

# **EXECUTIVE SUMMARY OF DRAFT EIA**

**FOR**

## **“PROPOSED EXPANSION OF REFRIGERANT GASES MANUFACTURING UNIT”**

**At**

**Ward-D, Block-2, TS-2A, 2B, Block-3, TS-1, Block-5, TS-1 of Mettur village,  
Taluk - Mettur, District - Salem, Tamil Nadu - 636001**

**Capacity:** EC Products from 1663 TPA to 43663 TPA,  
Non-EC Products from 4500 TPA to 233500 TPA, By-products from 506 TPA to  
155126 TPA

**Category:** 5(f) Category “A”

**TOR Identification No:** TO24A0202TN5904187N **Dated** 31.05.2024

### **PROJECT PROPONENT**

**M/s. CHEMPLAST SANMAR LIMITED**

**Registered Address :- 9, Cathedral Road, Chennai - 600086**

### **ENVIRONMENTAL CONSULTANT**

**M/S. PERFECT ENVIRO SOLUTIONS PVT. LTD. (PESPL)**

**(NABET Registered List of Accredited Consultant Organisations/ NABET/EIA/ 2225/RA 0284**

**(Rev.01) Valid Upto 26/11/2025)**

**Registered Address:- 5th Floor, NN Mall, Sector 3, Rohini, New Delhi- 110085**

**Chennai Address :- 4<sup>th</sup> Floor, Kochar Bliss, Thiru.V.Ka Industrial estate, Guindy, Chennai-600032**

**SEPTEMBER 2024**

## 1. INTRODUCTION

**M/s Chemplast Sanmar Limited (CSL)** is a leading manufacturer of Specialty Paste PVC resin, Custom Manufactured Chemicals, Chloromethane, Refrigerated gases, Caustic soda, Hydrogen Peroxide, and other essential chemicals. The manufacturing locations are at Mettur, Berigai, Vedaranyam in Tamil Nadu and Karaikal in Puducherry. The company's registered office is located at No. 9, Cathedral Road, Chennai, India.

### 1.1 Project Description

CSL is operating Refrigerant gas (R22) Monochlorodifluoromethane (plant-I) at Ward-D, Block-2, TS-2A, 2B, Block-3, TS-1, Block-5, TS-1 of Mettur, Taluk - Mettur, District - Salem, Tamil Nadu - 636001 with a plot area of 4.48 ha (11.07 Acres). The plant has been in operation prior to EIA Notification 1994, with its first consent order received vide Letter No. T9/F9/S1m/TNPCBd/A/R/94, Dated 09.03.1994 and renewed from time to time by TNPCB with the latest Consent to Operate (CTO) issued vide TNPCB Consent No. 2205241811558 under Air Act & No. 2205141811558 under Water Act dated 31.05.2022 valid upto 31.03.2027. Current Production involves **EC-Product** - Monochlorodifluoromethane (R22) **1663 TPA**, **Non-EC Product** - Hydrochloric Acid (HCl 30 %) **4500 TPA**, and **By product** - Dilute Hydrofluoric Acid **400 TPA** & Dilute Sulfuric Acid **106 TPA**. The existing cost of the project i.e. **INR 206.46 Cr.**

CSL proposes for the “**Expansion of Refrigerant Gases Manufacturing Unit**” by retaining its production capacity R22 with addition of R32 Production Facility and Anhydrous Hydrofluoric Acid (AHF) manufacturing units, and increasing land area by adding up abutting Plots of the project site - Ward-D, Block-2, TS-2A, 2B, Block-3, TS-1, Block-5, TS-1 of Village and Taluk - Mettur, District - Salem, Tamil Nadu - 636001. The total land area will be 21.00 ha (51.89 Acres) after expansion.

After the proposed expansion, the total production capacity for **EC products** will be Monochlorodifluoromethane (R22) **1663 TPA**, Difluoromethane (R32) **42000 TPA**, **Non-EC products** - AHF **40000 TPA**, Hydrochloric Acid (HCl 30%) **193500 TPA**, and for **By products** - Dilute Hydrofluoric Acid **820 TPA**, Dilute Sulfuric Acid **4306 TPA** & Gypsum Anhydrite **150000 TPA**. The Cost of the project after expansion will be **INR 1206.46 Cr.**

### 1.2 About the Project

The proposed expansion requires prior Environmental Clearance as per EIA Notification 2006 and its subsequent amendments. The project falls within the scope of Schedule Activity 5(f) of the EIA Notification due to its association with organic chemical products, under Category "A" since the project is located outside the notified industrial area, and hence requires Public Hearing in the process of obtaining Environmental Clearance. The project location is within the Comprehensive Environmental Pollution Index (CEPI) area .

Based on proposal submitted by CSL vide Proposal No. **IA/TN/IND3/469381/2024** dated **15.05.2024**, the project was granted Standard Terms of Reference from MoEF & CC vide **TOR Identification No. TO24A0202TN5904187N** and File No. **IA-J-11011/225/2024-IA-II(I)** dated **31.05.2024** for the proposed expansion of production capacity. The EIA study was carried out as per the Standard TOR granted and in compliance to the requirements of the EIA Notification, 2006 and its subsequent amendments to identify environmental impacts resulting from the proposed project and to prescribe mitigation measures.

*Table 1. Project Area and Cost Details*

S. No.	Particulars	Unit	Project Details		
			Existing	Proposed	Total
1.	Plot area	ha	4.48	16.52	21.00
		Acre	11.07	40.82	51.89
2.	Green Area	ha	1.48	6.95	8.43
		%	33.01	-	40.14
3.	Solid Waste Storage/ Disposal Area	ha	0.08	0.87	0.95
4.	Project Cost	INR Crores	206.46	1000.00	1206.46

### 1.3 Location & Accessibility

- **Location:** Ward-D, Block-2, TS-2A, 2B, Block-3, TS-1, Block-5, TS-1 of village and Taluk - Mettur, District - Salem, Tamil Nadu - 636001.
- **Existing latitude is** 11°48'19.69"N, **longitude** 77°49'16.14"E and **Elevation** of 264 m (MSL)
- **Proposed latitude is** 11°48'22.68"N **Longitude** 77°49'11.86"E and **Elevation** of 272 m (MSL).

“Proposed Expansion of Refrigerant Gases Manufacturing Unit” at Ward-D, Block-2, TS-2A, 2B, Block 3, TS-1 Block-5, TS-1 of Villegge and Taluk - Mettur, District - Salem, Tamil Nadu by  
M/s Chemplast Sanmar Limited

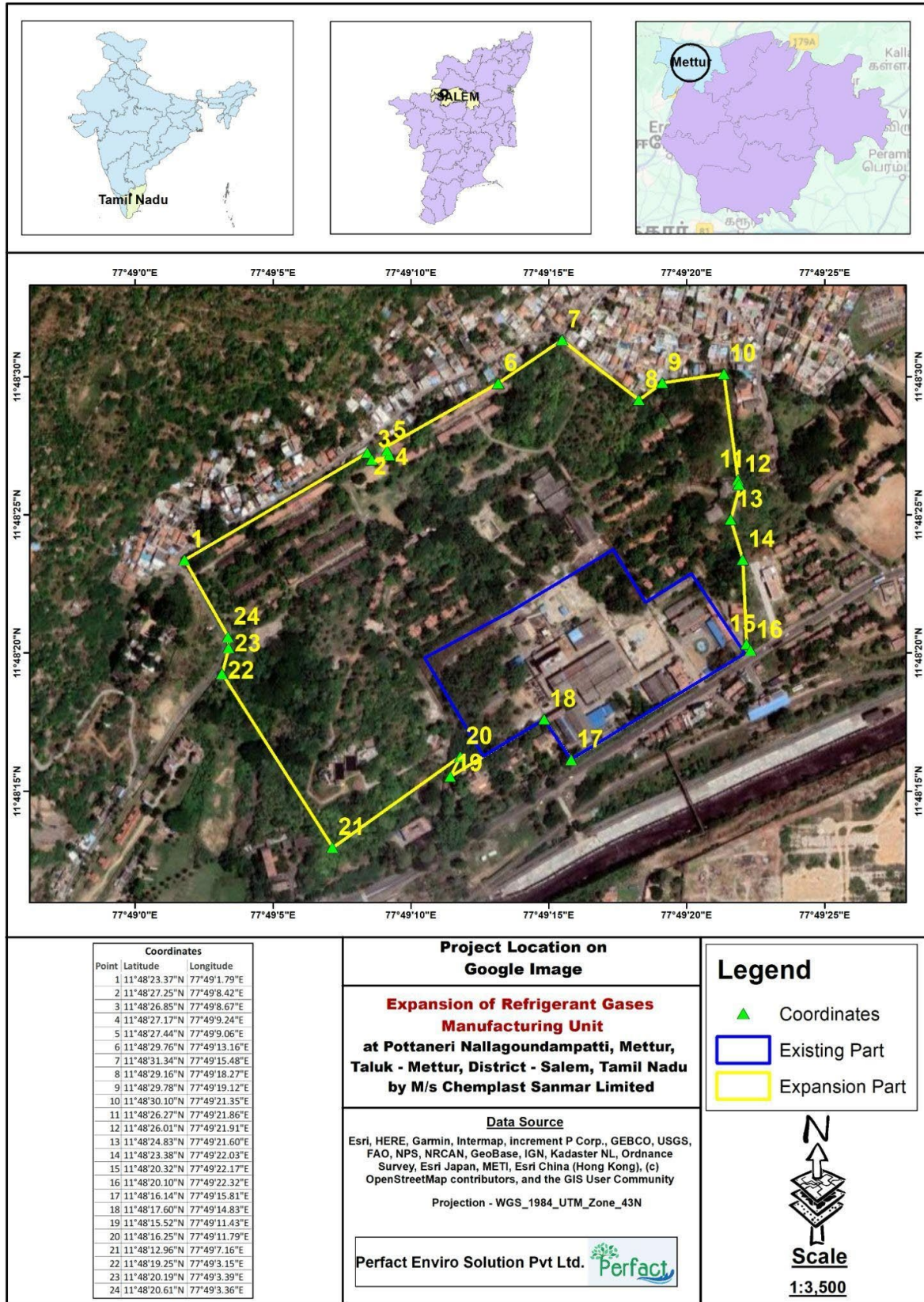


Figure 1. Google Image of Project Site showing Coordinates

## Environment Sensitivity

*Table 2. Project Site Specific Environmental Sensitivity Details*

Particulars	Distance	Direction
<b>Water Bodies</b>		
Stanley Reservoir	0.40 km	SW
Mettur West Bank Canal	1.87 km	WNW
Perum Pallam	2.69 km	SSE
Periya Pallam	7.47 km	NW
<b>Forests</b>		
Solappadi Reserve Forest	3.26 km	NNE
Palamalai Reserved Forest	3.87 km	WSW
Vanavasi Reserved Forest	3.96 km	SSE
Gonur Reserved Forest	4.46 km	NE
<b>Eco-sensitive Area</b>		
Nil		
<b>Archeological Area</b>		
Nil		
<b>Densely Populated Area</b>		
P N Patti	0.84 km	SE

*Table 3. Project Site Specific Connectivity Details*

Particulars	Distance	Direction
<b>Road</b>		
NH 544H	Adjacent to Project Boundary	S
State Highway No. 158	0.56 km	SSE
State Highway No. 20A	1.57 km	WSW
Koonandiyur-Keeraikaranoor Road	2.64 km	ENE
State Highway No. 223	3.80 km	ENE
State Highway No. 591	3.87 km	SSW
State Highway No. 220	8.89 km	SE
<b>Railway Station</b>		
Mettur Dam Railway Station	0.05 km	SSE
Pazhangottai Railway Station	6.52 km	ESE
Channa Koothanur Railway Station	7.61 km	E
Virudasampatty Railway Station	8.71 km	ENE
<b>Airport</b>		
Salem Airport	26.17 km	ESE

## 1.4 Project Description

- Production Capacity**

*Table 4. Production Capacity*

S. No.	Products Name	Production Capacity (TPA)			Physical State	CAS Number
		Existing	Proposed	Total After Expansion		
<b>EC Products</b>						
1.	Monochlorodi fluoromethane (R22)	1663	0	1663	Liquefied gas	75-45-6
2.	Difluoromethane (R32)	0	42000	42000	Liquefied gas	75-10-5
<b>Non - EC Products</b>						
3.	Anhydrous Hydrofluoric Acid (AHF)	0	40000	40000	Liquefied gas	7664-39-3
4.	Hydrochloric Acid (HCl-30%)	4500	189000	193500	Liquid	7647-01-0
<b>By-Products</b>						
5.	Dilute Sulfuric Acid (70-80%)	106	4200	4306	Liquid	7664-93-9
6.	Dilute Hydrofluoric Acid (10-15%)	400	420	820	Liquid	7664-39-3
7.	Gypsum Anhydrite	0	150000	150000	Solid	7778-18-9

- Production Process & Machineries**

**Difluoromethane (R32):** HFC-32(CH<sub>2</sub>F<sub>2</sub>) is produced by a process based on the continuous liquid phase reaction of Methylene dichloride (CH<sub>2</sub>Cl<sub>2</sub>) and HF in the presence of a partially fluorinated antimony pentachloride catalyst.

**Anhydrous Hydrofluoric Acid (AHF):** The production of Anhydrous Hydrogen fluoride (HF) involves a chemical reaction between calcium fluoride (CaF<sub>2</sub>) and sulfuric acid (H<sub>2</sub>SO<sub>4</sub>).

**The proposed production process which involve following machineries for R32 and AHF unit is given below:**

**For R32:** R-32 Reactor, Reaction Reflux tower, First Stage falling film absorber, Second stage falling film absorber, R-32 Compressor, Dryer, Catalyst Reactor, Catalyst Condenser

**For AHF-** Pre-Reactor – BUSS proprietary equipment, HF Kiln - Rotary kiln with heating Jacket, HF Kiln - Rotary kiln with heating Jacket, Absorption tower-PTFE lined column, Distillation columns, Condensers, AHF storage tanks, Silicon carbide heat exchanges, Graphite heat exchangers, Burners & Hot gas fan.

## **Raw Materials & Storage**

Raw materials for proposed manufacturing of Difluoromethane (R32) are 70,350 TPA Dichloromethane, 33,306 TPA Anhydrous Hydrogen Fluoride and 138600 TPA Water . For Anhydrous Hydrofluoric Acid (AHF) Manufacturing, raw materials required are Fluorspar: 88000 TPA, Sulphuric acid: 84000 TPA, Oleum (20%):24000 TPA, & Lime: 1600 TPA. The chemicals will be stored in tanks. The fresh water will be sourced from Mettur Stanley Water Reservoir.

## **Air Emission Stacks & Associated Air Pollution Control System (APCS)**

Existing stacks with Associated Air Pollution Control Systems (APCS) will be retained and additional stacks will be provided for the proposed expansion.

**Proposed Additional Stacks for Process Emission:** 2 Nos. of Reactor Furnaces with individual stack each with a height of 30m, 2 Nos. of Gypsum scrubbers with individual stack of height 30m and 2 Nos. of Process tail gas with individual stack of height 30m.

**Proposed Additional Stacks for Utility Emission:** 2 Nos. x 1500 kVA DG Sets with individual stacks, each of height 30m for, 1 No. x 25 TPH boiler with stack of 35m height fitted with pulse jet bag filters and

## **Water Requirement**

**Break-up Details of Water Requirement:** The total fresh water requirement after expansion will be 1176 KLD. 45 KLD for domestic purposes, 430 KLD will be used in process, & 532 KLD will be used in Boiler & Cooling Tower, & 169 KLD will be used in greenbelt. The remaining water is ETP treated water quantity of 302.5 KLD which will be reused in Boiler & cooling tower and STP treated water quantity of 73.5 KLD will be used for Gardening and Greenbelt development.

Freshwater will be sourced from Mettur Stanley Water Reservoir, for which already permission is received from Water Resources Department, Government of Tamil Nadu.

**Wastewater Generation & Management:** The total wastewater generation after expansion will be 396 KLD. Out of which 81 KLD will be sent to STP of 100 KLD capacity and Rest 315 KLD will be sent to ETP of 350 KLD capacity followed by RO of 350 KLD & MEE of 40 KLD. The treated sewage 73.5 KLD will be reused within the plant premises for gardening and/or greenbelt development.

## **Power Requirement**

**Demand & Source of Power Supply:** The total power requirement after the proposed expansion will be 8000 kW. It is proposed to be sourced from the Tamil Nadu Electricity Board (TNEB) Grid Supply.

To meet emergency power requirements, 2 Nos. of 1500 kVA D.G. Sets will be added to existing 1 No. of DG set of 125 kVA

### **Fuel Requirement**

HSD will be used in DG Sets and after expansion total fuel quantity will be 0.3 TPD.

Low Sulphur Heavy Stock (LSHS) will be used in boilers with a proposed consumption of 1200 Litres/hr.

Hydrogen is used for M23 Gas Incinerator with an existing consumption of 0.2 TPD.

### **Manpower**

Permanent employment will increase from 43 Nos. to 150 Nos. and temporary/contractual employment will increase from 40 Nos. to 200 Nos.

### **Greenbelt Development**

Greenbelt area will be increased from 1.48 ha to 8.43 ha(3.66 acre to 20.83). The overall green cover in the project site will be 40.14 % of the plot area after the proposed expansion. The No. of trees in greenbelt development will increase from 1437 Nos. to 21075 Nos. by planting a mix of native species trees

### **Rain Water Harvesting**

Rooftop water that is available for collection will be 2925.36 m<sup>3</sup>/hr. Rooftop Runoff will continue to be directed to Rainwater Sump. Surface runoff will be diverted to the storm water drain and collected in a collection tank

## **2. BASELINE ENVIRONMENTAL STUDIES**

### **Study Period:**

Monitoring was carried out **from February from 2024 to April 2024 (Summer Season).**

### **Ambient Air Quality:**

**Core zone:** The mean value of PM10 at core zone locations ranges from (59.03 - 64.73 µg/m<sup>3</sup>) & PM2.5 ranges from (22.79 - 25.43 µg/m<sup>3</sup>), SO<sub>2</sub> ranges from (8.45 - 9.41 µg/m<sup>3</sup>), NO<sub>2</sub> ranges from (31.95 - 35.63 µg/m<sup>3</sup>), CO (0.81 - 0.90 mg/m<sup>3</sup>), VOC (0.01 mg/m<sup>3</sup>), HCl (1.07 - 1.19 µg/m<sup>3</sup>), Cl<sub>2</sub> (5.74 - 6.39 µg/m<sup>3</sup>) which are within the limits of National Ambient Air Quality Standards (NAAQS).

As per the Air Quality Index by CPCB, the air quality of the core **zone is found to be Satisfactory** during the sampling period from February from 2024 to April 2024.

**Buffer zone:** The mean value of PM10 at buffer zone locations ranges from (43.56 - 48.01 µg/m<sup>3</sup>) & PM2.5 ranges from (21.43 - 30.41 µg/m<sup>3</sup>), SO<sub>2</sub> ranges from (7.16 - 9.68 µg/m<sup>3</sup>), NO<sub>2</sub> ranges from (27.29 - 36.16 µg/m<sup>3</sup>), CO (0.68 - 0.95 mg/m<sup>3</sup>), VOC (0.01 - 0.02 mg/m<sup>3</sup>), HCl (0.72 - 0.97 µg/m<sup>3</sup>) and Cl<sub>2</sub> (4.38 - 5.60 µg/m<sup>3</sup>) which are within the limits of National Ambient Air Quality Standards (NAAQS).

As per the Air Quality Index by CPCB, the air quality of the buffer zone is found to be **Satisfactory** during the sampling period from February from 2024 to April 2024.



## **Ambient Noise Quality:**

### **Core Zone :**

The ambient noise level during day time at the proposed project site varies from 58.5 dB (A) to 59.2 dB (A) which are within the day time standard limit of Industrial area ~75 dB (A). During night the noise level at the project site ranges from 47.2 dB (A) to 47.8 dB (A) which are within the night time standard limit of Industrial area 70.0 dB (A).

### **Buffer Zone:**

#### **Residential Area:**

The ambient noise level at Kavipuram is 53.2 dB (A) which is within the daytime noise standard limit of Residential area ~ 55.0 dB (A). During the night the noise level was recorded at 44.3 dB (A) which is within the night-time noise standard limit of ~ 45 dB (A).

The ambient noise level at Karumalai koodal is 53.4 dB (A) which is within the daytime noise standard limit of Residential area ~ 55.0 dB (A). During the night the noise level was recorded at 43.5 dB (A) which is within the night-time noise standard limit of ~ 45 dB (A).

The ambient noise level at Veerakkalpudur 52.6 dB (A) which is within the daytime noise standard limit of the Residential area of ~ 55.0 dB (A). During the night the noise level was recorded at 43.1 dB (A) which is within the night-time noise standard limit of ~ 45.0 dB (A).

The ambient noise level at Mettur is 53.2 dB (A) which is within the daytime noise standard limit of the Residential area of ~ 55.0 dB (A). During the night the noise level was recorded at 43.3 dB (A) which is within the night-time noise standard limit of ~ 45.0 dB (A).

The noise level at Tippampatti 54.8 dB (A) which is within the daytime noise standard limit of ~ 55 dB (A). During the night the noise level was recorded at 44.2 dB (A) which is within the night-time noise standard limit of ~ 45 dB (A).

The noise level at SH-20 is 63.1 dB (A) which is within the daytime noise within the standard limit of Commercial area ~ 65.0 dB (A). During the night the noise level was recorded at 53.4 dB (A) which is within the night-time noise standard limit of Commercial area ~ 55 dB (A).

The noise level at SH-223 is 62.3 dB (A) which is within the daytime noise within the standard limit of Commercial area ~ 65.0 dB (A). During the night the noise level was recorded at 52.8 dB (A) which is within the night-time noise standard limit of Commercial area ~ 55 dB (A).

The noise level at SH-158 is 64.3 dB (A) which is within the daytime noise standard limit of Commercial area ~ 65.0 dB (A). During the night the noise level was recorded at 54.5 dB (A) which is within the night-time noise standard limit of Commercial area ~ 55 dB (A).

## **Groundwater Quality:**

**Buffer zone:** The water quality of the buffer zone shows that

- The Total Dissolved Solids (TDS) of the sampling locations ranges from 313 mg/l to 744 mg/l. The TDS of sampling locations are within the acceptable limit of 500 mg/l & permissible limit of 2000 mg/l.
- The Total Hardness of the sampling locations ranges from 184 mg/l to 464 mg/l. The Total Hardness of sampling locations are within the acceptable limit of 200 mg/l & permissible limit of 600 mg/l.
- The Alkalinity of the sampling locations ranges from 166 mg/l to 273.38 mg/l. The alkalinity of sampling locations are within the acceptable limit of 200 mg/l & permissible limit of 600 mg/l.
- The Chloride Concentration of the sampling locations ranges from 67 mg/l to 127 mg/l. The Chloride concentration of sampling locations are within the acceptable limits i.e., 250 mg/l respectively.

The groundwater quality parameters (buffer zone) are within the IS 10500:2012 (Drinking water standard).

## **Surface water Quality:**

As per the samples collected and analyzed from locations SW1 ,SW2, SW3, SW4, SW5, SW6, SW7, SW8. surface water quality is meeting the criteria defined by class “C” as per the CPCB criteria. It is suitable for Drinking water source after conventional treatment and disinfection.

1. The Surface water quality of the canal near Ajay nagar shows that the parameters including Turbidity, TSS, Nitrate nitrogen, BOD, COD & iron content are within the EPA discharge standards. BOD & DO value indicating that the surface water quality of canal near Ajay nagar can be placed in Class “C” i.e. Drinking Water Source without conventional treatment but after disinfection per CPCB surface water quality - Designated Best Use Water Quality Criteria.
2. The surface water quality of the Mettur dam shows that the values of the parameters including TDS, total hardness chloride, fluoride, calcium, magnesium, iron, sulfate, nitrate nitrogen and alkalinity are within the IS drinking water quality standards. BOD and DO value indicating that the surface water quality of Mettur dam can be placed in Class “C” i.e., Drinking water source after conventional treatment and disinfection per CPCB surface water quality - Designated Best Use Water Quality Criteria.
3. The surface water quality of the canal near Bharti nagar shows that the values of the parameters including nitrate nitrogen, chloride, fluoride, calcium, magnesium, iron and alkalinity are within the IS drinking water quality standards. BOD & DO value indicating that the surface water quality of canal near Bharti nagar can be placed in Class “C” i.e., Drinking water source after conventional

treatment and disinfection per CPCB surface water quality - Designated Best Use Water Quality Criteria.

4. The surface water quality of the Kundribalavu Lake shows that the values of the parameters including TDS, total hardness, calcium, magnesium, and alkalinity are within the IS drinking water quality standards. BOD and DO value indicating that the surface water quality of Kundribalavu Lake can be placed in Class “C” i.e., Drinking water source after conventional treatment and disinfection per CPCB surface water quality- Designated Best Use Water Quality Criteria.
5. The surface water quality of the MTPS Lake shows that the values of the parameters including TDS, total hardness chloride, fluoride, calcium, magnesium, iron, sulphate, nitrate nitrogen and alkalinity are within the IS drinking water quality standards. BOD and DO value indicating that the surface water quality of MTPS Lake can be placed in Class “C” i.e., Drinking water source after conventional treatment and disinfection per CPCB surface water quality - Designated Best Use Water Quality Criteria.
6. The surface water quality of the Cauveri River Downstream shows that the values of the parameters including TDS, total hardness, calcium, magnesium, and alkalinity are within the IS drinking water quality standards. BOD and DO value indicating that the surface water quality of Cauveri River Downstream can be placed in Class “C” i.e. Drinking water source after conventional treatment and disinfection per CPCB surface water quality- Designated Best Use Water Quality Criteria.
7. The surface water quality of the Caveri River Up stream shows that the values of the parameters including TDS, total hardness, calcium, magnesium, and alkalinity are within the IS drinking water quality standards. BOD and DO value indicating that the surface water quality of Caveri River Up stream can be placed in Class “C” i.e. Drinking water source after conventional treatment and disinfection per CPCB surface water quality - Designated Best Use Water Quality Criteria.

### **Soil Quality:**

**Core Zone :** The soil texture is 3/4 Brown, pH is 7.7 Amount of primary nutrients like Organic matter is 0.37 %, the available nitrogen 72.4 mg/kg is low to medium and available Potassium 19.6 mg/kg is medium to high & the available Phosphorus 9.2 mg/kg is medium to high range.

The overall fertility of this soil would be considered moderate to low. While the phosphorus levels are adequate, the low levels of organic matter, nitrogen, and potassium suggest that the soil may need amendments, particularly organic matter and fertilizers, to improve fertility.

**Buffer Zone:** 5/4 Dull Reddish Brown, pH ranges from 7.29 to 7.7. Amount of primary nutrients like Organic matter 0.41 to 0.81 %, the Available Nitrogen 56.4 to 102.2 mg/kg is low to high range, the Available Phosphorus 6.4 mg/kg to 12.6 mg/kg is low to high range, Available Potassium 14.7 mg/kg to 39.3 mg/kg is low to high range.

The overall fertility of this soil would be considered moderate. The soil has good potential due to its clay loam texture and relatively neutral pH, but the fertility is limited by low to medium levels of organic matter, nitrogen, and potassium.

### **Biological Environment:**

#### **Flora and fauna of Core Zone:**

In the core zone following variety of tree species were observed, like *Azadirachta Indica* (Vembu), *Ficus Religiosa* (Arasu), *Ficus Benghalensis* (Alamaram), *Samanea saman* (Seemai Vagai), *Chloroxylon Swietenia* (Porusu), *Strychnos nux-vomica* (Ettimaram), *Syzygium cumini* (Naval maram) etc.

The fauna primarily consisted of birds like *Corvus splendens* (House Crows), *Passer domesticus* (Sparrows), *Cuculus micropterus* (Indian Cuckoo), *Acridotheres tristis* (Common Myna), and alongside common animals such as *Viverricula indica* (Small Indian Civet), *Herpestes edwardsii* (Common Mongoose), *Pteropus giganteus* (Large Fruit Bat), *Presbytis entellus* (Common langur), etc.

#### **Buffer Zone:**

**Flora:** In Buffer Zone Varieties trees, shrubs, Flowering trees, such as *Abrus precatorius* (Gunja), *Abutilon indicum* (Indian mallow), *Acalypha ciliata* (Cat's Tail), *Syzygium cumini* (jamun), *Acalypha fruticosa* (Shrub Copperleaf), *Acanthospermum hispidum* (starbur), *Bombax ceiba* (cotton tree), *Cassia fistula* (golden shower tree), *Desmodium triflorum* (three-flower beggarweed) etc.

**Fauna:** *Macaca radiata* (Bonnet macaque), *Cervus unicolor* (Sambar), *Canis aureus* (Jackal), *Urva edwardsii* (Grey mongoose), *Varanus bengalensis* (Bengal monitor lizard), *Python molurus* (Indian rock python), *Chamaeleo zeylanicus* (Indian Chameleon), *Naja naja* (Indian Cobra), *Gallus sonneratii* (Grey junglefowl), *Pavo cristatus* (Peafowl)

**Endangered Species:** Based on both our primary and secondary surveys, a total of 10 species listed under Schedule I of the Wildlife Protection Act, indicating their endangered status and necessitating conservation efforts.

10 species listed under Schedule I are as follows: **Macaca radiata** (Bonnet macaque), **Cervus unicolor** (Sambar), **Canis aureus** (Jackal), **Urva edwardsii** (Grey mongoose), **Varanus bengalensis** (Bengal monitor lizard), **Python molurus** (Indian rock python), **Chamaeleo zeylanicus** (Indian Chameleon), **Naja naja** (Indian Cobra), **Gallus sonneratii** (Grey junglefowl), **Pavo cristatus** (Peafowl).

**Socio-economic Environment:** The surveyed villages boast adequate provisions for drinking water, Sanitation Facility, Health care, well-constructed roads, electricity, Communication facilities, educational institutions, Bank, Power facility and transportation services. The main sources of income in the study area are agriculture, Agriculture worker, Other Labor, Private Service, Government Service, Self Employed, Shops, Business & other animal husbandry.

## **3.ANTICIPATED ENVIRONMENTAL IMPACT AND MITIGATION MEASURES**

### **3.1. Air Environment**

**During the construction/ installation phase**, impacts on ambient air would be mainly due to dust emissions and movement of vehicles. However, these impacts would be short term in nature and limited only to the construction period. Dust suppression system (water sprinkling) will be used. Construction materials will be fully covered during transportation to the project site by road.

**During the operational phase**, incremental increase in maximum Ground level concentration (GLC) of PM<sub>10</sub>:1.78 µg/m<sup>3</sup>, PM<sub>2.5</sub>: 1.68 µg/m<sup>3</sup>, SO<sub>2</sub>:3.45 µg/m<sup>3</sup> , NO<sub>2</sub>: 3.58 µg/m<sup>3</sup>, CO: 0.008 mg/m<sup>3</sup>. Adequate Air pollution control systems (APCS) include pulse jet bag filters and wet scrubbers for boilers, DG sets of adequate stack height of 30m , wet scrubbers for incinerators, and water and caustic scrubbers for reactor furnace vents, gypsum scrubber vents, and process tail gas will be installed to mitigate the air emissions. A total of 19638 Nos. of Native tree species including Albizia Lebbeck, Azadirachta Indica, Cassia Fistula, Ficus Benghalensis, Tamarindus Indica *etc.*, will be planted, water sprinkling systems, dust suppression system, ,Vehicles with valid PUC certificates, *etc.* will be implemented.

### **3.2 Water Environment**

#### **Source of Fresh water:**

Freshwater will be sourced from Mettur Stanley Water Reservoir, for which already permission is received from Water Resources Department, Government of Tamil Nadu.

#### **Construction phase:**

Wastewater from domestic activities will be collected in a mobile STP and will be treated and reused for gardening.

#### **Operational phase:**

The total water requirement for the operational industry is 1176 KLD out of which fresh water requirement is 800 KLD & treated water (ETP & STP) is 396 KLD. Fresh water will be used 45 KLD for domestic purposes, 430 KLD will be used in Process, and 535 KLD in Boiler & Cooling Tower 169 KLD will be used in greenbelt. ETP treated effluent will be used 302.5 KLD in Boiler & Cooling Tower. STP treated water will be used 73.5 KLD in greenbelt development. ZLD will be maintained within the premises.

### 3.3 Land Use

The project will maintain a greenbelt covering 40.14 % of total area with an increased number of trees from existing 1,437 Nos. to 21,075 Nos. No waterbody or any other environmental structures are existing in the additional land parcel.

➤ **Agriculture Land:**

Based on analyzed imagery and ground truth, Crop land and its area extent has been extracted. The Agricultural Land area is about 16761.45 hectares which is 50.39 percent of the total 10 km radius study area.

➤ **Built up Land :**

Based on analysis of imagery using GIS and ground truth. The total Built up area is about 2433.32 hectares which is 7.32 percent of the total study area.

➤ **Waste/Barren Land:**

The Barren Land area occupies around 1041.08 ha which is 3.13 percent of the study area.

➤ **Forest:**

Forest area is estimated around 7022.96 ha which is 21.11 percent of the study area.

➤ **Wet Land-Water Bodies:**

Based on satellite data and ground truth, the total area covered by the inland wetland, river and water bodies is 6003.48 hectares which is 18.05 percent of the total study area

### 3.4 Soil Quality

The major activities which would negatively impact the soil environment would be loading & unloading of raw material, manufacturing process of product, operation of machinery (Boiler, DG sets, Incinerator, ETP, STP, etc.), handling of raw material, transportation of raw material, finished product and waste. The aspects of the activities would be soil erosion, waste generation and spillage of hazardous wastes or chemical on the soil which could lead to permanent damage to land productivity, destabilization of landscape, decrease in permeability, damage to fertility of soil, chemical degradation and indirect negative impact on other aspects of environment like Air, Water & Ecology and Biodiversity.

To minimize such impacts, mitigation measures like proper treatment and disposal of waste, proper maintenance of equipment and storage for chemicals, provision and maintenance of Green areas in the project site and nearby areas. Procedures for maintenance of equipment would ensure that the risk is minimized and clean-up response is rapid if any spill occurs. The tankers, drums etc., would be ISO approved and as per the specifications of internationally approved vendors so as to minimise any spillage, etc. therefore there would be no impact on soil after this precaution is ensured. For any spills-apart from dumps, provision of spill kits are being made available.

### **3.5 Socio-Economic**

Employment opportunities will be generated for the local population during the construction/installation phase which will lead to a rise in income and improve standard of living. The expansion of existing industry would also generate jobs for the workers during the construction phase as well as during the operation phase. It will provide direct and indirect employment to the local youth population.

### **3.6 Ecology & Biodiversity**

The major activities which would have an impact on the Ecology and Biodiversity in the project area and the surroundings would be site preparation, excavation, manufacturing process, operation of machinery & equipment, transportation, loading & unloading of raw material. The aspects of the activities would be dust emission, increase in noise level, noise generation, water contamination, vehicular emission and waste generation which would directly /indirectly impact in decrease in transpiration rate of flora, loss of habitat, decrease in plant/tree cover, disturbance to avi-fauna and other species, premature senescence of floral species and hence decrease in population of local faunal species in the area and the surroundings. To minimize such impacts, mitigation measures like provision of air pollution control equipment, scrubbing system to the vents, provision and proper maintenance of green area, installation of water sprinkling systems and dust suppression system, provision of noise barriers, maintenance of vehicular movement near the project site and proper disposal and treatment of wastes generated from the project site. Vehicular movement for transportation of raw material will be carried out only in day-time and will try to avoid unnecessary honking with the help of sign boards. Green belt/greenery will be developed along most of the periphery of the project area as well as along roads.

### **3.7 Noise and Vibration**

The major activities which would have an impact on the environment would be operation of machinery and transportation. The aspects of the activities would be an increase in noise level and increased noise generation which could lead to physiological and psychological problems to workers and nearby population, increased vibration in the nearby areas and an indirect decrease in the biological diversity in the nearby area. To minimize such impacts, mitigation measures like restriction of activities in the limited project area, proper maintenance of equipment and machinery, maintenance of noise barriers, provision of protective devices like earmuffs, compactors, silencers etc., installation of green area in the nearby area, provision of No-Honking Zone in the area, maintenance of vehicular and traffic movement etc. would be adapted in the project site.

### **3.8 Hydrology and Geology**

The major activities which would have an impact on the hydrology and geology would be excavation, manufacturing process, operation of machinery & equipment, working of daily activity of laborers, staff and visitors and transportation. The aspects of the activities are generation of Solid Waste, E-

Waste and Bio-Medical Waste, Waste water generation, spillage/leakage of waste/chemical which would impact in deterioration of water quality (in both Surface Water and Groundwater). To minimize such impacts, mitigation measures proper channelization of waste water and proper disposal, all probable leakage areas such as pipelines, joints, pumps and structure of reactor/ storage vessel inspection, installation of leak Detector(s), case of spills of chemicals, dry adsorbents/cotton shall be used for cleaning instead of water and Proper treatment and disposal of Waste water shall be adapted in the project site.

### **3.9 Solid and Hazardous Waste**

Municipal solid waste:

Total solid waste generated from the plant is 31.94 TPA; out of which 12.78 TPA is biodegradable waste (will be treated in an in-house organic waste convertor (OWC) and use manure for greenbelt development and 19.16 TPA is non-biodegradable waste generated will be given to authorized recycler / vendors.

Hazardous Waste:

Hazardous waste of 62 TPA Spent / used Oil and 130 TPA Discarded Barrels will be sent to CPCB/TNPCB Authorized recyclers for recover/reuse, 1025 TPA Chemical Sludge from Wastewater Treatment will be sent to Common Landfill /TSDF, 155 TPA Process/ Distillation Residue will be Incinerated in house/in common TSDF and 51.5 TPA Wastes or residues containing oil sent to CPCB/TNPCB Authorized recyclers/Coprocessing.

Construction & Demolition wastes during the construction phase shall be collected and disposed off as per guidelines.

### **3.10 Traffic density**

The activities which would probably be responsible for traffic congestion would be transportation of raw materials and products for which trucks and tempo will be used. Traffic to the different sites during construction/installation will be intensive and heavier than at present in normal operating conditions. The aspect of the activities would be generation of dust from movement of vehicles are likely to cause some impacts on the working population within the immediate vicinity of the project site. In turn, it will subject existing roads to more stress. To control the impact, dust suppression system (water sprinkling) will be used as per requirement at the construction site. Construction materials will be fully covered during transportation to the project site by road. Vehicle flow during shift changes will be regulated by allowing exits in a phased manner. The present road conditions are reasonably good for proposed movement of traffic. Preventive maintenance will be carried out for vehicles and pollution checks on a periodic basis will be mandatory. All the activities will be done for a limited period of time.



## 4. ALTERNATIVE ANALYSIS

The project envisages “Expansion of existing Refrigerant Gases Manufacturing Unit”. The assessment for the site is presented below:

- Land: Adequate land of 16.52 ha for the proposed expansion activities at site is available abutting the site in the possession of the company. This total area will be adequate for the proposed expansion including locating our environmental components like greenbelt area, parking, HW storage area, etc.
- The site is well connected with roads and railway networks.
- No Rehabilitation and resettlement is required

Considering the above mentioned advantages of the project location the existing site has been considered for the proposed expansion. This would also give benefits in utilizing the existing utilities and infrastructure within the project site to have minimal environmental and social footprints.

## 5. ENVIRONMENTAL MONITORING PROGRAMME

M/s Chemplast Sanmar Limited will ensure that the environmental performances of all the activities are monitored throughout the execution of the various project activities. Monitoring will include all the aspects and parameters related to the process emissions from the manufacturing process, storage area, work zone area, quantities of waste generated, effluent generation and its characteristics, Environmental quality of components like Air, water, Soil, Noise are being verified that they meet the prescribed standards. All the reports will be periodically submitted to the concerned regulatory authorities as compliance, audit reports.

*Table 5. Monitoring Plan-Operation Phase*

Monitoring Frequency	Parameters	No. of Locations	Numbers Per Year	Responsibility of Maintaining Records
Ambient Air Quality- Monthly	PM10	2 in Onsite and 4 in Buffer	72	NABL Accredited Lab Result by EMC (Air Incharge)
	PM2.5			
	SO <sub>2</sub>			
	NO <sub>x</sub>			
	VOCs			
Process Stack- Monthly	PM	2 No. Reactor Furnace vent, 2 No. Gypsum scrubber vent, 2 No. Process tail gas	72	NABL Accredited Lab Result EMC (Air Incharge)
	SO <sub>2</sub>			
	NO <sub>x</sub>			
	VOCs			

Monitoring Frequency	Parameters	No. of Locations	Numbers Per Year	Responsibility of Maintaining Records
Utility Stack- Monthly	PM	2 No. Boiler Stack	72	NABL Accredited Lab Result EMC (Air Incharge)
	SO <sub>2</sub>	3 No. DG Sets		
	NO <sub>x</sub>			
	VOCs	1 No. Incinerator		
DG sets, Boilers, M23 Incinerator, Process Stack - Monthly	Operational hrs and the exit velocity	3 DG Sets	12	Log books EMC (Air Incharge)
		2 Boilers		
		1 Incinerator		
		6 Process Stacks		
Water Quality- Yearly	Drinking water standard IS – 10500	Surface water	1	NABL Accredited Lab Result EMC (Water Incharge)
Waste Water Quality (Treated & Untreated)- Daily	BOD	ETP inlet & outlet, RO inlet & Outlet, MEE inlet & Outlet, STP inlet & outlet	2920	NABL Accredited Lab Result & Logbooks EMC (Water Incharge)
	COD			
	TSS			
	TDS			
	pH			
	Oil & Grease			

<b>Monitoring Frequency</b>	<b>Parameters</b>	<b>No. of Locations</b>	<b>Numbers Per Year</b>	<b>Responsibility of Maintaining Records</b>
Waste Water Quality (Treated & Untreated)- Monthly	CPCB discharge Parameters as given for Organic Chemical Manufacturing Industry (GSR 608 (E) dated 21st July 2010		96	
Surface water- yearly	Drinking water standard IS – 10500 and CPCB Surface water quality	Surface water: 1 in onsite location	1	NABL Accredited Lab Result External Laboratory analyst & incharge
Day & Night level Noise Monitoring- Monthly	Leq (night), Leq (day), Leq (24 hourly)	2 in onsite location	24	NABL Accredited Lab Result EMC (Noise Incharge)
Qualitative and Quantitative Parameters- Yearly	All Parameters to check soil fertility & the presence of Pesticide	7 in Buffer location	7	NABL Accredited Lab Result EMC (Soil Incharge)

<b>Monitoring Frequency</b>	<b>Parameters</b>	<b>No. of Locations</b>	<b>Numbers Per Year</b>	<b>Responsibility of Maintaining Records</b>
Records of generation, handling, storage, transportation and disposal-Daily	Hazardous, Non Hazardous, E-waste, Organic waste, recyclable waste, manure generated	-	5	Logbooks
Sludge Characteristics and Quantity-Monthly	TCLP test and Quantity	ETP Sludge, STP sludge	24	NABL Accredited Lab Result External Laboratory analyst & incharge
Green belt & plantation monitoring-Yearly	Survival rate of the planted Trees, Greenbelt development status & Green area in 8.43 ha	-	1	Logbooks EMC (gardener) -External
Checking effectiveness of the Corporate Social Responsibility/ Corporate Environmental Responsibility-Yearly	Cost spent and where it is carried out	-	1	Audit Reports CSR Team

<b>Monitoring Frequency</b>	<b>Parameters</b>	<b>No. of Locations</b>	<b>Numbers Per Year</b>	<b>Responsibility of Maintaining Records</b>
Energy savings- Yearly	Energy consumption in terms of 1. Quantity of fossil fuels 2. Power drawn Renewable energy 1. Solar harvesting 2. use of Alternate source of energy	-	1	Energy meter Utility Team
Work Zone-Yearly	PM10	Process Area, DG Set Area,	1	NABL Accredited Lab Result External Laboratory analyst & incharge
	PM2.5			
	SO2			
	NOX			
	CO2	Raw material and finished good Storage Area		
	CO			
	VOCs			

## 6. ADDITIONAL STUDIES

### 6.1 INTRODUCTION

As per the Standard Terms of Reference issued vide letter No. **IA-J-11011/225/2024-IA-II(I)** dated 31.05.2024 by Ministry of Environment, Forest, and Climate Change (MoEFCC), New Delhi following Additional Studies required to be carried out for the proposed expansion project.

#### 1. Hazard Identification and Risk Management

Potential risks like leaks and tank ruptures were identified and evaluated based on their likelihood and severity using a risk matrix. The assessment considered factors such as materials, handling methods, and potential containment failures to identify hazards and their consequences.

**Type of Hazards:** The project faces both natural and man-made hazards. Natural hazards include earthquakes and floods. Man-made hazards stem from potential fires, explosions, electrical accidents, chemical spills, and toxic chemical releases. These hazards can be caused by factors such as faulty equipment, human error, and extreme weather conditions.

#### General Safety Measures

The area under study falls in Zone-II, according to the Indian Standard Seismic Zoning Map. Suitable seismic coefficients in horizontal and vertical directions respectively, will be adopted while designing the structure. There has been no earthquake in the last 365 days.

- The project is situated in the Seismic zone-II area. Special attention has been given to the structural design of foundation, elements of masonry, timber, plain concrete, reinforced concrete, pre-stressed concrete, and structural steel.
- All applicable guidelines have been followed in this regard to ensure safety of the building.
- Smoking is totally prohibited inside the premises.
- Vehicle access is strictly controlled / monitored.
- Ventilation is sufficient to cope with the maximum expected vapour levels in the building.
- Storage tank vents to the atmosphere are sized for fire-heated emergency vapour release.
- Electrical equipment is explosion-proof to meet national electrical code requirements.
- Dry chemical extinguishers are accessible for small fires. An adequate supply of hand held and wheeled types is available.
- Hydrants are strategically placed with adequate hoses periodically tested for its integrity.

- Small spills are being remediated with sand, earth, or other non-combustible absorbent material, and the area then flushed with water. Larger spills are being diluted with water and collected in a dyke for later disposal.

### **Production and Utility Operations:**

- **Chemical Processes:** Risk of runaway reactions, fires, explosions, and chemical exposure.

#### **Mitigation includes**

- DCS control, safety vents, cooling systems, pressure relief valves, and emergency procedures.
- Exothermic reaction will be controlled by adequate dosing of reaction chemicals in a fixed time, having adequate cooling water/chemical circulation in the jacket of reaction vessels thereby absorbing any energy generated due to exothermicity and controlling pressurization.
- High temperature, high pressure and auto cutoff input reaction chemicals
- During runaway reaction, downstream of safety vent in the reactor will have a catch/dump tank to collect releasing material (liquid, gas and/or vapor)
- To ensure proper use of PPEs by workers like gloves, apron, mask, gumboot & helmet
- Periodical occupational health checks of the workers
- Closed loop system with high alarm

**Boiler Operations:** Risk of fire, explosion, heat stress, noise, and injury

#### **Mitigation includes**

- Competent & trained person should be employed for boiler Operation.
- Regular inspection and maintenance shall be done.
- Ensure the working of Safety valves, Water-level control and low-water fuel cut-off, Water-gauge glass by periodical maintenance.
- Area shall be well ventilated and adequately illuminated for safe working.
- Use of PPEs like ear plugs, ear muffs, lightweight cotton clothing

## **2. Risk Assessment and Disaster Management Plan**

The primary goal of the plan is to prepare for and effectively respond to disasters. This includes:

- ❖ Identifying and assessing potential hazards and risks.
- ❖ Developing emergency response procedures.
- ❖ Protecting personnel, property, and the environment.

- ❖ Coordinating with external agencies.
- ❖ Learning from incidents to prevent recurrence.

### **Onsite Safety Measures:**

#### **i. Mitigation Measures against fire/ or other**

The facility will implement the following fire safety measures:

- Clear evacuation routes and signage
- Fire alarm systems with regular checks
- Adequate access for fire engines
- Fire-resistant materials in electrical areas
- Emergency lighting for escape routes
- Fire suppression systems including sprinklers and water storage
- Fire extinguishers and hydrants as required by regulations
- Lightning protection

**Disaster Preparedness Offsite:** The Disaster Management Plan of the Manufacturing unit will be integrated with a plan prepared for the region by District Revenue authorities.

#### **Offsite Action taken in the event of Fire:**

**Initial Response:** Use water or fire extinguishers to contain small fires. Trained personnel to handle larger fires.

**Notification:** Anyone discovering a fire must inform security, providing details about the fire's location, type, and severity.

**Security Actions:** Activate alarm, cordon off area, call fire department, and initiate evacuation.

**Actions in case of Flood/Tsunami:** As stated earlier, such eventualities are not expected considering the past weather records of the entire Mettur dam encompassing the project site. However, the Manufacturing unit management shall take all necessary precautions in consultation with the State weather and disaster management authorities.

### **3. Study On Decarbonisation Program**

- ❖ **Technology Adoption:** The unit will utilize the most advanced available technology for manufacturing.
- ❖ **Production Goals:** The aim is to maximize product yield while minimizing pollution and carbon emissions.
- ❖ **Industry Focus:** The industry prioritizes both product quality and environmental protection.



- ❖ **Continuous Improvement:** The unit will regularly update and replace machinery with newer, better technology.

## **6.2 PUBLIC CONSULTATION**

The Draft EIA is being submitted with a request to conduct Public Hearing.

## **7. PROJECT BENEFITS**

### **7.1 ENVIRONMENT BENEFIT**

- The project is currently operating with APCS to abide by the environmental norms. Similarly, APCS will be installed for the proposed process and Utility equipments so as to continue with complying with emission norms.
- Organic Municipal Solid Waste will be managed by in-house OWC and Inorganic waste will be sold to authorized recyclers. Hazardous wastes will be managed by proper collection, storage and disposal through common TSDF.

### **7.2 ECONOMIC BENEFIT**

The proposed expansion will bring direct revenue to Government / local panchayats . Also there will be an increase in small scale vending activities which will improve economic activities for local people.

### **7.3 SOCIAL BENEFIT**

Due to the proposed expansion 150 Nos. of permanent employment and 200 Nos. of contractual employment will be given.

### **7.4 OTHER TANGIBLE BENEFIT**

The global refrigerants market is projected to grow significantly, with the market size expected to reach USD 40.31 billion by 2030, growing at a CAGR of 7.10%. In Asia Pacific, which is the largest refrigerants market, the demand for inorganic refrigerants is expected to rise due to the phase-out of HCFCs and HFCs, with China being the largest market in terms of volume. The demand for refrigerants is driven by factors like the increasing consumption of refrigeration and air conditioning equipment in commercial buildings and supermarkets, rapid urbanization, and the growing infrastructure industry in countries like India and China.

The project will contribute to the Government treasury by way of direct and indirect taxes, like GST, Custom Duty and Income Tax. Chemplast Sanmar Limited will contribute funds for undertaking infrastructure development in surrounding villages, including roads, community centers, training centers, traditional activity, health, education under the Corporate Social Responsibility, as prescribed under the Companies Act.

## 8. ENVIRONMENT MANAGEMENT PLAN

The effective environment management system involves proper and regular monitoring of the environment components on a continual basis. Based on the project descriptions and the activities associated, the Environment Management plan has been prepared for all the valued Components for which the Budget of INR 307.12 lakhs after expansion as capital cost & 101.5 INR Lakhs after expansion as recurring cost has been proposed by M/s Chemplast Sanmar Limited. Work zone monitoring shall be carried out for gaseous pollutants and dust. Records will be kept in standard Form as per Factories Rules. Location for sampling shall be identified. Quarterly and half yearly monitoring will be carried out during the operation phase.

Capital Investment for the proposed Expansion: **INR 1000.00 Cr.**

### i) Capital Cost of Environment Management Activity:

*Table 6. Capital Expenditure*

Sr. No.	Particulars	Existing	Proposed	After Expansion
		INR Lakhs per Annum		
1	Air Management	9.53	150.0	159.53
2	Solid / Hazardous Waste Management	3.5	7.0	10.5
3	Wastewater Management	12.09	100.0	112.09
4	Landscaping / Plantation	0.0	10.0	10.0
5	Occupational Health & Safety	7.0	8.0	15.0
<b>Total</b>		<b>32.12</b>	<b>275.0</b>	<b>307.12</b>

### ii) Recurring Cost

*Table 7. Recurring Expenditure*

S. No.	Particulars	Existing	Proposed	After Expansion
		INR Lakhs per Annum		
1	Air Management	1.0	5.0	6.0
2	Solid / Hazardous Waste Management	0.5	9.0	9.5
3	Wastewater Management	1.5	5.0	6.5
4	Landscaping / Plantation	10.0	26.0	36.0
5	Environment Monitoring	6.0	6.0	12.0
6	Occupational Health & Safety	15	16.5	31.5
<b>Total</b>		<b>34.00</b>	<b>67.5</b>	<b>101.5</b>

## **9. CONCLUSION**

R-32 is an alternate for R-22 as the former one has zero Ozone Depletion Substance ODS, hence this project is to introduce a green product in place of a low ODS material. The proposed expansion will result in direct & indirect employment and economic growth of the project area apart from the growth in the top line of the company. Further, this project will bring additional revenue to the Government apart from various CSR activities which will be beneficial to the nearby community.