

DECEMBER
2023

SIX MONTHLY ENVIRONMENTAL CLEARANCE COMPLIANCE REPORT

DECEMBER 2023

EC OBTAINED VIDE LETTER NO. SEIAA-TN/F.6957/EC/8(B)/683/2019
DATED:11.12.2019

LOCATION:

TAMIL NADU POLYMER INDUSTRIES PARK LIMITED (TPIPL)
S.NO. 143 (P), 187 (P), 2053B(P) VOYALUR & PUZHUVAKKAM
TEHSIL: PONNERI, THIRUVALLUR,
TAMIL NADU.

SUBMITTED BY:

TAMIL NADU POLYMER INDUSTRIES PARK LIMITED (TPIPL)
NO: 19_A, RUKUMANI LAKSHMIPATHY ROAD, EGMORE
CHENNAI - 600 008, TAMILNADU.

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PROJECT DETAILS

Name of the Proponent	M/s. Tamil Nadu Polymer Industries Park Ltd.
Project Location	Voyalur & Puzhuthivakkam Villages, Ponneri Taluk, Thiruvallur District, Tamil Nadu.
EC No.	SEIAA-TN/F.6957/EC/8(b)/683/2019 dated 11.12.2019 (Enclosed as Annexure I)
Total Built-up Area	239.82 Acres

I.0 DESCRIPTION

Tamil Nadu is one of the most industrialised States in the Country and also a favourable destination for investors. Considering the scope for polymer and allied industries, Government of Tamil Nadu took initiative to promote “Polymer Industries Park” exclusively for housing polymer and allied industries by dovetailing the grant available under centrally sponsored “Scheme for setting up of Polymer Parks” of Department of Chemicals and Petrochemicals (DC&PC), Government of India.

Tamil Nadu Industrial Development Corporation Limited (TIDCO) & State Industries Promotion Corporation of Tamil Nadu Limited (SIPCOT) Jointly formed a Special Purpose Vehicle (SPV) in the name of “Tamil Nadu Polymer Industries Park Limited (TPIPL)” for setting up of the park.

The proposed Park is situated at Voyalur and Puzhudivakkam Villages, in Ponneri Taluk, Tiruvallur District, Tamil Nadu and is approximately 30 km north of Chennai, the State Capital.

The location has a good connectivity in terms of road, rail, port and the same is given below:

1.1 ROAD

The nearest Highway and the main link to the proposed site is State Highway 56 (TPP road) which connects Tiruvottiyur, Ponneri, Panchetty. And the NH – 16 is located about 22 kms from the proposed project site.

1.2 RAIL

The Athipattu railway station is the nearest railway station which is located 3.30 km from the proposed project site, connecting Ennore port to Athipattu.

1.3 PORT

There are 3 ports located near the proposed project site namely Ennore Port at 5 kms, Kattupalli Port at 6 kms, Chennai Port at 26 kms.

1.4 AIRPORT

Chennai International Airport is located at a distance of 45 km from the proposed project site.

2.0 LOCATION MAP

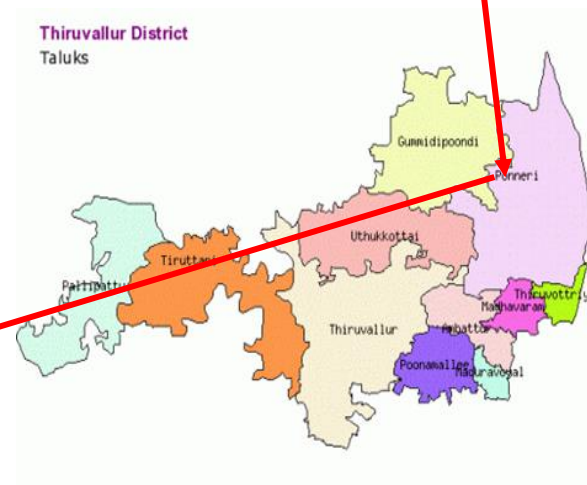
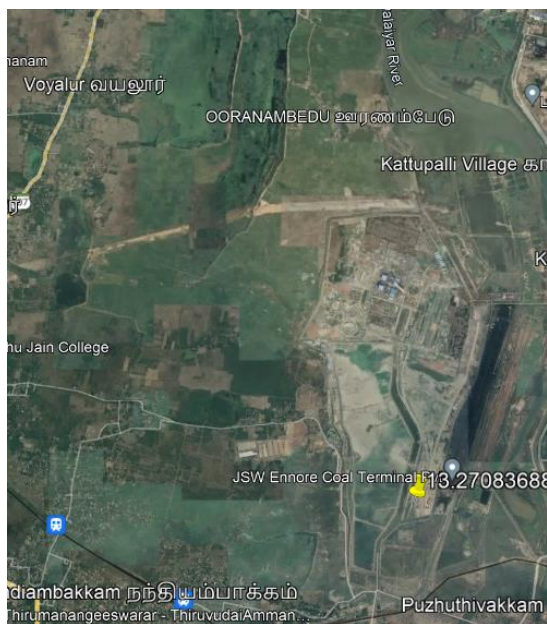


Figure 2.1 Index Map of Tamil Nadu Polymer Industries Park Limited

3.0 SITE PHOTOGRAPHS

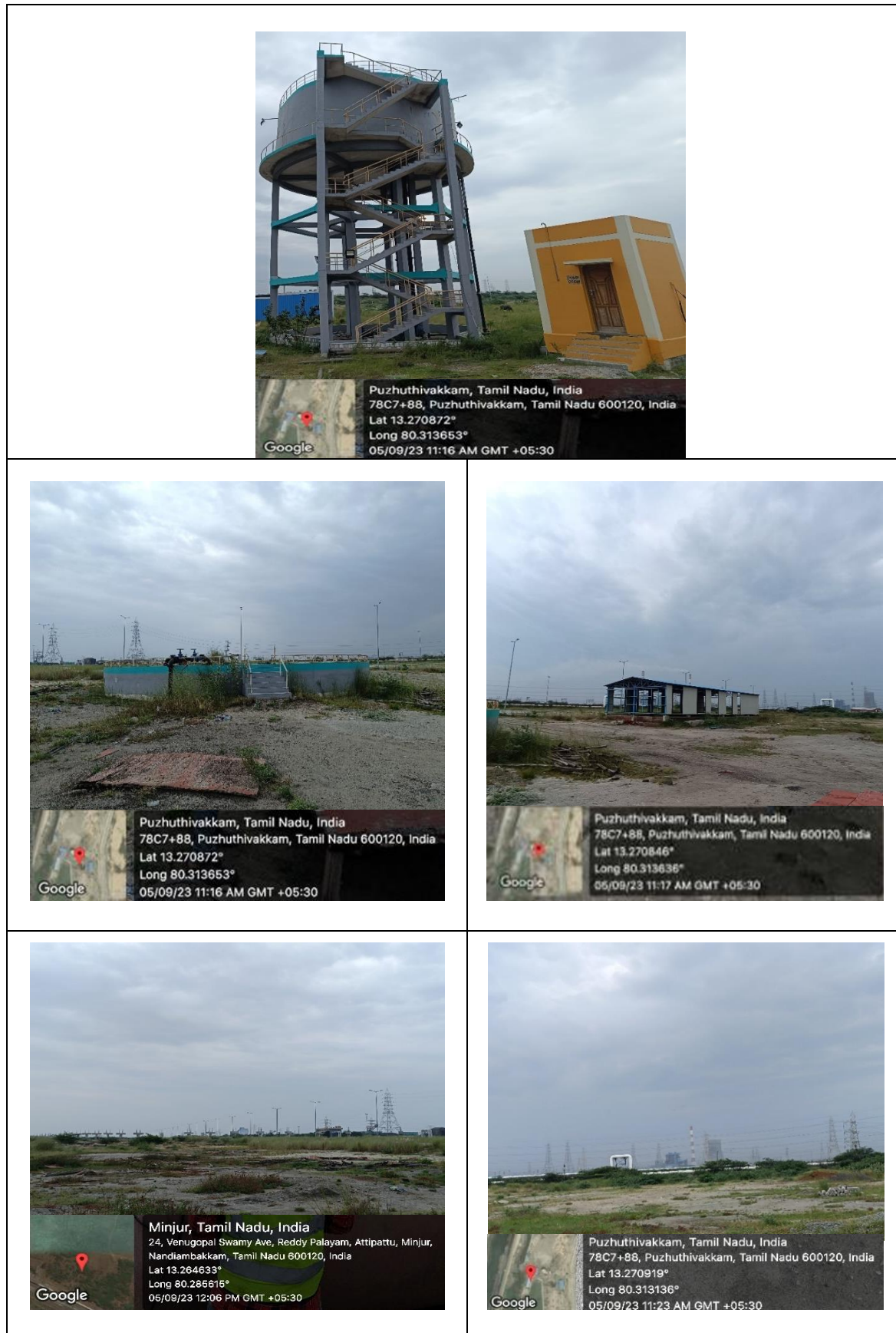


Figure 3.1 Tamil Nadu Polymers Industries Park Overview Photograph

4.0 SIX MONTHLY ENVIRONMENTAL CLEARANCE COMPLIANCE STATEMENT

4.1 PART - A: Common conditions applicable for Pre-construction, Construction and Operational Phases:

Table 4.1 Common conditions applicable for Pre-construction, Construction and Operational Phases

S.NO	CONDITIONS	STATUS
1.	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.	<p>Yes. An appeal was filed by Thiru. K. Saravanan, S/o. Kasinathan, Chennai-90 before the Hon'ble National Green Tribunal, Southern Zone, Chennai (NGT) challenging the Environment Clearance (EC) issued by State Level Impact Assessment Authority – Tamil Nadu (SEIAA) for establishment of Tamil Nadu Polymer Industries Park Limited.</p> <p>The Hon'ble NGT has disposed the Appeal No. 11/2020 with certain directions vide its order dated 04.05.2022.</p> <p>TPIPL has filed a Civil Appeal (CA 4709/2022) before the Hon'ble Supreme Court praying to quash the judgment issued by the Hon'ble NGT. The Appeal is pending as on date.</p>
2	The construction of STP, Solid Waste Management facility, E-waste management facility, DG sets, etc., should be made in the earmarked area only. In any case, the location of these utilities should not be changed later on.	All the member units will be advised to comply with.
3	The Environmental safeguards contained in the application of the proponent/mentioned during the presentation before the State Level Environment Impact Assessment Authority / State Level Expert Appraisal Committee should be implemented in the letter and spirit.	Condition noted.

4	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, fire and Rescue Services Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wild Life (Protection) Act, 1972, State / Central Ground Water Authority, Coastal Regulatory Zone Authority, other statutory and other authorities as applicable to the project shall be obtained by project proponent from the concerned competent authorities	Condition is complied. All the member units will be instructed to obtain all necessary statutory clearances and approvals.
5	The SEIAA reserves the right to add additional safeguard measures subsequently, if non-compliance of any of the EC conditions is found and to take action, including revoking of this Environmental Clearance as the case may be.	Condition Noted.
6.	A proper record showing compliance of all the conditions of Environmental Clearance shall be maintained and made available at all the times.	Condition is being complied.
7.	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. The status of compliance of environmental clearance conditions and shall also be sent to the Regional Office of the Ministry of Environment and Forests, Chennai by e-mail.	Condition complied. Screenshot of Environmental Statement for the FY 2022-2023 is uploaded on TPIPL website and the same is enclosed as Annexure – 3 .
8.	The Regional Office of the Ministry located at Chennai shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data/ information/ monitoring reports.	Condition Noted.
9.	"Consent for Establishment" shall be obtained from the Tamil Nadu Pollution Control Board and a copy shall be submitted to the SEIAA, Tamil Nadu.	Consent to Establishment has been granted and copy of the same is enclosed as Annexure - 2 .
10.	In the case of any change(s) in the scope of the project, a fresh appraisal by the SEAC/SEIAA shall be obtained before implementation.	Condition Noted. There is no change in scope of the project.
11.	The 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	Condition Noted.

	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 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, including the Hon'ble National Green tribunal relating to the subject matter.	
12.	The Environmental Clearance shall not be cited for relaxing the other applicable rules to this project.	Condition Noted.
13.	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.	Condition Noted.
14.	The proponent shall upload the status of compliance of the stipulated EC 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 MoEF, Chennai, the respective Zonal Office of CPCB, Bengaluru and the TNPCB. The criteria pollutant levels namely; PM10, PM2.5, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored.	Condition complied. Compliance report for the period October 2022 to March 2023 has been uploaded in the website of TPIPL and the screenshot is given in Annexure –3 .
15.	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 deliberately concealed and/or submitted false or misleading information or inadequate data for obtaining the environmental clearance.	Condition Noted.
16.	The Environmental Clearance does not imply that the other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would be considering the project on merits and be taking decisions independently of the Environmental Clearance.	Condition Noted.
17.	The SEIAA, TN may alter/modify the above conditions or stipulate any further condition in the interest of environment protection, even during the subsequent period.	Condition Noted.

18.	The Environmental Clearance does not absolve the applicant/proponent of his obligation/requirement to obtain, other statutory and administrative clearances from other statutory and administrative authorities.	Condition Noted.
19.	Where the trees need to be cut, compensation plantation in the ratio of 1:10 (i.e. planting of 10 trees for every one tree that is cut) should be done with the obligation to continue maintenance.	Condition Noted.
20.	A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive who will report directly to the Head of the Organization and the shortfall shall be strictly reviewed and addressed.	Condition complied. Separate Environmental Management Cell have been set-up for TPIPL.
21.	The EMP cost of Rs. 1.09 crores 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.	Condition will be complied.
22.	The project activity should not cause any disturbance & deterioration of the local bio diversity.	Condition noted.
23.	The project activity should not impact the water bodies. A detailed inventory of the water bodies and forest should be evaluated and fact reported to the Forest Department & PWD for monitoring.	Condition complied. Surface water quality monitoring report is enclosed as Annexure – 4 .
24.	All the assessed flora & fauna should be conserved and protected.	Condition Noted.
25.	The proponent should strictly comply with, Tamil Nadu Government Order (Ms) No. 84 Environmental and forest (EC 2) Department dated 25.06.2018 regarding ban on one time use and throwaway plastics irrespective of thickness with effect from 01.01.2019 under Environment (Protection) Act, 1986.	Condition will be complied. All the member units will be instructed to comply with.
26.	As per MoEF& CC, Gol, Office Memorandum dated 30.03.2015, prior clearance from Forestry & Wildlife angle including clearance from obtaining committee of the National Board for Wildlife as applicable shall be obtained before starting the quarrying operation, if the project site is located within 10KM from National Park and Sanctuaries.	Not applicable.
27.	Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided.	Condition will be complied.

28.	The safety measures proposed in the report should be strictly followed.	Condition will be complied. All the member units will be instructed to comply with.
29.	The Developer shall ensure that no allotment letter / sale deed in any form shall be made to house category A or category B industry as prescribed in the schedule of EIA notification 2006. However, in case any category A or category B type of industry as prescribed in the schedule of EIA notification 2006 is proposed then the individual unit shall apply and seek Environmental Clearance under the EIA notification 2006.	Condition will be complied.
30.	The project proponent must submit the permissible land use classification certificate obtained from competent authority for the proposed project before obtain the CTE from TNPCB.	Land use classification letter obtained from District Town Planning Office is given in Annexure –5 .
31.	The proponent shall obtain the necessary permission/ NOC of water supply from the TWAD Board.	Not applicable. Water requirement will be met through CPCL Desalination Plant.
32.	The Developer shall mandate the member industries of the Industrial Park to allot 33% of the plot area for green belt development and to install RWH structures.	Condition will be complied. All the member units will be instructed to comply with.
33.	The Developer has to ensure that all the member industries within the Industrial Park shall make their own arrangements to achieve zero discharge of the trade effluents, solid waste & E waste management, gaseous emission and noise control measures to achieve the standards prescribed by the TNPCB.	Condition will be complied. All the member units will be mandated to provide individual ETP with Zero Liquid Discharge system and to handle the domestic wastewater as per the prescribed standards.
34.	The project proponent shall ensure that the individual member units will not be allowed to carry out manufacturing of products stipulated in G.O. (Ms) No. 84 dated 25/06/2018 on banning of one time use on and throw away plastics.	Condition will be complied. All the member units will be instructed to comply with.
35.	The project proponent must submit the permissible land use classification certificate obtained from competent authority for the proposed project before obtain the CTE from TNPCB.	Land use classification letter obtained from District Town Planning Office is given in Annexure – 5 .
36.	The CER fund shall be utilized as per the office memorandum of MoEF & CC dated 01.05.2018 before obtaining CTO from TNPCB.	Condition will be complied.
37.	The allotted industrial units shall obtain consent from the TNPCB separately for their establishment & operation in this industrial estate.	All the member units will be instructed to obtain all necessary statutory clearances and approvals.

38.	The project proponent shall ensure that 33% of the total area of the project site should be covered with green belt.	Condition will be complied. All the member units will be instructed to comply with.
39.	The proponent shall provide Rain Water Harvesting pits so as to recharge the ground water table.	Condition will be complied. All the member units will be instructed to comply with.
40.	Discharge of treated sewage shall conform to the norms & standards prescribed by the Tamil Nadu Pollution Control Board.	All the member units will be instructed to comply with.
41.	It is the sole responsibility of the proponent that the treated sewage disposed for greenbelt development /avenue plantation should not pollute the soil/ ground water/ adjacent canals/ lakes/ ponds, etc.	Condition will be complied. All the member units will be instructed to comply with.
42.	The Developer has to ensure that all the member industries within the Industrial Park shall make their own arrangements to achieve zero discharge of the trade Effluents.	Condition is complied. All the member units will be mandated to provide individual ETP with Zero Liquid Discharge system and to handle the domestic wastewater as per the prescribed standards.
43.	The project proponent shall ensure that all the member units should treat and dispose solid waste & E-waste as per the Solid Waste Management Rule 2016 as amended and E-Waste Management Rules, 2016.	Condition will be complied. All the member units will be instructed to comply with.
44.	There shall be no discharge of effluent outside the Industrial Park at any time.	All the member units will be instructed to comply with. All the member units will be mandated to provide individual ETP with Zero Liquid Discharge system.
45.	The Developer shall mandate the member units of the Industrial Park to install adequate APC measures / Acoustic to achieve air emissions standards within permissible limits prescribed by the CPCB.	Condition will be complied. Individual industries will be advised to adopt Air Pollution Control measure to achieve air emissions standards within permissible limits prescribed by the statutory authority.

46.	<p>The Project proponent Shall embark the following Co-ordinates in the project site as per CRZ map issued by IRS, Anna University and shall provide with pillar stone.</p> <table border="1"> <thead> <tr> <th>LABLE</th><th>LATTITUDE</th><th>LONGITUDE</th></tr> </thead> <tbody> <tr><td>A.</td><td>13°17'53.829"N</td><td>80°18'57.149"E</td></tr> <tr><td>B.</td><td>13°17'51.613"N</td><td>80°19'6.267"E</td></tr> <tr><td>C.</td><td>13°17'29.520"N</td><td>80°19'17.462"E</td></tr> <tr><td>D.</td><td>13°17'25.876"N</td><td>80°19'17.624"E</td></tr> <tr><td>E.</td><td>13°17'0.406"N</td><td>80°19'11.241"E</td></tr> <tr><td>F.</td><td>13°16'45.849"N</td><td>80°19'2.924"E</td></tr> <tr><td>G.</td><td>13°16'11.552"N</td><td>80°18'54.004"E</td></tr> <tr><td>H.</td><td>13°16'10.676"N</td><td>80°18'48.620"E</td></tr> <tr><td>I.</td><td>13°16'15.943"N</td><td>80°18'48.161"E</td></tr> <tr><td>J.</td><td>13°16'16.212"N</td><td>80°18'46.548"E</td></tr> <tr><td>K.</td><td>13°16'39.554"N</td><td>80°18'52.076"E</td></tr> <tr><td>L.</td><td>13°16'44.580"N</td><td>80°18'50.337"E</td></tr> <tr><td>M.</td><td>13°16'56.035"N</td><td>80°18'44.163"E</td></tr> <tr><td>N.</td><td>13°17'3.801"N</td><td>80°18'42.680"E</td></tr> <tr><td>O.</td><td>13°17'5.139"N</td><td>80°18'43.162"E</td></tr> <tr><td>P.</td><td>13°17'2.214"N</td><td>80°18'53.224"E</td></tr> <tr><td>Q.</td><td>13°16'59.337"N</td><td>80°18'57.518"E</td></tr> <tr><td>R.</td><td>13°16'59.532"N</td><td>80°19'3.514"E</td></tr> <tr><td>S.</td><td>13°17'18.118"N</td><td>80°19'8.899"E</td></tr> <tr><td>T.</td><td>13°17'26.234"N</td><td>80°19'9.191"E</td></tr> <tr><td>U.</td><td>13°17'29.254"N</td><td>80°19'8.933"E</td></tr> <tr><td>V.</td><td>13°17'30.657"N</td><td>80°19'6.172"E</td></tr> <tr><td>W.</td><td>13°17'33.153"N</td><td>80°19'8.035"E</td></tr> </tbody> </table>	LABLE	LATTITUDE	LONGITUDE	A.	13°17'53.829"N	80°18'57.149"E	B.	13°17'51.613"N	80°19'6.267"E	C.	13°17'29.520"N	80°19'17.462"E	D.	13°17'25.876"N	80°19'17.624"E	E.	13°17'0.406"N	80°19'11.241"E	F.	13°16'45.849"N	80°19'2.924"E	G.	13°16'11.552"N	80°18'54.004"E	H.	13°16'10.676"N	80°18'48.620"E	I.	13°16'15.943"N	80°18'48.161"E	J.	13°16'16.212"N	80°18'46.548"E	K.	13°16'39.554"N	80°18'52.076"E	L.	13°16'44.580"N	80°18'50.337"E	M.	13°16'56.035"N	80°18'44.163"E	N.	13°17'3.801"N	80°18'42.680"E	O.	13°17'5.139"N	80°18'43.162"E	P.	13°17'2.214"N	80°18'53.224"E	Q.	13°16'59.337"N	80°18'57.518"E	R.	13°16'59.532"N	80°19'3.514"E	S.	13°17'18.118"N	80°19'8.899"E	T.	13°17'26.234"N	80°19'9.191"E	U.	13°17'29.254"N	80°19'8.933"E	V.	13°17'30.657"N	80°19'6.172"E	W.	13°17'33.153"N	80°19'8.035"E	Condition will be complied.
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47.	<p>The Environmental Clearance issued only for the revised proposal submitted for the project site fall non CRZ area as per CRZ (Ref.No.AU/IRS/CU/229-2019 Dt. 09.12.2019) map issued by IRS, Anna University.</p>	Condition Noted.																																																																								

4.2 Specific Conditions - Pre construction phase

Table 4.2 Specific Conditions - Pre construction phase

S.NO	CONDITIONS	STATUS OF COMPLIANCE
1.	The project authorities should advertise with basic details 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 clearance. The press releases also mention that copy of the clearance letter is available with the state pollution Control Board and also at website of SEIAA, TN. The copy of the press release should be forwarded to the Regional Office of the Ministry of Environment and Forests located at Chennai and SEIAA- TN.	Condition complied. Newspaper advertisement copy is enclosed as Annexure – 6 . The copy of the press release has been forwarded to the Regional Office of the Ministry of Environment and Forests located at Chennai and SEIAA - TN. Acknowledgement copy of the same is enclosed as Annexure - 7 .
2.	In the case of any change(s) in the scope of the project, a fresh appraisal by the SEAC/SEIAA shall be obtained before implementation.	Condition noted. There is no change in scope of the project.
3.	A copy of the clearance letter shall be sent by the proponent to the Local Body. The clearance letter shall also be put on the website of the Proponent.	Condition complied. Acknowledgement copy of the EC letter sent to local body is attached as Annexure - 8 .
4.	The approval of the competent authority shall be obtained for structural safety of the buildings during earthquake adequacy of firefighting equipment's, etc as per National Building Code including protection measures from lightning etc before commencement of the work.	Condition will be complied. Individual member units will be instructed to obtain all necessary statutory clearances and approvals.
5.	All required sanitary and hygienic measures for the workers should be in place before starting construction activities and they have to be maintained throughout the construction phase.	Condition is complied. All the member units will be instructed to comply with.
6.	Design of building should be in conformity with the Seismic Zone Classifications.	All the member units will be instructed to comply with.
7.	The Construction of the structures should be undertaken as per the plans approved by the concerned local authorities/local administration.	All the member units will be instructed to comply with.
8.	No construction activity of any kind shall be taken up in the OSR area.	Condition will be complied.
9	Consent of the local body concerned should be obtained for using the treated sewage in the OSR area for gardening purpose. The quality of treated sewage shall satisfy the bathing quality prescribed	Condition will be complied.

	by the CPCB.	
10.	The height and coverage of the constructions shall be in accordance with the existing FSI/FAR norms as per Coastal Regulation Zone Notification, 2011.	All the member units will be instructed to comply with.
11.	The Project Proponent shall provide car parking exclusively for the visiting guest in the proposed residential apartments as per CMDA norms.	All the member units will be instructed to comply with.
12.	The project proponent shall ensure the level of basement shall be above maximum flood level.	Condition will be complied. All the member units will be instructed to comply with.
13.	<p>The proponent shall prepare completion plans showing Separate pipelines marked with different colours with the following details</p> <ul style="list-style-type: none"> i. Location of STP, compost system, underground sewer line ii. Pipe Line conveying the treated effluent for green belt development iii. Pipe Line conveying the treated effluent for toilet flushing iv. Water supply pipeline v. Gas supply pipe line, if proposed vi. Telephone cable vii. Power cable viii. Storm water drains, and ix. Rain water harvesting system, etc., and it shall be made available to the owners. 	Condition will be complied. All the member units will be instructed to comply with.
14.	A First Aid Room shall be provided in the project site during the entire construction and operation phases of the project.	Condition is complied. All the member units will be instructed to comply with.
15.	The present land use surrounding the project site shall not be disturbed at any point of time.	Condition will be complied.
16.	The green belt area shall be planted with indigenous native trees.	Greenbelt will be developed with indigenous native species suitable to the soil.
17.	Natural vegetation listed particularly the trees shall not be removed during the construction/operation phase. In case any trees are likely to be disturbed, shall be replanted.	Condition noted.

18.	During the construction and operation phase, there should be no disturbance to the aquatic ecosystem within and outside the area.	Condition will be complied.
19.	The Provisions of Forest conservation Act 1980, Wild Life Protection Act 1972 & Bio diversity Act 2002 should not be violated.	Condition noted.
20.	There should be Firefighting plan and all required safety plan.	Condition will be complied. All the member units will be instructed to comply with.
21.	Regular fire drills should be held to create awareness among owners/ residents.	All the member units will be instructed to comply with.

4.3 Specific Conditions - Construction Phase

Table 4.3 Specific Conditions - Construction Phase

S.NO	CONDITIONS	STATUS OF COMPLIANCE
1.	Construction Schedule:	
	i) The Project proponent shall have to furnish the probable date of commissioning of the project supported with necessary bar charts to SEIAA-TN.	Condition noted.
2.	Labour Welfare:	
	i) All the labourers to be engaged for construction should be screened for health and adequately treated before and during their employment on the work at the site.	Condition will be complied. All the member units will be instructed to comply with.
	ii) Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health Surveillance program of the workers should be undertaken periodically to observe any contradictions due to exposure to dust and take corrective measures, if needed.	Condition will be complied. All the member units will be instructed to comply with.
	iii) Periodical medical examination of the workers engaged in the project shall be carried out and maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly. The workers shall be provided with personnel protective measures such as masks, gloves, boots, etc.	Condition will be complied. All the member units will be instructed to comply with.
3.	Water Supply:	
	i) The entire water requirement during construction phase may be met from ground water source from the source with approval of the PWD Department of water resources/ may be out sourced.	Condition will be complied.
	ii) Provision shall be made for the housing labour within the site with all necessary infrastructures 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.	Condition will be complied. All the member units will be instructed to comply with.

	iii) Adequate drinking water and sanitary facilities should be provided for construction workers at the site. The treatment and disposal of waste water shall be through dispersion trench after treatment through septic tank. The MSW generated shall be disposed through Local Body and the identified dumpsite only.	Condition will be complied. All the member units will be instructed to comply with.
	iv) Water demand during construction should be reduced by use of premixed concrete, curing agents and other best practices prevalent.	Condition will be complied. All the member units will be instructed to comply with.
	v) Fixtures for showers, toilet flushing and drinking water should be of low flow type by adopting the use of aerators / pressure reducing devices / sensor-based control.	Condition will be complied. All the member units will be instructed to comply with.
4.	Solid Waste Management:	
	i) In the solid waste management plan, the STP sludge management plan for direct use as manure, gardens is not acceptable; it must be co-composted with biodegradables.	All the member units will be instructed to comply with.
	ii) House hold hazardous wastes such as batteries, small electronics, CFL bulbs expired medicines and used cleaning solvent bottles should be segregated at source, in a month from residences and disposed as per the SWM rules 2016.	All the member units will be instructed to comply with.
	iii) Domestic solid wastes to be regularly collected in bins or waste handling receptacles and solid waste management rules 2016.	Condition will be complied. All the member units will be instructed to comply with.
	iv) No waste of any type disposed of in any watercourse including drains, canals and the surrounding environment.	Condition will be complied. All the member units will be instructed to comply with.
	v) E-waste shall be disposed through Authorized vendor as per E-waste (Management and Handling) Rules, 2016 and subsequent amendment.	Condition will be complied. All the member units will be instructed to comply with.
5.	Top Soil Management:	
	i) All the top soil excavated during construction activities should be stored for use in horticulture/ landscape development within the project site.	Condition will be complied. All the member units will be instructed to comply with.
6.	Construction Debris disposal:	
	i) Disposal of construction debris during construction phase should not create any adverse effect on the neighbouring communities and be	Condition will be complied. All the member units will be instructed to comply with.

	disposed of only in approved sites, with the approval of Competent Authority with necessary precautions for general safety and health aspects of the people, The construction and demolition waste shall be managed as per Construction & Demolition Waste Management rules, 2016.	
	ii) Construction spoils, including bituminous materials and other hazardous materials must not be allowed to contaminate watercourses. The dump sites for such materials must be secured so that they should not leach into the adjacent land/lake/ stream etc.	Condition will be complied. All the member units will be instructed to comply with.
7.	Diesel Generator sets:	
	i) Low Sulphur Diesel shall be used for operating diesel generator sets to be used during construction phase. The air and noise emission shall conform to the standards prescribed in the Rules under the Environment (Protection) Act, 1986, and the Rules framed thereon.	Condition will be complied.
	ii) The diesel required for stand by DG sets shall be stored in underground tanks fulfilling the safety norms and if required, clearance from Chief Controller of explosives shall be taken.	Condition Noted.
	iii) The acoustic enclosures installed at all noise generating equipment's such as DG sets, air conditioning systems, cooling water tower etc.	All the member units will be instructed to comply with.
8.	Air & Noise Pollution Control:	
	i) Vehicles hired for bringing construction materials to the site should be in good condition and should conform to air and noise emission standards, prescribed by TNPCB/CPCB. The vehicles should be operated only during non-peak hours.	Condition will be complied. All the member units will be instructed to comply with.
	ii) Ambient air and noise levels should conform to residential standards prescribed by the TNPCB, both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during the construction phase. The pollution abatement measures shall be strictly implemented.	Condition is being complied. All the member units will be instructed to comply with. Ambient Air and Noise monitoring Reports are enclosed as Annexure - 4.
	iii) Traffic congestion near the entry and exit points from the roads adjoining the proposed project site shall be avoided. Parking shall be fully internalized and no public space should be utilized. Parking plan to be as per DTCP norms. The traffic department	Condition will be complied. All the member units will be instructed to comply with.

	shall be consulted and any cost-effective traffic regulative facility shall be meet before commissioning.	
	iv) The buildings should have adequate distance between them to allow free movement of fresh air and passage of natural light, air and ventilation.	Condition Noted. All the member units will be instructed to comply with.
9.	Building material:	
	i) Fly-ash blocks should be used as building material in the construction as per the provision of Fly ash Notification of September, 1999 and amended as on 27th August, 2003 and Notification No. S.O. 2807 (E) dated: 03.11.2009.	Condition will be complied. All the member units will be instructed to comply with.
	ii) Ready-mix concrete used in building construction and necessary cube tests should be conducted ascertain their quality.	Condition will be complied. All the member units will be instructed to comply with.
	iii) Use of glass shall be reduced up to 40% to reduce the electricity consumption and load on air conditioning. If necessary, high quality double glass with special reflecting coating shall be used in windows.	All the member units will be instructed to comply with.
10.	Storm Water Drainage:	
	i) Storm water management around the site and on site shall be established by following the guidelines laid down by the storm water manual.	Condition noted. All the member units will be instructed to comply with.
	ii) Storm water management plan shall be obtained by engaging the services of Anna University/IIT.	Condition noted. All the member units will be instructed to comply with.
11.	Energy Conservation Measures:	
	i) Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material, to fulfill the requirement.	All the member units will be instructed to comply with.
	ii) Opaque wall should meet prescribed requirement as per Energy Conservation Building Code which is mandatory for all air-conditioned spaces by use of appropriate thermal insulation material to fulfil the requirement.	All the member units will be instructed to comply with.
	iii) All norms of Energy Conservation Building Code (ECBC) and National Building Code, 2005 as energy conservation have to be adopted Solar lights shall be provided for illumination of common areas.	Condition will be complied. All the member units will be instructed to comply with.
	iv) Application of solar energy should be incorporated for illumination of common areas, lighting for gardens and street lighting. A hybrids system or fully solar system for a portion of the	Condition will be complied. All the member units will be instructed to comply with.

	apartments shall be provided.	
	v) A report on the energy conservation measures conforming to energy conservation norms prescribed by the Bureau of Energy Efficiency shall be prepared incorporating details about building materials & technology; R & U factors etc and submitted to the SEIAA in three months' time.	All the member units will be instructed to comply with.
	vi) Energy conservation measures like installation of CFLs/TFLs for lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning.	Condition will be complied. All the member units will be instructed to comply with.
12.	Fire Safety:	
	i) Adequate fire protection equipment's and rescue arrangements should be made as per the prescribed standards.	All the member units will be instructed to comply with.
	ii) Proper and free approach road for fire-fighting vehicles up to the buildings and for rescue in the event of emergency shall be made.	Condition will be complied. All the member units will be instructed to comply with.
13.	Green Belt Development:	
	i) The Project Proponent shall plant tree species with large potential for carbon capture in the proposed green belt area based on the recommendation of the Forest department well before the project is completed.	Condition noted.
	ii) The purpose of Green belt around the project is to capture the fugitive emissions and to attenuate the noise generated, in addition to the improvement in the aesthetics. A wide range of indigenous plants species should be planted in and around the premise in consultation with the DFO, Viluppuram District / State Agriculture University. The plants species should have thick canopy cover, perennial green nature, native origin and large leaf areas. Medium size trees and small trees alternating with shrubs shall be planted. If possible Miyawaki method of planting i.e planting different types of trees at very close escapement may be tried which will give a good green cover. A total of 15% of the plot area should be designated for green belt which should be raised along the boundaries of the plot and in between blocks in an organized manner.	Condition will be complied. Greenbelt will be developed with indigenous native species suitable to the soil. All the member units will be instructed to comply with.
	iii) The proponent shall develop the green belt as per the plan furnished and area earmarked for the	Condition will be complied

	greenbelt shall not be alter at any point of time for any other purpose.	
	iv) The proponent has to earmark the greenbelt area with dimension and GPS coordinates for the green belt area and the same shall be included in the layout out plan to be submitted for DTCP approval.	Condition noted.
14.	Sewage Treatment Plant:	
	i) The Sewage Treatment Plant (STP) installed should be certified by an independent expert/ reputed academic institution for its adequacy and a report in this regard should be submitted to the SEIAA, TN before the project is commissioned for operation, Explore the less power consuming systems viz baffle reactor, etc., for the treatment of sewage.	All the member units will be instructed to comply with.
	ii) The Proponent shall install STP as furnished. Any alteration to satisfy the bathing quality shall be informed to SEIAA-TN.	All the member units will be instructed to comply with.
	iii) The project proponent shall operate and maintain the Sewage treatment Plant effectively to meet out the standards prescribed by the CPCB.	All the member units will be instructed to comply with.
	iv) The project proponent shall continuously operate and maintain the Sewage treatment plant to achieve the standards prescribed by the CPCB.	All the member units will be instructed to comply with.
	v) The project proponent has to ensure the complete recycling of treated sewage after achieving the standards prescribed by the CPCB.	All the member units will be instructed to comply with.
	vi) The project proponent has to provide separate standby D.G set for the STP for the continuous operation of the STP in case of power failure.	All the member units will be instructed to comply with.
15.	Rain Water Harvesting:	
	i) The proponent/Owner of the Flats shall ensure that roof rain water collected from the covered roof of the buildings, etc shall be harvested so as to ensure the maximum beneficiation of rain water harvesting by constructing adequate sumps so that 100% of the harvested water shall be reused.	All the member units will be instructed to comply with.
	ii) Rain water harvesting for surface run-off, as per plan submitted should be implemented. Before	All the member units will be instructed to comply with.

	recharging the surface run off, pre-treatment with screens, settlers etc. must be done to remove suspended matter, oil and grease, etc.	
	iii) The project activity should not cause any disturbance & deterioration of the local bio diversity.	Condition noted.
16.	Building Safety:	
	Lightning arrester shall be properly designed and installed at top of the building and where ever is necessary.	All the member units will be instructed to comply with.

5.0 ENVIRONMENTAL MONITORING DETAILS

The environmental monitoring was carried out at site by M/s. Life Shell Labs India Private Limited for the period of April 2023 – September 2023.

5.1 Ambient air quality monitoring

5.1.1 Ambient Air Quality Monitoring Stations

During construction phase, particulate matter and gaseous emissions are likely to arise from the site movement of vehicles, operation of DG sets etc., the ambient air quality parameters such as suspended Particulate matter (PM₁₀), Respirable Particulate matter (PM_{2.5}), Sulphur dioxide, Oxides of Nitrogen (NO_x), VOC, Hydro carbons and Carbon monoxide were monitored. The test report of ambient air quality for the period of April 2023 – September 2023 is enclosed as **Annexure - 4**.

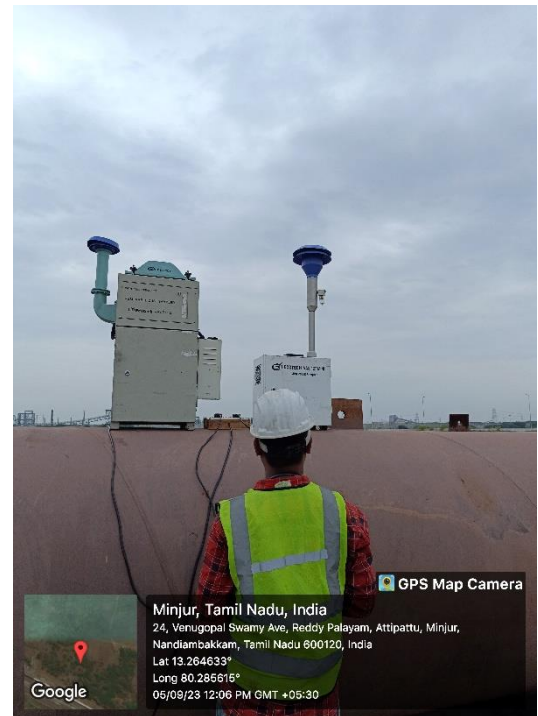
Table 5.1 Details of Ambient Air Quality Monitoring Stations

S. No.	Location Code	Location Description	Location Coordinates
1	AAQ 1	South Corner of the Project Site	13°16'15.1"N 80°18'49.2"E
2	AAQ 2	North Corner of the Project Site (Up Wind)	13°16'53.0"N 80°18'45.4"E
3	AAQ 3	Near Kattupalli Village (Up Wind)	13°18'24.8"N 80°19'44.5"E
4	AAQ 4	Near Kamarajar Port (Cross Wind)	13°15'52.8"N 80°19'33.6"E
5	AAQ 5	Near Athipattu Pudhu Nagar (Down Wind)	13°15'05.0"N 80°18'22.6"E

5.2 Ambient Air Quality Monitoring Methodology

The Monitoring was conducted in respect of the following parameters:

- PM₁₀
- PM_{2.5}
- SO₂
- NO₂
- CO
- NH₃
- O₃
- Pb
- Ni
- As
- C₆H₆
- BaP
- Ammonia Levels



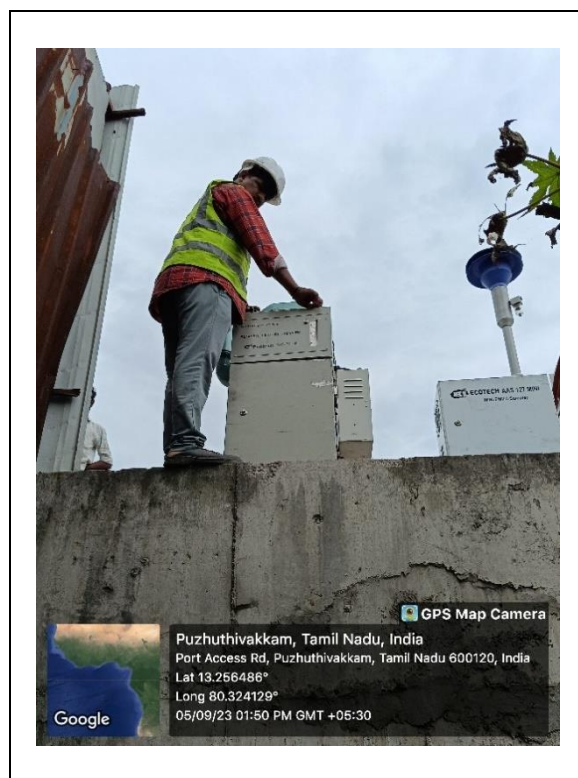


Figure 5.1 Ambient Air Monitoring Photos

5.3 Ambient Noise level monitoring

5.2.1 Ambient Noise Monitoring Locations

The main objective of noise monitoring in the study area is to assess the present ambient noise levels in project site. Ambient noise monitoring was conducted at three different locations within the boundary of the project area and two at nearby village as given in **Table 5.2**.

Table 5.2 Details of Ambient Noise Monitoring Stations

S. No.	Location Code	Location Description	Location Coordinates
1	Noise 1	South corner of the project site	13°16'15.1"N 80°18'49.1"E
2	Noise 2	Near Kattupalli village	13°18'24.8"N 80°19'44.5"E
3	Noise 3	Near Athipattu Pudhu Nagar	13°15'05.0"N 80°18'22.6"E



Figure 5.2 Noise level Monitoring Photos

5.4 Methodology of Noise Monitoring

The Noise levels were measured using integrated sound level meter. The integrating sound level meter is an integrating/ logging type with Octave filter attachment with frequency range of 31.5 to 16000 Hz. This instrument is capable of measuring the Sound Pressure Level (SPL), Equivalent Continuous Sound Level (Leq) and octave band frequency analysis.

5.2.2 Noise Test Parameters:

- Source noise in decibel

5.5 Soil Analysis

5.5.1 Soil Monitoring Locations

The objective of the soil monitoring is to identify and predict the impacts of activities on soil quality. A study assessment of the soil quality has been carried out.

The physio - chemical characteristics of soil were examined by obtaining soil samples from selected point and analysis of the same. Furthermore, three samples were collected from the project site for analysing the soil characteristics, which is listed in **Table 5.3**.

Table 5.3 Details of Soil Sample Collection

S. No.	Location Code	Location Description	Location Coordinates
1	Soil 1	South Corner of the Project Site	13°16'15.3"N 80°18'47.3"E
2	Soil 2	Kattupalli Village	13°18'24.8"N 80°19'44.5"E
3	Soil 3	Athipattu Pudhu Nagar	13°18'25.0"N 80°19'44.2"E

The samples have been analysed as per the established scientific methods for physio- chemical parameters. The heavy metals have been analysed by using Atomic Absorption Spectrophotometer and Inductive Coupled Plasma Analyzer. The samples were collected and analysed is enclosed as **Annexure 4**.

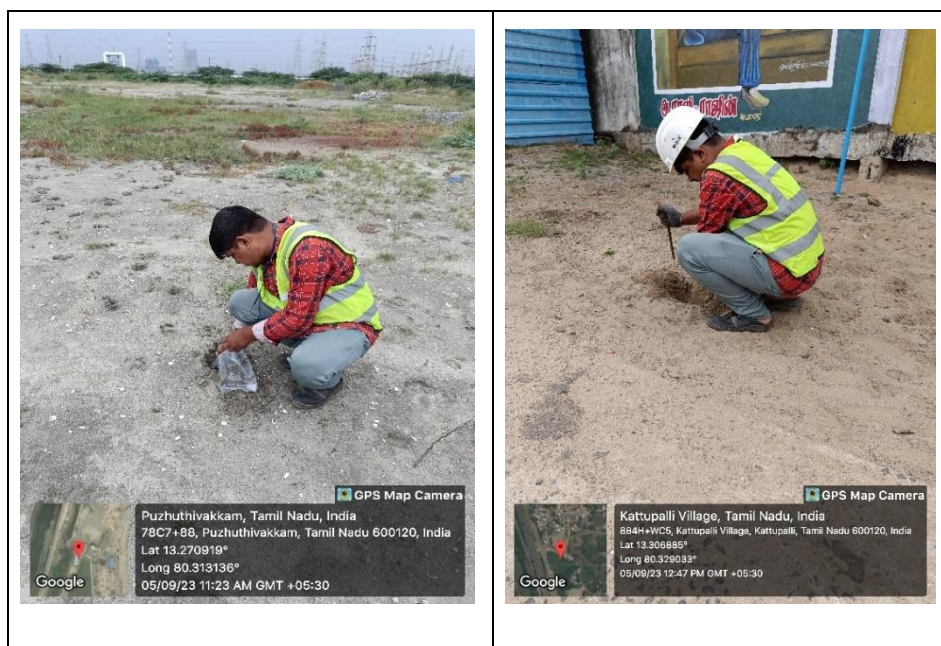




Figure 5.3 Soil Sampling Photos

5.5.2 Soil Parameters:

- Soil Texture
- pH at 25°C @ 10% solution
- Bulk Density
- Cation exchange capacity
- Water Holding Capacity
- Total organic Carbon
- Organic matter
- Nitrogen
- Phosphorus
- Potassium etc.,

5.6 Ground water quality monitoring

The ground water was tested at three locations for various water quality parameters for the period of April 2023 – September 2023. The results are within the stipulated norms when compared with baseline data. Ground water collected location given as **Table 5.4**.

Table 5.4 Details of Ground Water Sample Collection

S. No	Location Code	Location Description	Location Coordinates
1	Ground Water 1	Project Site	13°16'15.2"N 80°18'47.3"E
2	Ground Water 2	Kattupalli village	13°15'23.4"N 80°19'26.9"E
3	Ground Water 3	Athipattu Pudhu Nagar	13°15'05.0"N 80°18'22.6"E

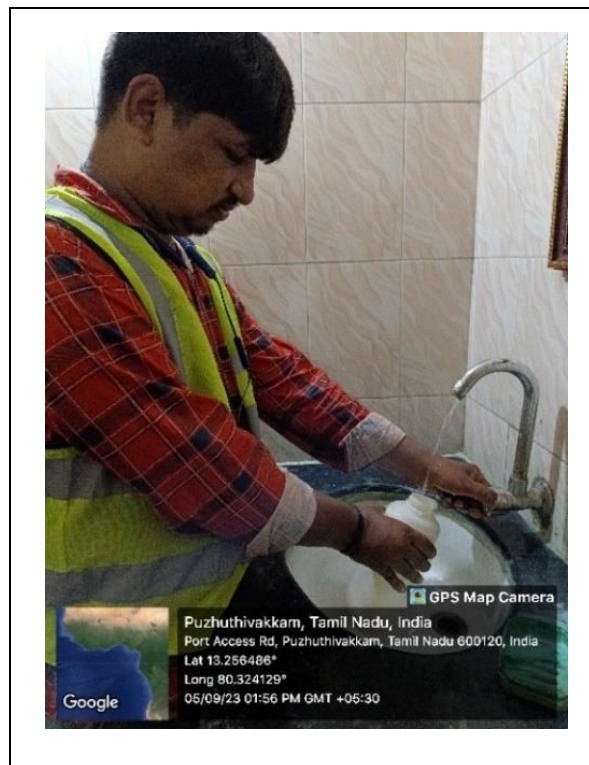


Figure 5.4 Ground Water Sampling Photos

5.6.1 Ground water parameters:

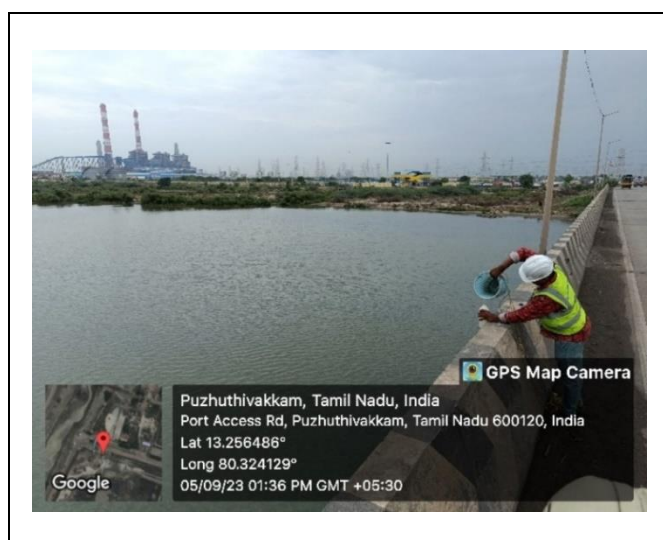
- pH (at 25°C)
- Total hardness as CaCO₃
- TDS
- SO₄
- NO₃
- Fe
- Zn
- Cr
- Cu
- Cd
- Pb
- Hg
- TSS
- Nickel
- Ba and other parameters as per NABL standards

5.7 Surface water quality monitoring

The surface water is collected and tested at three locations for various water quality parameters during April 2023 – September 2023. The results are within the stipulated norms when compared with Baseline data. Surface water collected locations given as **Table 5.5**.

Table 5.5 Details of Surface Water Sample Collection

S.No	Location Code	Location Description	Location Coordinates
1	Surface Water 1	Kosasthalaiyar River	13°14'54.5"N 80°18'54.0"E
2	Surface Water 2	Buckingham River (Up Stream)	13°16'51.4"N 80°19'39.59"E
3	Surface Water 3	Buckingham River (Down Stream)	13°15'50.4"N 80°19'29.9"E



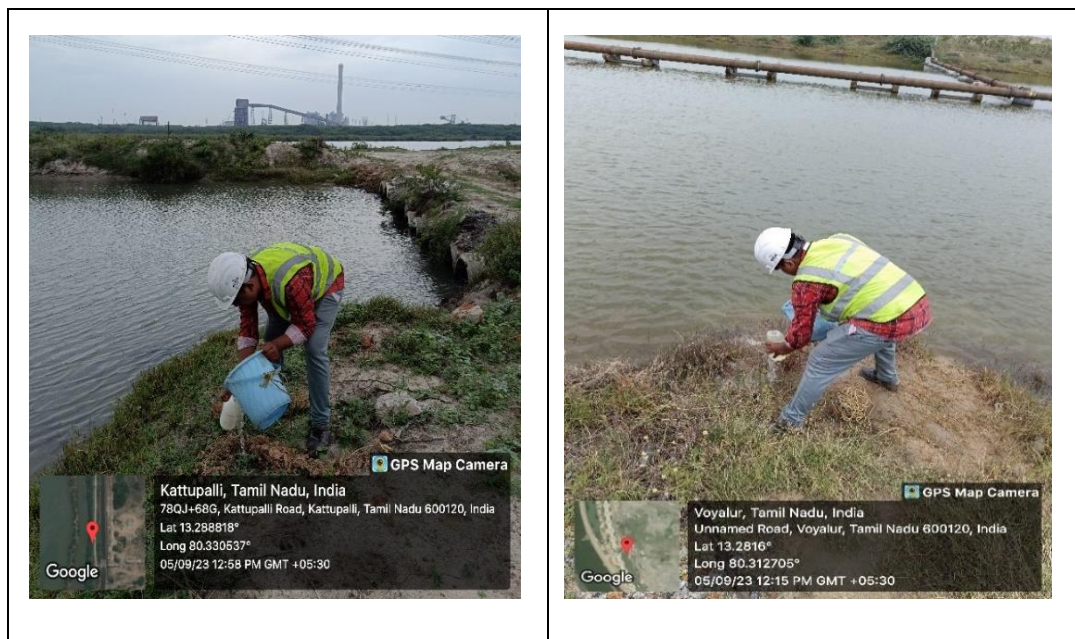


Figure 5.5 Surface Water Sampling Photos

5.7.1 Surface Water Parameters

- pH (at 25°C)
- TDS
- Nitrate as NO₃
- TSS and other parameters as per NABL standards

6.0 CONCLUSION

The environmental monitoring was carried out during the period of April 2023 – September 2023. The results are found to be satisfactory as per the standards of MoEF & CC.

All the conditions stipulated in Environmental Clearance are being complied / will be complied.



Dr. JAYANTHI. M, I.F.S
MEMBER SECRETARY

**STATE LEVEL ENVIRONMENT IMPACT
ASSESSMENT AUTHORITY – TAMIL NADU**

3rd Floor, Panagal Maaligai,
No.1 Jeenis Road, Saidapet,
Chennai-15.

Phone No.044-24359973

Fax No. 044-24359975

ENVIRONMENTAL CLEARANCE (EC)

Letter No. SEIAA-TN/F. 6957/EC/ 8(b)/683/2019 dated: 11.12.2019.

To

The Managing Director
M/s. Tamil Nadu Polymer Industries Park Ltd.
19-A, Rukmani Lakshmiipathy Road
Post Box No.7223
Egmore
Chennai-600 008

Sir,

Sub: SEIAA, TN - Environmental Clearance – Proposed establishment of Polymer Industries Park at Voyalur & Puzhdivakkam by M/s. Tamil Nadu Polymer Industries Park Ltd at S.F. No. 143 & 187 of Puzhdivakkam village, 2053B part of Voyalur Village, Ponneri Taluk, Tiruvallur District, Tamil Nadu - Issued – Regarding.

- Ref:**
1. Your application for Terms of Reference dated: 22.07.2019
 2. ToR Issued by SEIAA-TN Vide Lr. No. SEIAA/ TN/ F.No.6957/ SEAC/ ToR-654/ 2019 dated: 31.10.2019
 3. Proponent EIA report submitted to SEIAA-TN on 20.11.2019
 4. Minutes of the 139th SEAC Meeting held on 23.11.2019
 5. Minutes of the 140th SEAC Meeting held on 27.11.2019



[Signature]
MEMBER SECRETARY
SEIAA-TN

6. Proponent revised EIA report submitted to SEIAA-TN on 09.12.2019

7. Minutes of the 363rd SEIAA Meeting held on 11.12.2019

This has reference to your application 3rd cited, the proposal is for obtaining Environmental Clearance to establish a construction project under Category B2 and Schedule S.No. 8(b) under the Environment Impact Assessment Notification, 2006, as amended.

The Competent Authority and Authorized signatory furnished detailed information in Form 1 and Form 1A and liquidate enclosures are as Annexures:

Annexure 1

PROJECT DETAILS		
SL No	Description	Details
1)	Name of the Project proponent and address	The Managing Director Tamilnadu Polymer Industries Park Limited, 19/A, Rukmani Lakshmipathy Road, Egmore, Chennai – 600 008
2)	Proposed Activity	Proposed establishment of Polymer Industries Park at Voyalur & Puzhdivakkam Villages
3)	Schedule No.	8(b)
4)	Project Location	
	i) Survey No	143 & 187 of Puzhdivakkam village, 2053B part of Voyalur Village
	ii) Revenue Village	Puzhdivakkam & Voyalur Village
	iii) Taluk	Ponneri
	iv) District	Tiruvallur
5)	Area of the Land	239.82 acres
6)	Built up Area	



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SEIAA-TN

Sl.No.	Description	Area (Acres)
1	Plot area	167.21
2	OSR	24.38
3	Amenities	5.01
4	Logistics (Truck Terminal)	6.00
5	Solid Waste Management	9.00
6	Road, Water supply, Storm water drain & Street Lights	25.22
7	Utility Corridor	3.00
	Total area	239.82
7)	<p>Brief description of the project</p> <p>The proposal is an infrastructure development project. It involves development of roads, water supply, storm water drainage, street lights, green belt development, and such other amenities.</p> <p>Industrial Park will house industries which do not fall under EIA Notification 2006 and amendments thereof. The proposed industries include the following:</p> <ul style="list-style-type: none"> • Polymer and Plastic Components/Parts/Products • Engineering Manufacturing / Production, specifically, Machines for Plastic component manufacturing with Metal Finishing and Surface Coating activities. • Any other industries that are not under the purview of EIA Notification, 2006 	
8)	Land Use Classification	Patta dry land & Govt Poramboke Land



MEMBER SECRETARY
SEIAA-TN

9)	Green Belt		
	Sl.No.	Description	Area (Acres)
	1.	In OSR	24.38
	2.	By Member Industries (33 % of the total plot area allotted to Member Industries) i.e 33% of 167.21 Ha	56.30
		Total	80.68
		Percentage of Green Belt among Total Area of Industrial Park i.e 239.82 hectares	33.09%
10)	UTILITIES-WATER		
	a)	Total Water Requirements	1 MLD
	b)	Source from where the water is proposed to be drawn	Tamil Nadu Water Supply and Drainage Board (TWAD)
	c)	Sewage system	All member units will be mandated to install "Zero Liquid Discharge" based Effluent Treatment Plants to reclaim water for recycle/reuse in their utilities and green belt development. The quantity of sewage that will be generated from SIPCOT administrative office will be managed in septic tank followed by soak pit .
	d)	ETP & Recycle line	All member units will be mandated to install "Zero Liquid Discharge" based Effluent Treatment Plants to reclaim water for recycle/reuse in their utilities and green belt development.
11)	Solid Waste Management		Area of 9 acres has been earmarked for establishing a solid waste management facility.



MEMBER SECRETARY
SEIAA-TN

		<p>SIPCOT will identify a TSDF provider and facilitate to establish such a treatment, storage and disposal facility(TSDF) in line with guidelines of CPCB & MoEF & CC.</p> <p>Solid waste generated will be disposed to the approved Municipal Solid Waste Management or else SIPCOT will set up its facility through renowned agencies by outsourcing their services on annual contract basis</p>
12)	Power requirement	50MW from TANGEDCO
13)	Project Cost	Rs. 216.91 Crores
14)	EMP Cost	<p>For Operation Phase:</p> <p>Capital Cost -72.76 lakhs</p> <p>Operation cost- 36.60 Lakhs per annum</p>

Annexure 2- Affidavit

The Proponent has furnished affidavit in Twenty Rupees stamp paper attested by the Notary stating that

I, Dr. S. AneeshSekhar, IAS, Managing Director, Authorised Signatory, represent M/s. Tamil Nadu Polymer Industries Park Ltd (TPIPL), 19-A, RukmaniLakshmiPathy Road, Egmore, Chennai – 600008. We have proposed to establish a polymer industries park over an extent of 239.82acres at Voyalur and Puzhuvakkam Villages, Ponneri taluk, Thiruvallur District. An application submitted by us seeking Environmental Clearance under the EIA Notification, 2006 is under scrutiny in the Authority. I am furnishing the following undertaking to the Authority, hereby solemnly affirm and state as follows:-

1. We commit to SEIAA that will develop Green belt in 10.16% of the total area i.e 24.38acres. Further, we will also ensure the development of green belt in 33% of the allotted area by the member units i.e 55.18acres, which is 23.01% of total area. It will be made as a mandatory condition in the land allotment order as well as the lease deed to be executed between TPIPL and allottees. The net area of



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MEMBER SECRETARY
SEIAA-TN

green belt of the proposed industrial park in the post project scenario will be 79.56 acres, which is 33.17% of the total area of the park.

2. We commit to SEIAA that the area proposed for the park does not fall under CRZ area. The co-ordinates of the site as per the map prepared by Institute of Remote Sensing, Anna University superimposing the site on approved CZMP as per CRZ notification 2011 vide Ref.No.AU/IRS/CU/229-2019 are as follows:

Label	Latitude	Longitude
A	13°17'53.829"N	80°18'57.149"E
B	13°17'51.613"N	80°19'6.267"E
C	13°17'29.520"N	80°19'17.462"E
D	13°17'25.876"N	80°19'17.624"E
E	13°17'0.406"N	80°19'11.241"E
F	13°16'45.849"N	80°19'2.924"E
G	13°16'11.552"N	80°18'54.004"E
H	13°16'10.676"N	80°18'48.620"E
I	13°16'15.943"N	80°18'48.161"E
J	13°16'16.212"N	80°18'46.548"E
K	13°16'39.554"N	80°18'52.076"E
L	13°16'44.580"N	80°18'50.337"E
M	13°16'56.035"N	80°18'44.163"E
N	13°17'3.801"N	80°18'42.680"E
O	13°17'5.139"N	80°18'43.162"E
P	13°17'2.214"N	80°18'53.224"E
Q	13°16'59.337"N	80°18'57.518"E
R	13°16'59.532"N	80°19'3.514"E
S	13°17'18.118"N	80°19'8.899"E
T	13°17'26.234"N	80°19'9.191"E
U	13°17'29.254"N	80°19'8.933"E
V	13°17'30.657"N	80°19'6.172"E



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SEIAA-TN
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W	13°17'33.153"N	80°19'8.035"E
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3. We commit to SEIAA that the total water requirement for the park is 1MLD, which will be obtained from Tamil Nadu Water Supply and Drainage Board (TWAD). TWAD Board has already issued approval for 2.2 MLD (Letter No. 1609/F,CBIC/DO/PF Dn/VLR/date: 16.09.2015).
4. We commit to SEIAA that all member units will be mandated to install "Zero Liquid Discharge" based Effluent Treatment Plants to reclaim water for recycle/reuse in their utilities and green belt development. We will mandate to member units to manage the sewage as per TNPCB norms. The solid waste stream will be sent to TNPCB approved vendors/TSDF for proper and ultimate disposal. The quantity of sewage that will be generated from TPIPL administrative office will only be 1000litres/day and it will be managed in septic tank followed by soak pit as onsite construction.
5. We commit to SEIAA that all member units will be mandated to provide rain water harvesting structures as per norms. TPIPL will construct percolation tanks for harvesting the rainwater in the project office.
6. We commit to SEIAA that we will provide storm water drainage system as open concrete channels, all along the road side for ensuring proper collection of storm water and will let out in the nearby water bodies. We also assure that the storm water drain would not carry any untreated or treated sewage.
7. We commit to SEIAA that we will undertake CER activities as per norms with the approval of board of TPIPL.
8. We also assure that our project site does not encroach any water bodies such as rivers, canals, nallas, lakes, ponds, tanks, etc., from its original boundary.
9. We are aware that we can be prosecuted under relevant Act and Rules, if we are not ensuring the adherence of the above commitment

The project activity is covered in 8(b) of the Schedule and is of B2 category. It does not require Public Consultation as per Para 7 III Stage (3) (i) (d) of EIA Notification, 2006.



The Authority after consideration all the requisite documents with status and data and based on SEAC appraisal and recommendations for issue of Environmental Clearance in its 139th meeting held on 23.11.2019, SEIAA placed the proposal in the 363rd SEIAA meeting held on 19.12.2019 hereby conveyed Environmental Clearance along with the conditions containing four parts namely

Part - A –Common conditions applicable for Pre-construction, Construction and Operational Phases

Part - B –Specific Conditions – Pre construction phase

Part - C - Specific Conditions – Construction phase

Part – D - Specific Conditions – Operational Phase/Post constructional Phase / Entire life of the project.

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:

Part - A – Common conditions applicable for Pre-construction, Construction and Operational Phases:

1. 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.
2. The construction of STP, Solid Waste Management facility, E-waste management facility, DG sets, etc., should be made in the earmarked area only. In any case, the location of these utilities should not be changed later on.
3. The Environmental safeguards contained in the application of the proponent /mentioned during the presentation before the State Level Environment Impact



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Assessment Authority / State Level Expert Appraisal Committee should be implemented in the letter and spirit.

4. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire and Rescue Services Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wild Life (Protection) Act, 1972, State / Central Ground Water Authority, Coastal Regulatory Zone Authority, other statutory and other authorities as applicable to the project shall be obtained by project proponent from the concerned competent authorities.
5. The SEIAA reserves the right to add additional safeguard measures subsequently, if non-compliance of any of the EC conditions is found and to take action, including revoking of this Environmental Clearance as the case may be.
6. A proper record showing compliance of all the conditions of Environmental Clearance shall be maintained and made available at all the times.
7. 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. The status of compliance of environmental clearance conditions and shall also be sent to the Regional Office of the Ministry of Environment and Forests, Chennai by e-mail.
8. The Regional Office of the Ministry located at Chennai shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.
9. "Consent for Establishment" shall be obtained from the Tamil Nadu Pollution Control Board and a copy shall be submitted to the SEIAA, Tamil Nadu.
10. In the case of any change(s) in the scope of the project, a fresh appraisal by the SEAC/SEIAA shall be obtained before implementation.
11. The 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 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, including the Hon'ble National Green Tribunal relating to the subject matter.

12. The Environmental Clearance shall not be cited for relaxing the other applicable rules to this project.
13. 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.
14. The proponent shall upload the status of compliance of the stipulated EC 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 MoEF, Chennai, the respective Zonal Office of CPCB, Bengaluru and the TNPCB. The criteria pollutant levels namely; PM10, PM2.5, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored.
15. 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.
16. The Environmental Clearance does not imply that the other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would be considering the project on merits and be taking decisions independently of the Environmental Clearance.



17. The SEIAA, TN may alter/modify the above conditions or stipulate any further condition in the interest of environment protection, even during the subsequent period.
18. The Environmental Clearance does not absolve the applicant/proponent of his obligation/requirement to obtain other statutory and administrative clearances from other statutory and administrative authorities.
19. Where the trees need to be cut, compensation plantation in the ratio of 1:10 (i.e. planting of 10 trees for every one tree that is cut) should be done with the obligation to continue maintenance.
20. A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive who will report directly to the Head of the Organization and the shortfall shall be strictly reviewed and addressed.
21. The EMP cost of Rs.1.09 Crores 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.
22. The project activity should not cause any disturbance & deterioration of the local bio diversity.
23. The project activity should not impact the water bodies. A detailed inventory of the water bodies and forest should be evaluated and fact reported to the Forest Department & PWD for monitoring.
24. All the assessed flora & fauna should be conserved and protected.
25. The proponent should strictly comply with, Tamil Nadu Government Order (Ms) No.84 Environment and forests (EC.2) Department dated 25.06.2018 regarding ban on one time use and throwaway plastics irrespective of thickness with effect from 01.01.2019 under Environment (Protection) Act, 1986.
26. As per MoEF & CC, GoI, Office Memorandum dated 30.03.2015, prior clearance from Forestry & Wildlife angle including clearance from obtaining committee of the National Board for Wildlife as applicable shall be obtained



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- before starting the quarrying operation, if the project site is located within 10KM from National Park and Sanctuaries.
27. Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided.
28. The safety measures proposed in the report should be strictly followed.
29. The Developer shall ensure that no allotment letter/ sale deed in any form shall be made to house category A or category B industry as prescribed in the schedule of EIA notification 2006. However, in case any category A or category B type of industry as prescribed in the schedule of EIA notification 2006 is proposed then the individual unit shall apply and seek Environmental Clearance under the EIA notification 2006.
30. The project proponent must submit the permissible land use classification certificate obtained from competent authority for the proposed project before obtain the CTE from TNPCB.
31. The proponent shall obtain the necessary permission/ NOC of water supply from the TWAD board
32. The Developer shall mandate the member industries of the Industrial Park to allot 33% of the plot area for green belt development and to install RWH structures.
33. The Developer has to ensure that all the member industries within the Industrial Park shall make their own arrangements to achieve zero discharge of the trade effluents, solid waste & E waste management, gaseous emission and noise control measures to achieve the standards prescribed by the TNPCB.
34. The project proponent shall ensure that the individual member units will not be allowed to carry out manufacturing of products stipulated in G.O. (Ms) No. 84 dated 25/06/2018 on banning of one time use on and throwaway plastics.
35. The project proponent must submit the permissible land use classification certificate obtained from competent authority for the proposed project before obtain the CTE from TNPCB.



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36. The CER fund shall be utilized as per the office memorandum of MoEF & CC dated 01.05.2018 before obtaining CTO from TNPCB.
37. The allotted industrial units shall obtain consent from the TNPCB separately for their establishment & operation in this industrial estate.
38. The project proponent shall ensure that 33% of the total area of the project site should be covered with green belt.
39. The proponent shall provide Rain Water Harvesting pits so as to recharge the ground water table.
40. Discharge of treated sewage shall conform to the norms & standards prescribed by the Tamil Nadu Pollution Control Board.
41. It is the sole responsibility of the proponent that the treated sewage disposed for green belt development/ avenue plantation should not pollute the soil/ ground water/ adjacent canals/ lakes/ ponds, etc.
42. The Developer has to ensure that all the member industries within the Industrial Park shall make their own arrangements to achieve zero discharge of the trade effluents,
43. The project proponent shall ensure that all the member units should treat and dispose solid waste & E-waste as per the Solid Waste Management Rule 2016 as amended and E-Waste Management Rules, 2016
44. There shall be no discharge of effluent outside the Industrial Park at any time.
45. The Developer shall mandate the member units of the Industrial Park to install adequate APC measures/Acoustic to achieve air emissions standards within permissible limits prescribed by the CPCB.
46. The Project proponent shall earmark the following Co ordinates in the project site as per CRZ map issued by IRS, Anna University and shall provide with pillar stone.

LABLE	LATITUDE	LONGITUDE
A	13°17'53.829"N	80°18'57.149"E
B	13°17'51.613"N	80°19'6.267"E
C	13°17'29.520"N	80°19'17.462"E
D	13°17'25.876"N	80°19'17.624"E
E	13°17'0.406"N	80°19'11.241"E



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F	13°16'45.849"N	80°19'2.924"E
G	13°16'11.552"N	80°18'54.004"E
H	13°16'10.676"N	80°18'48.620"E
I	13°16'15.943"N	80°18'48.161"E
J	13°16'16.212"N	80°18'46.548"E
K	13°16'39.554"N	80°18'52.076"E
L	13°16'44.580"N	80°18'50.337"E
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V	13°17'30.657"N	80°19'6.172"E
W	13°17'33.153"N	80°19'8.035"E

47. The Environmental Clearance issued only for the revised proposal submitted by the proponent for the project site fall non CRZ area as per CRZ (Ref.No AU/IRS/CU/229-2019 Dt.9.12.2019) map issued by IRS, Anna University.

Part - B – Specific Conditions – Pre construction phase:

1. The project authorities should advertise with basic details 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 clearance. The press releases also mention that a copy of the clearance letter is available with the State Pollution Control Board and also at website of SEIAA, TN. The copy of the press release should be forwarded to the Regional Office of the Ministry of Environment and Forests located at Chennai and SEIAA-TN.
2. In the case of any change(s) in the scope of the project, a fresh appraisal by the SEAC/SEIAA shall be obtained before implementation.
3. A copy of the clearance letter shall be sent by the proponent to the Local Body. The clearance letter shall also be put on the website of the Proponent.
4. The approval of the competent authority shall be obtained for structural safety of the buildings during earthquakes, adequacy of fire fighting equipments, etc as per



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National Building Code including protection measures from lightning etc before commencement of the work.

5. All required sanitary and hygienic measures for the workers should be in place before starting construction activities and they have to be maintained throughout the construction phase.
6. Design of buildings should be in conformity with the Seismic Zone Classifications.
7. The Construction of the structures should be undertaken as per the plans approved by the concerned local authorities/local administration.
8. No construction activity of any kind shall be taken up in the OSR area.
9. Consent of the local body concerned should be obtained for using the treated sewage in the OSR area for gardening purpose. The quality of treated sewage shall satisfy the bathing quality prescribed by the CPCB.
10. The height and coverage of the constructions shall be in accordance with the existing FSI/FAR norms as per Coastal Regulation Zone Notification, 2011.
11. The Project Proponent shall provide car parking exclusively for the visiting guest in the proposed residential apartments as per CMDA norms.
12. The project proponent shall ensure the level of basement shall be above maximum flood level.
13. The proponent shall prepare completion plans showing Separate pipelines marked with different colours with the following details
 - i. Location of STP, compost system, underground sewer line.
 - ii. Pipe Line conveying the treated effluent for green belt development.
 - iii. Pipe Line conveying the treated effluent for toilet flushing
 - iv. Water supply pipeline
 - v. Gas supply pipe line, if proposed
 - vi. Telephone cable
 - vii. Power cable
 - viii. Storm water drains, and



- ix. Rain water harvesting system, etc., and it shall be made available to the owners
14. A First Aid Room shall be provided in the project site during the entire construction and operation phases of the project.
15. The present land use surrounding the project site shall not be disturbed at any point of time.
16. The green belt area shall be planted with indigenous native trees.
17. Natural vegetation listed particularly the trees shall not be removed during the construction/operation phase. In case any trees are likely to be disturbed, shall be replanted.
18. During the construction and operation phase, there should be no disturbance to the aquatic eco-system within and outside the area.
19. The Provisions of Forest conservation Act 1980, Wild Life Protection Act 1972 & Bio diversity Act 2002 should not be violated.
20. There should be Fire fighting plan and all required safety plan.
21. Regular fire drills should be held to create awareness among owners/ residents.

Part - C - Specific Conditions – Construction phase:

1. Construction Schedule:

- i) The Project proponent shall have to furnish the probable date of commissioning of the project supported with necessary bar charts to SEIAA-TN.

2. Labour Welfare:

- i) All the labourers to be engaged for construction should be screened for health and adequately treated before and during their employment on the work at the site.
- ii) Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to



observe any contradictions due to exposure to dust and take corrective measures, if needed.

- iii) Periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly. The workers shall be provided with personnel protective measures such as masks, gloves, boots etc.

3. Water Supply:

- i) The entire water requirement during construction phase may be met from ground water source from the source with approval of the PWD Department of water resources/ may be out sourced.
- ii) Provision shall be made for the housing labour within the site with all necessary infrastructures and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- iii) Adequate drinking water and sanitary facilities should be provided for construction workers at the site. The treatment and disposal of waste water shall be through dispersion trench after treatment through septic tank. The MSW generated shall be disposed through Local Body and the identified dumpsite only.
- iv) Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices prevalent.
- v) Fixtures for showers, toilet flushing and drinking water should be of low flow type by adopting the use of aerators / pressure reducing devices / sensor based control.

4. Solid Waste Management:

- i) In the solid waste management plan, the STP sludge management plan for direct use as manure for gardens is not acceptable; it must be co-composted with biodegradables.



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- ii) House hold hazardous waste such as batteries, small electronics, CFL bulbs, expired medicines and used cleaning solvent bottles should be segregated at source, collected once in a month from residences and disposed as per the SWM rules 2016.
- iii) Domestic solid wastes to be regularly collected in bins or waste handling receptacles and disposed as per the solid waste management rules 2016.
- iv) No waste of any type to be disposed of in any watercourse including drains, canals and the surrounding environment.
- v) E-waste shall be disposed through Authorized vendor as per E-waste (Management and Handling) Rules, 2016 and subsequent amendment.

5. Top Soil Management:

- i) All the top soil excavated during construction activities should be stored for use in horticulture/ landscape development within the project site.

6. Construction Debris disposal:

- i) Disposal of construction debris during construction phase should not create any adverse effect on the neighboring communities and be disposed off only in approved sites, with the approval of Competent Authority with necessary precautions for general safety and health aspects of the people. The construction and demolition waste shall be managed as per Construction & Demolition Waste Management Rules, 2016.
- ii) Construction spoils, including bituminous materials and other hazardous materials, must not be allowed to contaminate watercourses. The dump sites for such materials must be secured so that they should not leach into the adjacent land/ lake/ stream etc.

7. Diesel Generator sets:

- i) Low Sulphur Diesel shall be used for operating diesel generator sets to be used during construction phase. The air and noise emission shall conform to the standards prescribed in the Rules under the Environment (Protection) Act, 1986 and the Rules framed thereon.



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- ii) The diesel required for operating stand by DG sets shall be stored in underground tanks fulfilling the safety norms and if required, clearance from Chief Controller of Explosives shall be taken.
- iii) The acoustic enclosures shall be installed at all noise generating equipments such as DG sets, air conditioning systems, cooling water tower etc.

8. Air & Noise Pollution Control:

- i) Vehicles hired for bringing construction materials to the site should be in good condition and should conform to air and noise emission standards, prescribed by TNPCB/CPCB. The vehicles should be operated only during non-peak hours.
- ii) Ambient air and noise levels should conform to residential standards prescribed by the TNPCB, both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during the construction phase. The pollution abatement measures shall be strictly implemented.
- iii) Traffic congestion near the entry and exit points from the roads adjoining the proposed project site shall be avoided. Parking shall be fully internalized and no public space should be utilized. Parking plan to be as per DTCP norms. The traffic department shall be consulted and any cost effective traffic regulative facility shall be met before commissioning.
- iv) The buildings should have adequate distance between them to allow free movement of fresh air and passage of natural light, air and ventilation.

9. Building material:

- i) Fly-ash blocks should be used as building material in the construction as per the provision of Fly ash Notification of September, 1999 and amended as on 27th August, 2003 and Notification No. S.O. 2807 (E) dated: 03.11.2009.
- ii) Ready-mix concrete shall alone be used in building construction and necessary cube-tests should be conducted to ascertain their quality.



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- iii) Use of glass shall be reduced up to 40% to reduce the electricity consumption and load on air conditioning. If necessary, high quality double glass with special reflecting coating shall be used in windows.

10. Storm Water Drainage:

- i) Storm water management around the site and on site shall be established by following the guidelines laid down by the storm water manual.
- ii) Storm water management plan shall be obtained by engaging the services of Anna University/IIT.

11. Energy Conservation Measures:

- i) Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material, to fulfill the requirement.
- ii) Opaque wall should meet prescribed requirement as per Energy Conservation Building Code which is mandatory for all air conditioned spaces by use of appropriate thermal insulation material to fulfill the requirement.
- iii) All norms of Energy Conservation Building Code (ECBC) and National Building Code, 2005 as energy conservation have to be adopted Solar lights shall be provided for illumination of common areas.
- iv) Application of solar energy should be incorporated for illumination of common areas, lighting for gardens and street lighting. A hybrids system or fully solar system for a portion of the apartments shall be provided.
- v) A report on the energy conservation measures conforming to energy conservation norms prescribed by the Bureau of Energy Efficiency shall be prepared incorporating details about building materials & technology; R & U factors etc and submitted to the SEIAA in three month's time.
- vi) Energy conservation measures like installation of CFLs/TFLs for lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning.

12. Fire Safety:

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- i) Adequate fire protection equipments and rescue arrangements should be made as per the prescribed standards.
- ii) Proper and free approach road for fire-fighting vehicles upto the buildings and for rescue operations in the event of emergency shall be made.

13. Green Belt Development:

- i) The Project Proponent shall plant tree species with large potential for carbon capture in the proposed green belt area based on the recommendation of the Forest department well before the project is completed.
- ii) The purpose of Green belt around the project is to capture the fugitive emissions and to attenuate the noise generated, in addition to the improvement in the aesthetics. A wide range of indigenous plants species should be planted in and around the premise in consultation with the DFO, Viluppuram District / State Agriculture University. The plants species should have thick canopy cover, perennial green nature, native origin and large leaf areas. Medium size trees and small trees alternating with shrubs shall be planted. If possible Miyawaki method of planting i.e planting different types of trees at very close escapement may be tried which will give a good green cover. A total of 15% of the plot area should be designated for green belt which should be raised along the boundaries of the plot and in between blocks in an organized manner
- iii) The proponent shall develop the green belt as per the plan furnished and area earmarked for the greenbelt shall not be alter at any point of time for any other purpose.
- iv) The proponent has to earmark the greenbelt area with dimension and GPS coordinates for the green belt area and the same shall be included in the layout out plan to be submitted for DTCP approval

14. Sewage Treatment Plant:



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- i) The Sewage Treatment Plant (STP) installed should be certified by an independent expert/ reputed Academic institutions for its adequacy and a report in this regard should be submitted to the SEIAA, TN before the project is commissioned for operation. Explore the less power consuming systems viz baffle reactor, etc., for the treatment of sewage.
- ii) The Proponent shall install STP as furnished. Any alteration to satisfy the bathing quality shall be informed to SEIAA-TN.
- iii) The project proponent shall operate and maintain the Sewage treatment Plant effectively to meet out the standards prescribed by the CPCB.
- iv) The project proponent shall continuously operate and maintain the Sewage treatment plant to achieve the standards prescribed by the CPCB.
- v) The project proponent has to ensure the complete recycling of treated sewage after achieving the standards prescribed by the CPCB.
- vi) The project proponent has to provide separate standby D.G set for the STP for the continuous operation of the STP in case of power failure.

15. Rain Water Harvesting:

- i) The proponent/ Owner of the Flats shall ensure that roof rain water collected from the covered roof of the buildings, etc shall be harvested so as to ensure the maximum beneficiation of rain water harvesting by constructing adequate sumps so that 100% of the harvested water shall be reused.
- ii) Rain water harvesting for surface run-off, as per plan submitted should be implemented. Before recharging the surface run off, pre-treatment with screens, settlers etc. must be done to remove suspended matter, oil and grease, etc.
- iii) The project activity should not cause any disturbance & deterioration of the local bio diversity.

16. Building Safety:

Lightning arrester shall be properly designed and installed at top of the building and where ever is necessary.



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Part – D - Specific Conditions – Operational Phase/Post constructional phase/Entire life of the project:

1. There should be Fire fighting plan and all required safety plan.
2. Regular fire drills should be held to create awareness among owners/ residents.
3. House hold hazardous waste such as batteries, small electronics, CFL bulbs, expired medicines and used cleaning solvent bottles should be segregated at source, collected once in a month from residences and disposed as per the SWM rules 2016.
4. The building should not spoil the green views and aesthetics of surroundings and should provide enough clean air space.
5. The project proponent has to furnish the certificate stating that the proposed site had not encroached any water body (rivers, canals, lakes, ponds, tanks, etc) from its original boundary shall be obtained from the competent authority before obtaining CTE from TNPCCB.
6. The project proponent shall obtain the necessary permission for drawl of ground water / surface water required for the project from the competent authority.
7. Solar energy saving shall be increased to atleast 10% of total energy utilization.
8. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
9. The company shall have a well laid down environmental policy duly approved 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.



10. The EMP cost shall be printed in the Brochure / Pamphlet for the preparation of the sale of the property and should also mention the component involved.
11. The Project proponent shall get due permission from the wetland Authority before the commencement of the work, if applicable.
12. The project activities should in no way disturb the manmade structures.
13. The Proponent shall do afforestation/ restoration programme contemplated to strengthen the open spaces shall preferably include native species along with the financial forecast for planting and maintenance for 5 years.
14. "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.
15. Raw water quality to be checked for portability and if necessary RO plant shall be provided.
16. The Proponent should be responsible for the maintenance of common facilities including greening, rain water harvesting, sewage treatment and disposal, solid waste disposal and environmental monitoring including terrace gardening for a period of 3 years. Within one year after handing over the flats to all allottees a viable society or an association among the allottees shall be formed to take responsibility of continuous maintenance of all facilities with required agreements for compliance of all conditions furnished in Environment Clearance (EC) order issued by the SEIAA-TN or the Proponent himself shall maintain all the above facilities for the entire period. The copy of MOU between the buyers Association and proponent shall be communicated to SEIAA-TN.
17. The ground water level and its quality should be monitored and recorded regularly in consultation with Ground Water Authority.
18. Treated effluent emanating from STP shall be recycled / reused to the maximum extent possible. The treated sewage shall conform to the norms and standards for bathing quality laid down by CPCB irrespective of any use. Necessary measures should be made to mitigate the odour and mosquito problem from STP.



Jaya
MEMBER SECRETARY
SEIAA-TN
19/12/19

19. The Proponent shall operate STP continuously by providing stand by DG set in case of power failure.
20. Adequate measures should be taken to prevent odour emanating from solid waste processing plant and STP.
21. 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.
22. Diesel power generating sets proposed as source of back-up power during operation phase should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets.
23. The noise level shall be maintained as per MoEF/CPCB/TNPCB guidelines/norms both during day and night time.
24. Spent oil from D.G sets should be stored in HDPE drums in an isolated covered facility and disposed as per the Hazardous & other Wastes (Management & Transboundary Movement) Rules 2016. Spent oil from D.G sets should be disposed off through registered recyclers.
25. The proponent is required to provide a house hold hazardous waste / E-waste collection and disposal mechanism.
26. The proponent/ Owner of the Flats shall ensure that storm water drain provided at the project site shall be maintained without choking or without causing stagnation and should also ensure that the storm water shall be properly disposed off in the natural drainage / channels without disrupting the adjacent public. Adequate harvesting of the storm water should also be ensured.
27. Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination.
28. A copy of the Environmental clearance (EC) letter shall be made available to all the allottees along with the allotment order / sale deed.



Tajm
MEMBER SECRETARY
SEIAA-TN
19/12/19

29. 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.

Tayy
MEMBER SECRETARY
SEIAA-TN
11/12/19

Copy to:

1. The Principal 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 110032.
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 110003.
6. The District Collector, Tiruvallur District
7. Stock File.





TAMILNADU POLLUTION CONTROL BOARD

Category of the Industry :

RED



CONSENT ORDER NO. 2101232436303

DATED: 22/03/2021.

PROCEEDINGS NO.T2/TNPCB/F.0929GMP/RL/GMP/A/2021 DATED: 22/03/2021

SUB: TNPC Board-Consent for Establishment-M/s. TAMILNADU POLYMER INDUSTRIES PARK LIMITED , S.F. No. SF.No.143(part) and 187(part) of Puzhuthivakkam Village, and 2053B (part) of Voyalur Village, PUZHUTHIVAKKAM village, Ponneri Taluk and Tiruvallur District - for the establishment or take steps to establish the industry under Section 21 of the Air(Prevention and control of Pollution)Act,1981, as amended in 1987(Central Act. 14 of 1981)-Issued -Reg.

- REF:** 1. Unit's application for CTE – New on 24.06.2020/ 02.02.2021
2. IR.No : F.0929GMP/RL/AE (M)/GMP/2020 dated 22/12/2020
3. Minutes of TSC Resolution No. 185-05 Dated 20.01.2021
4. Minutes of TSC Resolution No. 186 – 02 Dated 10.03.2021

Consent to establish or take steps to establish is hereby granted under Section 21 of the Air (Prevention and control of Pollution) Act,1981, as amended in 1987 and the Rules and Orders made there under to

The Managing Director,

M/s . TAMILNADU POLYMER INDUSTRIES PARK LIMITED

S.F No.SF.No.143(part) and 187(part) of Puzhuthivakkam Village, and 2053B (part) of Voyalur Village,

PUZHUTHIVAKKAM Village,

Ponneri Taluk,

Tiruvallur District.

Authorizing occupier to establish or take steps to establish the industry in the site mentioned below:

S.F No. SF.No.143(part) and 187(part) of Puzhuthivakkam Village, and 2053B (part) of Voyalur Village,

PUZHUTHIVAKKAM Village,

Ponneri Taluk,

Tiruvallur District.

This Consent to establish is valid upto **March 31, 2025**, or till the industry obtains consent to operate under Section 21 of the Air (Prevention and control of Pollution) Act, 1981, as amended in 1987 whichever is earlier subject to special and general conditions enclosed.

S. Ragupathi Digitally signed by S. Ragupathi
Date: 2021.03.23 13:54:27 +05'30'

**For Member Secretary,
Tamil Nadu Pollution Control Board,
Chennai**

To
The Managing Director,
M/s.TAMILNADU POLYMER INDUSTRIES PARK LIMITED,

Tamilnadu Polymer Industries Park Limited
III Floor, 19-A, Rukmini Lakshmipathy Road
Egmore, Chennai,
Pin: 600008



TAMILNADU POLLUTION CONTROL BOARD

Copy to:

1. The Commissioner, MEENJUR-Panchayat Union, Ponneri Taluk, Tiruvallur District .
2. The District Environmental Engineer, Tamil Nadu Pollution Control Board, GUMMIDIPOONDI.
3. The JCEE-Monitoring, Tamil Nadu Pollution Control Board, Chennai.
4. File





TAMILNADU POLLUTION CONTROL BOARD
SPECIAL CONDITIONS

1. This consent to establish is valid for establishing the facility for the manufacture of products/byproducts (Col. 2) at the rate (Col 3) mentioned below. Any change in the product/byproduct and its quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Sl. No.	Description	Quantity	Unit
Product Details			
1.	It is an industrial park involving development of infrastructure such as roads, water supply, storm water drainage, street lights, green belt etc., to house industries including engineering, manufacturing/production specifically for polymer components and any other industries that are not fall under EIA Notification 2006 and amendments thereof.	97.05	Hectares

2. This consent to establish is valid for establishing the facility with the below mentioned emission/noise sources along with the control measures and/or stack .Any change in the emission source/control measures/change in stack height has to be brought to the notice of the Board and fresh consent has to be obtained if necessary.

I	Point source emission with stack :			
Stack No.	Point Emission Source	Air pollution Control measures	Stack height from Ground Level in m	Gaseous Discharge in Nm3/hr
II	Fugitive/Noise emission :			
Sl. No.	Fugitive or Noise Emission sources	Type of emission	Control measures	

3. **Special Additional Conditions:**

The unit shall install the approved retrofit emission control device/equipment with at least 70% Particulate matter reduction efficiency on all DG sets with capacity of 125 KVA and above or otherwise the unit shall be shift to gas based generators within the time frame prescribed in the notification No. TNPCB/Labs/DD(L)02151/2019 dated 10.06.2020 issued by TNPCB.

4. **Additional Conditions:**

1. The unit shall comply with the conditions as stipulated in the Environmental Clearance obtained from SEIAA, TN vide Lr.No.SEIAA-TN/F.6957/EC/8(b)/683/2019 Dated 11.12.2019.
2. The unit shall conduct Ambient Noise level survey report and Ambient Air Quality survey report for base line data to assess the quality of Ambient Air and Ambient Noise level and submit the report within one month's time.
3. The unit shall comply with the E- waste Management Rules, 2016. E-waste as listed in Schedule – I generated by them shall be channelized through collection centre or dealer of authorized producer or dismantler or recycler or through the designated take back service provider of the producer to authorized dismantler or recycler. The unit shall maintain records of e- waste generated by them in Form – 2 and make such records available for scrutiny by the TNPCB. The unit shall file annual returns in Form -3 , to the TNPCB on or before the 30th day of June following the financial year.
4. The unit shall develop adequate greenbelt (33% of its total area) in and around the unit premises.
5. The unit shall remit consent fee in case of revision by the Government.

S. Ragupathi Digitally signed by S. Ragupathi
Date: 2021.03.23 13:55:07 +05'30'

**For Member Secretary,
Tamil Nadu Pollution Control Board,
Chennai**



TAMILNADU POLLUTION CONTROL BOARD

GENERAL CONDITIONS

1. This consent to establish cannot be construed as consent to operate and the unit shall not commence the operation without obtaining the Consent to operate.
2. The applicant shall make a request for grant of consent to operate at least thirty days, before the commissioning of trial production.
3. Any Change in the details furnished in the conditions has to be brought to the notice of the Board and got approved by the Board, before obtaining consent to operate under the said Act.
4. The unit has to comply with the provisions of Public Liability Insurance Act, 1991 to provide immediate relief in the event of any hazard to human beings, other living creatures/plants and properties while handling and storage of hazardous substances (wherever applicable).
5. Consent to operate will not be issued unless the unit complies with the conditions of consent to establish.
6. The unit shall provide adequate water sprinklers for the control of dust emission during the loading and unloading of construction material so as to minimize the dust emission.
7. The unit shall provide water sprinklers along the temporary roads inside the premises to avoid fugitive dust emission during the vehicle movements.
8. The unit shall develop green belt of adequate width around the premises.
9. In case there is any change in the management, the unit shall inform the change with relevant documents immediately.

S. Ragupathi

Digitally signed by S. Ragupathi
Date: 2021.03.23 13:55:38 +05'30'

For Member Secretary,
Tamil Nadu Pollution Control Board,
Chennai



TAMILNADU POLLUTION CONTROL BOARD

Category of the Industry :

RED

CONSENT ORDER NO. 2101132436303

DATED: 22/03/2021.

PROCEEDINGS NO.T2/TNPCB/F.0929GMP/RL//GMP/W/2021

DATED: 22/03/2021



SUB: TNPC Board-Consent for Establishment-M/S TAMILNADU POLYMER INDUSTRIES PARK LIMITED S.F No. SF.No.143(part) and 187(part) of Puzhuthivakkam Village, and 2053B (part) of Voyalur Village, PUZHUTHIVAKKAM Village, Ponneri Taluk, Tiruvallur District - for the establishment or take steps to establish the industry under Section 25 of the Water (Prevention and control of Pollution) Act, 1974, as amended in 1988(Central Act 6 of 1974)- Issued- Reg.

REF: 1. Unit's application for CTE – New on 24.06.2020/ 02.02.2021
2. IR.No : F.0929GMP/RL/AE (M)/GMP/2020 dated 22/12/2020
3. Minutes of TSC Resolution No. 185-05 Dated 20.01.2021
4. Minutes of TSC Resolution No. 186 – 02 Dated 10.03.2021

Consent to establish or take steps to establish is hereby granted under Section 25 of the Water (Prevention and control of Pollution) Act, 1974, as amended in 1988(Central Act 6 of 1974) (hereinafter referred to as 'The Act') and the Rules and Orders made there under to

The Managing Director,

TAMILNADU POLYMER INDUSTRIES PARK LIMITED

Authorizing occupier to establish or take steps to establish the industry in the site mentioned below:

S.F. No.SF.No.143(part) and 187(part) of Puzhuthivakkam Village, and 2053B (part) of Voyalur Village,
PUZHUTHIVAKKAM Village,
Ponneri Taluk,
Tiruvallur District.

This Consent to establish is valid upto **March 31, 2025**, or till the industry obtains consent to operate under Section 25 of the Water (Prevention and control of Pollution) Act, 1974, as amended in 1988 whichever is earlier subject to special and general conditions enclosed.

S. Ragupathi Digitally signed by S. Ragupathi
Date: 2021.03.23 13:51:34 +05'30'

For Member Secretary,
Tamil Nadu Pollution Control Board,
Chennai

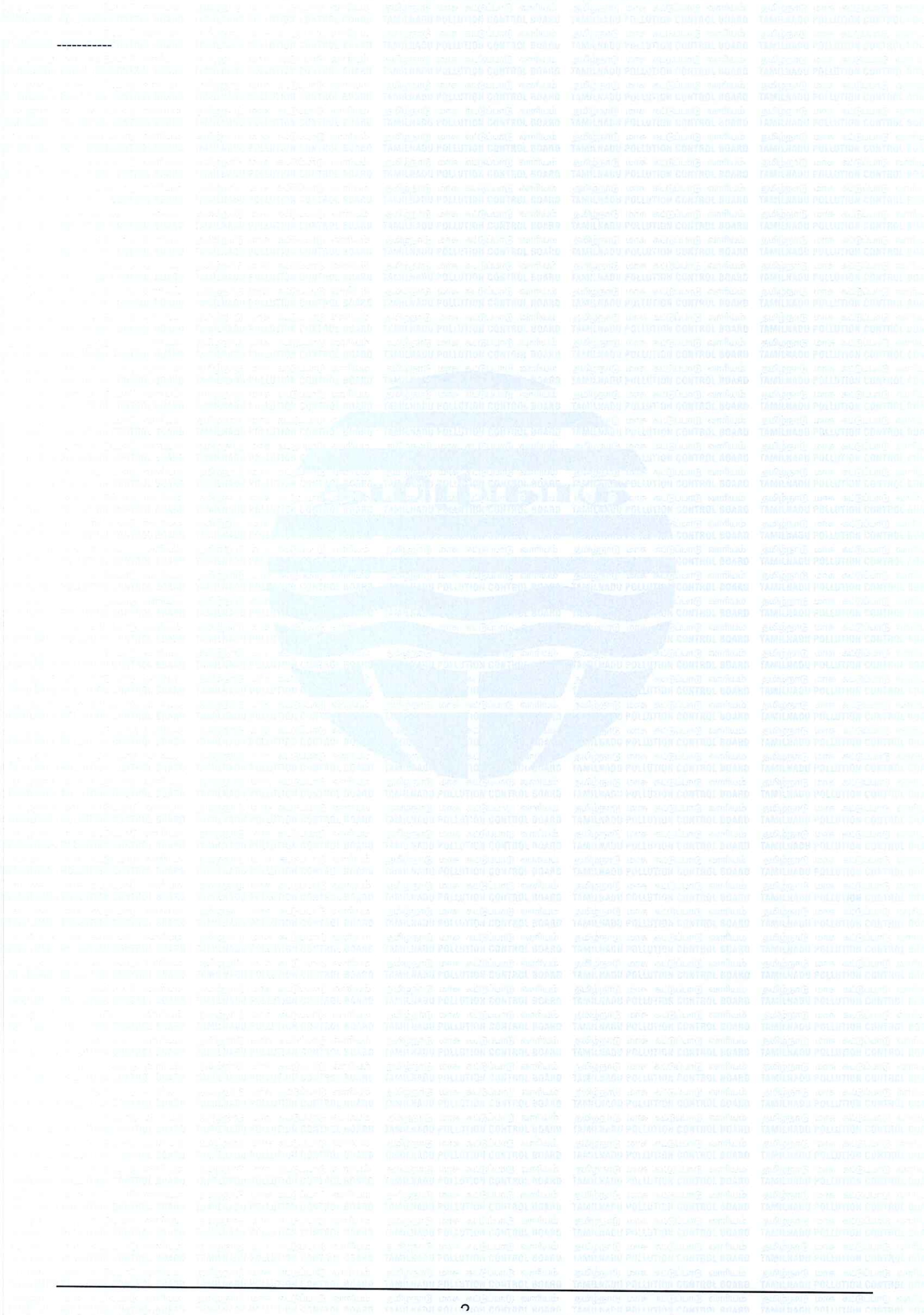
To
The Managing Director,
M/s.TAMILNADU POLYMER INDUSTRIES PARK LIMITED,
Tamilnadu Polymer Industries Park Limited
III Floor, 19-A, Rukmini Lakshmipathy Road
Egmore, Chennai,
Pin: 600008

Copy to:

- 1.The Commissioner, MEENJUR-Panchayat Union, Ponneri Taluk, Tiruvallur District .
2. The District Environmental Engineer, Tamil Nadu Pollution Control Board, GUMMIDIPOONDI.
3. The JCEE-Monitoring, Tamil Nadu Pollution Control Board, Chennai.
4. File



TAMILNADU POLLUTION CONTROL BOARD





TAMILNADU POLLUTION CONTROL BOARD

SPECIAL CONDITIONS

1. This consent to establish is valid for establishing the facility for the manufacture of products/byproducts (Col. 2) at the rate (Col 3) mentioned below. Any change in the product/byproduct and its quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Sl. No.	Description	Quantity	Unit
Product Details			
1.	It is an industrial park involving development of infrastructure such as roads, water supply, storm water drainage, street lights, green belt etc., to house industries including engineering, manufacturing/production specifically for polymer components and any other industries that are not fall under EIA Notification 2006 and amendments thereof.	97.05	Hectares

2. The unit shall provide Sewage Treatment Plant and /or Effluent Treatment Plant as indicated below.

a Sewage Treatment Plant:			
Treatment status: Septic Tank and SP/DT			
SL. No.	Name of the Treatment Unit	No. of Units	Dimensions in metres
1.	Septic Tank	1	4.2 x 2.3 x 1.9
2.	Soak Pit	1	1 m dia x 2.5 m Ht
Treatment status: Individual STP			
SL. No.	Name of the Treatment Unit	No. of Units	Dimensions in metres
1.	Member industries will install their own STP	0	0
b Effluent Treatment Plant:			
Treatment status: Individual ETP			
SL. No.	Name of the Treatment Unit	No. of Units	Dimensions in metres
1.	Member Industries will install their own ETP	0	0

3. This consent to establish is valid for establishing the facility with the below mentioned outlets for the discharge of sewage/trade effluent. Any change in the outlets and the quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Outlet No.	Description of Outlet	Maximum daily discharge in KLD	Point of disposal
Effluent Type : Sewage			
1.	Sewage	0.57	On Industrys own land
Effluent Type : Trade Effluent			

4. Additional Conditions:



TAMILNADU POLLUTION CONTROL BOARD

1. The unit shall comply with the conditions as stipulated in the Environmental Clearance obtained from SEIAA, TN vide Lr.No.SEIAA-TN/F.6957/EC/8(b)/683/2019 Dated 11.12.2019.
2. The issue of CTE to the project shall not be construed as CTO and shall not commission the project without obtaining CTO from the Board.
3. The unit shall not carry out any establishment activity in the CRZ area adjacent to the site.
4. The unit shall start its establishment activities only after getting the necessary project/building approvals from the competent authorities.
5. This consent order does not absolve from obtaining necessary permission / Clearance from other Authority or under other statutes as applicable.
6. The stability of the entire building/ STP does not falls under the purview of the TNPCB Board.
7. The unit shall obtain planning permission and building plan approval from the competent authority and furnish the same to the Board.
8. The unit shall submit baseline data for ground water to assess the quality of ground water for 1 KM radius outside the boundary of the project and also inside available open wells within a month's time.
9. The unit shall allot 5% (4.85 Hectare) of the total area (97.05 Hectare) for Solid Waste Management as reported in the unit's letter dated 02.02.2021.
10. The unit has to ensure that all the member Industries within the industrial Park shall make their own arrangements to achieve zero discharge of the trade effluents, solid waste & E waste management, gaseous emission and noise control measures to achieve the standards prescribed by the TNPCB.
11. The unit shall ensure that the allotted industrial units obtain consent from the TNPCB separately for their establishment & operation in this industrial estate.
12. The unit shall develop adequate green belt by planting native trees of 30m width adjacent to CRZ area.
13. The unit shall install septic tank and soak pit arrangements for the disposal of sewage generated from the unit.
14. The unit shall ensure that there is no trade effluent generated from its activity.
15. The bio degradable solid waste, non bio degradable solid waste, STP sludge, etc generated from the project activity shall be properly collected, segregated and disposed as per the provision of Solid waste(Management and Handling) Rules, 2016.
16. The plastic wastes shall be segregated and disposed as per the provisions of Plastic Waste (Management and Handling) Rules, 2016.
17. The unit shall provide rain water harvesting facility in the premises.
18. The unit shall remit consent fee in case of revision by the Government.

S. Ragupathi Digitally signed by S. Ragupathi
Date: 2021.03.23 13:52:25 +05'30'
**For Member Secretary,
Tamil Nadu Pollution Control Board,
Chennai**



TAMILNADU POLLUTION CONTROL BOARD

GENERAL CONDITIONS

1. This consent to establish cannot be construed as consent to operate and the unit shall not commence the operation without obtaining the Consent to operate.
2. The applicant shall make a request for grant of consent to operate at least thirty days, before the commissioning of trial production.
3. Any Change in the details furnished in the conditions has to be brought to the notice of the Board and got approved by the Board, before obtaining consent to operate under the said Act.
4. The unit has to comply with the provisions of Public Liability Insurance Act, 1991 to provide immediate relief in the event of any hazard to human beings, other living creatures/plants and properties while handling and storage of hazardous substances (wherever applicable).
5. Consent to operate will not be issued unless the unit complies with the conditions of consent to establish.
6. The unit shall provide adequate water sprinklers for the control of dust emission during the loading and unloading of construction material so as to minimize the dust emission.
7. The unit shall provide water sprinklers along the temporary roads inside the premises to avoid fugitive dust emission during the vehicle movements.
8. The unit shall develop green belt of adequate width around the premises.
9. In case there is any change in the management, the unit shall inform the change with relevant documents immediately.

S. Ragupathi

Digitally signed by S. Ragupathi
Date: 2021.03.23 13:53:08 +05'30'

For Member Secretary,
Tamil Nadu Pollution Control Board,
Chennai





TAMILNADU POLYMER INDUSTRIES PARK LIMITED
(A Government of Tamilnadu Enterprise)

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ENVIRONMENT MANAGEMENT

Environment Management



EC Compliance – June 2023



Environmental Clearance (EC)



Environmental Statement – Form V



NABL Accredited, ISO 9001 : 2015,
OSHAS 18001 : 2007 Certified Company

ANNEXURE - IV

LIFE SHELL LABS INDIA PVT. LTD.

(The Complete Environmental Service Provider)
No. 20, Nehru Street, Maruthi Nagar, Phase I,
Iyyappanthangal, Chennai – 600077. Tamil Nadu
Tel: +91(44) 48634849, 63809 68684
Email: labs@lifeshell.in, lifeshelllabs@gmail.com
www.lifeshelllabs.com

TEST REPORT

Sample ID: 2309057	JOE: 2193	Report Date: 12.09.2023
Customer Name	M/s. Tamil Nadu Polymer Industries Park Limited (TPIPL)	
Address	143 & 187 Of Puzhuvakkam Village, 2053 B Part Of Voyalur Village, Ponneri Taluk, Thiruvallur District, Tamil Nadu.	
Starting Date & Time	05.09.2023 (08.30 AM)	Closing Date & Time
		06.09.2023 (8.30 AM)
Sample Received on	06.09.2023	Sampled by
		LSL
Test Commenced on	06.09.2023	Sample Description
		Ambient Air Quality (AAQ)-1
Test Completed on	11.09.2023	Sampling duration
		24 hrs
Sampling Location	South Corner of the project site	Ambient Temp during sampling
		32°C (Avg.)
Sampling Procedure	Prescribed as per Test Method	RH during sampling
		62% (Avg.)

DISCIPLINE		CHEMICAL TESTING				
PRODUCT GROUP		ATMOSPHERIC POLLUTION				
S. No	PARAMETERS	UNIT	TEST METHOD	RESULTS	*NAAQ STANDARDS:2009	
1	Particulate Matter in (PM ₁₀)	µg/m ³	IS 5182 (Part 23)	56.1	100 (24 Hours)	60 (Annual)
2	Particulate Matter in (PM _{2.5})	µg/m ³	EPA-Appendix-L (Part-50)	28.0	60 (24 Hours)	40 (Annual)
3	Sulphur dioxide as SO ₂	µg/m ³	IS 5182 (Part 2)	8.22	80 (24 Hours)	50 (Annual)
4	Nitrogen Dioxide as NO ₂	µg/m ³	IS 5182 (Part 6)	15.5	80 (24 Hours)	40 (Annual)
5	Ozone as O ₃	µg/m ³	IS 5182 (Part 9)	BDL (DL: 5.0)	180 (1 Hours)	100 (8Hours)
6	Ammonia as NH ₃	µg/m ³	CPCB Manual-2013	19.4	400 (24 Hours)	100 (Annual)
7	Carbon Monoxide as CO (1hr)	mg/m ³	IS 5182 (Part 10)	BDL (DL: 1.15)	4 (1 Hours)	2 (1 Hours)
8	Lead as Pb	µg/m ³	IS 5182 (Part 22)	BDL (DL: 0.5)	1 (24 Hours)	0.5 (Annual)
9	Benzene as C ₆ H ₆	µg/m ³	IS 5182 (Part 11)	BDL (DL: 1.0)	5 (Annual)	5 (Annual)
10	Arsenic as As	ng/m ³	IS 5182 (Part 22)	BDL (DL: 1.0)	6 (Annual)	6 (Annual)
11	Nickel as Ni	ng/m ³	IS 5182 (Part 22)	BDL (DL: 1.0)	20 (Annual)	20 (Annual)
12	Benzo(a)Pyrene in C ₂₀ H ₁₂	ng/m ³	IS 5182 (Part 12)	BDL (DL: 0.5)	1 (Annual)	1 (Annual)

Note: BDL: Below Detectable Limit; DL: Detectable Limit, µg/m³ - Micrograms per cubic meter, ng/m³ - Nanograms per cubic meter, S.No: 7-12 are nonaccredited.
*NAAQ: National Ambient Air Quality.

Verified by

J. Poovanasan

For Life Shell Labs India Pvt. Ltd.

K. Kamalanathan
Authorized Signatory

K. KAMALANATHAN
Deputy Technical Manager

*****End of Report*****



NABL Accredited, ISO 9001 : 2015,
OSHAS 18001 : 2007 Certified Company

LIFE SHELL LABS INDIA PVT. LTD.

(The Complete Environmental Service Provider)

No. 20, Nehru Street, Maruthi Nagar, Phase I,
Iyyappanthangal, Chennai – 600077. Tamil Nadu
Tel: +91(44) 48634849, 63809 68684

Email: labs@lifeshell.in, lifeshelllabs@gmail.com
www.lifeshelllabs.com

TEST REPORT

Sample ID: 2309058	JOE: 2193	Report Date: 12.09.2023
Customer Name	M/s. Tamil Nadu Polymer Industries Park Limited (TPIPL)	
Address	143 & 187 Of Puzhuvakkam Village, 2053 B Part Of Voyalur Village, Ponneri Taluk, Thiruvallur District, Tamil Nadu.	
Starting Date & Time	05.09.2023 (08.40 AM)	Closing Date & Time
		06.09.2023 (8.40 AM)
Sample Received on	06.09.2023	Sampled by
		LSL
Test Commenced on	06.09.2023	Sample Description
		Ambient Air Quality (AAQ)-2
Test Completed on	11.09.2023	Sampling duration
		24 hrs
Sampling Location	North Corner of the project site	Ambient Temp during sampling
		31°C (Avg.)
Sampling Procedure	Prescribed as per Test Method	RH during sampling
		63% (Avg.)

DISCIPLINE		CHEMICAL TESTING				
PRODUCT GROUP		ATMOSPHERIC POLLUTION				
S. No	PARAMETERS	UNIT	TEST METHOD	RESULTS	*NAAQ STANDARDS:2009	
1	Particulate Matter in (PM ₁₀)	µg/m ³	IS 5182 (Part 23)	53.1	100 (24 Hours)	60 (Annual)
2	Particulate Matter in (PM _{2.5})	µg/m ³	EPA-Appendix-L (Part-50)	23.9	60 (24 Hours)	40 (Annual)
3	Sulphur dioxide as SO ₂	µg/m ³	IS 5182 (Part 2)	6.85	80 (24 Hours)	50 (Annual)
4	Nitrogen Dioxide as NO ₂	µg/m ³	IS 5182 (Part 6)	14.7	80 (24 Hours)	40 (Annual)
5	Ozone as O ₃	µg/m ³	IS 5182 (Part 9)	BDL (DL: 5.0)	180 (1 Hours)	100 (8Hours)
6	Ammonia as NH ₃	µg/m ³	CPCB Manual-2013	22.9	400 (24 Hours)	100 (Annual)
7	Carbon Monoxide as CO (1hr)	mg/m ³	IS 5182 (Part 10)	BDL (DL: 1.15)	4 (1 Hours)	2 (1 Hours)
8	Lead as Pb	µg/m ³	IS 5182 (Part 22)	BDL (DL: 0.5)	1 (24 Hours)	0.5 (Annual)
9	Benzene as C ₆ H ₆	µg/m ³	IS 5182 (Part 11)	BDL (DL: 1.0)	5 (Annual)	5 (Annual)
10	Arsenic as As	ng/m ³	IS 5182 (Part 22)	BDL (DL: 1.0)	6 (Annual)	6 (Annual)
11	Nickel as Ni	ng/m ³	IS 5182 (Part 22)	BDL (DL: 1.0)	20 (Annual)	20 (Annual)
12	Benzo(a)Pyrene in C ₂₀ H ₁₂	ng/m ³	IS 5182 (Part 12)	BDL (DL: 0.5)	1 (Annual)	1 (Annual)

Note: BDL: Below Detectable Limit; DL: Detectable Limit, µg/m³-Micrograms per cubic meter, ng/m³- Nanograms per cubic meter, S.No: 7-12 are nonaccredited.

*NAAQ: National Ambient Air Quality.

Verified by

J. P. Praveen

For Life Shell Labs India Pvt. Ltd.

Authorized Signatory

K. KAMALANATHAN

Deputy Technical Manager

*****End of Report*****



NABL Accredited, ISO 9001 : 2015,
OSHAS 18001 : 2007 Certified Company

LIFE SHELL LABS INDIA PVT. LTD.

(The Complete Environmental Service Provider)

No. 20, Nehru Street, Maruthi Nagar, Phase I,
Iyyappanthangal, Chennai – 600077. Tamil Nadu

Tel: +91(44) 48634849, 63809 68684

Email: labs@lifeshell.in, lifeshelllabs@gmail.com

www.lifeshelllabs.com

TEST REPORT

Sample ID: 2309059	JOE: 2193	Report Date: 12.09.2023
Customer Name	M/s. Tamil Nadu Polymer Industries Park Limited (TPIPL)	
Address	143 & 187 Of Puzhuvakkam Village, 2053 B Part Of Voyalur Village, Ponneri Taluk, Thiruvallur District, Tamil Nadu.	
Starting Date & Time	05.09.2023 (9.05 AM)	Closing Date & Time 06.09.2023 (9.05 AM)
Sample Received on	06.09.2023	Sampled by LSL
Test Commenced on	06.09.2023	Sample Description Ambient Air Quality (AAQ)-3
Test Completed on	11.09.2023	Sampling duration 24 hrs
Sampling Location	Near Kattupalli Village (UP Wind)	Ambient Temp during sampling 32°C (Avg.)
Sampling Procedure	Prescribed as per Test Method	RH during sampling 61% (Avg.)

DISCIPLINE		CHEMICAL TESTING				
PRODUCT GROUP		ATMOSPHERIC POLLUTION				
S. No	PARAMETERS	UNIT	TEST METHOD	RESULTS	*NAAQ STANDARDS:2009	
1	Particulate Matter in (PM ₁₀)	µg/m ³	IS 5182 (Part 23)	56.8	100 (24 Hours)	60 (Annual)
2	Particulate Matter in (PM _{2.5})	µg/m ³	EPA-Appendix-L (Part-50)	21.3	60 (24 Hours)	40 (Annual)
3	Sulphur dioxide as SO ₂	µg/m ³	IS 5182 (Part 2)	6.14	80 (24 Hours)	50 (Annual)
4	Nitrogen Dioxide as NO ₂	µg/m ³	IS 5182 (Part 6)	12.9	80 (24 Hours)	40 (Annual)
5	Ozone as O ₃	µg/m ³	IS 5182 (Part 9)	BDL (DL: 5.0)	180 (1 Hours)	100 (8Hours)
6	Ammonia as NH ₃	µg/m ³	CPCB Manual-2013	20.7	400 (24 Hours)	100 (Annual)
7	Carbon Monoxide as CO (1hr)	mg/m ³	IS 5182 (Part 10)	BDL (DL: 1.15)	4 (1 Hours)	2 (1 Hours)
8	Lead as Pb	µg/m ³	IS 5182 (Part 22)	BDL (DL: 0.5)	1 (24 Hours)	0.5 (Annual)
9	Benzene as C ₆ H ₆	µg/m ³	IS 5182 (Part 11)	BDL (DL: 1.0)	5 (Annual)	5 (Annual)
10	Arsenic as As	ng/m ³	IS 5182 (Part 22)	BDL (DL: 1.0)	6 (Annual)	6 (Annual)
11	Nickel as Ni	ng/m ³	IS 5182 (Part 22)	BDL (DL: 1.0)	20 (Annual)	20 (Annual)
12	Benzo(a)Pyrene in C ₂₀ H ₁₂	ng/m ³	IS 5182 (Part 12)	BDL (DL: 0.5)	1 (Annual)	1 (Annual)

Note: BDL: Below Detectable Limit; DL: Detectable Limit, µg/m³-Micrograms per cubic meter, ng/m³- Nanograms per cubic meter, S.No: 7-12 are nonaccredited.

*NAAQ: National Ambient Air Quality.

Verified by

J. Perumal

For Life Shell Labs India Pvt. Ltd.

Authorized Signatory

K. KAMALANATHAN

Deputy Technical Manager

*****End of Report*****



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TEST REPORT

Sample ID: 2309060	JOE: 2193	Report Date: 12.09.2023
Customer Name	M/s. Tamil Nadu Polymer Industries Park Limited (TPIPL)	
Address	143 & 187 Of Puzhuvakkam Village, 2053 B Part Of Voyalur Village, Ponneri Taluk, Thiruvallur District, Tamil Nadu.	
Starting Date & Time	05.09.2023 (9.40 AM)	Closing Date & Time 06.09.2023 (9.40AM)
Sample Received on	06.09.2023	Sampled by LSL
Test Commenced on	06.09.2023	Sample Description Ambient Air Quality (AAQ)-4
Test Completed on	11.09.2023	Sampling duration 24 hrs
Sampling Location	Near Kamarajar Port (Cross Wind)	Ambient Temp during sampling 32°C (Avg.)
Sampling Procedure	Prescribed as per Test Method	RH during sampling 62% (Avg.)

DISCIPLINE		CHEMICAL TESTING				
PRODUCT GROUP		ATMOSPHERIC POLLUTION				
S. No	PARAMETERS	UNIT	TEST METHOD	RESULTS	*NAAQ STANDARDS:2009	
1	Particulate Matter in (PM ₁₀)	µg/m ³	IS 5182 (Part 23)	61.9	100 (24 Hours)	60 (Annual)
2	Particulate Matter in (PM _{2.5})	µg/m ³	EPA-Appendix-L (Part-50)	31.8	60 (24 Hours)	40 (Annual)
3	Sulphur dioxide as SO ₂	µg/m ³	IS 5182 (Part 2)	9.22	80 (24 Hours)	50 (Annual)
4	Nitrogen Dioxide as NO ₂	µg/m ³	IS 5182 (Part 6)	15.4	80 (24 Hours)	40 (Annual)
5	Ozone as O ₃	µg/m ³	IS 5182 (Part 9)	BDL (DL: 5.0)	180 (1 Hours)	100 (8Hours)
6	Ammonia as NH ₃	µg/m ³	CPCB Manual-2013	14.6	400 (24 Hours)	100 (Annual)
7	Carbon Monoxide as CO (1hr)	mg/m ³	IS 5182 (Part 10)	BDL (DL: 1.15)	4 (1 Hours)	2 (1 Hours)
8	Lead as Pb	µg/m ³	IS 5182 (Part 22)	BDL (DL: 0.5)	1 (24 Hours)	0.5 (Annual)
9	Benzene as C ₆ H ₆	µg/m ³	IS 5182 (Part 11)	BDL (DL: 1.0)	5 (Annual)	5 (Annual)
10	Arsenic as As	ng/m ³	IS 5182 (Part 22)	BDL (DL: 1.0)	6 (Annual)	6 (Annual)
11	Nickel as Ni	ng/m ³	IS 5182 (Part 22)	BDL (DL: 1.0)	20 (Annual)	20 (Annual)
12	Benzo(a)Pyrene in C ₂₀ H ₁₂	ng/m ³	IS 5182 (Part 12)	BDL (DL: 0.5)	1 (Annual)	1 (Annual)

Note: BDL: Below Detectable Limit; DL: Detectable Limit, µg/m³-Micrograms per cubic meter, ng/m³- Nanograms per cubic meter, S.No: 7-12 are nonaccredited.

*NAAQ: National Ambient Air Quality.

Verified by

J. Perumal

For Life Shell Labs India Pvt. Ltd.

K. Kamalanathan
Authorized Signatory

K. KAMALANATHAN
Deputy Technical Manager

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TEST REPORT

Sample ID: 2309061	JOE: 2193	Report Date: 12.09.2023
Customer Name	M/s. Tamil Nadu Polymer Industries Park Limited (TPIPL)	
Address	143 & 187 Of Puzhuvakkam Village, 2053 B Part Of Voyalur Village, Ponneri Taluk, Thiruvallur District, Tamil Nadu.	
Starting Date & Time	05.09.2023 (10.0 AM)	Closing Date & Time
		06.09.2023 (10.0 AM)
Sample Received on	06.09.2023	Sampled by
		LSL
Test Commenced on	06.09.2023	Sample Description
		Ambient Air Quality (AAQ)-5
Test Completed on	11.09.2023	Sampling duration
		24 hrs
Sampling Location	Near Athipattu Pudhu Nagar (Down Wind)	Ambient Temp during sampling
		33°C (Avg.)
Sampling Procedure	Prescribed as per Test Method	RH during sampling
		60% (Avg.)

DISCIPLINE		CHEMICAL TESTING				
PRODUCT GROUP		ATMOSPHERIC POLLUTION				
S. No	PARAMETERS	UNIT	TEST METHOD	RESULTS	*NAAQ STANDARDS:2009	
1	Particulate Matter in (PM ₁₀)	µg/m ³	IS 5182 (Part 23)	68.2	100 (24 Hours)	60 (Annual)
2	Particulate Matter in (PM _{2.5})	µg/m ³	EPA-Appendix-L (Part-50)	33.0	60 (24 Hours)	40 (Annual)
3	Sulphur dioxide as SO ₂	µg/m ³	IS 5182 (Part 2)	9.71	80 (24 Hours)	50 (Annual)
4	Nitrogen Dioxide as NO ₂	µg/m ³	IS 5182 (Part 6)	17.5	80 (24 Hours)	40 (Annual)
5	Ozone as O ₃	µg/m ³	IS 5182 (Part 9)	BDL (DL: 5.0)	180 (1 Hours)	100 (8Hours)
6	Ammonia as NH ₃	µg/m ³	CPCB Manual-2013	16.8	400 (24 Hours)	100 (Annual)
7	Carbon Monoxide as CO (1hr)	mg/m ³	IS 5182 (Part 10)	BDL (DL: 1.15)	4 (1 Hours)	2 (1 Hours)
8	Lead as Pb	µg/m ³	IS 5182 (Part 22)	BDL (DL: 0.5)	1 (24 Hours)	0.5 (Annual)
9	Benzene as C ₆ H ₆	µg/m ³	IS 5182 (Part 11)	BDL (DL: 1.0)	5 (Annual)	5 (Annual)
10	Arsenic as As	ng/m ³	IS 5182 (Part 22)	BDL (DL: 1.0)	6 (Annual)	6 (Annual)
11	Nickel as Ni	ng/m ³	IS 5182 (Part 22)	BDL (DL: 1.0)	20 (Annual)	20 (Annual)
12	Benzo(a)Pyrene in C ₂₀ H ₁₂	ng/m ³	IS 5182 (Part 12)	BDL (DL: 0.5)	1 (Annual)	1 (Annual)

Note: BDL: Below Detectable Limit; DL: Detectable Limit, µg/m³-Micrograms per cubic meter, ng/m³- Nanograms per cubic meter, S.No: 7-12 are nonaccredited.

*NAAQ: National Ambient Air Quality.

Verified by

J. Poovanasam

For Life Shell Labs India Pvt. Ltd.

K. Kamalanathan
Authorized Signatory

K. KAMALANATHAN
Deputy Technical Manager

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TEST REPORT

Sample ID: 2309062	JOE: 2193	Report Date: 12.09.2023
Customer Name	M/s. Tamil Nadu Polymer Industries Park Limited (TPIPL)	
Address	143 & 187 Of Puzhuvakkam Village, 2053 B Part Of Voyalur Village, Ponneri Taluk, Thiruvallur District, Tamil Nadu.	
Date of Sampling	05.09.2023	Sampled by LSL
Sample Received on	06.09.2023	Sample Description Noise Monitoring
Test Commenced on	06.09.2023	Sampling duration 24 hrs
Test Completed on	11.09.2023	Ambient Temp during sampling 32°C (Avg.)
Sampling Location	Mentioned Below	RH during sampling 62% (Avg.)
Sampling Procedure	IS 9989:1981 RA 2020	

Location Code	Sampling Location	LDay {dB(A)}	LNight {dB(A)}	Day Time	Night Time
N1	South corner of the Project Site	50.9	41.2	6.00 am to 10.00 pm	10.00 pm to 6.00 am
N2	Near Kattupalli Village	49.5	40.0		
N3	Near Athipattu Pudhu Nagar	62.9	45.9		

Ambient Noise Standards-CPCB

Category Of Area	LDay {dB(A)}	LNight {dB(A)}
Industrial Area	75	70
Commercial Area	65	60
Residential Area	55	45
Silence Zone	50	40

Verified by

J. P. Permasan

For Life Shell Labs India Pvt. Ltd,



K. Kamalanathan
Authorized Signatory

K. KAMALANATHAN

Deputy Technical Manager

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TEST REPORT

Sample ID: 2309063	JOE: 2193	Report Date: 12.09.2023	
Customer Name	M/s. Tamil Nadu Polymer Industries Park Limited (TPIPL)		
Address	143 & 187 Of Puzhuvakkam Village, 2053 B Part Of Voyalur Village, Ponneri Taluk, Thiruvallur District, Tamil Nadu.		
Date of Sampling	05.09.2023	Sampled by	LSL
Sample Received on	06.09.2023	Sample Description	Surface Water
Test Commenced on	06.09.2023	Sampling Procedure	LSL/SOP/CHE/071
Test Completed on	11.09.2023	Sample Condition	Satisfactory
Sampling Location	Buckingham Canal (UP Stream)	Sample Quantity	2 liters

DISCIPLINE		CHEMICAL TESTING							
PRODUCT GROUP		WATER							
S. No	PARAMETERS	UNIT	TEST METHOD	RESULTS	Surface Water Quality Standards (as per IS: 2296).				
					A	B	C	D	E
1	Taste	--	IS 3025-Part 5	Agreeable	None	--	--	--	--
2	Odour	--	IS 3025-Part 5	Agreeable	Unobj	--	--	--	--
3	Colour	Hazen	IS 3025-Part 4	10.0	10	300	300	--	--
4	Temperature	°C	IS 3025-Part 9	26.0	--	--	--	--	--
5	pH @ 25°C	--	IS 3025-Part 11	7.45	8.5	8.5	8.5	8.5	8.5
6	Conductivity @ 25°C	uS/cm	IS 3025-Part 14	15967	--	--	--	1000	2250
7	Turbidity	NTU	IS 3025-Part 10	1.4	5.0				
8	Dissolved Oxygen	mg/l	IS 3025-Part 38	6.8	6	5	4	4	--
9	BOD @27°C for 3 days	mg/l	IS 3025-Part 44	BDL(DL:2.0)	2	3	3	--	--
10	Chemical Oxygen Demand	mg/l	APHA-24 th Edn	10.0	--	--	--	--	--
11	Total Dissolved Solids (TDS)	mg/l	IS 3025-Part 16	10200	500	--	1500	--	2100

BDL: Below Detectable Limit; DL: Detectable Limit.

Verified by


M. BALAJI
Quality Manager

For Life Shell Labs India Pvt. Ltd.


Authorized Signatory

K. KAMALANATHAN
Deputy Technical Manager



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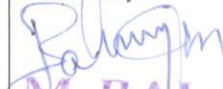
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TEST REPORT

Sample ID: 2309063		JOE: 2193			Report Date: 12.09.2023				
S.No	PARAMETERS	UNIT	TEST METHOD	RESULTS	Surface Water Quality Standards (as per IS: 2296).				
					A	B	C	D	E
12	Oil and Grease	mg/l	IS 3025-Part 39	BDL(DL:1.0)	--	--	0.1	0.1	--
13	Mineral Oil	mg/l	IS 3025-Part 39	BDL(D1.0)	0.01	--	--	--	--
14	Total Hardness as CaCO ₃	mg/l	IS 3025-Part 21	3140	300	--	--	--	--
15	Chloride as Cl	mg/l	IS 3025-Part 32	3020	250	--	600	--	600
16	Sulfate as SO ₄	mg/l	APHA-24 th Edn	850	400	--	400	--	1000
17	Nitrates as NO ₃	mg/l	IS 3025-Part 34	8.3	20	--	50	--	--
18	Nitrite as NO ₂	mg/l	IS 3025-Part 34	BDL(DL:0.01)	--	--	--	--	--
19	Free CO ₂	mg/l	APHA-24 th Edn	BDL(DL:1.0)	--	--	--	6	--
20	Ammoniacal Nitrogen as NH ₄ -N	mg/l	IS 3025-Part 34	BDL(DL:1.0)	--	--	--	1.2	--
21	Free Ammonia as N	mg/l	IS 3025-Part 34	0.14	--	--	--	1.2	--
22	Fluorides as F	mg/l	APHA-24 th Edn	2.16	1.5	1.5	1.5	--	--
23	Calcium as Ca	mg/l	IS 3025-Part 40	728	80.10	--	--	--	--
24	Magnesium as Mg	mg/l	IS 3025-Part 46	317	24.28	--	--	--	--
25	Copper	mg/l	IS 3025 Part 42	0.16	1.5	--	1.5	--	--
26	Iron as Fe	mg/l	IS 3025-Part 53	0.24	0.3	--	50	--	--
27	Manganese as Mn	mg/l	IS 3025-Part 59	BDL(DL:0.5)	0.5	--	--	--	--
28	Boron as B	mg/l	IS 3025-Part 57	BDL(DL:0.1)	--	--	--	--	2

Verified by


M. BALAJI
Quality Manager

For Life Shell Labs India Pvt. Ltd.




Authorized Signatory
K. KAMALANATHAN
Deputy Technical Manager



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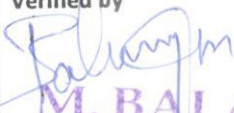
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TEST REPORT

Sample ID: 2309063		JOE: 2193			Report Date: 12.09.2023				
S.No	PARAMETERS	UNIT	TEST METHOD	RESULTS	Surface Water Quality Standards (as per IS: 2296).				
					A	B	C	D	E
29	Lead as Pb	mg/l	IS 3025 Part 47	BDL(DL:0.1)	0.1	--	0.1	--	--
30	Chromium Cr6+	mg/l	IS 3025-Part 52	BDL(DL:0.1)	0.05	0.05	0.05	--	--
31	Percentage Sodium	%	IS 11624	49.6	--	--	--	--	60
32	Sodium absorption ratio	meq/l	IS 11624	8.48	--	--	--	--	26
33	Total Phosphate	mg/l	IS 3025 (Part 31)	1.32	--	--	--	--	--
34	Sodium as Na	mg/l	IS 3025 (Part 45)	1950	--	--	--	--	--
35	Potassium as K	mg/l	IS 3025 (Part 45)	230	--	--	--	--	--
36	Carbonate as CO ₃	mg/l	APHA-24 th Edn-2023	BDL(DL:1.0)	--	--	--	--	--
37	Bicarbonate as HCO ₃	mg/l	APHA-24 th Edn-2023	146	--	--	--	--	--
38	Total Coliforms	MPN/100ml	IS 1622:1981	79	50	500	5000	--	--
39	Fecal Coliforms	MPN/100ml	IS 1622:1981	34	--	--	--	--	--


Note: Class A – Drinking water without conventional treatment but after disinfection. Class B – Water for outdoor bathing. Class C – Drinking water with conventional treatment followed by disinfection. Class D – Water for fish culture and wild life propagation. Class E – Water for irrigation, industrial cooling and controlled waste disposal. (Unobj = Unobjectionable) BDL: Below Detectable Limit; DL: Detectable Limit.

Verified by


M. BALAJI
Quality Manager

For Life Shell Labs India Pvt. Ltd.




K. KAMALANATHAN
Deputy Technical Manager



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TEST REPORT

Sample ID: 2309064	JOE: 2193	Report Date: 12.09.2023
Customer Name	M/s. Tamil Nadu Polymer Industries Park Limited (TPIPL)	
Address	143 & 187 Of Puzhuvakkam Village, 2053 B Part Of Voyalur Village, Ponneri Taluk, Thiruvallur District, Tamil Nadu.	
Date of Sampling	05.09.2023	Sampled by LSL
Sample Received on	06.09.2023	Sample Description Surface Water
Test Commenced on	06.09.2023	Sampling Procedure LSL/SOP/CHE/071
Test Completed on	11.09.2023	Sample Condition Satisfactory
Sampling Location	Buckingham Canal (Down Stream)	Sample Quantity 2 liters

DISCIPLINE		CHEMICAL TESTING							
PRODUCT GROUP		WATER							
S. No	PARAMETERS	UNIT	TEST METHOD	RESULTS	Surface Water Quality Standards (as per IS: 2296).				
					A	B	C	D	E
1	Taste	--	IS 3025-Part 5	Agreeable	None	--	--	--	--
2	Odour	--	IS 3025-Part 5	Agreeable	Unobj	--	--	--	--
3	Colour	Hazen	IS 3025-Part 4	10.0	10	300	300	--	--
4	Temperature	°C	IS 3025-Part 9	26.0	--	--	--	--	--
5	pH @ 25°C	--	IS 3025-Part 11	6.89	8.5	8.5	8.5	8.5	8.5
6	Conductivity @ 25°C	uS/cm	IS 3025-Part 14	16179	--	--	--	1000	2250
7	Turbidity	NTU	IS 3025-Part 10	1.7	5.0				
8	Dissolved Oxygen	mg/l	IS 3025-Part 38	6.8	6	5	4	4	--
9	BOD @27°C for 3 days	mg/l	IS 3025-Part 44	BDL(DL:2.0)	2	3	3	--	--
10	Chemical Oxygen Demand	mg/l	APHA-24 th Edn	14.0	--	--	--	--	--
11	Total Dissolved Solids (TDS)	mg/l	IS 3025-Part 16	10840	500	--	1500	--	2100

BDL: Below Detectable Limit; DL: Detectable Limit.

Verified by

M. Balaji
M. BALAJI
Quality Manager

For Life Shell Labs India Pvt. Ltd.

K. Kamalanathan
Authorized Signatory

K. KAMALANATHAN
Deputy Technical Manager



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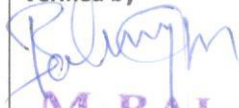
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TEST REPORT


Sample ID: 2309064		JOE: 2193			Report Date: 12.09.2023				
S.No	PARAMETERS	UNIT	TEST METHOD	RESULTS	Surface Water Quality Standards (as per IS: 2296).				
					A	B	C	D	E
12	Oil and Grease	mg/l	IS 3025-Part 39	BDL(DL:1.0)	--	--	0.1	0.1	--
13	Mineral Oil	mg/l	IS 3025-Part 39	BDL(D1.0)	0.01	--	--	--	--
14	Total Hardness as CaCO ₃	mg/l	IS 3025-Part 21	3984	300	--	--	--	--
15	Chloride as Cl	mg/l	IS 3025-Part 32	4200	250	--	600	--	600
16	Sulfate as SO ₄	mg/l	APHA-24 th Edn	900	400	--	400	--	1000
17	Nitrates as NO ₃	mg/l	IS 3025-Part 34	10.2	20	--	50	--	--
18	Nitrite as NO ₂	mg/l	IS 3025-Part 34	BDL(DL:0.01)	--	--	--	--	--
19	Free CO ₂	mg/l	APHA-24 th Edn	BDL(DL:1.0)	--	--	--	6	--
20	Ammoniacal Nitrogen as NH ₄ -N	mg/l	IS 3025-Part 34	BDL(DL:1.0)	--	--	--	1.2	--
21	Free Ammonia as N	mg/l	IS 3025-Part 34	0.18	--	--	--	1.2	--
22	Fluorides as F	mg/l	APHA-24 th Edn	3.05	1.5	1.5	1.5	--	--
23	Calcium as Ca	mg/l	IS 3025-Part 40	802	80.10	--	--	--	--
24	Magnesium as Mg	mg/l	IS 3025-Part 46	475	24.28	--	--	--	--
25	Copper	mg/l	IS 3025 Part 42	BDL(DL:0.5)	1.5	--	1.5	--	--
26	Iron as Fe	mg/l	IS 3025-Part 53	0.26	0.3	--	50	--	--
27	Manganese as Mn	mg/l	IS 3025-Part 59	BDL(DL:0.5)	0.5	--	--	--	--
28	Boron as B	mg/l	IS 3025-Part 57	0.28	--	--	--	--	2

Verified by


M. BALAJI
Quality Manager

For Life Shell Labs India Pvt. Ltd.




Authorized Signatory
K. KAMALANATHAN
Deputy Technical Manager



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Email: labs@lifeshell.in, lifeshelllabs@gmail.com


www.lifeshelllabs.com

TEST REPORT

Sample ID: 2309064		JOE: 2193			Report Date: 12.09.2023				
S.No	PARAMETERS	UNIT	TEST METHOD	RESULTS	Surface Water Quality Standards (as per IS: 2296).				
					A	B	C	D	E
29	Lead as Pb	mg/l	IS 3025 Part 47	BDL(DL:0.1)	0.1	--	0.1	--	--
30	Chromium Cr6+	mg/l	IS 3025-Part 52	BDL(DL:0.1)	0.05	0.05	0.05	--	--
31	Percentage Sodium	%	IS 11624	57.3	--	--	--	--	60
32	Sodium absorption ratio	meq/l	IS 11624	17.5	--	--	--	--	26
33	Total Phosphate	mg/l	IS 3025 (Part 31)	1.48	--	--	--	--	--
34	Sodium as Na	mg/l	IS 3025 (Part 45)	1800	--	--	--	--	--
35	Potassium as K	mg/l	IS 3025 (Part 45)	210	--	--	--	--	--
36	Carbonate as CO ₃	mg/l	APHA-24 th Edn-2023	BDL(DL:1.0)	--	--	--	--	--
37	Bicarbonate as HCO ₃	mg/l	APHA-24 th Edn-2023	158	--	--	--	--	--
38	Total Coliforms	MPN/100ml	IS 1622:1981	84	50	500	5000	--	--
39	Fecal Coliforms	MPN/100ml	IS 1622:1981	79	--	--	--	--	--

Note: Class A – Drinking water without conventional treatment but after disinfection. Class B – Water for outdoor bathing. Class C – Drinking water with conventional treatment followed by disinfection. Class D – Water for fish culture and wild life propagation. Class E – Water for irrigation, industrial cooling and controlled waste disposal. (Unobj = Unobjectionable) BDL: Below Detectable Limit; DL: Detectable Limit.

Verified by


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Quality Manager

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TEST REPORT

Sample ID: 2309065	JOE: 2193	Report Date: 12.09.2023
Customer Name	M/s. Tamil Nadu Polymer Industries Park Limited (TPIPL)	
Address	143 & 187 Of Puzhuvakkam Village, 2053 B Part Of Voyalur Village, Ponneri Taluk, Thiruvallur District, Tamil Nadu.	
Date of Sampling	05.09.2023	Sampled by LSL
Sample Received on	06.09.2023	Sample Description Surface Water
Test Commenced on	06.09.2023	Sampling Procedure LSL/SOP/CHE/071
Test Completed on	11.09.2023	Sample Condition Satisfactory
Sampling Location	Kosasthalaiyar river	Sample Quantity 2 liters

DISCIPLINE		CHEMICAL TESTING							
PRODUCT GROUP		WATER							
S. No	PARAMETERS	UNIT	TEST METHOD	RESULTS	Surface Water Quality Standards (as per IS: 2296).				
					A	B	C	D	E
1	Taste	--	IS 3025-Part 5	Agreeable	None	--	--	--	--
2	Odour	--	IS 3025-Part 5	Agreeable	Unobj	--	--	--	--
3	Colour	Hazen	IS 3025-Part 4	10.0	10	300	300	--	--
4	Temperature	°C	IS 3025-Part 9	26.0	--	--	--	--	--
5	pH @ 25°C	--	IS 3025-Part 11	7.87	8.5	8.5	8.5	8.5	8.5
6	Conductivity @ 25°C	uS/cm	IS 3025-Part 14	4860	--	--	--	1000	2250
7	Turbidity	NTU	IS 3025-Part 10	1.4	5.0				
8	Dissolved Oxygen	mg/l	IS 3025-Part 38	6.7	6	5	4	4	--
9	BOD @27°C for 3 days	mg/l	IS 3025-Part 44	BDL(DL:2.0)	2	3	3	--	--
10	Chemical Oxygen Demand	mg/l	APHA-24 th Edn	10.0	--	--	--	--	--
11	Total Dissolved Solids (TDS)	mg/l	IS 3025-Part 16	2790	500	--	1500	--	2100

BDL: Below Detectable Limit; DL: Detectable Limit.

Verified by

M. BALAJI
Quality Manager

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Deputy Technical Manager



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TEST REPORT

Sample ID: 2309065		JOE: 2193			Report Date: 12.09.2023				
S.No	PARAMETERS	UNIT	TEST METHOD	RESULTS	Surface Water Quality Standards (as per IS: 2296).				
					A	B	C	D	E
12	Oil and Grease	mg/l	IS 3025-Part 39	BDL(DL:1.0)	--	--	0.1	0.1	--
13	Mineral Oil	mg/l	IS 3025-Part 39	BDL(D1.0)	0.01	--	--	--	--
14	Total Hardness as CaCO ₃	mg/l	IS 3025-Part 21	1040	300	--	--	--	--
15	Chloride as Cl	mg/l	IS 3025-Part 32	908	250	--	600	--	600
16	Sulfate as SO ₄	mg/l	APHA-24 th Edn	210	400	--	400	--	1000
17	Nitrates as NO ₃	mg/l	IS 3025-Part 34	3.68	20	--	50	--	--
18	Nitrite as NO ₂	mg/l	IS 3025-Part 34	BDL(DL:0.01)	--	--	--	--	--
19	Free CO ₂	mg/l	APHA-24 th Edn	BDL(DL:1.0)	--	--	--	6	--
20	Ammoniacal Nitrogen as NH ₄ -N	mg/l	IS 3025-Part 34	BDL(DL:1.0)	--	--	--	1.2	--
21	Free Ammonia as N	mg/l	IS 3025-Part 34	0.21	--	--	--	1.2	--
22	Fluorides as F	mg/l	APHA-24 th Edn	0.94	1.5	1.5	1.5	--	--
23	Calcium as Ca	mg/l	IS 3025-Part 40	210	80.10	--	--	--	--
24	Magnesium as Mg	mg/l	IS 3025-Part 46	124	24.28	--	--	--	--
25	Copper	mg/l	IS 3025 Part 42	BDL(DL:0.5)	1.5	--	1.5	--	--
26	Iron as Fe	mg/l	IS 3025-Part 53	0.21	0.3	--	50	--	--
27	Manganese as Mn	mg/l	IS 3025-Part 59	BDL(DL:0.5)	0.5	--	--	--	--
28	Boron as B	mg/l	IS 3025-Part 57	BDL(D0.1)	--	--	--	--	2

Verified by


M. BALAJI
Quality Manager

For Life Shell Labs India Pvt. Ltd.




Authorized Signatory
K. KAMALANATHAN
Deputy Technical Manager



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TEST REPORT

Sample ID: 2309065		JOE: 2193			Report Date: 12.09.2023				
S.No	PARAMETERS	UNIT	TEST METHOD	RESULTS	Surface Water Quality Standards (as per IS: 2296).				
					A	B	C	D	E
29	Lead as Pb	mg/l	IS 3025 Part 47	BDL(DL:0.1)	0.1	--	0.1	--	--
30	Chromium Cr6+	mg/l	IS 3025-Part 52	BDL(DL:0.1)	0.05	0.05	0.05	--	--
31	Percentage Sodium	%	IS 11624	50.1	--	--	--	--	60
32	Sodium absorption ratio	meq/l	IS 11624	8.54	--	--	--	--	26
33	Total Phosphate	mg/l	IS 3025 (Part 31)	1.620	--	--	--	--	--
34	Sodium as Na	mg/l	IS 3025 (Part 45)	340	--	--	--	--	--
35	Potassium as K	mg/l	IS 3025 (Part 45)	48.0	--	--	--	--	--
36	Carbonate as CO ₃	mg/l	APHA-24 th Edn-2023	BDL(DL:1.0)	--	--	--	--	--
37	Bicarbonate as HCO ₃	mg/l	APHA-24 th Edn-2023	162	--	--	--	--	--
38	Total Coliforms	MPN/100ml	IS 1622:1981	49	50	500	5000	--	--
39	Fecal Coliforms	MPN/100ml	IS 1622:1981	23	--	--	--	--	--


Note: Class A – Drinking water without conventional treatment but after disinfection. Class B – Water for outdoor bathing. Class C – Drinking water with conventional treatment followed by disinfection. Class D – Water for fish culture and wild life propagation. Class E – Water for irrigation, industrial cooling and controlled waste disposal. (Unobj = Unobjectionable) BDL: Below Detectable Limit; DL: Detectable Limit.

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M. BALAJI
Quality Manager

For Life Shell Labs India Pvt. Ltd.




Authorized Signatory
K. KAMALANATHAN
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TEST REPORT

Sample ID: 2309066	JOE: 2193	Report Date: 12.09.2023
Customer Name	M/s. Tamil Nadu Polymer Industries Park Limited (TPIPL)	
Address	143 & 187 Of Puzhudiavakkam Village, 2053 B Part Of Voyalur Village, Ponneri Taluk, Thiruvallur District, Tamil Nadu.	
Date of Sampling	05.09.2023	Sampled by LSL
Sample Received on	06.09.2023	Sample Description Bore Well Water
Test Commenced on	06.09.2023	Sampling Procedure LSL/CHE/SOP/071
Test Completed on	11.09.2023	Sample Condition Satisfactory
Sampling Location	Project Site	Sample Quantity 2 liters

DISCIPLINE		CHEMICAL TESTING			
PRODUCT GROUP		WATER			
S. No.	PARAMETERS	UNIT	TEST METHOD	RESULTS	PERMISSIBLE LIMIT AS PER IS 10500-2012
1	Colour	Hazen	IS 3025-Part 4	5.0	15.0
2	Odor	--	IS 3025-Part 5	Agreeable	Agreeable
3	Temperature	°C	IS 3025-Part 9	26.5	--
4	pH @ 25°C	--	IS 3025-Part 11	8.05	6.5-8.5
5	Electrical Conductivity	µs/cm	IS 3025-Part 14	870	--
6	Turbidity	NTU	IS 3025-Part 10	1.2	5.0
7	Total Dissolved Solids (TDS)	mg/l	IS 3025-Part 16	570	2000
8	Chemical Oxygen Demand	mg/l	APHA-24 th Edn-2023	BDL(DL:4.0)	--
9	Total Hardness as CaCO ₃	mg/l	IS 3025-Part 21	182	600
10	Calcium Hardness as CaCO ₃	mg/l	APHA-24 th Edn-2023	96.0	--
11	Magnesium Hardness as CaCO ₃	mg/l	APHA-24 th Edn-2023	86.0	--
12	Total Alkalinity as CaCO ₃	mg/l	IS 3025 part-23	122	600

Note: BDL: Below Detection Limit, DL: Detection Limit.

Verified by

J. Poornasam.

For Life Shell Labs India Pvt. Ltd,

K. Kamalanathan
Authorized Signatory

K. KAMALANATHAN
Deputy Technical Manager





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TEST REPORT

Sample ID: 2309066		JOE: 2193		Report Date: 12.09.2023	
S. No	PARAMETERS	UNIT	TEST METHOD	RESULTS	PERMISSIBLE LIMIT AS PER IS 10500-2012
13	Chloride as Cl	mg/l	IS 3025-Part 32	162	1000
14	Sulphate as SO_4^{2-}	mg/l	APHA-24 th Edn-2023	58.0	400
15	Calcium as Ca	mg/l	IS 3025-Part 40	38.4	200
16	Magnesium as Mg	mg/l	IS 3025 (Part 46)	20.6	100
17	Iron as Fe	mg/l	IS 3025 (Part 53)	0.11	0.3
18	Reactive Silica as SiO_2	mg/l	IS 3025 (Part 35)	17.0	--
19	Carbonate Hardness as $CaCO_3$	mg/l	APHA-24 th Edn-2023	122	--
20	Non Carbonate Hardness as $CaCO_3$	mg/l	APHA-24 th Edn-2023	60.0	--
21	Flouride as F	mg/l	APHA-24 th Edn-2023	0.11	1.5
22	Nitrate as NO_3	mg/l	APHA-24 th Edn-2023	2.24	45
23	Nitrite as NO_2	mg/l	IS 3025 (Part 34)	BDL(DL:1.0)	--
24	Orthophosphate	mg/l	IS 3025 (Part 31)	0.58	--
25	Sodium as Na	mg/l	IS 3025 (Part 45)	50.0	--
26	Potassium as K	mg/l	IS 3025 (Part 45)	6.0	--
27	Carbon	mg/l	APHA-24 th Edn-2023	BDL(DL:1.0)	--
28	Bicarbonate	mg/l	APHA-24 th Edn-2023	148	--
29	Boron	mg/l	IS 3025 (Part 57)	BDL(DL:0.1)	0.5

BDL: Below Detectable Limit; DL: Detectable Limit.

Verified by

J. Poovarasam.

For Life Shell Labs India Pvt. Ltd,

K. Kamalanathan
Authorized Signatory

K. KAMALANATHAN
Deputy Technical Manager





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TEST REPORT

Sample ID: 2309066	JOE: 2193	Report Date: 12.09.2023
Customer Name	M/s. Tamil Nadu Polymer Industries Park Limited (TPIPL)	
Address	143 & 187 Of Puzhuvivakkam Village, 2053 B Part Of Voyalur Village, Ponneri Taluk, Thiruvallur District, Tamil Nadu.	
Date of Sampling	05.09.2023	Sampled by LSL
Sample Received on	06.09.2023	Sample Description Bore Well Water
Test Commenced on	06.09.2023	Sampling Procedure LSL/MIC/SOP/004
Test Completed on	11.09.2023	Sample Condition Satisfactory
Sampling Location	Project Site	Sample Quantity 250 ml

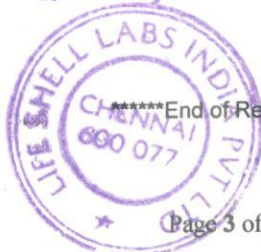
DISCIPLINE		BIOLOGICAL TESTING			
PRODUCT GROUP		WATER			
S. No.	PARAMETERS	UNIT	TEST METHOD	RESULTS	PERMISSIBLE LIMIT AS PER IS 10500-2012
1	Total Coliforms	MPN/100ml	IS 1622:1981	<2	Absent/100ml
2	Fecal Coliforms	MPN/100ml	IS 1622:1981	<2	Absent/100ml
3	E.coli	MPN/100ml	IS 1622:1981	<2	Absent/100ml
Note: 1. Total Coliforms, Fecal Coliforms, E. coli are in quantitative (value) not in qualitative (like Present/Absent). 2. Less than 2MPN/100ml is equal to absent which is not contains coliform group, so sample is Pass. 3. More than 2MPN/100ml is sample contain coliform group, so sample is Fail. 4. MPN: Most Probable Number.					

For Life Shell Labs India Pvt. Ltd,

Verified & Authorized by

M. BALAJI

Quality Manager



*****End of Report*****

Page 3 of 3



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TEST REPORT

Sample ID: 2309067	JOE: 2193	Report Date: 12.09.2023
Customer Name	M/s. Tamil Nadu Polymer Industries Park Limited (TPIPL)	
Address	143 & 187 Of Puzhuvivakkam Village, 2053 B Part Of Voyalur Village, Ponneri Taluk, Thiruvallur District, Tamil Nadu.	
Date of Sampling	05.09.2023	Sampled by LSL
Sample Received on	06.09.2023	Sample Description Bore Well Water
Test Commenced on	06.09.2023	Sampling Procedure LSL/CHE/SOP/071
Test Completed on	11.09.2023	Sample Condition Satisfactory
Sampling Location	Kattupalli	Sample Quantity 2 liters

DISCIPLINE		CHEMICAL TESTING			
PRODUCT GROUP		WATER			
S. No.	PARAMETERS	UNIT	TEST METHOD	RESULTS	PERMISSIBLE LIMIT AS PER IS 10500-2012
1	Colour	Hazen	IS 3025-Part 4	5.0	15.0
2	Odor	--	IS 3025-Part 5	Agreeable	Agreeable
3	Temperature	°C	IS 3025-Part 9	26.0	--
4	pH @ 25°C	--	IS 3025-Part 11	7.73	6.5-8.5
5	Electrical Conductivity	µs/cm	IS 3025-Part 14	687	--
6	Turbidity	NTU	IS 3025-Part 10	1.1	5.0
7	Total Dissolved Solids (TDS)	mg/l	IS 3025-Part 16	364	2000
8	Chemical Oxygen Demand	mg/l	APHA-24 th Edn-2023	BDL(DL:4.0)	--
9	Total Hardness as CaCO ₃	mg/l	IS 3025-Part 21	160	600
10	Calcium Hardness as CaCO ₃	mg/l	APHA-24 th Edn-2023	88.0	--
11	Magnesium Hardness as CaCO ₃	mg/l	APHA-24 th Edn-2023	72.0	--
12	Total Alkalinity as CaCO ₃	mg/l	IS 3025 part-23	110	600

Note: BDL: Below Detection Limit, DL: Detection Limit.

Verified by

J. Poovarasam.

For Life Shell Labs India Pvt. Ltd,



K. Kamalanathan
Authorized Signatory

K. KAMALANATHAN
Deputy Technical Manager



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TEST REPORT

Sample ID: 2309067		JOE: 2193		Report Date: 12.09.2023	
S. No	PARAMETERS	UNIT	TEST METHOD	RESULTS	PERMISSIBLE LIMIT AS PER IS 10500-2012
13	Chloride as Cl	mg/l	IS 3025-Part 32	126	1000
14	Sulphate as SO_4^{2-}	mg/l	APHA-24 th Edn-2023	38.0	400
15	Calcium as Ca	mg/l	IS 3025-Part 40	35.2	200
16	Magnesium as Mg	mg/l	IS 3025 (Part 46)	17.3	100
17	Iron as Fe	mg/l	IS 3025 (Part 53)	0.14	0.3
18	Reactive Silica as SiO_2	mg/l	IS 3025 (Part 35)	16.0	--
19	Carbonate Hardness as CaCO_3	mg/l	APHA-24 th Edn-2023	110	--
20	Non Carbonate Hardness as CaCO_3	mg/l	APHA-24 th Edn-2023	50.0	--
21	Flouride as F	mg/l	APHA-24 th Edn-2023	0.16	1.5
22	Nitrate as NO_3	mg/l	APHA-24 th Edn-2023	2.42	45
23	Nitrite as NO_2	mg/l	IS 3025 (Part 34)	BDL(DL:1.0)	--
24	Orthophosphate	mg/l	IS 3025 (Part 31)	0.68	--
25	Sodium as Na	mg/l	IS 3025 (Part 45)	48.0	--
26	Potassium as K	mg/l	IS 3025 (Part 45)	7.0	--
27	Carbon	mg/l	APHA-24 th Edn-2023	BDL(DL:1.0)	--
28	Bicarbonate	mg/l	APHA-24 th Edn-2023	134	--
29	Boron	mg/l	IS 3025 (Part 57)	BDL(DL:0.1)	0.5

BDL: Below Detectable Limit; DL: Detectable Limit.

Verified by 	For Life Shell Labs India Pvt. Ltd,   Authorized Signatory K. KAMALANATHAN Deputy Technical Manager
--	--



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TEST REPORT

Sample ID: 2309067	JOE: 2193	Report Date: 12.09.2023
Customer Name	M/s. Tamil Nadu Polymer Industries Park Limited (TPIPL)	
Address	143 & 187 Of Puzhuvakkam Village, 2053 B Part Of Voyalur Village, Ponneri Taluk, Thiruvallur District, Tamil Nadu.	
Date of Sampling	05.09.2023	Sampled by LSL
Sample Received on	06.09.2023	Sample Description Bore Well Water
Test Commenced on	06.09.2023	Sampling Procedure LSL/MIC/SOP/004
Test Completed on	11.09.2023	Sample Condition Satisfactory
Sampling Location	Kattupalli	Sample Quantity 250 ml

DISCIPLINE		BIOLOGICAL TESTING			
PRODUCT GROUP		WATER			
S. No.	PARAMETERS	UNIT	TEST METHOD	RESULTS	PERMISSIBLE LIMIT AS PER IS 10500-2012
1	Total Coliforms	MPN/100ml	IS 1622:1981	<2	Absent/100ml
2	Fecal Coliforms	MPN/100ml	IS 1622:1981	<2	Absent/100ml
3	E.coli	MPN/100ml	IS 1622:1981	<2	Absent/100ml

Note: 1. Total Coliforms, Fecal Coliforms, E. coli are in quantitative (value) not in qualitative (like Present/Absent).
2. Less than 2MPN/100ml is equal to absent which is not contains coliform group, so sample is Pass.
3. More than 2MPN/100ml is sample contain coliform group, so sample is Fail.
4. MPN: Most Probable Number.

For Life Shell Labs India Pvt. Ltd,

Verified & Authorized by

M. BALAJI
Quality Manager



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TEST REPORT

Sample ID: 2309068	JOE: 2193	Report Date: 12.09.2023
Customer Name	M/s. Tamil Nadu Polymer Industries Park Limited (TPIPL)	
Address	143 & 187 Of Puzhuvakkam Village, 2053 B Part Of Voyalur Village, Ponneri Taluk, Thiruvallur District, Tamil Nadu.	
Date of Sampling	05.09.2023	Sampled by LSL
Sample Received on	06.09.2023	Sample Description Bore Well Water
Test Commenced on	06.09.2023	Sampling Procedure LSL/CHE/SOP/071
Test Completed on	11.09.2023	Sample Condition Satisfactory
Sampling Location	Athipattu Pudhu Nagar	Sample Quantity 2 liters

DISCIPLINE		CHEMICAL TESTING			
PRODUCT GROUP		WATER			
S. No.	PARAMETERS	UNIT	TEST METHOD	RESULTS	PERMISSIBLE LIMIT AS PER IS 10500-2012
1	Colour	Hazen	IS 3025-Part 4	5.0	15.0
2	Odor	--	IS 3025-Part 5	Agreeable	Agreeable
3	Temperature	°C	IS 3025-Part 9	26.5	--
4	pH @ 25°C	--	IS 3025-Part 11	7.16	6.5-8.5
5	Electrical Conductivity	µs/cm	IS 3025-Part 14	679	--
6	Turbidity	NTU	IS 3025-Part 10	1.1	5.0
7	Total Dissolved Solids (TDS)	mg/l	IS 3025-Part 16	360	2000
8	Chemical Oxygen Demand	mg/l	APHA-24 th Edn-2023	BDL(DL:4.0)	--
9	Total Hardness as CaCO ₃	mg/l	IS 3025-Part 21	172	600
10	Calcium Hardness as CaCO ₃	mg/l	APHA-24 th Edn-2023	94.0	--
11	Magnesium Hardness as CaCO ₃	mg/l	APHA-24 th Edn-2023	78.0	--
12	Total Alkalinity as CaCO ₃	mg/l	IS 3025 part-23	102	600

Note: BDL: Below Detection Limit, DL: Detection Limit.

Verified by

J. Perumasan.

For Life Shell Labs India Pvt. Ltd,



K. Kamalanathan
Authorized Signatory

K. KAMALANATHAN
Deputy Technical Manager



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(The Complete Environmental Service Provider)

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TEST REPORT

Sample ID: 2309068		JOE: 2193		Report Date: 12.09.2023	
S. No	PARAMETERS	UNIT	TEST METHOD	RESULTS	PERMISSIBLE LIMIT AS PER IS 10500-2012
13	Chloride as Cl	mg/l	IS 3025-Part 32	148	1000
14	Sulphate as SO ₄ ²⁻	mg/l	APHA-24 th Edn-2023	42.0	400
15	Calcium as Ca	mg/l	IS 3025-Part 40	37.6	200
16	Magnesium as Mg	mg/l	IS 3025 (Part 46)	18.7	100
17	Iron as Fe	mg/l	IS 3025 (Part 53)	0.08	0.3
18	Reactive Silica as SiO ₂	mg/l	IS 3025 (Part 35)	20.0	--
19	Carbonate Hardness as CaCO ₃	mg/l	APHA-24 th Edn-2023	102	--
20	Non Carbonate Hardness as CaCO ₃	mg/l	APHA-24 th Edn-2023	70.0	--
21	Flouride as F	mg/l	APHA-24 th Edn-2023	0.18	1.5
22	Nitrate as NO ₃	mg/l	APHA-24 th Edn-2023	2.24	45
23	Nitrite as NO ₂	mg/l	IS 3025 (Part 34)	BDL(DL:1.0)	--
24	Orthophosphate	mg/l	IS 3025 (Part 31)	0.70	--
25	Sodium as Na	mg/l	IS 3025 (Part 45)	68.0	--
26	Potassium as K	mg/l	IS 3025 (Part 45)	9.0	--
27	Carbon	mg/l	APHA-24 th Edn-2023	BDL(DL:1.0)	--
28	Bicarbonate	mg/l	APHA-24 th Edn-2023	124	--
29	Boron	mg/l	IS 3025 (Part 57)	BDL(DL:0.1)	0.5

BDL: Below Detectable Limit; DL: Detectable Limit.

Verified by J. Poovarasam	For Life Shell Labs India Pvt. Ltd, K. Kamalanathan Authorized Signatory K. KAMALANATHAN Deputy Technical Manager
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TEST REPORT

Sample ID: 2309068	JOE: 2193	Report Date: 12.09.2023
Customer Name	M/s. Tamil Nadu Polymer Industries Park Limited (TPIPL)	
Address	143 & 187 Of Puzhuvakkam Village, 2053 B Part Of Voyalur Village, Ponneri Taluk, Thiruvallur District, Tamil Nadu.	
Date of Sampling	05.09.2023	Sampled by LSL
Sample Received on	06.09.2023	Sample Description Bore Well Water
Test Commenced on	06.09.2023	Sampling Procedure LSL/MIC/SOP/004
Test Completed on	11.09.2023	Sample Condition Satisfactory
Sampling Location	Athipattu Pudhu Nagar	Sample Quantity 250 ml

DISCIPLINE		BIOLOGICAL TESTING			
PRODUCT GROUP		WATER			
S. No.	PARAMETERS	UNIT	TEST METHOD	RESULTS	PERMISSIBLE LIMIT AS PER IS 10500-2012
1	Total Coliforms	MPN/100ml	IS 1622:1981	<2	Absent/100ml
2	Fecal Coliforms	MPN/100ml	IS 1622:1981	<2	Absent/100ml
3	E.coli	MPN/100ml	IS 1622:1981	<2	Absent/100ml

Note: 1. Total Coliforms, Fecal Coliforms, E. coli are in quantitative (value) not in qualitative (like Present/Absent).
2. Less than 2MPN/100ml is equal to absent which is not contains coliform group, so sample is Pass.
3. More than 2MPN/100ml is sample contain coliform group, so sample is Fail.
4. MPN: Most Probable Number.

For Life Shell Labs India Pvt. Ltd,

Verified & Authorized by

M. BALAJI
Quality Manager



*****End of Report*****

Page 3 of 3

Note:1) The results listed herewith are only for the items tested. 2) Endorsement of test item is neither inferred nor implied. 3) The report in full or part shall not be used for any promotional activity or publicity purpose without written consent by us. 4) Samples are not drawn by us unless otherwise mentioned. 5) Unless specifically requested by the customer, the test items will not be retained more than 7 days from the date of issue of the test report. 6) Under no circumstances, lab accepts any liability for loss/damage caused by use or misuse of test report. 7) Liability is limited to proven willful negligence and will in no case be more than the invoiced amount.



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TEST REPORT

Sample ID: 2309069	JOE: 2193	Report Date: 12.09.2023
Customer Name	M/s. Tamil Nadu Polymer Industries Park Limited (TPIPL)	
Address	143 & 187 Of Puzhuvivakkam Village, 2053 B Part Of Voyalur Village, Ponneri Taluk, Thiruvallur District, Tamil Nadu.	
Date of Sampling	05.09.2023	Sampled by LSL
Sample Received on	06.09.2023	Sample Description Soil
Test Commenced on	06.09.2023	Sampling Procedure LSL/CHE/SOP/074
Test Completed on	11.09.2023	Sample Condition Satisfactory
Sampling Location	South Corner of the project site	Sample Quantity 2 Kgs

DISCIPLINE		CHEMICAL TESTING		
PRODUCT GROUP		POLLUTION & ENVIRONMENT		
S. No.	PARAMETERS	UNIT	TEST METHOD	RESULTS
1	pH Value	--	IS 2720 (Part 26)	8.72
2	Electrical Conductivity	µs/cm	IS 14767 (2000)	314
3	Moisture	%	IS 2720 (Part 2)	6.32
4	Bulk Density	g/cm ³	IS 2720(Part 3)	1.26
5	Total Organic Matter	%	IS 2720 (Part 22)	1.07
6	Total Organic Carbon	%	IS 2720 (Part 27)	0.62
7	Total Soluble Sulphate as SO ₄ ²⁻	%	IS 2720 (Part 27)	0.010
8	Total Kjeldhal Nitrogen as N	%	IS 14684	0.014
9	Total Phosphorus as P ⁺	%	IS 10158	BDL(DL0.1)
10	Chloride as Cl-	meq/l	Method of analysis for soils of arid and semi-arid Regions, FAO	8.2
11	Soluble Potassium as K ⁺	meq/l		1.01

Note: BDL: Below Detection Limit, DL: Detection Limit.

Verified by

J. Pavanam.

For Life Shell Labs India Pvt. Ltd,

K. Kamalanathan
Authorized Signatory

K. KAMALANATHAN
Deputy Technical Manager





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Sample ID: 2309069		JOE: 2193		Report Date: 12.09.2023
S. No	PARAMETERS	UNIT	TEST METHOD	RESULTS
12	Soluble Sodium as Na_2^+	meq/l	Method of analysis for soils of arid and semi-arid Regions, FAO	1.62
13	Soluble Calcium as Ca_2^+	meq/l		7.0
14	Soluble Magnesium as Mg	meq/l		3.4
15	Texture	--		Sandy
16	Porosity	%		32
17	Manganese as Mn	%	IS 13624 : 1993 (RA 2013)	0.003
18	Sodium absorption Ratio	meq/l	LSL/CHE/SOP/080	0.71
19	Zinc as Zn	%	IS 13624 : 1993 (RA 2013)	0.004
20	Available Iron	%	IS 13624 : 1993 (RA 2013)	0.010
21	Cation Exchange Capacity	meq/100g	IS 2720 Part-24	6.49
22	Water Holding Capacity.	%	IS 14765	16.1

BDL: Below Detectable Limit; DL: Detectable Limit. meq/l- milliequivalents per liter

Verified by

J. Poovanasam

For Life Shell Labs India Pvt. Ltd,

K. Kamalanathan
Authorized Signatory

K. KAMALANATHAN
Deputy Technical Manager

*****End of Report*****





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TEST REPORT

Sample ID: 2309070	JOE: 2193	Report Date: 12.09.2023
Customer Name	M/s. Tamil Nadu Polymer Industries Park Limited (TPIPL)	
Address	143 & 187 Of Puzhuvakkam Village, 2053 B Part Of Voyalur Village, Ponneri Taluk, Thiruvallur District, Tamil Nadu.	
Date of Sampling	05.09.2023	Sampled by LSL
Sample Received on	06.09.2023	Sample Description Soil
Test Commenced on	06.09.2023	Sampling Procedure LSL/CHE/SOP/074
Test Completed on	11.09.2023	Sample Condition Satisfactory
Sampling Location	Kattupalli Village	Sample Quantity 2 Kgs

DISCIPLINE		CHEMICAL TESTING		
PRODUCT GROUP		POLLUTION & ENVIRONMENT		
S. No.	PARAMETERS	UNIT	TEST METHOD	RESULTS
1	pH Value	--	IS 2720 (Part 26)	8.74
2	Electrical Conductivity	µs/cm	IS 14767 (2000)	394
3	Moisture	%	IS 2720 (Part 2)	5.84
4	Bulk Density	g/cm ³	IS 2720(Part 3)	1.27
5	Total Organic Matter	%	IS 2720 (Part 22)	1.56
6	Total Organic Carbon	%	IS 2720 (Part 27)	0.91
7	Total Soluble Sulphate as SO ₄ ²⁻	%	IS 2720 (Part 27)	0.015
8	Total Kjeldal Nitrogen as N	%	IS 14684	0.027
9	Total Phosphorus as P ⁺	%	IS 10158	BDL(DL0.1)
10	Chloride as Cl ⁻	meq/l	Method of analysis for soils of arid and semi-arid Regions, FAO	9.4
11	Soluble Potassium as K ⁺	meq/l		1.05

Note: BDL: Below Detection Limit, DL: Detection Limit.

Verified by

J. Perarasan

For Life Shell Labs India Pvt. Ltd,



K. Kamalanathan
Authorized Signatory

K. KAMALANATHAN
Deputy Technical Manager



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Sample ID: 2309070		JOE: 2193		Report Date: 12.09.2023
S. No	PARAMETERS	UNIT	TEST METHOD	RESULTS
12	Soluble Sodium as Na_2^+	meq/l	Method of analysis for soils of arid and semi-arid Regions, FAO	1.80
13	Soluble Calcium as Ca_2^+	meq/l		7.6
14	Soluble Magnesium as Mg	meq/l		3.8
15	Texture	--		Sandy
16	Porosity	%		30
17	Manganese as Mn	%	IS 13624 : 1993 (RA 2013)	0.005
18	Sodium absorption Ratio	meq/l	LSL/CHE/SOP/080	0.75
19	Zinc as Zn	%	IS 13624 : 1993 (RA 2013)	0.003
20	Available Iron	%	IS 13624 : 1993 (RA 2013)	0.016
21	Cation Exchange Capacity	meq/100g	IS 2720 Part-24	6.10
22	Water Holding Capacity.	%	IS 14765	15.4

BDL: Below Detectable Limit; DL: Detectable Limit. meq/l- milliequivalents per liter.

Verified by

J. Poochanasan.

For Life Shell Labs India Pvt. Ltd,

K. Kamalanathan
Authorized Signatory

K. KAMALANATHAN
Deputy Technical Manager

*****End of Report*****





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TEST REPORT

Sample ID: 2309071	JOE: 2193	Report Date: 12.09.2023
Customer Name	M/s. Tamil Nadu Polymer Industries Park Limited (TPIPL)	
Address	143 & 187 Of Puzhuvivakkam Village, 2053 B Part Of Voyalur Village, Ponneri Taluk, Thiruvallur District, Tamil Nadu.	
Date of Sampling	05.09.2023	Sampled by LSL
Sample Received on	06.09.2023	Sample Description Soil
Test Commenced on	06.09.2023	Sampling Procedure LSL/CHE/SOP/074
Test Completed on	11.09.2023	Sample Condition Satisfactory
Sampling Location	Athipattu Pudhu Nagar	Sample Quantity 2 Kgs

DISCIPLINE		CHEMICAL TESTING		
PRODUCT GROUP		POLLUTION & ENVIRONMENT		
S. No.	PARAMETERS	UNIT	TEST METHOD	RESULTS
1	pH Value	--	IS 2720 (Part 26)	8.68
2	Electrical Conductivity	µs/cm	IS 14767 (2000)	342
3	Moisture	%	IS 2720 (Part 2)	6.05
4	Bulk Density	g/cm ³	IS 2720(Part 3)	1.24
5	Total Organic Matter	%	IS 2720 (Part 22)	1.50
6	Total Organic Carbon	%	IS 2720 (Part 27)	0.87
7	Total Soluble Sulphate as SO ₄ ²⁻	%	IS 2720 (Part 27)	0.013
8	Total Kjeldal Nitrogen as N	%	IS 14684	0.025
9	Total Phosphorus as P ⁺	%	IS 10158	BDL(DL0.1)
10	Chloride as Cl ⁻	meq/l	Method of analysis for soils of arid and semi-arid Regions, FAO	9.0
11	Soluble Potassium as K ⁺	meq/l		1.03

Note: BDL: Below Detection Limit, DL: Detection Limit.

Verified by

J. Perumasan

For Life Shell Labs India Pvt. Ltd,

K. Kamalanathan
Authorized Signatory

K. KAMALANATHAN
Deputy Technical Manager







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Sample ID: 2309071		JOE: 2193		Report Date: 12.09.2023
S. No	PARAMETERS	UNIT	TEST METHOD	RESULTS
12	Soluble Sodium as Na_2^+	meq/l	Method of analysis for soils of arid and semi-arid Regions, FAO	1.76
13	Soluble Calcium as Ca_2^+	meq/l		7.2
14	Soluble Magnesium as Mg	meq/l		3.6
15	Texture	--		Sandy
16	Porosity	%		33
17	Manganese as Mn	%	IS 13624 : 1993 (RA 2013)	0.004
18	Sodium absorption Ratio	meq/l	LSL/CHE/SOP/080	0.76
19	Zinc as Zn	%	IS 13624 : 1993 (RA 2013)	0.005
20	Available Iron	%	IS 13624 : 1993 (RA 2013)	0.012
21	Cation Exchange Capacity	meq/100g	IS 2720 Part-24	6.22
22	Water Holding Capacity.	%	IS 14765	15.8
BDL: Below Detectable Limit; DL: Detectable Limit. meq/l- milliequivalents per liter.				
Verified by			For Life Shell Labs India Pvt. Ltd,	
				
			Authorized Signatory	
			K. KAMALANATHAN	
			Deputy Technical Manager	

*****End of Report*****



அனுப்புநர்

க.கோபால கிருஷ்ணன், B.E.,
உதவி இயக்குநர்,
மாவட்ட நகர் ஊரமைப்பு அலுவலகம்,
திருவள்ளூர் மாவட்டம்,
எண்.43/397A, இரண்டாம் தளம்,
அன்னை இந்திரா காந்தி சாலை,
இராஜாஜிபுரம் பகுதி - II,
திருவள்ளூர் - 602 001.
தொலைபேசி - 044-27665657.
email-tvlrregion@gmail.com

பெறுநர்

M/s.Tamil Nadu Polymer Industries Park
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ஒ.மு.எண்.1232/2020/திவம2

நாள்.29.07.2020.

ஐயா,

பொருள்: நில உபயோகச் சான்று - மாவட்ட நகர் ஊரமைப்பு அலுவலகம்- திருவள்ளூர் மாவட்டம் - பொன்னேரி வட்டம் - புழுதிவாக்கம் கிராமம் - சர்வே எண்கள்.143,187, வயலுர் கிராமம் ச.எண்.205/3B -ற்கு நில உபயோகச் சான்று வழங்க கோரியது - தொடர்பாக.

பார்வை: தங்கள் கடிதம், நாள்.28.07.2020.

பார்வையில் கண்ட தங்கள் கடிதத்தில், திருவள்ளூர் மாவட்டம், பொன்னேரி வட்டம், புழுதிவாக்கம் கிராமம், சர்வே எண்கள்.143,187, வயலுர் கிராமம் ச.எண்.205/3B ஆகியவற்றிற்கு நில உபயோகச் சான்று வழங்க கோரப்பட்டதை தொடர்ந்து, கீழ்காண் விவரம் தெரிவிக்கலாகிறது.

மேற்படி, புழுதிவாக்கம் மற்றும் வயலுர் கிராமத்திற்கு நகர் ஊரமைப்புத் துறையால் எவ்வித நில உபயோகமும் வகைபடுத்தப்படவில்லை என்ற விவரம் தெரிவிப்பதுடன் கீழ்காண் விவரங்கள் தெரிவிக்கலாகிறது.

1) இவ்விடத்தில் மனைப்பிரிவோ / நிறுவனமோ / கட்டிடமோ அல்லது எவ்வித அபிவிருத்தியோ செய்யும் முன்னர் நகர் ஊரமைப்புச் சட்டம் 1971, பிரிவு 47A-ன்படி, இத்துறையின் முன் அனுமதி பெறப்பட வேண்டும். அவ்வாறு அனுமதி பெறாமல் அபிவிருத்தி செய்யப்பட்டால் நகர் ஊரமைப்புச் சட்டம் 1971 பிரிவு 56 மற்றும் 57-ன் கீழ் நடவடிக்கை தொடரப்படும்.

2) அபிவிருத்திகளுக்கு அனுமதி பெறுவதை எளிமைப்படுத்தும் விதமாக அதிகபட்சம் 7000 சதுர அடி பரப்பளவுள்ள குடியிருப்புக் கட்டிட உத்தேசம் மற்றும் அதிகபட்சம் 8

குடியிருப்புகளை உள்ளடக்கியதான மற்றும் அதிகபட்சம் தரைதளம் மற்றும் முதல்தளம், வரையிலான குடியிருப்புக் கட்டிடம் போன்றவற்றிற்கும் அதிகபட்சம் 2000 சதுர அடி வரையிலான வணிக உபயோகக் கட்டிடங்களுக்கு சம்மந்தப்பட்ட உள்ளாட்சியே இத்துறையின் சார்பாக அனுமதி வழங்கிட இத்துறையால் அதிகாரப்பகிர்வு வழங்கப்பட்டுள்ளது. மேற்காண் வகைக் கட்டிடங்கள் தவிர கூடுதல் பரப்பளவுள்ள குடியிருப்புக் கட்டிடங்கள், வணிகக் உபயோகக் கட்டிட உத்தேசங்களுக்கு இவ்வலுவலகத்தின் அனுமதி பெறப்பட வேண்டும். இதர பொது வகைக் கட்டிடங்கள் போன்றவற்றிற்கு இத்துறையின் முன் அனுமதி பெறப்பட வேண்டும் எனவும் தெரிவிக்கப்படுகிறது.

- 3) புன்செய் நில அபிவிருத்திக்கு இணை இயக்குநர், வேளாண்மைத் துறை தடையின்மை சான்று பெறப்பட வேண்டும்.
- 4) நன்செய் நில அபிவிருத்திக்கு மாவட்ட ஆட்சியர் அவர்களின் தடையின்மைச் சான்று பெறப்பட வேண்டும்.
- 5) இச்சான்று தகவல் அளிக்கும் நோக்கத்தில் மட்டுமே வழங்கப்படுகிறது. இதனை சட்ட ரீதியான நடவடிக்கைகளுக்கு தேவையான நகர் ஊரமைப்பு துறையின் அனுமதியாக கருதக் கூடாது.

க. சுவாமிநாதன்

உதவி இயக்குநர், 29/7/2020
மாவட்ட நகர் ஊரமைப்பு அலுவலகம்,
திருவள்ளூர் மாவட்டம்.

29/7/2020

வியாழக்கிழமை, 9 ஜனவரி 2020

தினமணி சென்னை 5

தமிழ்நாடு

தமிழ்நாடு பாலிமர் தொழிற் பூங்கா லிமிடெட்

(A Joint Venture of TIDCO and SIPCOT)

பாலிமர் தொழிற்பூங்கா, திருவள்ளூர் மாவட்டம்

சுற்றுச்சூழல் இசைவாணை

திருவள்ளூர் மாவட்டம், வாயலூர் மற்றும் புழுதிவாக்கம் கிராமங்களில் அமையவுள்ள பாலிமர் தொழிற் பூங்காவிற்கு மாநில அளவிலான சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையம் (SEIAA), தமிழ்நாடு கடிதம் எண்: SEIAA-TN/F.No.6957/EC/8(b)/683/2019 தேதி 11.12.2019 மூலம் சுற்றுச்சூழல் இசைவாணை வழங்கியுள்ளது.

இவ்விசைவாணையின் முழுவிவரத்தை தமிழ்நாடு பாலிமர் தொழிற் பூங்கா இணையதளமான www.tnpolymerpark.com மற்றும் மாநில சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையம், தமிழ்நாடு இணையதளத்திலும் காணலாம். மேலும் இசைவாணையின் நகலினை தமிழ்நாடு மாசு கட்டுப்பாட்டு வாரியத் தலைமை அலுவலகத்தில் பெறலாம்.

மேலாண்மை இயக்குனர்,
தமிழ்நாடு பாலிமர் தொழிற் பூங்கா லிமிடெட்
19-A, ருக்மணி லட்சுமிபதி சாலை,
எழும்பூர், சென்னை-600008.

செ.ம.தொ.இ/64/வரைகலை/2020



THE NEW
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INDIA

THURSDAY 09.01.2020

Tamil Nadu Polymer Industries Park Limited
(A Joint venture of TIDCO & SIPCOT)

Polymer Industries Park, Tiruvallur District
Environmental Clearance

Environmental Clearance has been issued by State Level Environment Impact Assessment Authority (SEIAA), Tamil Nadu for the proposed Polymer Industries Park in Voyalur and Puzhudivakkam Villages, Tiruvallur District vide their letter No. SEIAA-TN/F.No.6957/EC/8(b)/683/2019 dated 11.12.2019.

The contents of the Environmental Clearance can be viewed in TPIPL website www.tnpolymerpark.com and also in the website of SEIAA, Tamil Nadu. Further, the copies of the Environmental Clearance could be obtained from the Head Office of Tamil Nadu Pollution Control Board (TNPCB).

Managing Director,
Tamilnadu Polymer Industries Park Limited (TPIPL),
19-A, Rukmani Lakshmipathy Road,
Egmore, Chennai - 600008.

DIPR/64/Display/2020

प्राप्ति स्वीकृति (रसीद) ACKNOWLEDGEMENT

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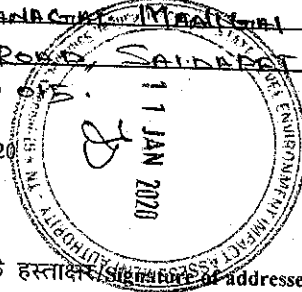
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THE MEMBER SECRETARY, SEIAA
 2nd Floor, Panagudi, Madurai
 NO: 1, JERNIS ROAD, SAIDAPET
 CHENNAI - 600 035.



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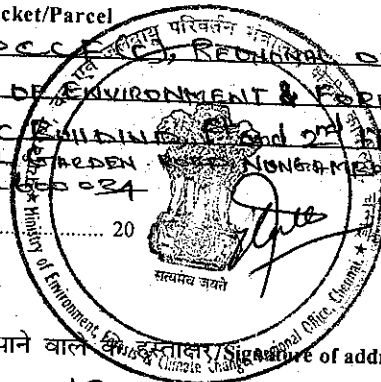
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 34, HEPC BUILDING, 2nd and 3rd floor,
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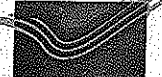
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