Half Yearly Compliance Report
2024
01 Jun(01 Oct - 31 Mar)

Acknowledgment

Proposal Name	EXPANSION PROJECTS OF CHLOROMETHANES AND PVC PLANTS OF M/S CHEMPLAST SANMAR LIMITED AT METTUR SALEM DISTRICT, TAMILNADU
Name of Entity / Corporate Office	CHEMPLAST SANMAR LIMITED
Village(s)	N/A
District	SALEM

Proposal No.	IA/TN/IND/21639/1910
Plot / Survey / Khasra No.	N/A
State	TAMIL NADU
MoEF File No.	J-11011/18/96-1A.II(I)

Category	Industrial Projects - 2
Sub-District	N/A
Entity's PAN	NA
Entity name as per PAN	NA

Compliance Reporting Details

Reporting Year	2024
Remarks (if any)	Bi-annual compliance-Plant-II
Reporting Period	01 Jun(01 Oct - 31 Mar)

Details of Production and Project Area

Name of Entity / Corporate Office CHEMPLAST SANMAR LIMITED

	Project Area as per EC Granted	Annual Project Area in Possession
Private	0	0
Revenue Land	0	0
Forest	0	0
Others	0	0
Total	0	0

Production Capacity

Sr. no	Product Name	units	Valid Upto	Capacity	Production last year	Capacity as per CTO
1	Hydrochloric Acid	Tons per Annum (TPA)	31/03/2027	68000	67904.42	68000
2	PVC resins	Tons per Annum (TPA)	31/03/2027	66000	65915	66000
3	Methyl chloride (CH3Cl),Methylene Chloride (CH2Cl2),Chloroform(CHCl3),Carbon Tetra Chloride(CCl 4	Tons per Annum (TPA)	31/03/2027	33580	29966.29	33580

Conditions

Specific Conditions

Sr.No.	Condition Type	Condition Details
1	Statutory compliance	Any further expansion of the plant can be taken up only with prior approval of this Ministry

PPs Submission: Complied Noted for compliance. The PVC paste resin manufacturing unit at Mettur was started in 1967. The unit has a valid CTO from TNPCB vide Consent Order No. APCI/182/85 for a production capacity of 21,300 TPA of PVC and 13,320 TPA of HCl. An Environmental Clearance was subsequently granted by MoEF under file number J-11011/18/96-IA II (Ind) dated February 12, 1997, for a production capacity of 60,000 TPA of PVC resin and 22,000 TPA of chloromethane. The unit has implemented best available technologies (BAT) in the plant maintenance activities and lower break-down hours, resulted with increase in "On-Stream" hours of the manufacturing facility. These improvements have resulted in increased production output without any additional infrastructure. Following the verification and Site inspection by the District Environmental Engineer (DEE), Salem, TNPCB has issued an amendment in the CTO vide Proceeding No. T9/TNPCB/F.864/SLM/R/L/W dated 14.10.2005 (attached as Annexure – 2), approving a 10% increase in PVC production capacity to 66,000 TPA. The unit has been operating at this capacity since then.	Date: 01/06/2024

2	AIR QUALITY MONITORING AND PRESERVATION	The gaseous and SPM emission(s) from various units should confirm to the standards prescribed by the State Pollution Control Board from time to time. At no time, the emissions should go beyond the prescribed limits. In the event of failure of any pollution control system adopted by the units, the respective unit(s) must be put out of operation immediately and shall not be restarted until the control systems are rectified to achieve the desired efficiency.

PPs Submission: Being Complied All the Air pollution control equipments are in operation in an efficient manner. Monthly monitoring of stack emissions is carried out through NABL and MoEF & CC accredited Laboratory and report is being submitted to TNPCB on monthly basis. Stack Emission monitoring data during Compliance period (October 2023 to March 2024) is attached as Annexure – 3. There is failure / down-time of any pollution control system during the compliance period.	Date: 01/06/2024

3	AIR QUALITY MONITORING AND PRESERVATION	Monitoring of ambient air quality and stack emissions shall be periodically carried out in consultations with SPCB and report submitted to the Board quarterly and to the Ministry (Regional Office at Bangalore) half-yearly.

	PPs Submission: Being Complied Ambient Air quality is monitored in 12 Locations through NABL and MoEF & CC accredited laboratory on monthly basis and monitored results are submitted to TNPCB on monthly basis. Chlorine monitors (4 numbers) are installed in the Chlorine handling area and monitoring on real time basis at PVC plant. Similarly, 12 Nos of Chlorine monitors installed at Caustic Soda plant and 1 no of HCL monitor installed in the HCL plant. Ambient Air Quality monitoring data during Compliance period (October 2023 to March 2024) is attached as annexure 4 Monthly monitoring of stack emissions is carried out through NABL and MoEF & CC accredited Laboratory and report is being submitted to TNPCB on monthly basis. Stack Emission monitoring data during Compliance period (October 2023 to March 2024) is attached. A consolidated report of AAQ/Stack monitoring is submitted to MoEF (Regional Office) bi-annually. Continuous Ambient Air Quality Monitoring Stations are installed at upwind and downwind directions to monitor SO2, NOx, PM10, VOC and Chlorine. The real time data are connected with Care Air Centre of TNPCB. The real-time monitored Values are also displayed at plant entrance for public view. Photo of online display board is attached Annexure – 5.	Date: 01/06/2024
4	Noise Monitoring & Prevention	Adequate Noise control measures shall be taken up so as to keep noise levels below 85 dB (A) in the work environment. The ambient noise level must not exceed the standards stipulated under EPA/State authorities.
	PPs Submission: Being Complied Adequate Noise Control Measures are implemented in the work area so that the Ambient Noise Level never exceeds the standard as prescribed by the Tamil Nadu Pollution Control Board. In –built engineering control measures have been provided for the noise prone equipment's. Apart from this, PPEs like earmuff / earplugs are provided to all the employees working in the noise prone areas as a secondary protection from noise. Ambient Noise Level is measured at 12 Locations through NABL and MoEF & CC accredited laboratory on monthly basis and the report on the same is submitted to TNPCB on monthly basis. Noise level monitored data during the compliance period is found within the standard and the report is attached as Annexure – 6.	Date: 01/06/2024
5	WATER QUALITY MONITORING AND PRESERVATION	The effluent generation from the Chloromethanes and PVC plants must be maintained at the present level even after expansion and steps must be continued to further reduce the same. At any case, the quantity of effluent shall not exceed 30 m3 /hr for PVC plant and 9.30m3/hr chloromethane section. The effluents must be treated to meet the prescribed norms under EPA/State Pollution Control Board before discharging outside the premises. Effluent quality must be monitored to SPCB every quarter and Ministry every six-months
	PPs Submission: Being Complied The effluent generation at PVC plant section (Polymer) during the compliance period is 15.66 KL/Hr and from Chloromethane plant is 3.12 KL/hour. Effluents streams are collected and treated at Zero liquid discharge plant and the recovered water is recycled back to the process. Company is sustaining zero liquid discharge status since September 2009. Filtered polymer water is recycled back to the process and effluent generated from chloromethane plant is treated at ZLD and recycled back to the process. There is no effluent discharge to outside premises from both the plants. The integrity of ZLD is being checked by SPCB by taking samples on monthly basis. Being achieved ZLD status, the effluent quality has not applicable. However, the quantity of water recycled is being reported.	Date: 01/06/2024
6	WASTE MANAGEMENT	The hazardous waste including residual solvent, heavy ends, spent catalyst, Mercury bearing sludge, VCM high boils, etc. must be handled as per Hazardous and other Waste (Management and Handling) Rules, 1989 and necessary approval from SPCB must be obtained.
	PPs Submission: Complied The hazardous wastes are handled as per the provisions of Hazardous Waste and other (Management and Handling) Rules 2016. The Authorization for handling hazardous waste has been obtained from	Date: 01/06/2024

Tamil Nadu Pollution Control Board vides HWA Order NO. 20HFC31185293 dated 31/08/2020 (Valid till 31/03/2025) for incinerating heavy ends and high boils of VCM. Mercury bearing sludge is totally eliminated by the introduction of Membrane process in Aug-07 at Caustic Soda Plant.		
7	WASTE MANAGEMENT	The landfill sites for hazardous waste disposal must be properly reclaimed with a time bound action plan. Ground water monitoring should be done regularly at a few selected sites within the factory estate and premises and data submitted to State Board and Ministry. The new landfill sites must be concrete impervious lining to prevent possible ground water leaching.
PPs Submission: Being Complied The HW landfill at Chloralkali plant is of composite liner system, which is totally impervious and prevents ground water leaching, constructed as per the CPCB guidelines. Piezometric and Bore wells have been installed around the HW landfills for regular monitoring of Ground Water. Ground Water from the above scientifically identified piezometric and bore wells are being monitored by Tamil Nadu Pollution Control Board from time to time. From the year 2020, all hazardous waste is being disposed to common TSDF of M/s. Re Sustainability IWM Solutions Limited (Formerly Known as "Tamilnadu Waste Management Limited"), at Virudhunagar and Pochampalli Taluk, Krishnagiri District – 635206 and operation of onsite SLF is completely stopped.		Date: 01/06/2024
8	WASTE MANAGEMENT	State of the art incinerator with waste heat recovery and scrubbing facility must be installed for incinerating HI boiling liquids (VCM high boils) before expansion projects are commissioned.
PPs Submission: Complied "State of art" Incinerator with waste heat recovery and scrubbing facility was commissioned in 1998 for incinerating VCM high boils and is being validated from time to time. Dioxins & Furans level at the incinerator outlet is being checked through M/s SMS Labs Services Private Limited (NABL and MoEF approved Laboratory) once in a year and the results are in compliance with the norms. Latest monitoring report is attached as Annexure – 7.		Date: 01/06/2024
9	WASTE MANAGEMENT	The company must expedite the R&D efforts to extract mercury the brine sludge (Av 1450 mg/kg) to the least possible (preferably 4-100 ppm)
PPs Submission: Complied The Caustic Soda manufacturing plant graduated from the legacy mercury cell technology to the cutting-edge membrane cell process, significantly reducing its environmental impact. Chemplast Sanmar Ltd, in keeping with its environment-friendly approach to business completed the switch over this August 2007, well ahead of the mandated timeline. The company spent Rs 800 million in the switch over at its mercury based to membrane-based technology and sludge was generated mercury free from Brine Sludge. The Brine sludge is finally processed through drum filter for maximizing the removal of moisture content and moved to Secured landfill facility for disposal. From 1st March 2019 on wards Brine sludge is being transported and disposed to common TSDF of M/s. Re Sustainability IWM Solutions Limited (Formerly Known as "Tamilnadu Waste Management Limited"), Virudhungar and Pochampalli Taluk, Krishnagiri District – 635206.		Date: 01/06/2024
10	WASTE MANAGEMENT	Handling, manufacturing, storage and transportation of hazardous chemicals must be in accordance with the Manufacture, storage and import of Hazardous Chemicals Rules, 1989 as amended in October 1994. Necessary approvals from Chief Inspectorate of Factories/ Chief Controller of Explosives must be obtained as per regulations.
PPs Submission: Being Complied Hazardous chemicals are handled as per the guidelines of Manufacture, storage and import of Hazardous Chemicals Rules 1989 as amended. Necessary approvals from Factory Inspectorate / Chief Controller of Explosives are in place and periodically renewed as per the requirement. PVC Plant: 1.VCM storage licenses: (License No.S/HO/TN/03/196S (S2669) & (License No. S/HO/TN/03/224 (S2720) valid up to 30.09.2028. 2.Chlorine storage for 68 tonners license No:		Date: 01/06/2024

		G/SC/TN/06/1412 (G 18458) valid up to 30.09.2025 Chloromethanes Plant: 1.Methanol storage of 1384 KL: License No.P/HQ/TN/15/152 (P12841) valid up to 31.12.2024. 2.Methyl chloride storage of 29MT: License No.S/HO/TN/03/229 (S2757) valid up to 31.09.2026.	
11	GREENBELT	A green belt development plan taking into account the expanded activities, common waste disposal sites and other land uses must be made which should ensure coverage of minimum 30 % of the total land area.	
		PPs Submission: Complied Extensive green belt is developed and well maintained. Chloralkali Plant: Company is currently having green belt comprising of around 17000 trees covering in 8.5 Hectares area (34.45%) PVC Plant: Company is currently having green belt comprising of around 18380 trees in 10.0 Hectares area. (38%).	Date: 01/06/2024
12	Corporate Environmental Responsibility	The project authorities must set up Environmental Cell with adequate facilities for collection and analysis of samples, monitoring of environmental quality parameters, and to carry out time bound action plans related to environmental management and pollution control.	
		PPs Submission: Complied Environment Management cell is in place with qualified Engineer to carry out the Environmental Management and Monitoring functions at plant supported by Corporate Environment Team from Head Office. Organogram of Environment Cell is attached as Annexure - 8. CSL established Full-fledged laboratory facilities for Environmental parameter monitoring. Lab photos shall be attached as Annexure - 9.	Date: 01/06/2024
13	Corporate Environmental Responsibility	The funds earmarked for the environmental protection measures shall not be diverted for other purposes and year wise expenditure reported to this Ministry for proper monitoring of the project implementation	
		PPs Submission: Being Complied Separate budget for the environmental protection measures (Capital and Recurring cost) is earmarked and are not diverted for any other purpose. All the expenses are recorded in advanced accounting system (SAP) of the company. Capital Cost utilized for Environment safeguard and protection measures during the compliance period Oct 23 to March 24) and the breakup details are as follows. 1.Operational cost of ZLD ETP & Incinerator –Rs.3.48 Crores. 2.Environmental surveillance study of PVC & Chloromethane plants (Air, water, Soil sampling & analysis) using MoEF approved Lab – Rs.1.0 Lakhs/- 3.Ambient Air quality & stack monitoring – Rs. 4.71 Lakhs. 4.Revamping of dust extraction system at PVC dryer: Rs.10 lakhs. 5.Installation of HCL monitor at HCL plant – Rs. 2.5 Lakhs 6.Installation of IP enabled camera to demonstrate ZLD status Rs. 2.5 Lakhs 7.Waste generation and disposal audit and compliance audit on secured landfill as per CPCB protocol through external agency (Anna University)-Rs.4 lakhs 8.Installation of water Quality watch center: Rs.6.08Lakhs. 9.Bio Medical waste handling and disposal - Rs.0.5lakhs 10.ETP Sludge handling and disposal to Common TSDF – Virudhunagar Rs.5.39 lakhs 11.ZLD Sludge handling and co-processing in M/s Dalmia Cements - Trichy- Rs.1.10 lakhs. 12.Roof Rainwater collection and reuse in process - Rs.80 lakhs. 13.Installation of VOC sensor in the incinerator stack Rs.2.5Lakhs 14.Installation of HCL flow meter in incinerator Rs.2.5Lakhs 15.Additional Piezometric Bore wells - 6nos – Rs.2.44 lakhs	Date: 01/06/2024
14	Statutory compliance	Six-monthly progress reports on the implementation status of environmental conditions mentioned above must be submitted to Ministry/CPCB and the State Pollution Control Board regularly. The project will be monitored inter-alia by Ministry’s Regional Office at Bangalore.	
		PPs Submission: Being Complied EC Compliance status report for the compliance period April'23 to September'23 submitted to MoEF	Date:

& CC , CPCB and TNPCB vide our Letter Ref No. dated 23.11.2023 Deputy Director General and Scientist C, IRO, MoEF& CC, Chennai visited our plant on 30.01.2024		01/06/2024
15	Statutory compliance	The project authority must strictly comply with the stipulations made by the State Government and State Pollution Control Board in the NOC granted to the Chloromethane and PVC project expansion.
PPs Submission: Complied The Compliance status to conditions stipulated in the TNPCB NOC dated 17th June 1996 is attached as Annexure – 1.		Date: 01/06/2024
16	WATER QUALITY MONITORING AND PRESERVATION	The company must adopt water conservation measures in the plant including maximum recycling to maintain the raw water requirement at the present level even after the above-proposed expansion.
PPs Submission: Being Complied Various Control measures have been taken for conservation of water by adopting the reduce, recycle and reuse techniques. Zero Liquid Discharge (ZLD) plant is operational at PVC Plant at the cost of Rs.280 million in June-2008. The total effluent water is processed through ZLD and recycled back to the process. Salt recovered from the Evaporator of ZLD is reused at Caustic Soda Plant for Brine preparation. The overall process involves the extensive pretreatment to remove the suspended solids, oil & grease, organics and hardness. About 87% of water is recovered through dual stage High Efficient Reverse Osmosis (HERO) system. Mechanical vapor compressors are used to recover 10% of water from the RO reject after evaporation followed by centrifuge. Quantity of Water reprocessed through ZLD during the compliance period of October'2023 to March'2024 is as follows. PVC Plant: 70487 KL (385.17KLD) Caustic Soda Plant: 43669 KL (238.63KLD) Qty. of Salt recovered and reused: 303.21MT (1.66 MT/day) Rainwater collection system from the building roofs is also implemented		Date: 01/06/2024

Visit Remarks

Last Site Visit Report Date:	N/A
Additional Remarks:	