent for treatment at TNPCB/CPCB authorized waste treatment companies/recyclers.
5. All the mitigation measures will be followed for the flood management, Evacuation plan, Solid waste disposal and Effluent treatment & Disposal.
6. The storm water drain would not carry any treated (or) untreated sewage and Effluent. Storm water drainage will be provided as open concrete channels, all along the road for ensuring proper collection of storm water and the same will be maintained properly.
7. The total Electrical power requirement for the project is 900 KVA which will be sourced from TANGEDCO. Backup power supply will be sourced through 1 * 500 KVA and 1 * 320KVA with adequate stack height.
8. Green Belt area developed within the project site is 21,766 Sq.m. which is 35% of total plot area. It will be maintained properly.
9. Under this project, Corporate Environmental Responsibility(CER) funding of Rs. **66,77,942** will be allotted. Proposed CER funding will be utilized for improvement of infrastructure facilities of

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school proposed under this project and details of activities performed is listed below:

CER BUDGET

S.No.	Description	Amount in Rupees
1	**Panchayat Union Middle School, Pondhur, Kancheepuram Dist.**	
i	Renovation of restrooms (Girls 3 blocks, Boys 1 blocks, Staff 1 block & Handicapped 1 block)	3,90,590
ii	Underground electric cable connection	31,625
iii	Construction of new compound wall – separation from hospital East side to school	51,800
iv	Existing compound wall height raising up to 2' (extra height)	1,85,750
v	Compound wall full painting	47,852
vi	Laying foyer Blocks – School Assembly Platform	8,31,000
vii	New Building includes library cupboard, Library equipments, books, smart board	29,00,000
viii	Tree plantation	1,00,000
	Sub Total 1	**45,38,617**
2	**Panchayat Union Middle School, Mambakkam Kancheepuram Dist.**	
i	Laying Foyer Blocks	11,50,000
ii	School Building Painting with colourful pictures (3 Blocks)	4,89,325
iii	Tree plantation	50,000
iv	Smart board	1,50,000
v	Library facility	3,00,000
	Sub Total 2	21,39,325
	Total of 1+2	**66,77,942**

We are aware that Dow Chemical International Pvt. Ltd. can be prosecuted under the relevant Act and Rules if we are not ensuring the adherence of the above commitments.

Commitment signed by me on 15th November 2022 as an Authorized Signatory of the project proponent before the SEIAA, Tamil Nadu.

Appraisal by SEAC:-

Expansion in Production of Water based Latex Polymer from 40000 MTA to 70000 MTA & Latex Polymer cake from 407 MTA to 1462 MTA in two phase in existing Emulsion Plant by M/s. Dow Chemical International Private Limited located at Plot No. L-7, Sipcot Industrial Park (Phase II),

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Mambakkam Post, Sriperumbudur Village, Kanchipuram District, Tamil Nadu - For Environmental Clearance.

The proposal seeking Environmental Clearance was already placed before 102nd, 103rd, 117th, 131st, 153rd, 164th, 209th, 229th and 276th SEAC meetings held on 01.02.2018, 23.02.2018, 28.07.2018, 17.07.2019, 04.06.2020, 20.07.2020, 09.04.2021, 27.08.2021 and 21.5.2022 respectively. Subsequent to the SEAC meetings, the minutes of the SEAC meeting was placed before the 325th, 343rd, 382nd Authority meeting held on 19.07.2018, 03.05.2019 & 23.06.2020 respectively. The details of the minutes are given in the website (parivesh.nic.in).

The SEAC noted the following:

1. The project proponent, M/s. Dow Chemical International Private Limited, has applied for Environmental Clearance for the proposed Synthetic organic chemical industry at S.F.Nos. Plot No. L-7, Sipcot Industrial Park (Phase II), Mambakkam Post, Sriperumbudur Village, Kanchipuram District, Tamil Nadu.
2. The project/activity is covered under Category "B1" of Item 5(f) "Synthetic Organic chemical Industry Projects" of the Schedule to the EIA Notification, 2006.
3. Terms of Reference (ToR) was issued for this proposal for expansion vide F.No.6439/2017/(5f)/SOC/TOR-291/2017 dated 09-10-2017

The proposal was placed for appraisal in 307th meeting of SEAC held on 26.08.2021.

Based on the presentation and documents furnished by the project proponent, SEAC noted the EIA report was submitted on 08.12.2017, hence SEAC decided that the project proponent shall submit revised EIA report, with the latest data collected.

On receipt of the revised EIA report this subject has been again placed 276th SEAC meeting held on 21.5.2022. Based on the presentation made and documents furnished by the project proponent, SEAC decided to make on site inspection by the Sub Committee constituted by SEAC. On the receipt of the same further deliberation will be done.

The Sub-Committee of SEAC visited the project site on 25.06.2022(Saturday) to collect the factual information and took photographs of the salient features of the site to get the first-hand information of the site. The Sub-Committee inspection report was placed in this 307th Meeting of SEAC held on 26.08.2021 and the observations of the Sub-committee are as follows,

Observations made by the Sub-Committee:

The Sub-Committee held discussions with the project proponent regarding the proposal seeking Environmental Clearance for Expansion in Production of Water based Latex Polymer from 40000 MTA

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to 70000 MTA & Latex Polymer cake from 407 MTA to 1462 MTA in two phases in existing Emulsion Plant located at Plot No. L-7, SIPCOT Industrial Park (Phase II), Mambakkam Post, Sriperumbudur Village, Kanchipuram District, Tamil Nadu.

- The unit was under operation.

1. **Effluent Treatment Plant:**

The ETP treats at present 79 KLD from process vessel and equipment flushing and 8 KLD from domestic use. Thus, the total flow into the ETP now is 87 KLD. This flow will increase to 147.5 KLD in future (138 + 9.5 KLD). Since the process effluent flow has almost doubled, the ETP capacity also needs to be doubled. Hence, the industry is directed to go for an additional ETP of similar configuration as it is existing now.

2. **Hazardous Waste:**

Regarding hazardous waste, the industry produces pump seal oil, expired raw materials, empty raw material drums, bag liners which are contaminated with chemical powders and ETP sludge. hazardous waste should also be managed as per the existing Hazardous Waste and Other Waste (Management) Rules, 2016.

3. **Air pollution control Measures:**

Air pollution control measures provided by the unit were in operation. The industry should install an additional VOC monitor at the ground floor in the process area and the data generated should be fed to the TNPCB CARE AIR CENTRE.

The project proponent submitted EIA report on 07.12.2017 through online vide SIA/TN/IND2/21287/2017 seeking Environmental Clearance for Expansion in Production of Water based Latex Polymer from 40000 MTA to 70000 MTA & Latex Polymer cake from 407 MTA to 1462 MTA in two phases in existing Emulsion Plant located at Plot No. L-7, SIPCOT Industrial Park (Phase II), Mambakkam Post, Sriperumbudur Village, Kanchipuram District, Tamil Nadu. Used has basic raw materials required in the manufacture of paints.

Earlier, the company was established by Rohm and Haas (India) Pvt. Ltd and obtained Consent to Establish from TNPCB on 5th August 2006 & subsequently obtained consent to operate on 07.09.2007 and later merged with Dow Chemical International Private Limited in the year 2016.

As per the Environment Impact Assessment Notification S.O.60(E), dated 27/01/1994 under SCHEDULE-I for List of Projects Requiring Environmental Clearance From The Central Government in

Integrated paint complex including the manufacture of resins and basic raw materials

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required in the manufacture of paints.

Rohm and Haas India Pvt. Ltd must have applied and obtained Environment Clearance at the time of commissioning of the unit from MoEF&CC.

MoEF&CC has informed vide F.No.22-7/2019-IA.III dated 03.02.2021 based on the project proponent request for the natural polymer. But, sub –the committee felt based on the report from the IIT Madras confirmed synthetic organics and it clearly shows that the unit activity attracts both the EIA Notification 2006 and EIA notification 1994. (Stated in para vii. Above).

The project proponent applied prior to the provisions of Notification S.O 804 (E) dated 14.03.2017, the project proponent may avail O.M issued by MoEF&CC vide F. No. 22-10/2019-1A.111 dated 09.09.2019 through lateral entry.

Recommendations:

The Sub-Committee submits the inspection report to SEAC for the further course of action regarding the proposal seeking Environmental Clearance for Expansion in Production of Water based Latex Polymer from 40000 MTA to 70000 MTA & Latex Polymer cake from 407 MTA to 1462 MTA in two phases in existing Emulsion Plant located at Plot No. L-7, SIPCOT Industrial Park (Phase II), Mambakkam Post, Sriperumbudur Village, Kanchipuram District, Tamil Nadu.

The Committee carefully examined the proposal and the observations made by the Sub-Committee. The Committee noted the following;

- M/s. Dow Chemical International Private Limited, Sriperumbudur, Chennai is engaged in the production of Water based Latex Polymer (Emulsion).
- The unit was established prior to EIA Notification 2006, after obtaining Consent to Establish in August 2006, in the name of M/s Rohm & Haas India Private Limited and later merged with Dow Chemical International Private Limited in the year 2015.
- The proponent has proposed to increase the production capacity of Water Based Latex Polymer & Latex Polymer Cake from 40000MTPA to 70000MTPA and from 407 MTPA to 1462 MTPA respectively.
- The PP applied for ToR on 21.08.2017 under 5(f) of EIA notification 2006.
- The Terms of Reference was issued by SEIAA, TN vide Letter No. SEIAA-TN / F.No.6439 / 2017/(5f) / SOC /TOR - 291 /2017 dated 09.10.2017.
- PP applied for EC on 08.12.2017 along with EIA report.
- The proposal came up for examination in the 102nd meeting of SEAC held on 01.02.2018 and SEAC decided to inspect the plant by a Technical Team constituted by the Committee and the

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Technical Team submitted its report on 19.02.2018.

- The proposal was considered by SEAC in its 103rd meeting held on 23.02.2018 along with the observations made by the Team. PP was asked to revise the EIA report to incorporate various pollution control measures suggested by the Team. PP submitted the revised the EIA report and SEAC decided to recommend grant of EC to SEIAA on the same day.
- The following conditions was one among the additional conditions prescribed by SEAC;

  "From regulatory point of view, the SEAC members noted that as per EIA Notification, S.O. 60 (E), dated: 27.01.1994, the project requires Environmental Clearance. As per the Schedule – I, "integrated paint complex including manufacture of resins and basic raw materials required in the manufacture of paints will require EC". When this was pointed out to the proponent, the proponent was of the opinion that his project does not require EC according to his interpretation of the rule. This recommendation made by the SEAC is subject to the resolution of the point whether the EIA notification, 1994 was applicable in the case of this project in the year 2006 when the proponent planned to start the industry."
- This led to proposal going back and forth between SEIAA and SEAC, as SEIAA needed a clear opinion from SEAC on the point whether the proposal should be considered under 5(f) of 2006 Notification or under 15 of EIA Notification 1994, the implication being that the proposal has be treated as violation case if it came under 15 of EIA Notification 1994.
- SEIAA wrote to MoEF&CC for a clarification and the Ministry placed the subject before the Expert Committee for streamlining environmental clearance procedures. Based on the recommendations, the Ministry in its letter F.No.22-7/2019-IA.III dated 03.02.2021 issued the following clarification;

  "Based on the recommendations of the Committee it is clarified that the existing water based latex polymer manufacturing project does not require prior environmental clearance as per EIA Notification, 1994. However, considering the project under category 5(f) 'Synthetic Organic Chemical Industry' of the schedule of the EIA Notification, 2006, the project proponent may obtain prior EC for expansion/modernisation of the project from the concerned regulatory authority."
- The MoEF&CC Committee in its minutes dated January 14-15, 2021 has observed that *"the Proponant is not involved in Paint manufacture and is making water based polymer emulsions only and therefore do not fall under 'Integrated Paint Manufacturing.'"*

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- As per MOEF&CC OM Dt 21.3.2022 it is clarified that any paint industry which is involved in manufacturing of ingredients such as resins, lacquers, varnishes, etc., **besides** formulation (physical mixing of ingredients) of paints shall require prior EC as per schedule 5(h) of the EIA Notification, 2006 as amended from time to time. It is also clarified that the ingredients are not restricted to resins, lacquers and varnishes but it may also include any ingredient such as polymers/co-polymers etc. including water based polymer, which are used in the manufacturing of paints.
- Considering all the above, SEAC decided to recommend grant of EC to SEIAA under 5(f) of EIA Notification 2006 subject to the following conditions.
  1. Water based Latex Polymer from 40000 MT/ Year to 70000 MT/Year & Latex Polymer cake from 407 MT/Year to 1462 MT/Year
  2. Due to the expansion of the industry, there will be increased air emission. At present the air emission (mainly monomers) is estimated to be 2860 kg/annum. After expansion this will increase to 4960 kg/annum. To manage the increased air emission, the proponent should implement the following additional air pollution control measures.
     a) The scrubber column internal packing must be revamped by going for a combination of structured packing and random packing to improve the caustic scrubber efficiency to 80% from 60%.
     b) Caustic circulation pump capacity must be increased from 17cu.m/hr to 25 cu.m/hr after checking the flooding conditions.
     c) The forced draft caustic blower capacity must be increased from 170 cu.m/hr to 250 cu.m/hr by change of impeller / motor.
  3. The ETP treats at present 79 KLD from process vessel and equipment flushing and 8 KLD from domestic use. Thus, the total flow into the ETP now is 87 KLD. This flow will increase to 147.5 KLD in future (138 + 9.5 KLD). Since the process effluent flow has almost doubled, the ETP capacity also needs to be doubled. Hence, the industry is directed to go for an additional ETP of similar configuration as it is existing now.
  4. Regarding hazardous waste, the industry produces pump seal oil, expired raw materials, empty raw material drums, bag liners which are contaminated with chemical powders and ETP sludge. The total hazardous waste now generated is 296 T/annum which will increase to 525.25 T/annum after expansion. The future hazardous waste should also be managed as per the existing Hazardous Waste and Other Waste (Management) Rules, 2016.

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5. The industry should install an additional VOC monitor at the ground floor in the process area and the data generated should be fed to the TNPCB CARE AIR CENTRE.
6. Only approved species should be planted following proper planting technique in future for green belt development:
   i) Calophyllum inophyllum (Punnai)
   ii) Derris indica (pungan)
   iii) Ficus religiosa (Arassa Maram)
   iv) Ficus bengalensis (Ala Maram)
   v) Mimusops elangi (Magilan Maram)
   vi) Syzygium cumini (Naaval)
   vii) Azadirachta indica (Vempu)
   viii) Thespesia populnea (Poovarasu)
7. Regarding the Occupational Health Services (OHS), the surgeon or medical officer appointed for the purpose shall be trained in OHS by the expertise in the respective fields. Besides, the documents related to periodical medical examination carried out shall be maintained in all aspects.
8. The plant safety committee shall be constituted if not done earlier, incorporating the members representing the management and workmen representing the different working areas to review the existence of the safety standards. Ensuring the safety standards on day to day basis must be carried out.
9. Safety audit shall be carried out for all the working places including the functional components as per norms and at least once in a year whichever is earlier. The same shall be considered as a basis for reviewing the safety standards during the plant safety committee meeting.
10. The Project proponent shall install a Display Board at the entrance of the mining lease area/abutting the public Road, about the project information as shown in the **Appendix –II** of this Minutes.
11. As per the MoEF& CC Office Memorandum F.No. 22-65/2017-IA.III dated: 30.09.2020 and 20.10.2020 the proponent shall adhere EMP furnished.
12. As accepted by the Project proponent the CER cost is Rs. 63.40 lakhs and the amount shall be spent for the committed activities in Panchayath Union Middile School, Pondur as committed, before obtaining CTO from TNPCB.

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The project was appraised in 552nd Authority meeting held on 20.09.2022.

The authority noted that this proposal was placed for appraisal in 307th meeting of SEAC held on 26.8.2022 and the SEAC decided to recommend the proposal for grant of EC subject to certain conditions.

The authority noted that,

The Sub-Committee of SEAC visited the project site on 25.06.2022(Saturday). The Sub-Committee of SEAC reported that,

M/s.Rohm and Haas India Pvt. Ltd (Currently M/s.Dow Chemical International Pvt Ltd) must have applied and obtained Environment Clearance at the time of commissioning of the unit from MoEF&CC.

MoEF&CC has informed vide F.No.22-7/2019-IA.III dated 03.02.2021 based on the project proponent request for the natural polymer. But the subcommittee felt based on the report from the IIT Madras confirmed synthetic organics and it clearly shows that the unit activity attracts both the EIA Notification 2006 and EIA notification 1994.

In view of the above, the Authority after detailed discussion decided to refer back the proposal to SEAC,

i. for re-appraisal of the project file furnishing clear recommendation weighing the IIT report, the MoEF&CC clarification and the sub-committee report.
ii. the sub-committee which inspected has not mentioned the installed capacity and current status of the project and has not clearly furnished its opinion.
iii. further it may be clarified if it attracts any violations.
iv. the PP shall furnish the copy of first CTE and CTO obtained from TNPCB.

Now the proposal was placed for appraisal in 322nd meeting of SEAC held on 19.10.2022. The Project proponent has made a presentation along with clarification for the above shortcomings observed by the SEIAA.

S.No	Query	Reply
1.	For re-appraisal of the project file finishing clear recommendation weighing the IIT report, the MoEF & CC clarification and the subcommittee report.	**MoEF & CC Clarification:** • It is clarified that the existing water based latex polymer manufacturing project does not require prior environmental clearance as per the EIA notification, 1994. • However, considering the project under category 5 (f) "Synthetic Organic Chemical industry" of the schedule to the EIA Notification, 2006, the project proponent

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		may obtain prior EC for expansion / modernization of the project from the concerned regulatory authority. **Minutes of 4th EAC meeting (Industry 3 Sector) held during January 14 - 15, 2021.** The committee, after detailed deliberation and considering clarification issued by the ministry vide letter no. 25th march 2019, and considering that water based latex polymer is one of additives only along with other components in the paint industry, was of the view that the water based latex polymer manufacturing project does not require Environmental Clearance at the time of establishment of unit as per the EIA Notification 1994. • However, considering the project under category 5 (f) "Synthetic Organic Chemical industry" of the schedule to the EIA Notification, 2006, the project proponent may obtain prior EC for expansion / modernization of the project from the concerned regulatory authority.
		IIT report: • The use of butyl acrylate, methyl methacrylate, ethyl acrylate, vinyl acetate, styrene. 2-ethylhexyl acrylate, acrylonitrile all of which (including the additives in the presence of water) would lead to the formation of synthetic polymers only.
2.	The subcommittee which inspected has not mentioned the installed capacity and current status of the project and has not clearly furnished its opinion.	• The project is yet to start and awaiting for Environmental Clearance.(EC) • Latest CTO obtained from TNPCB **Air Act Consent Order No. 2208243030145 Dated: 10/06/2022**. Water Act Consent Order No. 2208143030145 Dated: 10/06/2022. Valid up to 31.03.2024. • Current Production Capacity: Water Based Latex polymer – 40000 MT/Year Latex Polymer Cake-407 MT/Year
3.	Further it may be clarified if it attracts any violations.	• **As per MoEF & CC is clarified, that the existing water based latex polymer manufacturing project does not require prior Environmental Clearance as per the EIA notification, 1994.** • However, considering the project under category 5 (f) "Synthetic Organic Chemical industry" of the schedule to the EIA Notification, 2006, the project proponent may obtain prior EC for expansion / modernization of the project from the concerned regulatory authority.

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		• According to the TNPCB consent orders, the unit has maintained the same production capacity of water-based latex polymer (40000 MT/YEAR) and latex polymer cake (407 MT/YEAR) from the 2006 CTE to the most recent 2022 CTO. • **Hence we clarify that the unit didn't attract any violation.**
4.	The pp shall furnish the copy of first CTE and CTO obtained from TNPCB.	• **First CTE** obtained from TNPCB 2006-2007 Air act Consent Order No: **3418** Date:**05/08/2006** • Valid up to –Two Years. CTE copy is enclosed. • **First CTO** obtained from TNPCB Water Act Consent Order- **21084** Dated **07/09/2007,** Valid upto **31.03.2008**. CTO copy is enclosed.

The Committee carefully examined the points raised by SEIAA and the replies given by the PP and decided to reiterate recommend the recommendation already made in 307th SEAC meeting held on 26.8.2022.

Appendix -I
List of Native Trees Suggested for Planting

No	Scientific Name	Tamil Name	Tamil Name
1	*Aegle marmelos*	Vilvam	வில்வம்
2	*Adenaanthera pavonina*	Manjadi	மஞ்சாடி, ஆனைக்குன்றிமணி
3	*Albizia lebbeck*	Vaagai	வாகை
4	*Albizia amara*	Usil	உசில்
5	*Bauhinia purpurea*	Mantharai	மந்தாரை
6	*Bauhinia racemosa*	Aathi	ஆத்தி
7	*Bauhinia tomentos*	Iruvathi	இருவாத்தி
8	*Buchanania axillaris*	Kattuma	காட்டுமா
9	*Borassus flabellifer*	Panai	பனை
10	*Butea monosperma*	Murukkamaram	முருக்கமரம்
11	*Bobax ceiba*	Ilavu, Sevvilavu	இலவு
12	*Calophyllum inophyllum*	Punnai	புன்னை
13	*Cassia fistula*	Sarakondrai	சரக்கொன்றை
14	*Cassia roxburghii*	Sengondrai	செங்கொன்றை
15	*Chloroxylon sweitenia*	Purasamaram	புரசு மரம்
16	*Cochlospermum religiosum*	Kongu, Manjalllavu	கோங்கு, மஞ்சள் இலவு
17	*Cordia dichotoma*	Naruvuli	நருவுலி
18	*Creteva adansoni*	Mavalingum	மாவிலங்கம்
19	*Dillenia indica*	Uva, Uzha	உசா
20	*Dillenia pentagyna*	SiruUva, Sitruzha	சிறு உசா
21	*Diospyro sebenum*	Karungali	கருங்காலி
22	*Diospyro schloroxylon*	Vaganai	வாகனை
23	*Ficus amplissima*	Kalltchi	கல் இச்சி
24	*Hibiscus tiliaceou*	Aatrupoovarasu	ஆற்றுப்பூவரசு
25	*Hardwickia binata*	Aacha	ஆச்சா
26	*Holoptelia integrifolia*	Aayili	ஆயா மரம், ஆயிலி
27	*Lannea coromandelica*	Odhiam	ஓதியம்
28	*Lagerstroemia speciosa*	Poo Marudhu	பூ மருது
29	*Lepisanthus tetraphylla*	Neikottaimaram	நெய் கொட்டை மரம்
30	*Limonia acidissima*	Vila maram	விலா மரம்
31	*Litsea glutinos*	Pisinpattai	அரம்பா, பிசின்பட்டை
32	*Madhuca longifolia*	Illuppai	இலுப்பை
33	*Manilkara hexandra*	UlakkaiPaalai	உலக்கை பாலை
34	*Mimusops elengi*	Magizhamaram	மகிழமரம்
35	*Mitragyna parvifolia*	Kadambu	கடம்பு
36	*Morinda pubescens*	Nuna	நுணா
37	*Morinda citrifolia*	Vellai Nuna	வெள்ளை நுணா
38	*Phoenix sylvestre*	Eachai	ஈச்சமரம்
39	*Pongamia pinnat*	Pungam	புங்கம்

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40	*Premna mollissima*	Munnai	முன்னை
41	*Premna serratifolia*	Narumunnai	நறு முன்னை
42	*Premna tomentosa*	Malaipoovarasu	மலை பூவரசு
43	*Prosopis cinerea*	Vanni maram	வன்னி மரம்
44	*Pterocarpus marsupium*	Vengai	வேங்கை
45	*Pterospermum canescens*	Vennangu, Tada	வெண்ணாங்கு
46	*Pterospermum xylocarpum*	Polavu	புலவு
47	*Puthranjiva roxburghi*	Karipala	கரிபாலா
48	*Salvadora persica*	Ugaa Maram	உகா மரம்
49	*Sapindus emarginatus*	Manipungan, Soapukai	மணிப்புங்கன் சோப்புக்காய்
50	*Saraca asoca*	Asoca	அசோகா
51	*Streblus asper*	Piray maram	பிராய் மரம்
52	*Strychnos nuxvomic*	Yetti	எட்டி
53	*Strychnos potatorum*	Therthang Kottai	தேத்தான் கொட்டை
54	*Syzygium cumini*	Naval	நாவல்
55	*Terminalia belleric*	Thandri	தான்றி
56	*Terminalia arjuna*	Ven marudhu	வெண் மருது
57	*Toona ciliate*	Sandhana vembu	சந்தன வேம்பு
58	*Thespesia populnea*	Puvarasu	பூவரசு
59	*Walsuratrifoliata*	valsura	வால்சுரா
60	*Wrightia tinctoria*	Veppalai	வெப்பாலை
61	*Pithecellobium dulce*	Kodukkapuli	கொடுக்காப்புளி

Discussion by SEIAA and the Remarks:-

The proposal was placed in the 567th Authority meeting held on 07.11.2022 & 08.11.2022. After detailed discussion, the Authority accepts the recommendation of SEAC and decided to grant Environmental Clearance subject to the conditions as recommended by SEAC in addition to the following condition.

1. As per the MoEF & CC Office Memorandum F. No. 22-65/2017-IA.III dated: 30.09.2020 and 20.10.2020 & the proponent shall furnish the detailed EMP mentioning all the activities as proposed in the CER as recommended by the SEAC to TNPCB before obtaining CTE. All the EMP& CER activities proposed shall be carried out before obtaining CTO from TNPCB.
2. The Proponent shall store the raw materials within the threshold limit adhering to the guidelines of the Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 as amended.
3. The project proponent shall provide & maintain adequate capacity STP, ETP with ZLD, & APC measures with treatment & disposal arrangements & adequate storage area for raw materials/solvent/Hazardous/solid wastes, as committed in EMP adhering to the mode of disposal & discharge standards prescribed by the CPCB/TNPCB.
4. The project proponent shall provide STP & ETP in the elevated closed area above the ground level.

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5. The project proponent shall operate & maintain the STP & ETP with ZLD continuously & efficiently so as to comply with the discharge standards prescribed by the CPCB/TNPCB.
6. No untreated sewage, treated/untreated effluent shall be discharge inside & outside the project premises at any time.
7. The project proponent shall periodically monitor treated/untreated sewage, treated/untreated effluent, Noise levels & AAQ/Stack emission/VOC through the TNPCB laboratory and shall upgrade adequate mitigation measures, safety measures & monitoring mechanism as and when recommended by the competent authority.
8. The project proponent shall provide online/offline sensors/ analyzers for air quality parameters (AAQ/Stack emission), VOC, water quality parameters (sewage/Effluent) linked up to CAC/WQW websites of CPCB/TNPCB for continuous & effective monitoring as recommended by the CPCB/TNPCB before obtaining CTO and shall periodically calibrate the said sensors/ analyzers and submit report to TNPCB.
9. The project proponent shall periodically dispose the Hazardous waste generated as per provisions of Hazardous and Other Wastes (Management and Transboundary Movement) Amendment Rules, 2016 as amended.
10. The project proponent shall periodically dispose the solid waste generated as per provisions of Solid waste Management Rules, 2016 as amended.
11. The proponent shall adhere to Bio safety guidelines/SoP notified by Department of Biotechnology, Ministry of Science and Technology, Govt. of India.
12. The project proponent, their activities should not cause harm to the natural vegetation/water bodies and other natural resources.
13. The project proponent shall ensure the activities should not cause any damage to the soil and natural seed banks.
14. The project proponent shall provide medical facilities, possibly with a medical officer in the project site for continuous monitoring the health of construction workers during COVID and Post - COVID period.
15. The project proponent, there should be no Green House Gases (GHG) emissions. The result in temperature rise and leading to climate changes.
16. As the plant operation involves the sensitive processing, the medical officer and the supporting staff involved in the health centre activities shall be trained in occupational health surveillance (OHS) aspects through the outsourced training from the experts available in the field of OHS for

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ensuring the health standard of persons employed.

17. Necessary permission letter for the supply of water shall be obtained from the competent authority before obtaining consent from TNPCB.

Validity:

The SEIAA hereby accords Environmental Clearance to the above project under the provisions of EIA Notification dated 14th September, 2006 as amended, with validity for Seven years from the date of issue of EC, subject to the compliance of the terms and conditions stipulated below:

(A) Statutory compliance

i. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.

ii. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.

iii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (incase of the presence of schedule-I species in the study area)

iv. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State pollution Control Board/ Committee.

v. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.

vi. The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989

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(B) Air quality monitoring and preservation:

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.

iii. The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10and PM25 in reference to PM emission, and SO2and NOx in reference to SO2 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120 each), covering upwind and downwind directions.

iv. To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. Sulphur content should not exceed 0.5% in the coal for use in coal fired boilers to control particulate emissions within permissible limits (as applicable). The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.

v. Storage of raw materials, coal etc shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.

vi. National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21st July, 2010 and amended from time to time shall be followed.

vii. The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16thNovember, 2009 shall be complied with

(C) Water quality monitoring and preservation:

i. The project proponent shall provide online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the

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channel/drain carrying effluent within the premises (applicable in case of the projects achieving ZLD)

ii. As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises (applicable in case of the projects achieving the ZLD).

iii. The effluent discharge shall conform to the standards prescribed under the Environment (Protection) Rules, 1986, or as specified by the State Pollution Control Board while granting Consent under the Air/Water Act, whichever is more stringent.

iv. Total fresh water requirement shall not exceed the proposed quantity or as specified by the Committee. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard.

v. Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system.

vi. The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and utilize the same for different industrial operations within the plant.

vii. The DG sets shall be equipped with suitable pollution control devices and the adequate stack height so that the emissions are in conformity with the extant regulations and the guidelines in this regard.

(D) Noise monitoring and prevention:

i. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.

ii. 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.

iii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time

(E) Safety, Public hearing and Human health issues:

i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.

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ii. 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.

iii. The PP shall provide Personal Protection Equipment (PPE) as per the norms of Factory Act.

iv. Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.

v. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

vi. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

vii. There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places

(F) Corporate Environment Responsibility:

i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1stMay 2018, as applicable, regarding Corporate Environment Responsibility.

ii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for 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. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

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iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other 5 purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

v. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

(G) Waste management:

i. Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm and the solvent transfer through pumps.

ii. Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.

iii. The company shall undertake waste minimization measures as below:-

a. Metering and control of quantities of active ingredients to minimize waste.

b. Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.

c. Use of automated filling to minimize spillage.

d. Use of Close Feed system into batch reactors.

e. Venting equipment through vapour recovery system.

f. Use of high pressure hoses for equipment clearing to reduce wastewater generation

Air Environment

1. Stack emission levels should be stringent than the existing standards in terms of the identified critical pollutants.
2. CEMS may be installed in all large/medium red category industries (air polluting) and connected to SPCB and CPCB server.
3. Effective fugitive emission control measures should be imposed in the process, transportation, packing etc.
4. Transportation of materials by rail/ conveyor belt, wherever feasible.

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5. Encourage use of cleaner fuels (pet coke/ furnace oil/ LSHS may be avoided).
6. Best Available Technology may be used. For example; usage of EAF/SAF/ IF in place of Cupola furnace. Usage of Supercritical technology in place of sub-critical technology.
7. Increase of green belt cover by 40% of the total land area beyond the permissible requirement of 33%, wherever feasible.
8. Stipulation of greenbelt outside the project premises such as avenue plantation, plantation in vacant areas, social forestry, etc.
9. Assessment of carrying capacity of transportation load on roads inside the industrial premises.

Water Environment

1. Reuse/recycle of treated wastewater, wherever feasible.
2. Continuous monitoring of effluent quality/quantity in large and medium Red Category Industries (water polluting).
3. A detailed water harvesting plan may be submitted by the project proponent
4. Zero liquid discharge wherever techno - economically feasible.

Land Environment

1. Increase of green belt cover by 40% of the total land area beyond the permissible requirement of 33%, wherever, feasible for new projects.
2. Stipulation of greenbelt outside the project premises such as avenue plantation, plantation in vacant areas, social forestry, etc.
3. Dumping of waste (fly ash, slag, red mud, etc.) may be permitted only at designated locations approved by SPCBs/ PCCs.
4. More stringent norms for management of hazardous waste. The waste generated should be preferably utilized in co processing.
5. Monitoring of compliance of EC conditions may be submitted with third party audit every year.
6. The % of the CER may be at least 1.5 times the slabs given in the OM dated 01.05.2018 for SPA and 2 times for CPA in case of Environmental Clearance.

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(H) SPECIFIC CONDITIONS:

1. It is mandatory for the project proponent to furnish to the SEIAA, Half yearly compliance report in hard and soft copies on 1st June and 1st December of each calendar year in respect of the conditions stipulated in the prior Environmental clearance issued.
2. "Consent for Establishment" shall be obtained from Tamil Nadu Pollution Control Board and a copy of the same shall be furnished to the SEIAA, Tamil Nadu before start of project construction activity at the site.
3. "Consent to Operate" should be obtained from the Tamil Nadu pollution Control Board before the start of the operation of the project and copy shall be submitted to the SEIAA-TN.
4. The implementation of Environmental Management Plan in regard to treatment and disposal of sewage & Effluent, Solid waste Management, Hazardous - Waste Management, and CSR Activities should be carried out, as proposed and committed. Regular monitoring should be carried out during operation phases.
5. The residue collected from the evaporator shall be documented by maintaining proper register and it should be made available at the time of inspection.
6. Adequate dust extraction system such as Ducting with dust extracting arrangement wherever required shall be established to achieve Occupational –health standards and ambient air quality standards.
7. The proponent shall carryout best housekeeping practices as spillage management for handling and maintenance of raw materials and products inside the unit premises.
8. Nature of chemicals Handled, the Do and Don'ts shall be displayed at all vital locations as laid down in MSDS.
9. The proponent shall ensure that the quantity of Hazardous Waste handed over to the TSDF shall match with the quantity generated.
10. The proponent shall provide a separate closed area earmarked for storing solid waste including Hazardous Waste as proposed.
11. The proponent shall dispose Hazardous Waste generated as per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. Spent oil from D.G sets should be stored in HDPE drums in an isolated covered facility and disposed off through TNPCB registered recyclers.
12. The Plastic wastes shall be segregated and disposed as per the provisions of Plastic Waste (Management & Handling) Rules 2016.

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13. The e - waste generated should be collected and disposed to a nearby authorized e-waste centre as per e waste (Management & Handling), Rules 2016 as amended.
14. The Municipal solid waste generated shall be collected, segregated and disposed as per Solid Waste Management Rules, 2016.
15. The industry shall conduct air sampling at least once in six months for the general core parameters (PM_{10}, $PM_{2.5}$, SO_x, NO_X) through TNPCB/NABL Accredited Laboratory and maintain records of the same and it should be made available at the time of inspection.
16. Regular monitoring on the air quality, water quality and noise on the selected locations in and around the project site as mentioned in the EMP report for creating base line data shall be continued and records shall be maintained.
17. A separate environment and safety management cell with qualified staff shall be set up before establishment of the facility and shall be retained throughout the lifetime of the industry, for implementation of the stipulated environmental safeguards.
18. The Green belt area already developed within the project area shall be properly maintained.
19. The green belt of 5-10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.
20. The industry shall promote tree plantation to neutralize their carbon foot print. The industry shall engage regularly in afforestation programme.
21. The proponent shall ensure effective risk management strategy regarding confined space management to avoid risk while handling raw materials, products in the process area and storage.
22. The energy sources for lighting purposes shall preferably be LED based.
23. The industry shall conduct air sampling at least twice in a week (104 times in a year), as stipulated under EP Act 1986.
24. Risk cum disaster management plan should be in placed in the industry premises at all time.
25. Water conservation scheme including rain water harvesting measures to augment ground water resources shall be implemented so as to collect and reuse the entire rainwater harvested as a supplement to fresh water.
26. The natural drainage pattern in the project area shall be maintained and storm water drain along the boundary and appropriate places shall be provided considering the Catchment area and

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maximum intensity of rainfall to collect runoff water/rain water for proper disposal to avoid flooding around the premises.

27. The Environmental Clearance is issued without prejudice to any order that may be passed by the Hon'ble NGT/ Honb'le High Court of Madras.
28. All the assurances given in EIA and EMP shall be adhered strictly.
29. Detail study shall be carried out by engaging accredited agencies / reputed institutions for Risk management and detailed Disaster management plan prepared for compliance.
30. Sufficient funds should be provided for Disaster management.
31. The Project Proponent shall provide disinfection by UV system for the sewage treatment plant for treating the sewage before applying on land for gardening.
32. The project proponent shall provide sufficient ventilation (air circulation) in the hazardous waste storage yard where the hazardous waste like spent carbon, Chemical sludge, used or spent oil are being kept.
33. The Project Proponent shall carry out safety audit in the different operating zones of the plant at least once in a year and the same shall be considered as base for reviewing the unsafe conditions during the plant safety meeting.
34. The Project Proponent shall prepare a code of practice for safe operation for educating the safety standards to the work force deployed in the plant through appropriate training by the concerned experts.
35. As the plant operation involves the sensitive processing, the medical officer and the supporting staff involved in the health centre activities shall be trained in occupational health surveillance (OHS) aspects through the outsourced training from the experts available in the field of OHS for ensuring the health standard of persons employed.
36. The Activity of the industry should not impact on agricultural, irrigation system and mangroves surrounding the area.
37. The EMP cost and operation and maintenance cost shall be deposited in a nationalized bank by opening separate account and the head wise expenses statement shall be submitted to TNPCB with a copy to SEIAA annually.
38. There should be no threat to Bio diversity due to the operation of the industry.
39. The flora & fauna present in and around the project site should be get affected due to the activity as reported.

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40. The Project Proponent has to provide rain water harvesting collection tank capacity with Recharging pit in order to recover and reuse the rain water during normal rains.
41. The operation of the activity should not impact on the soil, micro flora & Fauna present in and around the project site.
42. The project proponent shall carry out risk assessment process for all the operations involved in the plant and a suitable risk management plan showing the contours of sensitive zones should be prepared.
43. The project proponent shall take up better housekeeping measures including scraps disposal and up keeping the machineries, pipes, etc.
44. The proponent should continuously monitor the VOC and ensure that VOC levels are within permissible limits.

(I) GENERAL CONDITIONS:-

1. This Environmental Clearance shall not be cited to relax any other rules applicable to this project.
2. **The Project Proponent should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the Environmental Clearance informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with TNPCB.**
3. **A copy of the Environmental Clearance shall be sent by the project proponent to concerned local body and local NGO, if any from whom suggestions/representatives, if any were received while processing the proposal.**
4. The project proponent shall monitor the criteria pollutants level namely; PM_{10}, SO_2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
5. The Environmental Clearance shall also be put on the website of the company.
6. No expansion or modernization in the project shall be carried out without prior approval of the SEIAA-TN. In case of any deviations or alterations in the project proposal from those submitted to this Authority for clearance, a fresh reference shall be made to the SEIAA-TN to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.
7. All the environmental protection measures and safeguards as recommended in the EIA report shall be complied with.

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8. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
9. The implementation of the project vis-à-vis environmental action plans shall be monitored by the Regional office of MoEF& CC at Chennai, TNPCB and CPCB. A six monthly compliance status report shall be submitted to monitoring agencies regularly.
10. Data on ambient air, stack and fugitive emissions shall be regularly submitted online to the Regional office of MoEF & CC, GOI, at Chennai, TNPCB and Central Pollution Control Board as well as hard copy once in six months and display data on RSPM, SO_2 and NOx outside the premises at the appropriate place for the general public.
11. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
12. Proper house-keeping and cleanliness must be maintained within and outside the plant.
13. Occupational health surveillance programme shall be undertaken as regular exercise for all the employees, especially for those engaged in handling hazardous substances. The first aid facilities in the occupational health centre shall be strengthened and the medical records of each employee should be maintained separately.
14. The overall noise levels in and around the plant area shall be kept well within the standards prescribed for by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75dBA (day time) and 70 dBA (night time).
15. A separate Environmental Management Cell equipped with full fledged laboratory facilities to carry out the various Environmental Management and Monitoring functions shall be set up under the control of a Senior Executive.
16. The requisite amount earmarked towards capital cost and recurring cost/annum for implementing pollution control measures shall be used judiciously to implement the Environment Management Plan as furnished in the EIA report. The funds so provided shall not be diverted for any other purposes.
17. The project proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEF & CC, GOI at Chennai, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant

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levels namely; RSPM, SO_2, NOx (ambient levels as well as stack emissions) or critical sector parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

18. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent 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 conditions and shall also be sent to the respective Regional Offices of the MOEF by e-mail.
19. Environmental Clearance is being issued without prejudice to the action initiated under Environment (Protection) Act, 1986 or any court case pending or any other court order shall prevail.
20. The SEIAA, TN may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.
21. The SEIAA/SEAC or any Competent Authority may suitably add any further condition(s) on receiving reports from the project authority. The above condition shall be monitored by the Regional Office of MoEF located at Chennai.
22. The SEIAA, TN may revoke or suspend the Environmental clearance, if implementation of any of the above conditions is not satisfactory.
23. The SEIAA, TN may cancel the environmental clearance granted to this project under the provisions of EIA Notification, 2006, if, at any stage of the validity of this environmental clearance, if it is found or if it comes to the knowledge of this SEIAA, TN that the project proponent has deliberately concealed and/or submitted false or misleading information or inadequate data for obtaining the environmental clearance.
24. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.
25. The SEIAA-TN reserves the right to stipulate additional conditions if found necessary. The industry in a time bound manner shall implement these conditions.
26. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability Insurance Act, 1991, along with their amendments ,draft Minor Mineral Conservation & Development Rules, 2010 framed under MMDR Act 1957, National Commission for protection of Child Right Rules, 2006 and rules

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made there under and also any other orders passed by the Hon'ble Supreme Court of India/Hon'ble High Court of Madras and any other Courts of Law relating to the subject matter.

27. Any appeal against this environmental clearance shall lie with the Hon'ble National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

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Copy to:

1. The Additional Chief Secretary to Government, Environment & Forests Dept, Govt. of Tamil Nadu, Fort St. George, Chennai - 9.
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD Cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
3. The Member Secretary, Tamil Nadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai - 600 032.
4. The APCCF (C), Regional Office, Ministry of Environment & Forest (SZ), 34, HEPC Building, 1st & 2nd Floor, Cathedral Garden Road, Nungambakkam, Chennai - 34
5. Monitoring Cell, I A Division, Ministry of Environment & Forests, Paryavaran Bhavan, CGO Complex, New Delhi - 110 003.
6. The District Collector, Kancheepuram District.
7. Stock File.

Signature Not Verified
Digitally signed by Thiru.Deepak S.Bilgi
Member Secretary
Date: 12/16/2022 8:00:30 PM