

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI.**

Original Application No. 142 of 2021(SZ)

**Suo Motu based on the news item in
The Hindu Tamil Newspaper , Chennai
Edition Dated -06.06.2021, " Soap factories
spoiling Agricultural Lands in the Cauvery Delta,
which has been declared a protected
Agricultural Zone: Farmers worried about yields "-**

Vs

**The Secretary to Government,
Department of Environment ,
Climate Change & Forest ,
Govt., Secretariat, Fort St. George,
Chennai – 600 009 & 7 others**

...Respondents

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**FILED BY
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**REPORT OF THE JOINT COMMITTEE IN THE MATTER OF ORIGINAL
APPLICATION NO: 142/2021 (SUO MOTU) IN COMPLIANCE OF HON'BLE NGT
ORDER DATED 06.07.2021**

**SUBMITTED TO THE
HON'BLE NATIONAL GREEN TRIBUNAL,
SOUTHERN ZONE, CHENNAI**

November, 2021

Preamble

The Hon'ble National Green Tribunal, Southern Zone, Chennai based on the news item published in the Hindu Tamil Newspaper, Chennai Edition dated 06.07.2021 "Soap factories spoiling Agricultural Lands in the Cauvery Delta, which has been Declared a Protected Agricultural Zone; Farmers worried about yields" has taken up Suo-moto case OA 142/2021. It is alleged in the newspaper report that on account of the non-compliance of the pollution norms by the Soap factories in this area, the fertility of the soil has been affected considerably thereby their production is also affected causing heavy loss to the agriculturists in the Delta Districts of Cauvery River. In order to ascertain the genuineness of the allegations made in the newspaper report Hon'ble tribunal vide order dated 06.07.2021 has appointed a joint committee to conduct inspection of the area and to submit report.

1.0 Orders of the Hon'ble Tribunal

Hon'ble Tribunal vide order dated 06.07.2021 has directed as follows:

"In order to ascertain the genuineness of the allegations made in the newspaper report, we feel it appropriate to appoint a joint committee comprising of (1) a Senior Scientist or a Senior Officer from Central Pollution Control Board (CPCB), Integrated Regional Office, Chennai, (2) a Senior Officer or a Senior Scientist from the Tamil Nadu Pollution Control Board (TNPCB) as designated by its Chairman, (3) a Soil Scientist to be nominated by the Vice Chancellor of Tamil Nadu Agricultural University (TNAU), Coimbatore, preferably from Tiruchirappalli or nearby Institution to these Districts and the Joint Directors of Agricultural Departments, namely, Thanjavur, Tiruvarur, Nagapattinam and Mayiladuthurai District who will assess the main team, whenever they are inspecting the respective areas, so as to prepare the report by the committee appointed by this Tribunal".

The District Collectors of the above Districts were also directed to render their assistance for proper coordination and also for providing necessary logistics for the team to conduct the inspection and submit the report. Copy of the order is placed as Annexure-I.

2.0 Constitution of Committee:

In compliance to Hon'ble NGT order, the joint committee comprising of following members is constituted:

1.	Thiru. K.Elankumaran Joint Chief Environmental Engineer (Monitoring) Tamil Nadu Pollution Control Board, Trichy	Member & Nodal officer
2.	Dr.P.Balasubramaniam Professor & Head, Soil Science & Agricultural Chemistry, Anbil Dharmalingam Agricultural College & Research Institute, Trichy.	Member
3.	Tmt. T.Mahima Scientist-D, Central Pollution Control Board, Regional Directorate, Chennai	Member

The committee was assisted by the following officials of Thanjavur, Tiruvarur & Nagapattinam Districts

- i. Tmt.A. Gomathi Thangam,
Deputy Director,
O/o Joint Director of Agriculture,
Department of Agriculture and Farmers Welfare,
Thanjavur District
- ii. Thiru.A. Uthirapathi,
Deputy Director,
O/o Joint Director of Agriculture,
Department of Agriculture and Farmers Welfare,
Tiruvarur District
- iii. Thiru S. Paneerselvam
Joint Director of Agriculture,
Department of Agriculture and Farmers Welfare,
Nagapattinam and Mayiladuthurai (a/c) District.
- iv. Thiru.A. Alvin J Anand
District Environmental Engineer,
Tamil Nadu Pollution Control Board,
Thanjavur District.

- v. Thiru. R. Gunaseelan
District Environmental Engineer,
Tamil Nadu Pollution Control Board,
Nagapattinam, Tiruvarur and Mayiladuthurai Districts.

3.1 Scope of the Committee: The committee is vested with the following scope:

1. To inspect the Soap Industries in these areas and ascertain as to whether they are complying with all the pollution norms and the conditions imposed in the permission or Consent order granted and if there is any violation then they are directed to ascertain the nature of violation
2. to ascertain the soil quality in those areas and ascertain as to whether there was any damage caused to the soil on account of any illegal activity of discharging effluents or other waste in the nearby agricultural lands and if there is any contamination caused
3. to suggest the remedial measures to restore the soil quality in that area,
4. to assess the damage caused to the environment and assess the environmental compensation payable by the Soap industries which are responsible for such contamination applying the Polluter Pays' Principle and also the guideline issued by this Tribunal in several cases of this nature,
5. to ascertain as to whether any such untreated effluents are being dumped in the nearby water bodies as well, if there is any water body adjacent to the Soap manufacturing units, and also make analysis of the water and sediments in those water bodies and if there is any contamination found on account of the such illegal activities of any soap factory, then that also will have to be taken into consideration for the purpose of assessing damage to environment and for cost of restoration while calculating the environmental compensation
6. to ascertain as to whether any loss of yield has been caused to the agriculturists, whose lands have been affected and if so assess the loss of income caused to each land owner.

3.0 Committee Meeting

The Joint Committee convened its first meeting on 13.08.2021 through video conference (VC). The committee finalised the inspection schedule and action plan to carry out inspection. During the meeting both Tamil Nadu Pollution Control Board and Department

of Agriculture clarified that that the allegation made in the press is against the Sodium silicate industries in Thanjavur District. There are Sodium silicate industries in Thanjavur, Tiruvarur and Nagapattinam Districts and there are no such industries in Mayiladuthurai District. Sodium silicate is used as raw material in soap industries, silica gel manufacturing etc. There are no major soap manufacturing industries in these districts except 8 Nos. of tiny sector (micro level) soap formulation units. The officials of Tamil Nadu Pollution Control Board inspected the soap formulation units in Thanjavur, Tiruvarur and Nagapattinam Districts. During the time of inspection, it was observed that two units were in operation, five units were closed permanently and one unit is established and yet to be commissioned. The process involves mixing of the ingredient in the blender and then passes it through the extruder to obtain the desired size and shape. These units do not generate trade effluent and do not let out any process emission.

4.0 Field visit by Joint Committee

In compliance to the orders of the Hon'ble National Green Tribunal (SZ), the Joint Committee has carried out the site visit on 17.08.2021 and 18.08.2021 in the Sodium silicate industries located in Thanjavur, Tiruvarur and Nagapattinam Districts. The committee visited the area published in the Hindu news paper dated 06.07.2021. The committee interacted with complainants and as well with other villagers located in the vicinity of the industries. There are totally 10 Nos. of Sodium silicate industries (small scale industries) out of which two industries are located in Thanjavur, four industries in Tiruvarur and four industries in Nagapattinam District. The details of the Sodium silicate industries in these Districts are given below:

District	Sl. No.	Name and address of the Industry	Date of establishment	Capacity	Area in hectare	Status of Operation during inspection
Thanjavur	1.	M/s. Kiran Global Chems Limited S.F.No. 42/5, 6, 8, 10, Deebambalpuram Village, Papanasam Taluk, Thanjavur District.	16.10.2013	Sodium silicate:2250 T/Month	1.288	Under operation

	2.	M/s. Maharaj Soaps Industries P Ltd, S.F. No. 74/3, Deebambalpuram Village, Papanasam Taluk, Thanjavur District.	15.02.2021	Sodium silicate:750 T/Month	0.348	Under Operation
Tiruvarur	3.	M/s.PremiChemico Company Pvt Ltd, S.F No. 24/5 Part, 24/10 Part, 36/1 Part, Nallur Village, Mannargudi Taluk, Tiruvarur District.	15.09.2005	Sodium silicate Soluble Glass: 750 T/Month	0.44	Under closed condition
	4.	M/s. Diamond Silicate, S.F No. 199/3, Peruntharagudi Village, Tiruvarur Taluk, Tiruvarur District.	20.01.2002	1. Sodium silicate Glass - 30 T/Day 2. Sodium silicate Liquid - 40 T/Day	0.74	Under Operation
	5.	M/s.Narimanam Silicate Unit I, R.S No. 205/3, 206/1,2 &212/2 Peruntharagudi Village, Tiruvarur Taluk, Tiruvarur District.	01.06.1999	Sodium silicate Glass - 30 T/Day	1.28	Under Operation
	6.	M/s.Narimanam Silicate Unit-II, R.S No. 11-7C, Adiyakkamangalam Village, Tiruvarur Taluk, Tiruvarur District.	01.04.2009	Sodium silicate Glass - 480 T/Month	0.36	Not in operation
Nagapattinam	7.	M/s. Kiran Global Chem Limited, S.F No. 67/2, 68/7, 68/8, Uthamacholapuram Village, Nagapattinam Taluk, Nagapattinam District.	01.10.1988	Sodium silicate Soluble Glass -4500 T/Month	2.32	Not in operation
	8.	M/s Reena Silicates Private Ltd, R.S No. 66/2, Uthamacholapuram Village, Nagapattinam Taluk, Nagapattinam District.	01.04.1998	Sodium silicate - 10 T/Month	0.415	Under Operation

9.	M/s. Sree Jaya Devi Industries Unit I, S.F No. 117/1B/1, Kuttalam Village, Nagapattinam Taluk, Nagapattinam District.	31.10.1988	Sodium silicate In Liquid Form – 450 T/Month	0.7	Not in operation
10.	M/s. Sree Jaya Devi Industries Unit II, S.F No. 117/1B/2, Kuttalam Village, Nagapattinam Taluk, Nagapattinam District.	01.10.2005	1. Sodium silicate in Liquid Form – 300 T/Month 2. Sodium silicate in Solid Form – 378 Tons/Month	0.6	Under operation

All the above industries have been established between 1988 and 2013 except the industry M/s. Maharaj Soaps Industries P Ltd, Thanjavur which has been commissioned during the year 2021.

5.1 Process description

Sand (silica sand) and Soda ash (Sodium carbonate) are mixed in the ratio of 1.3 :1 and heated in a gas fired furnace at a temperature of 1200⁰C - 1300⁰C ranging from four to eight hours (one batch) depending on the grade of the product manufactured. The final product is Sodium silicate and it comes out in molten form from the furnace. Water is used for cooling purpose. Sodium silicate is also referred to as soluble glass since it dissolves in hot water/ steam. The final product is sent to detergent/soap, construction, pharma industries and for other applications.

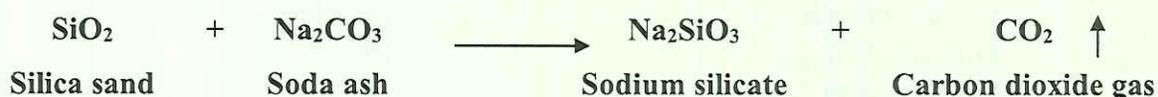
Only two raw materials Sand (silica sand) and Soda ash (Sodium carbonate) are used in the process. Sand is stored in open. Soda ash and finished product are stored in a covered shed. Gas is supplied through pipelines directly by GAIL/ ONGC.

Water is used for cooling purposes and is kept under re-circulation. No trade effluent is generated from the process.

In some industries, the Sodium silicate crystals are charged in a reactor, water is added and mixture is heated by applying steam. The Sodium silicate in liquid form is obtained.

All the raw materials are converted into product and no hazardous waste is generated during the process. Carbon-dioxide is emitted during process which is let out into atmosphere through stack. The industries manufacturing liquid Sodium silicate have installed baby boiler

for generating steam. The industries are surrounded by agricultural fields. The chemical reaction for the manufacture of Sodium silicate is furnished as follows:



5.0 Findings of the committee in compliance of Hon'ble NGT order dated 06.07.2021:

6.1 M/s. Kiran Global Chems Limited, Thanjavur:

The industry M/s. Kiran Global Chems Limited, S.F. No. 42/5, 6, 8,10, Deebambalpuram Village, Papanasam Taluk, Thanjavur District was established during the year 2013 over an extent of 1.288 hectare. The industry has obtained Consent to Operate for expansion on 16.04.2014 for the manufacture of Sodium silicate- 2250 MT/Month. The Consent has been subsequently renewed up to 31.03.2022.

The industry has provided 1No. of furnace with Common Chimney of 31 m height, Gas generator of 125 KVA of stack 4.57m and DG set of 82.5 KVA with stack of 4.57m. The industry has provided port hole and monitoring arrangement for furnace chimney.

The raw material silica sand is stored in open land. The other raw material Soda ash and the product Sodium silicate are stored within the processing shed of area 24,700 sq ft. Water consumption of the industry is 1.0 KLD, which is used for domestic and cooling purposes. Since molten Sodium silicate is cooled by direct contact with water, the final product dissolves in water. Hence re-circulation water is highly alkaline and is having pH-14. As the solid concentration builds up in cooling water and when it cannot be further used for cooling purposes the water is mixed with raw material. The industry has provided open tank for collecting cooling effluent of capacity 31 m³. No trade effluent was generated from the process.

The committee observed that thick deposits were observed on the walls of the tank. The tanks shall be frequently cleaned and depositions shall be mixed with raw material. The industry has not provided storm water drain. During rainy season, over flow from the tank may be carried with storm water runoff, hence industry shall cover the tanks to prevent entry of rain water. It was also observed that the dust particles had settled on the roof of the

industry. During rainy season, it is likely that it will wash into the agricultural fields. There were no complaints received against the industry.

The industry is surrounded by the following:

- North - Own land, ONGC Road, Agriculture land
- South - Own land, Agriculture land
- East - Road, Agriculture land
- West - Own land, Agriculture land

Agriculture land is located at 8m and 10m on the Southern and Eastern side of the industry respectively and the nearest habitation is located at 0.5 Km distance from the industry.

6.2 M/s. Maharaj Soaps Industries P Ltd, Thanjavur:

The industry M/s Maharaj Soaps Industries P Ltd, S. F. No. 74/3, Deebambalpuram Village, Papanasam Taluk, Thanjavur District was established during the year 2021 over an extent of 0.348 hectare. The industry has obtained Consent to Operate on 05.02.2021 for the manufacture of Sodium silicate- 750 MT/Month valid up to 31.03.2023.

The industry has provided 1 No. of furnace with stack of 25 m height and DG set of 82.5 KVA with acoustic enclosures with stack of 3.0 m height. The industry has provided port hole and monitoring arrangement for the furnace stack.

The raw material silica sand is stored in open land. The other raw material Soda ash and the product Sodium silicate are stored inside the processing shed of area 8,000 sq ft. Water consumption of the industry is 1.0KLD, which is used for domestic and cooling purposes. The water utilized for cooling purpose is collected in a collection tank of capacity 84m³ and recirculated. No trade effluent was generated from the process. While establishment of the unit, complaints were received regarding installation of the industry in agriculture lands.

The industry is surrounded by the following:

- North - ONGC land/ Road, Agriculture land
- South - Own land, Agriculture land
- East - ONGC Drill site, Agriculture land
- West - Road, Agriculture land

Agriculture land is located at 10m and 20m on the Western and Northern side of the industry respectively and the nearest habitation is located at 0.5 Km distance from the industry.

6.3 M/s Premi Chemco Private Limited, Tiruvarur

The industry M/s Premi Chemco Private Limited, S.No.24/5 Part, 24/10 Part, 36/1 Part, Nallur Village, Mannargudi Taluk, Tiruvarur District was established during the year 2005 over an extent of 0.44 hectare. The industry has obtained Consent of TNPCB Board for the manufacture of Sodium silicate Soluble Glass: 750 T/Month valid up to 31.03.2023. The industry has provided 1 No. of furnace with stack of 20 m height. No trade effluent was generated from the process. The Committee observed that the industry was under closed condition and not in operation for more than three years.

6.4 Diamond Silicate, Tiruvarur

The industry M/s Diamond Silicate, S.F No. 199/3, Peruntharagudi Village, Tiruvarur Taluk, Tiruvarur District was established during the year 2002 over an extent of 0.74 hectares. The industry has obtained Consent to Operate for Expansion on 02.02.2021 for the manufacture of Sodium silicate Glass - 30 MT/day and Sodium silicate Liquid - 40 MT/day valid up to 31.03.2025.

The industry has provided 2 Nos. of furnace with stack of 13 m height each, DG set of 45 KVA with Acoustic Enclosure with stack of 3.0 m height and 2 Nos. of Baby Boiler with stack of 10 m height. The industry has provided port hole and monitoring arrangement for the furnace stack.

The raw material silica sand is stored in open land. The other raw material Soda ash and the product Sodium silicate are stored inside the processing shed of area 2,250sq ft. Water consumption of the industry is 6.5KLD, which is used for domestic, cooling and liquid Sodium silicate manufacturing purposes. The water utilized for cooling purpose is collected in a collection tank of capacity of 2.8 m³ and recirculated. No trade effluent was generated from the process. The Boiler Blow down of 0.1 KLD is disposed through solar evaporation pan. There were no complaints received against the industry.

The industry is surrounded by the following:

North: Vellakudi to Pulivalam Road followed by vacant land

South: Vacant Land

East: Vacant Land followed M/s ONGC Kamalapuram GGS

West: Vacant Land

An agricultural land is located at a distance of 200 m on the Northern side of the industry and the nearest habitation is located at the distance of 300 m on the North Eastern side of the industry.

6.5 Narimanam Silicate Unit I, Tiruvarur

The industry M/s Narimanam Silicate Unit I, R.S No. 205/3, 206/1, 206/2 & 212/2, Peruntharagudi Village, Tiruvarur Taluk, Tiruvarur District was established during the year 1999 over an extent of 1.28 hectare. The industry has obtained Consent to Operate for Expansion on 28.05.2020 for the manufacture of Sodium silicate Glass - 600 MT/Month and Sodium silicate Liquid - 1200 MT/Month valid up to 31.03.2022.

The industry has provided 2 Nos. of furnace with stack of 20 m height each and 1 No. of Baby Boiler with stack of 10 m height. The industry has provided port hole and monitoring arrangement for the furnace stack.

The other raw material Soda ash and the product Sodium silicate are stored inside the processing shed of area 11,140 sq ft. Water consumption of the industry is 1.0 KLD, which is mainly used for domestic, cooling and liquid Sodium silicate manufacturing purposes. No trade effluent was generated from the process. The water utilized for cooling purpose is collected in 2 Nos. of collection tanks of capacity 5.6 m³ and 3.4 m³ each and recirculated. The Boiler Blowdown of 0.01 KLD is disposed through solar evaporation pan. There were no complaints received against the industry.

The industry is surrounded by the following:

North: Vellakudi to Pulivalam Road followed by vacant land

South: Vacant Land

East: Industry M/s Raghavendra Alkalies Pvt Ltd

West: Vacant Land followed M/s ONGC Kamalapuram Group Gathering Station (GGS)

An agricultural land is located at a distance of 300 m on the Eastern side of the industry and the nearest habitation is located at a distance of 800m on the Eastern side of the industry.

6.6 Narimanam Silicate Unit II, Tiruvarur:

The industry M/s. Narimanam Silicate Unit-II, R.S No. 11-7C, Adiyakkamangalam Village, Tiruvarur Taluk, Tiruvarur District was established during the year 2009 over an extent of 0.36 hectare. The industry has obtained Consent to Operate on 17.12.2009 for the manufacture of Sodium silicate Soluble Glass - 480 MT/Month. The Consent is renewed till 31.03.2024.

The industry has provided 1 No. of furnace with stack of 20 m height and 2 Nos. of DG set of 62.5 KVA and 82 KVA with acoustic enclosures with stack of 3.0 m height each. The industry has provided port hole and monitoring arrangement for the furnace stack.

The other raw material Soda ash and the product Sodium silicate are stored inside the processing shed of area 10110 sq ft. Water consumption of the industry is 1.0 KLD, which is used for domestic and cooling purposes. No trade effluent was generated from the process. The water utilized for cooling purpose is collected in a collection tank of capacity 9.5 m³ and recirculated. There were no complaints received against the industry.

The industry is surrounded by the following:

- North - Approved Layout
- South - Vacant land
- East - Karuppur road followed by vacant land
- West - Approved Layout

An agricultural land is located at a distance of 130 m & 100 m on the Western & Northern side of the industry respectively and the nearest habitation is located at the distance of 350 m on the North-Eastern side of the industry.

6.7 M/s. Kiran Global Chem Limited, Nagapattinam:

The industry M/s. Kiran Global Chem Limited, S.F No.67/2, 68/7, 68/8, Uthamacholapuram Village, Nagapattinam Taluk, Narimanam Post, Nagapattinam District was established during the year 1988 over an extent of 2.32 hectare. The industry has obtained Consent to Operate for Expansion on 31/01/2018 for the manufacture of Sodium silicate Soluble Glass - 4500 MT/Month. The Consent is renewed till 31.03.2022.

The industry has provided 4 Nos. of furnace with stack of 19.8 m height and a gas generator set of 240 KVA with acoustic enclosures with stack of 6.0 m height each. The industry has provided port hole and monitoring arrangement for the furnace stack.

The other raw material Soda ash and the product Sodium silicate are stored inside the processing shed of area 13,680sq ft. Water consumption of the industry is 19.6 KLD which is used for domestic, cooling and washing purposes. No trade effluent was generated from the process. The water utilized for cooling purpose is collected in 3 Nos. of collection tanks of capacity 59 m³, 39 m³ and 16 m³ each and recirculated. There were no complaints received against the industry.

The industry is surrounded by the following:

- North - Industry M/s. Prem Chemical Industries
- South - Nagore to Vettar Road (SH148)
- East - Agriculture land
- West - Industry M/s. Reena silicates

An agricultural land is located adjacent to the boundary wall on the Eastern side of the industry and the nearest habitation is located at a distance of 800m at Eastern side of the industry.

6.8 M/s. Reena Silicates Private Ltd, Nagapattinam

The industry M/s. Reena Silicates Private Ltd, R.S No. 66/2, Uthamacholapuram Village, Nagapattinam Taluk, Nagapattinam District was established during the year 1998 over an extent of 0.415 hectare. The industry has obtained Consent of TNPCB Board for the manufacture of Sodium silicate Soluble Glass: 10 T/Month valid up to 31.03.2021.

The industry has provided 2 Nos. of furnace with stack of 15 m height and DG sets of 40 and 20 KVA with exhaust pipe of 2.5 m each. The industry has provided port hole and monitoring arrangement for the furnace stack.

The other raw material Soda ash and the product Sodium silicate are stored inside the processing shed of area 640sq ft. Water consumption of the industry is 2.0 KLD, which is used for domestic and cooling purposes. No trade effluent was generated from the process. The water utilized for cooling purpose is collected in a collection tank of capacity 1.8 m³ and recirculated. There were no complaints received against the industry.

The industry is surrounded by the following:

- North - Industry M/s Madras Chemicals (Closed unit)
- South - Nagore to Vettar Road (SH148)
- East - Industry M/s. Kiran Global Chems Limited
- West - Agriculture Land

An agricultural land is located adjacent to the boundary wall on the Western side of the industry and the nearest habitation is located at a distance of 1.4 Km on the western side of the industry.

6.9 M/s Sree Jaya Devi Industries Unit I, Nagapattinam

The industry M/s Sree Jaya Devi Industries Unit I, S.F No. 117/1B/1, Kuttalam Village, Narimanam Post, Nagapattinam Taluk, Nagapattinam District was established during the year 1988 over an extent of 0.7 hectare. The industry has obtained Consent to Operate on

14.03.1990 for the manufacture of Sodium silicate in Liquid Form: 450 T/Month. The Consent is renewed till 31.03.2021.

The industry has provided 1 No. of furnace with stack of 21 m height and a DG set of 62.5 KVA with exhaust pipe of 4.5 m height. The industry has provided port hole and monitoring arrangement for the furnace stack.

The other raw material Soda ash and the product Sodium silicate are stored inside the processing shed of capacity 6,100sq ft. Water consumption of the industry is 6.5 KLD, which is used for domestic, cooling purposes and liquid Sodium silicate manufacturing purposes. No trade effluent was generated from the process. The water utilized for cooling purpose is collected in a collection tank of capacity 5.4 m³ and recirculated. There were no complaints received against the industry.

The industry is surrounded by the following:

- North - Agricultural Land followed by village Road
- South - Industry M/s Sree Jaya Devi Industries Unit II followed by agricultural Land
- East - Agricultural Land followed by village Road
- West - Coconut Farms

An agricultural land is located adjacent to the boundary wall on the Northern side of the industry and the nearest habitation is located at a distance of 0.35 Kms on the North Eastern side of the industry.

6.10 M/s. Sree Jaya Devi Industries Unit II, Nagapattinam

The industry M/s Sree Jaya Devi Industries Unit I, S.F No. 117/1B/2, Kuttalam Village, Narimanam Post, Nagapattinam Taluk, Nagapattinam District was established during the year 2005 over an extent of 0.6 hectare. The industry has obtained Consent to operate on 26.12.2007 for the manufacture of Sodium silicate Glass - 378 MT/Month and Sodium silicate Liquid - 300 MT/Month. The consent is renewed till 31.03.2021.

The industry has provided 1 No. of furnace with stack of 21 m height, 2 Nos of Boiler with stack of 8.33 m height and a DG set of 62.5 KVA with exhaust pipe of 4.0 m height. The industry has provided port hole and monitoring arrangement for the furnace stack.

The other raw material Soda ash and the product Sodium silicate are stored inside the processing shed of area 7380sq ft. Water consumption of the industry is 2.0 KLD, which is used for domestic, cooling and liquid Sodium silicate manufacturing purposes. No trade effluent was generated from the process. The water utilized for cooling purpose is collected

in a collection tank of capacity 10.6 m³ and recirculated. There were no complaints received against the industry.

The industry is surrounded by the following:

North : M/s Sree Jaya Devi Industries Unit I

South : Agricultural Land

East : Coconut Farms followed by village Road

West : Coconut Farms

An agricultural land is located adjacent to the boundary wall on the Northern side and the nearest habitation is located at a distance of 0.35 Kms on the North eastern side of the industry.

The details of raw material, product, air pollution Control measures, consent status and compliance of Consent Order Conditions of the Sodium silicate industries are enclosed as **Annexure -2.**

6.11 Inspection of Complainant's land Near M/s. Kiran Global Chems Limited and M/s. Maharaj Soaps Industries P Ltd, Thanjavur

The committee inspected the paddy fields of the complainants nearby the industries of M/s. Kiran Global Chems Limited and M/s. Maharaj Soaps Industries P Ltd, Thanjavur District. Soil samples could not be collected due to standing paddy crop in the field.

Sample of Borewell water (**Annexure -3**) were collected from the complainants' land and analysed through Tamil Nadu Pollution Control Board laboratory. The Report of analysis reveals that the parameters are within the prescribed standards specified in the CPCB Water Quality Criteria for irrigation.

S. No	Sample Location	Parameters				
		pH	Total Hardness in mg/L	Total Dissolved Solids in mg/L	Total Alkalinity in mg/L	Sodium Absorption Ratio
1	Bore well sample from land owned by the complainant Thiru. Vetrikondan	6.97	304	606	276	0.78

2	Bore well sample from land owned by the complainant Thiru. Ramamoorthy	7.02	260	486	288	0.77
CPCB Water Quality Criteria for irrigation		6.0-8.5	-	-	-	26

7.0 Compliance of the Hon'ble NGT Directions:

7.1 Compliance of Pollution Norms and Compliance of Consent Order Conditions by the Sodium silicate industries

The **Stack Monitoring Survey** was conducted by the Tamil Nadu Pollution Control Board laboratory in the month of August and September 2021 in 7 Nos. of Sodium silicate industries and the Result of Analysis (**Annexure -4**) are summarized as follows:

S.No.	Name of the Industry	From Stack Monitoring Survey				Stack height provided in m	Standard			
		PM in mg/Nm ³	PM in Kg/hr	SO ₂ in mg/Nm ³	NO _x in mg/Nm ³		PM in Kg/hr	Stack Height required in m	SO ₂ in mg/Nm ³	NO _x in mg/Nm ³
1	M/s. Kiran Global Chems Limited, Thanjavur District.	21	0.12	BDL*	127	31	2.0	-	500	1000
2	M/s. Maharaj Soaps Industries P Ltd, Thanjavur District.	19	0.08	BDL*	246	25	2.0	-	500	1000
3	M/s. PremiChemico Company Pvt Ltd, Tiruvarur District.	The unit is in closed condition				20	2.0	-	500	1000
4	M/s. Diamond Silicate, Tiruvarur District.	26	0.40	42	30	13.0	2.0	12.3	500	1000
5	M/s. Narimanam Silicate Unit I, Tiruvarur District.	The unit is not in operation				20	2.0	-	500	1000
6	M/s. Narimanam Silicate Unit-II, Tiruvarur District.	21	0.31	16	29	20.0	2.0	9.1	500	1000

7	M/s.Kiran Global Chem Limited, Nagapattinam District.	27	0.70	46	37	19.8	2.0	14.7	500	1000
8	M/s.Reena Silicates Private Ltd, Nagapattinam District.	21	0.50	12	26	15.0	2.0	9.6	500	1000
9	M/s.Sree Jaya Devi Industries Unit I, Nagapattinam District.	The unit is not in operation				21	2.0	-	500	1000
10	M/s Sree Jaya Devi Industries Unit II, Nagapattinam District.	23	0.53	12	29	21.0	2.0	9.5	500	1000

*Below detectable Limit

The above table shows all the values are within the Standards prescribed by the MoEF& CC for glass industry under the Environment (Protection) Rules, 1986 as amended which is furnished as follows

Parameter	Standards
Reference: MoEF&CC Notification No. G.S.R. 93(E), dated 21.2.1991	
PM	2.0 Kg/hr for furnace product draw capacity of 60 MT/day
Stack Height	$H = 14(Q)^{0.3}$ where Q is the emission rate of SO ₂ in kg/hr. & H is Stack Height in meters
Reference: MoEF&CC Notification No. G.S.R. 263(E), dated 22.03.2018	
SO ₂	500mg/Nm ³ for natural gas firing
NO _x	1000mg/Nm ³

The **Ambient Air Quality** survey was conducted by the Tamil Nadu Pollution Control Board laboratory in the month of August and September 2021 in 5 Nos. of Sodium silicate industries and Report of Analysis (**Annexure – 5**) are summarized as follows:

S.No	Name of the Industry	Ambient Air Quality Survey Parameters ($\mu\text{g}/\text{m}^3$)			
		PM ₁₀ (4 locations)	PM _{2.5} (2 locations)	SO ₂ (4 locations)	NO ₂ (4 locations)
1.	M/s. Kiran Global Chems Limited, Thanjavur District.	Ambient Air Quality survey could not be conducted because the entire surrounding is water logged with paddy Cultivation			
2.	M/s. Maharaj Soaps Industries P Ltd, Thanjavur District.				
3.	M/s.PremiChemico Company Pvt Ltd, Tiruvarur District.	The industry is in closed condition			
4.	M/s. Diamond Silicate, Tiruvarur District.	18-46	11 and 18	5-8	9-12
5.	M/s.Narimanam Silicate Unit I, Tiruvarur District.	The industry is not in operation			
6.	M/s. Narimanam Silicate Unit-II, Tiruvarur District.	13-23	7 and 13	9-16	13-27
7.	M/s. Kiran Global Chem Limited, Nagapattinam District.	24-62	13 and 28	19-26	27-46
8.	M/s. Reena Silicates Private Ltd, Nagapattinam District.	16-23	11 and 13	8-12	15-19
9.	M/s. Sree Jaya Devi Industries Unit I, Nagapattinam District.	The industry is not in operation			
10.	M/s Sree Jaya Devi Industries Unit II, Nagapattinam District.	20-31	12 and 14	9-16	20-26
	NAAQ Standards	100	60	80	80

The above table shows the parameters PM₁₀, PM_{2.5}, SO₂, NO₂ are within the National Ambient Air Quality Standards prescribed by the CPCB vide Notification dated 18th November, 2009.

No Trade effluent is generated from the process. The water utilized for cooling purposes is recirculated. The industries manufacturing liquid Sodium silicate have installed baby boiler for generating steam and meagre quantity of boiler blow down is generated which is disposed through solar evaporation pan.

Out of 10 Sodium silicate manufacturing industries in Thanjavur (2 Nos.), Tiruvarur (4 Nos.) and Nagapattinam (4 Nos.) Districts, 1 No. of the industry is under closed condition. The remaining 9 Nos. of industries are complying the pollution norms and the conditions specified in the Consent Order issued by the Tamil Nadu Pollution Control Board. **The compliance of consent order conditions for each industry is enclosed in Annexure 2.**

7.2 Assessment of Soil Quality nearby the Industries

It was observed that there is no discharge of effluent from the industries in the nearby land or water bodies and there is no water bodies located near the industries.

The soil samples from the adjacent land owned by the industry of M/s. Kiran Global Chems Limited, Thanjavur were collected on 17.08.2021 and analyzed in the soil testing laboratory, Aduthurai, recorded high pH of the soil (pH >8.5 which is called as sodic soil as per Text book – Nature and Properties of Soils (**Annexure 6**)). These soils need to be reclaimed using Gypsum after analyzing the soil for gypsum requirement. Further, it is suggested that the industry shall not let any washings of the factory premises to the nearby land.

The soil in the nearby farmers' field is not affected due to the industries in Thanjavur District which was evidenced by the supported soil quality data (**Annexure 7**) of nearby farmers collected after harvest of paddy crop on 18.10.2021 (Soil samples could not be collected on 17.08.2021 on the date of inspection due to standing paddy crop in the field) which shows pH less than 8.5 and the Electrical conductivity of the soil samples were less than 1 and no samples recorded >4 to designate as saline soils as per Text book - Nature and Properties of Soils.

In Tiruvarur District, the soil samples were taken from the land nearby Sodium silicate industries for analysis. Soil test data of Peruntharakudi Village, Koradachery Block shows the pH as 7.02 and EC 0.34 exhibiting normal one. Similarly, in Adiyakamangalam Village of Tiruvarur Block, pH was 7.08 and EC of 1.54 dS/m which does not show any contamination from the industry (**Annexure 8**).

In Nagapattinam District, Soil test data of Kuthalam, Uthamasolapuram and Narimanam Villages during 2019-20 were normal by exhibiting pH of 6.85, 6.39 and 7.16 and EC of 0.18, 0.29 and 0.3 dS/m, respectively. Average Soil test data of above villages during 2020-21 were also normal by exhibiting pH of 6.03, 6.7 and 6.67 and EC of 0.26, 0.28 and 0.17 dS/m, respectively (**Annexure 9**).

The soil samples were taken in the field on 18.08.2021 nearby Sodium silicate industries in Nagapattinam District for analysis. Soil test data of Kuthalam Village of Thirumurugal Block shows the pH as 7.1 and EC 0.29 exhibiting normal one. Similarly, in Uthamasolapuram Village of Thirumurugal Block, pH was 6.8 and EC of 0.68 dS/m which does not show any contamination from the industry (**Annexure 10**).

7.3 Assessment of Environmental damage caused by the industries

It was observed that the Ambient Air Quality (AAQ) survey and Stack Monitoring (Emission) survey conducted in the Sodium silicate industries shows that the AAQ parameters and emission parameters are within the prescribed standards of CPCB/MoEF, GOI. There is no generation of trade effluent from these industries and no discharge of effluent was found in the nearby land/ water body. The Report of Analysis of bore well sample collected nearby the Sodium silicate industries in Thanjavur District are within the prescribed standards. The soil samples collected nearby the premises of these industries does not show any contamination from the industries as per the details furnished by the Agriculture Department. Hence no environmental damage was found due to operation of the industries.

7.4 Discharge of Trade Effluent Generated from the Industries in to the Water bodies

It was observed that there is no discharge of effluent from the industries in the nearby land or water bodies and there is no water bodies located near the industries.

7.5 Assessment of Loss of Yield in the Nearby Agriculture Lands

In Thanjavur District, the results of *Kuruvai* crop cutting experiments of Deepambalur Village shows the yield of 5020, 3555, 4121 and 3659 kg/hectare during 2017-18, 2018-19, 2019-20 and 2020-21 respectively (**Annexure 11**). The test crop paddy yield of the farmers nearby industry harvested on 8.10.2021 and 12.10.2021 (*kuruvai* season) recorded the paddy grain yield ranged from 3198 to 4548 kg/hectare (**Annexure 12**). Further, post harvest soil data of the above farmers were normal one (**Annexure 7**). Hence, the variation in the yield might be due to various agronomic practices viz., weed management, irrigation water management, nutrient / fertilizer management and pest and disease management adopted by the individual farmers and not due to the industry.

In Tiruvarur District, loss of yield due to Sodium silicate industries have not been observed as the results of *Samba* Paddy crop cutting experiments shows the yield of 2516, 4950, 4725, 5100 and 5300 kg/hectare during 2016-17, 2017-18, 2018-19, 2019-20 and 2020-

21 respectively in Peruntharakudi Village, Koradachery Block. Similarly, in Adiyakamangalam Village of Tiruvarur Block, the results of *Samba* Paddy crop cutting experiments shows the yield of 1452, 4820, 4642, 4952 and 4849 kg/hectare during 2016-17, 2017-18, 2018-19, 2019-20 and 2020-21 respectively (**Annexure 13**).

In Nagapattinam District, regarding loss of yield due to Sodium silicate industries have not been observed as the results of *Samba* Paddy crop cutting experiments shows the paddy yield of 4736, 5120 and 4925 kg/hectare during 2018-19, 2019-20 and 2020-21 respectively in Uthamasolapuram Village of Thirumurugal Block. Similarly, In Narimanam Village of Thirumurugal Block, the results of *Samba* Paddy crop cutting experiments shows the paddy yield of 4322, 4970 and 5233 kg/hectare during 2018-19, 2019-20 and 2020-21 respectively (**Annexure 14**).

8. Conclusion

- a. It is submitted that the complaint is against the Sodium silicate industries in Thanjavur District. Out of 10 Sodium silicate manufacturing industries in Thanjavur (2 Nos.), Tiruvarur (4 Nos.) and Nagapattinam (4 Nos.) Districts, 1 No. of the industry is under closed condition. The remaining 9 Nos. of industries are complying the pollution norms and the conditions specified in the Consent Order issued by the Tamil Nadu Pollution Control Board.
- b. The soil quality in the complainant's land located nearby land of these industries were not got affected. However, the soil of the industry owned land of M/s. Kiran Global Chems Limited, Thanjavur was contaminated with Sodium carbonate which was evidenced by the high soil pH (>9). This may be due to the washings during cleaning or runoff during heavy rain. These soils need to be reclaimed using Gypsum after analyzing the soil for gypsum requirement. Further, it is suggested that the industry shall not let any washings of the factory premises to nearby land.
- c. There is no generation of trade effluent from the industrial activity and there are no water bodies nearby these industries. The Committee did not find any discharge of trade effluent in the nearby land from these industries. These industries do not cause any environmental damage as per the details furnished by the Agriculture Department.

- d. The raw materials and final product are alkaline in nature and pH is 14. The industries are surrounded by agricultural fields. The industries have not provided storm water drains and during rainy season, the dust particles are likely to be carried with rain water. The industries shall provide storm water drain and ensure that no effluent is discharged outside the industry premises. The first shower (for a minimum of 45 mins) shall be collected separately and mixed with cooling water since it is likely to contain impurities.
- e. Though the industries are complying with emission norms, they shall provide wet scrubber and stack of height minimum 30m as an improvement to the Air pollution Control Measures so as to avoid escape of particulate matter
- f. There is no loss of yield of paddy crops due to operation of Sodium silicate industries in the villages of Thanjavur, Tiruvarur and Nagapattinam Districts where these industries are located as per the details furnished by the Agriculture Department.

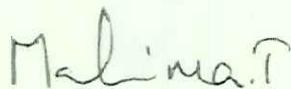
9. Recommendations of the Committee

In order to avoid recurrence of such complaints, the committee suggest the following measures to the Sodium silicate industries:

- a. The industries shall provide garland drain around the industry premises to collect the floor washing and surface run-off due to rain and the same shall be treated and reused for cooling purpose.
- b. The raw material Soda ash (Sodium carbonate) shall be stored within shed in such a way to ensure that there will not be any spillage of the same on the ground/ outside the industry premises.
- c. The industries shall provide concrete flooring in raw material and product storage sheds
- d. The industries shall provide wet scrubber and stack of height minimum 30m as an improvement to the Air pollution Control Measures so as to avoid escape of particulate matter and waste water from the wet scrubber shall be treated and disposed properly.

- e. The industries shall provide proper monitoring platform and port hole as per emission regulation part-III.
- f. The industries shall provide collection tank of adequate volume for the cooling water to ensure that there is no overflow even during rainy season.
- g. Workers shall be provided with PPE's such as safety shoes, goggles, hand gloves, mask, etc.

By considering the above facts and observation of the Joint Committee, the Hon'ble Tribunal may pass appropriate Order (s)/Direction (s) as deemed fit.



Tmt. T. Mahima,
Scientist-D,
Central Pollution Control Board,
Regional Directorate,
Chennai



Dr. P. Balasubramaniam,
Professor & Head,
Soil Science & Agricultural Chemistry,
Anbil Dharmalingam Agricultural College
& Research Institute, Trichy



Thiru. K. Elankumaran,
Joint Chief Environmental Engineer (Monitoring),
Tamil Nadu Pollution Control Board, Trichy

Item No.03:

**BEFORE THE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI**

Original Application No. 142 of 2021 (SZ)

Through Video Conference)

IN THE MATTER OF

Tribunal on its own motion-SUO MOTU based on the News Item in the Hindu Tamil Newspaper, Chennai Edition Dated: 6th June 2021, "Soap factories spoiling Agricultural Lands in the Cauvery Delta, which has been Declared a Protected Agricultural Zone; Farmers worried about yields "...Applicant(s)

Versus

1. The Secretary to Govt. of Tamil Nadu,
Department of Environment,
Climate Change & Forest,
Govt. Secretariat, Fort St. George
Chennai, Tamil Nadu – 600 009.
2. The Principal Secretary to Govt. of Tamil Nadu,
Industries Department,
Govt. Secretariat, Fort St. George
Chennai, Tamil Nadu – 600 009.
3. The Secretary to Govt. of Tamil Nadu,
Agriculture and Farmers Welfare Department,
Govt. Secretariat, Fort St. George,
Chennai, Tamil Nadu – 600 009.
4. The Chairman,
Tamil Nadu Pollution Control Board,
No. 76, Anna Salai, Guindy,
Chennai, Tamil Nadu – 600 032.
5. The District Collector,
Thanjavur District,
District Collectorate,
Thanjavur – 613 010.

6. The District Collector,
Thiruvarur District,
District Collectorate,
First Floor, Thiruvarur – 610 004.

7. The District Collector,
Nagapattinam District,
District Collectorate,
First Floor,
Nagapattinam – 611 001.

8. The District Collector,
Mayiladuthurai District,
District Collectorate
Mayiladuthurai

(Impleaded as additional 8th respondent
As per order dated 06.07.2021



...Respondent(s)

Date of hearing: 06.07.2021.

CORAM:

HON'BLE MR. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER

HON'BLE MR. DR. K. SATYAGOPAL, EXPERT MEMBER

For Applicant(s): Suo Motu by Court

For Respondent(s): Dr. D. Shanunganathan for R1 to R3 & R5 to R8
Mr. C. Kasirajan through
Ms. D. Ashwini for R4

ORDER

1. The above case has been Suo Motu registered by this Tribunal on the basis of the newspaper report published in The Hindu Tamil daily Edition dated 06.06.2021, under the caption “பாதுகாக்கப்பட்ட வேளாண் மண்டலமாக அறிவிக்கப்பட்டுள்ள காவிரி டெல்டாவில் விளைநிலங்களை பாழாக்கும் சோப்பு தொழிற்சாலைகள்: மகசூல் பாதிக்கப்படுவதாக விவசாயிகள் கவலை” “(Soap factories

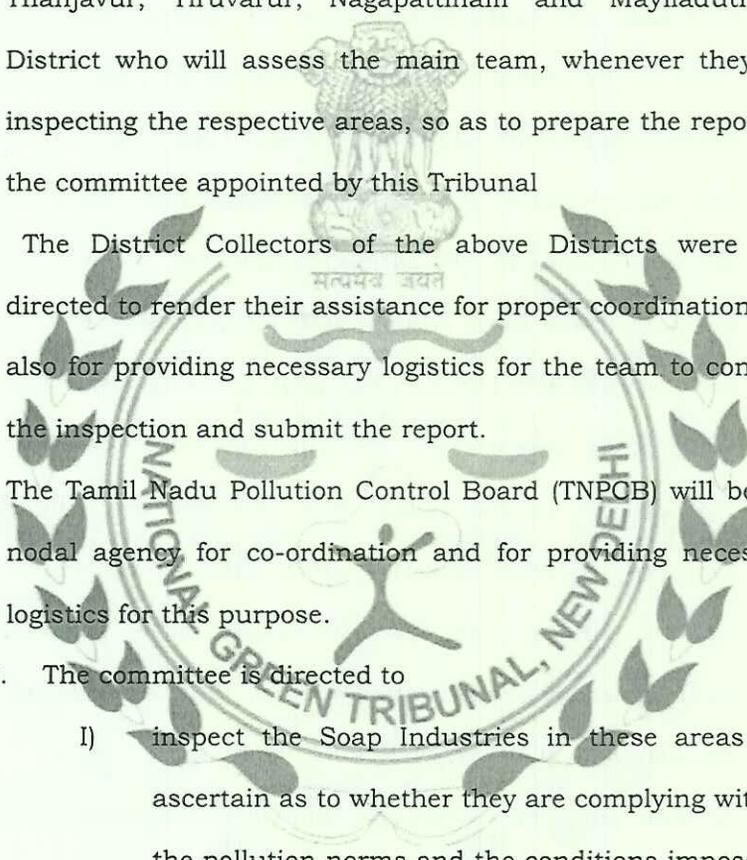
spoiling agricultural lands in the Cauvery Delta, which has been declared a protected Agricultural Zone; Farmers worried about yields)".

2. It is alleged in the newspaper report that on account of the non-compliance of the pollution norms by the Soap factories in this area, the fertility of the soil has been affected considerably thereby their production is also affected causing heavy loss to the agriculturists in the Delta Districts of Cauvery River. Though complaints were made to the authorities, no action has been taken by them in this regard.
3. On going through the allegations made in the newspaper report, we are satisfied that there arises a substantial question of environment which requires the interference of this Tribunal for resolving the same. So, the application is admitted.
4. When the matter came up for hearing for admission today through Video Conference, Dr. D. Shanmuganathan represented respondents 1 to 3 & 5 to 8 and Mr. C. Kasirajan through Ms. D. Ashwini represented 4th responded. So, service is complete.
5. Issue notice to the respondents by Registered post with acknowledgement due, and also by e-mail along with the copy of the news paper report and the gist of the Suo Motu

proceedings with full cause title so as to enable them to comply with the direction and for filing their independent response regarding the allegations in the news paper report.

6. It is time and again reiterated by the Hon'ble Apex Court as well as the Hon'ble High Court including this Tribunal in several matters of similar nature that there is a duty cast on the State Government, its departments and regulators and the local bodies for regulating the activities of the industries, so as to make them comply with the norms which they will have to adhere to and they will have to take action against the responsible persons for violating the same. Further this Tribunal in several cases even directed the Tamil Nadu Pollution Control Board (TNPCB) to take action against those persons apart from issuing closure order etc., impose environmental compensation for the damage caused to the environment as well against such violators.
7. In order to ascertain the genuineness of the allegations made in the newspaper report, we feel it appropriate to appoint a joint committee comprising of (1) a Senior Scientist or a Senior Officer from Central Pollution Control Board (CPCB), Integrated Regional Office, Chennai, (2) a Senior Officer or a Senior Scientist from the Tamil Nadu Pollution Control Board (TNPCB) as designated by its Chairman, (3) a Soil Scientist to

be nominated by the Vice Chancellor of Tamil Nadu Agricultural University (TNAU), Coimbatore, preferably from Tiruchirappalli or nearby Institution to these Districts and the Joint Directors of Agricultural Departments, namely, Thanjavur, Tiruvarur, Nagapattinam and Mayiladuthurai District who will assess the main team, whenever they are inspecting the respective areas, so as to prepare the report by the committee appointed by this Tribunal

- 
8. The District Collectors of the above Districts were also directed to render their assistance for proper coordination and also for providing necessary logistics for the team to conduct the inspection and submit the report.
 9. The Tamil Nadu Pollution Control Board (TNPCB) will be the nodal agency for co-ordination and for providing necessary logistics for this purpose.
 10. The committee is directed to
 - I) inspect the Soap Industries in these areas and ascertain as to whether they are complying with all the pollution norms and the conditions imposed in the permission or Consent order granted and if there is any violation then they are directed to ascertain the nature of violation,
 - II) to ascertain the soil quality in those areas and

ascertain as to whether there was any damage caused to the soil on account of any illegal activity of discharging effluents or other waste in the nearby agricultural lands and if there is any contamination caused, then, they are directed to suggest the remedial measures to restore the soil quality in that area,

III) the committee is also directed to assess the damage caused to the environment and assess the environmental compensation payable by the Soap industries which are responsible for such contamination applying the Polluter Pays' Principle and also the guideline issued by this Tribunal in several cases of this nature,

IV) to ascertain as to whether any such untreated effluents are being dumped in the nearby water bodies as well, if there is any water body adjacent to the Soap manufacturing units, and also make analysis of the water and sediments in those water bodies and if there is any contamination found on account of the such illegal activities of any soap factory, then that also will have to be taken into consideration for the purpose of assessing damage

to environment and for cost of restoration while calculating the environmental compensation

- V) the committee is also directed to ascertain as to whether any loss of yield has been caused to the agriculturists, whose lands have been affected and if so assess the loss of income caused to each land owner

11. Considering the fact that the newly formed Mayiladuthurai District falls in the Cauvery Delta area, we feel it appropriate to Suo-Motu implead the District Collector, Mayiladuthurai District as well, as additional 8th respondent.

12. The Registry is directed to carry out the amendment in the cause title. Dr. D. Shanmuganathan, Government Advocate for State of Tamil Nadu has taken notice for the additional 8th respondent as well.

13. The committee is directed to submit the report as directed by this Tribunal on or before **26.08.2021** by e-filing in the form of searchable PDF/OCR Support PDF and not in the form of Image PDF along with necessary hardcopies to be produced as per rules,

14. The Registry is directed to communicate this order to the official respondents as well as the members of the committee immediately through e-mail along with the copies of the news

paper reports and the gist of the Suo Motu proceedings with full amended cause title so as to enable them to comply with the direction and for filing their independent response regarding the allegations made in the news paper report without delay.

15. For appearance of parties, submitting their independent responses and also for consideration of report, post on **26.08.2021.**

O.A. No. 142/2021
06.07.2021. Sr.



The details of Product, Air Pollution Control Measures, Effluent treatment Plant, Effluent Generation & Disposal and Compliance of Consent Order Conditions of Sodium silicate industries

1. M/s Kiran Global Chems Limited, Thanjavur

Name and Address of the unit	M/s Kiran Global Chems Limited S.F.No. 42/5,6,8,10, Deebambalpuram Village, Papanasam Taluk, Thanjavur District.		
Product with Quantity	<u>Product</u> Sodium silicate:2250 T/Month <u>By Product:</u> Nil		
Raw Material with Quantity	Soda ash (Sodium carbonate) :1950 T/Month Silica sand: 1734 T/Month		
Sewage and Trade Effluent Quantity	Sewage: 0.46 KLD No trade effluent generated.		
Sewage and Effluent Treatment Plant Details			
	Name of the Treatment Unit	Nos.	Dimensions
	Septic tank	3	2.5x 1.7 x 2.5
	Soak Pit	3	2.5x 1.7 x 2.5
Trade Effluent Disposal			
Air Pollution Control Measures	Source of the Emission	Air pollution Control Measure	Stack Height
	Furnace.	Chimney	31m
	Gas Generator 125 KVA	Stack	4.57 m
	Diesel Generator 82.5KVA	Stack	4.57 m
Details of Hazardous / Non Hazardous Waste generated in the unit	HDPE Bag: 2 T/Month		
Details of Consent issued to the unit with validity	CTO Expn issued on 16.04.2014 and subsequently renewed up to 31.03.2022		
Details of Hazardous waste authorization issued to the unit with validity	-		
Details of Complaint received if any	No complaints received		
Action taken against the unit for violations, if any.	-		

Compliance of Consent Order Conditions for M/s Kiran Global Chems Limited, Thanjavur

SL.NO.	CONDITIONS	COMPLIANCE STATUS
	WATER ACT	
1.	The unit shall treat and dispose the sewage through septic tank followed by soak pit arrangement.	Sewage is treated and disposed through septic tank/soak pit arrangements.
2.	The unit shall not generate any trade effluent at any stage of its manufacturing process.	No trade effluent is generated.
3.	All the process operations were carried out in closed sheds only.	Process operations were carried out in closed sheds.
4.	The unit shall dispose the solid waste then and there without any accumulation inside the premises.	The unit is storing the non hazardous solid waste HDPE bags in closed shed and disposing regularly,
5.	The unit shall not use “use and throwaway plastics” such as plastic sheets used for food wrapping, spreading on dining table etc., plastic plates, plastic coated tea cups, plastic tumbler, water pouches and packets, plastic straw, plastic carry bag and plastic flags irrespective of thickness, within the industry premises as per the G.O. (Ms) No. 84, E & F Department, Dated: 25.06.2018 as amended. Instead the unit shall encourage use of eco friendly alternative such as banana leaf, arecanut palm plate, stainless steel, glass, porcelain plate/cups, cloth bag, jute bag etc.,.	Complied with
	AIR ACT	
1.	The unit shall operate and maintain the existing APC measures efficiently and continuously so as to achieve the AAQ/Emission standards prescribed by the Board.	Stack was in operation condition.
2.	The unit shall adhere to the Ambient Noise Level standards prescribed by the Board.	Generally complied.

2. Maharaj Soaps Industries P Ltd, Thanjavur

Name and Address of the unit	M/s Maharaj Soaps Industries P Ltd, S.F. No. 74/3, Deebambalpuram Village Papanasam Taluk, Thanjavur District		
Product with Quantity	Sodium silicate: 750 T/Month		
Raw Material with Quantity	Soda ash (Sodium carbonate): 345 T/Month Silica sand: 450 T/Month		
Sewage and Trade Effluent Quantity	Sewage: 0.4 KLD No trade effluent generated.		
Sewage and Effluent Treatment Plant Details	Name of the Treatment Unit	Nos.	Dimensions
	Septic tank	1	2.0 m x 1.5 m x 1.5 m
	Soak Pit	1	1.2 m dia x 1.5 m height
Trade Effluent Disposal	No trade effluent generated.		
Air Pollution Control Measures	Source of the Emission	Air pollution Control Measure	Stack Height
	Gas Fired Furnace	Stack	25 m
	D.G.Set 82.5 KVA	Acoustic Enclosures with stack	3.0 m
Details of Hazardous / Non Hazardous Waste generated in the unit	HDPE Bag: 0.9 T/Month		
Details of Consent issued to the unit with validity	CTO under Water and Air Acts issued on 05/02/2021 with validity upto 31/03/2023		
Details of Hazardous waste authorization issued to the unit with validity	No Hazardous waste generated in the unit		
Details of Complaint received if any	While establishment of the unit, complaints were received regarding installation of the industry in agriculture lands.		
Action taken against the unit for violations, if any.	Nil		

**Compliance of Consent Order Conditions for Maharaj Soaps Industries P Ltd,
Thanjavur**

SL.N O.	CONDITIONS	COMPLIANCE STATUS
	WATER ACT	
1.	The unit shall treat and dispose the sewage through septic tank followed by soak pit arrangement.	Sewage is treated and disposed through septic tank/soak pit arrangements.
2.	The unit shall not generate any trade effluent at any stage of its manufacturing process	No trade effluent is generated.
3.	The unit shall dispose the solid waste then and there for further beneficial use without any accumulation inside the premises	Complied.
4.	The unit shall obtain and submit the Land use reclassification certificate from the competent authority within six months from the date of issue of consent order.	The unit has not submitted Land use reclassification certificate from the competent authority. Not Complied.
5.	The operation of the unit shall not give rise to any complaints.	While establishment of the unit, complaints were received regarding installation of the industry in agriculture lands
6.	The unit shall not use “use and throwaway plastics” such as plastic sheets used for food wrapping, spreading on dining table etc., plastic plates, plastic coated tea cups, plastic tumbler, water pouches and packets, plastic straw, plastic carry bag and plastic flags irrespective of thickness, within the industry premises as per the G.O. (Ms) No. 84, E & F Department, Dated: 25.06.2018 as amended. Instead the unit shall encourage use of eco-friendly alternative such as banana leaf, arecanut palm plate, stainless steel, glass, porcelain plate/cups, cloth bag, jute bag etc.,.	Complied with.
	AIR ACT	
1.	The unit shall operate and maintain APC measures efficiently and continuously so as to achieve the standards prescribed by the Board.	Stack was in operation condition.
2.	The unit shall adhere to the Ambient Noise Level standards prescribed by the Board.	Generally complied.
3.	The unit shall continue to develop and maintain green belt of adequate width along the entire boundary of the unit.	The industry has planted around 35 Nos. of saplings within the industry premises.

3. Premi Chemco Private Limited, Thiruvarur

Name and Address of the unit	M/s PremiChemco Private Limited, S.No.24/5 Part, 24/10 Part, 36/1 Part, Nallur Village, Mannargudi Taluk, Thiruvarur District – 614001.											
Product with Quantity	Sodium silicate Soluble Glass: 750 T/Month											
Raw Material with Quantity	Soda ash (Sodium carbonate): 235 T/Month Silica sand: 517 T/Month											
Sewage and Trade Effluent Quantity	Sewage: 1.6 KLD No trade effluent generated.											
Sewage and Effluent Treatment Plant Details	<table border="1"> <thead> <tr> <th>Name of the Treatment Unit</th> <th>Nos.</th> <th>Dimensions</th> </tr> </thead> <tbody> <tr> <td>Septic tank</td> <td>1</td> <td>4.8m x 1.5 m x 1.8 m</td> </tr> <tr> <td>Soak Pit</td> <td>1</td> <td>1.8m x 1.8 m x 1.5 m</td> </tr> </tbody> </table>			Name of the Treatment Unit	Nos.	Dimensions	Septic tank	1	4.8m x 1.5 m x 1.8 m	Soak Pit	1	1.8m x 1.8 m x 1.5 m
	Name of the Treatment Unit	Nos.	Dimensions									
	Septic tank	1	4.8m x 1.5 m x 1.8 m									
Soak Pit	1	1.8m x 1.8 m x 1.5 m										
Trade Effluent Disposal	No trade effluent generated.											
Air Pollution Control Measures	Source of the Emission	Air pollution Control Measure	Stack Height									
	Furnace	Stack	20 m									
Details of Hazardous / Non Hazardous Waste generated in the unit	-											
Details of Consent issued to the unit with validity	Latest RCO under the Water and Air Acts issued on 08/07/2021 valid upto 31/03/2022											
Details of Hazardous waste authorization issued to the unit with validity	No Hazardous waste generated in the unit											
Details of Complaint received if any	Nil											
Action taken against the unit for violations, if any.	Nil											

Compliance of Consent Order Conditions for M/s. PremiChemco Private Limited, Thiruvarur

SL.NO.	CONDITIONS	COMPLIANCE STATUS
	WATER ACT	
1.	The unit shall treat and dispose the sewage through Septic Tank followed by Soak Pit arrangements.	The unit was in dismantled condition and not in operation for more than three years.
2.	The unit shall ensure that no trade effluent is generated from manufacturing process.	
3.	The unit shall not go for expansion activities without prior Consent of the Board.	
4.	The unit shall furnish the audited Balance Sheet every year for verification of the Gross Fixed Assets so as to collect the balance or consent fee, if any..	
	AIR ACT	
1.	The unit shall operate and maintain the APC measures efficiently and continuously so as to achieve the AAQ/Emission standards prescribed by the Board.	
2.	The unit shall adhere to the ANL standards prescribed by the Board	
3.	The unit shall continue to develop adequate green belt within the premises.	
4.	The unit shall not go for expansion activities without prior Consent of the Board.	
5.	The unit shall furnish the audited Balance Sheet every year for verification of the Gross Fixed Assets so as to collect the balance or consent fee, if any.	
6.	The unit shall not use 'Use and throwaway plastics' such as plastic sheets used for food wrapping, spreading on dining table etc, plastic plates, plastic coated tea cups, plastic tumbler, water pouches and packets, plastic straw, plastic carry bag and plastics flags irrespective of thickness, within the industry premises as per the G.O.(Ms.) No. 84, E&F Department, dated 25.6.2018 as amended. Instead unit shall encourage use of ecofriendly alternative such as banana leaf, areca nut palm plate, stainless steel, glass, porcelain plates/cups, cloth bag, jute bag etc.,	

4. **Diamond Silicate, Thiruvarur**

Name and Address of the unit	M/s Diamond Silicate S.F No. 199/3, Peruntharagudi Village, Vellakudi Road, Thiruvarur Taluk, Kulikarai Post Thiruvarur District – 613704.		
Product with Quantity	1. Sodium silicate Glass - 30 Tons/Day 2. Sodium silicate Liquid - 40 Tons/Day		
Raw Material with Quantity	1. Soda ash (Sodium carbonate)– 30 Tons/Day 2. Silica sand – 45 Tons/Day		
Sewage and Trade Effluent Quantity	Sewage: 1.2 KLD Trade effluent – 0.1 KLD(Boiler Blow down)		
Sewage and Effluent Treatment Plant Details	Name of the Sewage Treatment Unit	Nos.	Dimensions
	Septic tank	1	3.0m x 1.5 m x 1.8 m
	Soak Pit	1	1.2m x 1.2 m x 1.2 m
	Name of the Effluent Treatment Unit	Nos.	Dimensions
	Solar Evaporation Pan	1	4.0m x 4.0 m x 1.0 m
Trade Effluent Disposal	Solar Evaporation Pans		
Air Pollution Control Measures	Source of the Emission	Air pollution Control Measure	Stack Height
	Furnace	Stack	13 m
	D.G Set	Stack	3 m
	Furnace -II	Stack	13 m
	Baby Boiler I	Stack	10 m
	Baby Boiler II	Stack	10 m
Details of Hazardous / Non Hazardous Waste generated in the unit	Nil		
Details of Consent issued to the unit with validity	CTO Expn under the Water and Air Acts issued on 02/12/2020 valid upto 31/03/2025		
Details of Hazardous waste authorization issued to the unit with validity	No Hazardous waste generated in the unit		
Details of Complaint received if any	Nil		
Action taken against the unit for violations, if any.	Nil		

Compliance of Consent Order Conditions for M/s. Diamond Silicate, Thiruvarur

SL.NO.	CONDITIONS	COMPLIANCE STATUS
	WATER ACT	
1.	The unit shall treat and dispose the sewage through septic tanks followed by soak pits arrangements.	The sewage is treated and disposed through septic tank followed by soak pit..
2.	The unit shall ensure that solar evaporation pan is operated efficiently and continuously	Solar Evaporation pan is maintained properly
3.	The unit shall not go for expansion without obtaining prior consent of the Board	The unit has not expanded its manufacturing activities
4.	The operation of the unit shall not attract any public complaints.	No Complaints against the unit.
5.	The unit shall dispose the solid waste then and there without any accumulation inside the unit premises	The unit has assured to comply this condition at all times.
6.	In case of revision of consent fee by the Government, the unit shall remit the difference in amount within one month from the date of notification. Failing to remit the consent fee, this consent order will be withdrawn without any notice and further action will be initiated against the unit as per law.	The unit has assured to comply this condition at all times.
7.	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 unauthorized producers or the dismantler or recycler or through designated take back service provider of the producer to authorized dismantler or recycler.	The unit has assured to comply this condition at all times.
	AIR ACT	
1.	The unit shall operate and maintain the Air Pollution Control measures continuously and efficiently so as to achieve the Ambient Air Quality/Emission standards prescribed by the Board.	The ROA of AAQ survey conducted on 13.09.2021 reveals that the parameters such as PM ₁₀ , PM _{2.5} , SO ₂ , NO ₂ are within the standards prescribed by the Board.
2.	The unit shall adhere to Ambient Noise Level standard prescribed by the Board.	The ROA of ANL survey conducted on 13.09.2021 reveals that the parameters are within the standards prescribed by the Board.

3.	The unit shall not go for expansion without obtaining prior consent of the Board	The unit has not expanded its manufacturing activities
4.	The operation of the unit shall not attract any public complaints	No Complaints against the unit.
5.	The unit shall not use 'use and throwaway plastics' such as plastic sheets used for food wrapping, spreading on dining table etc., plastic plates, plastic coated teacups, plastic tumbler, water pouches and packets, plastic straw, plastic carry bag and plastic flags irrespective of thickness, within the industry premises. Instead unit shall encourage use of eco friendly alternative such as banana leaf, arecanut palm plate, stainless steel, glass, porcelain plates/cups, cloth bag, jute bag etc.,	The unit has assured to comply this condition at all times.
6.	In case of revision of consent fee by the Government, the unit shall remit the difference in amount within one month from the date of notification. Failing to remit the consent fee, this consent order will be withdrawn without any notice and further action will be initiated against the unit as per law	The unit has assured to comply this condition at all times.
7.	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 unauthorized producers or the dismantler or recycler or through designated take back service provider of the producer to authorized dismantler or recycler	The unit has assured to comply this condition at all times.

5. Narimanam Silicate Unit I, Thiruvarur

Name and Address of the unit	M/s Narimanam Silicate UNIT I, R.S No. 205/3, 206/1, 206/2 & 212/2, Peruntharagudi Village, Vellakudi Road, Thiruvarur Taluk, Kulikarai Post Thiruvarur District – 613704.		
Product with Quantity	Sodium silicate Glass – 30 Tons/Day		
Raw Material with Quantity	1. Soda ash (Sodium carbonate)– 25 Tons/Day 2. Silica sand – 37 Tons/Day		
Sewage and Trade Effluent Quantity	Sewage: 0.8 KLD Trade Effluent – 0.01 KLD		
Sewage and Effluent Treatment Plant Details	Name of the Sewage Treatment Unit	Nos.	Dimensions
	Septic tank	1	1.8 m x 1.5 m x 1.5 m
	Soak Pit	1	1.2m x 1.2 m x 1.2 m
	Name of the Effluent Treatment Unit	Nos.	Dimensions
	Solar Evaporation Pan	1	2.0m x 2.0 m x 1.0 m
Trade Effluent Disposal	Solar Evaporation Pan.		
Air Pollution Control Measures	Source of the Emission	Air pollution Control Measure	Stack Height
	Furnace	Stack	20 m
	Furnace	Stack	20 m
	Baby boiler	Stack	10 m
Details of Hazardous / Non Hazardous Waste generated in the unit	Nil		
Details of Consent issued to the unit with validity	CTO Expansion under Water and Air Acts issued on 28/05/2020 with validity upto 31/03/2022		
Details of Hazardous waste authorization issued to the unit with validity	No Hazardous waste generated in the unit		
Details of Complaint received if any	Nil		
Action taken against the unit for violations, if any.	Nil		

Compliance of Consent Order Conditions for Narimanam Silicate Unit I, Thiruvarur

SL. NO.	CONDITIONS	COMPLIANCE STATUS
	WATER ACT	
1.	The unit shall treat and dispose the sewage through septic tanks followed by soak pits arrangements.	The sewage is treated and disposed through septic tank followed by soak pit.
2.	The unit shall not go for expansion without prior consent of the board	The unit has not expanded its manufacturing activities
3.	The unit shall not attract any public complaints.	No Complaints against the unit.
4.	The unit shall treat the trade effluent generated through Solar Evaporation Pans only	Solar Evaporation pan is maintained properly.
5.	In case of revision of consent fee by the Government, the unit shall remit the difference in amount within one month from the date of notification. Failing to remit the consent fee, this consent order will be withdrawn without any notice and further action will be initiated against the unit as per law.	The unit has assured to comply this condition at all times.
6	The unit shall not use 'use and throwaway plastics' such as plastic sheets used for food wrapping, spreading on dining table etc., plastic plates, plastic coated teacups, plastic tumbler, water pouches and packets, plastic straw, plastic carry bag and plastic flags irrespective of thickness, within the industry premises. Instead unit shall encourage use of eco friendly alternative such as banana leaf, arecanut palm plate, stainless steel, glass, porcelain plates/cups, cloth bag, jute bag etc.,	The unit has assured to comply this condition at all times.
7.	The unit shall ensure that the expansion activities shall be carried out existing machineries only.	The unit has not expanded its manufacturing activities
	AIR ACT	
1.	The unit shall operate and maintain the Air Pollution Control measures continuously and efficiently so as to achieve the Ambient Air Quality/Emission standards prescribed by the Board.	The unit was not in operation. However, the APC measures are in operable condition.
2.	The unit shall satisfy to Ambient Noise Level standard prescribed by the Board.	The unit has been instructed to adhere to the ANL standards at all times.
3.	The unit's operation shall not attract public complaints	No Complaints against the unit.
4.	In case of revision of consent fee by the Government ,the unit shall remit the difference in amount within the one month from the date of notification .Failing to remit the consent fee ,this consent order will be withdrawn without any notice and further action will be initiated against the unit as per law	The unit has assured to comply this condition at all times.

6. Narimanam Silicate Unit II, Thiruvarur

Name and Address of the unit	M/s. Narimanam Silicate Unit-II R.S No. 11-7C, Karuppur Road Adiyakkamangalam Village Thiruvarur Taluk, Thiruvarur District - 611101.		
Product with Quantity	Sodium silicate Glass – 480 Tons/Month		
Raw Material with Quantity	1.Soda ash (Sodium carbonate)– 260 MT/Month 2.Silica sand – 330 MT/Month		
Sewage and Trade Effluent Quantity	Sewage: 0.8 KLD Trade Effluent – Nil		
Sewage and Effluent Treatment Plant Details	Name of the Sewage Treatment Unit	Nos	Dimensions
	Septic tank	1	2.0 m x 4.0 m x 2.4 m
	Dispersion Trench	1	1.34 m x 1.1 m x 1.0 m
Trade Effluent Disposal	No Trade effluent Generated		
Air Pollution Control Measures	Source of the Emission	Air pollution Control Measure	Stack Height
	Furnace	Stack	20 m
	DG Set 62.5 KVA	Acoustic Enclosures with Stack	3 m
	DG Set 82 KVA	Acoustic Enclosures with Stack	3 m
Details of Hazardous / Non Hazardous Waste generated in the unit	Nil		
Details of Consent issued to the unit with validity	CTO Expansion under Water and Air Acts issued on 28/05/2020 with validity upto 31/03/2022		
Details of Hazardous waste authorization issued to the unit with validity	Non Hazardous waste – Packaging Material Waste – 25 Kg/month		
Details of Complaint received if any	Nil		
Action taken against the unit for violations, if any.	Nil		

Compliance of Consent Order Conditions for Narimanam Silicate Unit II, Thiruvarur

SL. NO.	CONDITIONS	COMPLIANCE STATUS
	WATER ACT	
1.	The unit shall treat and dispose the sewage through septic tanks followed by soak pits arrangements.	The sewage is treated and disposed through septic tank followed by soak pit.
2.	The unit shall not generate trade effluent at any stage of its process.	No trade effluent is generated from its process.
3.	The unit shall handle the chemicals with the requisite precaution as mentioned in the Material Safety Data Sheets (MSDS).	The raw materials such as soda ash are stored inside the shed. The unit has been instructed to adhere to the MSDS.
4.	The unit shall not change the manufacturing process without prior consent of the Board.	No Change in its manufacturing process.
5.	The unit shall not go for expansion without prior consent of the board	The unit has not expanded its manufacturing activities
6.	The unit shall not invite any complaint from the nearby public.	No Complaints against the unit.
7.	The unit shall ensure that, "In case of revision of consent fee by the Government, the unit shall remit the difference in amount within one month from the date of notification. Failing to remit the consent fee, this consent order will be withdrawn without any notice and further action will be initiated against the unit as per law".	The unit has assured to comply this condition at all times.
8.	The unit shall not use 'use and throwaway plastics' such as plastic sheets used for food wrapping, spreading on dining table etc., plastic plates, plastic coated teacups, plastic tumbler, water pouches and packets, plastic straw, plastic carry bag and plastic flags irrespective of thickness, within the industry premises. Instead unit shall encourage use of eco friendly alternative such as banana leaf, arecanut palm plate, stainless steel, glass, porcelain plates/cups, cloth bag, jute bag etc.,	The unit has assured to comply this condition at all times.
	AIR ACT	
1.	The unit shall operate and maintain the Air Pollution Control measures continuously and efficiently so as to achieve the NAAQ/Emission standards prescribed by the Board.	The ROA of AAQ survey conducted on 14.09.2021 reveals that the parameters such as PM ₁₀ , PM _{2.5} , SO ₂ , NO ₂ are within the standards prescribed by the Board.

2.	The unit shall strictly comply with the AAQ/Stack monitoring/ANL Standards prescribed by the Board	The ROA of ANL survey conducted on 14.09.2021 reveals that the parameters are within the standards prescribed by the Board.
3.	The unit shall handle the chemicals with the requisite precaution as mentioned in the Material Safety Data Sheets (MSDS).	The raw material such as soda ash is stored inside the shed. The unit has been instructed to adhere to the MSDS.
4.	The unit shall not change the manufacturing process without prior consent of the Board.	No Change in its manufacturing process.
5.	The unit shall not go for expansion without prior consent of the board	The unit has not expanded its manufacturing activities
6.	The unit shall not invite any complaint from the nearby public.	No Complaints against the unit.
7.	The unit shall ensure that, "In case of revision of consent fee by the Government, the unit shall remit the difference in amount within one month from the date of notification. Failing to remit the consent fee, this consent order will be withdrawn without any notice and further action will be initiated against the unit as per law".	The unit has assured to comply this condition at all times.
8.	The unit shall not use 'use and throwaway plastics' such as plastic sheets used for food wrapping, spreading on dining table etc., plastic plates, plastic coated teacups, plastic tumbler, water pouches and packets, plastic straw, plastic carry bag and plastic flags irrespective of thickness, within the industry premises. Instead unit shall encourage use of eco friendly alternative such as banana leaf, arecanut palm plate, stainless steel, glass, porcelain plates/cups, cloth bag, jute bag etc.,	The unit has assured to comply this condition at all times.

7. Kiran Global Chem Limited, Nagapattinam

Name and Address of the unit	M/s.Kiran Global Chem Limited S.F No. 67/2, 68/7, 68/8, Uthamacholapuram Village, Nagapattinam Taluk, Narimanam Post, Nagapattinam District – 611002.		
Product with Quantity	Sodium silicate Soluble Glass - 4500 Tons/Month		
Raw Material with Quantity	1. Soda ash (Sodium carbonate)– 2432 MT/Month 2. Silica sand – 3104 MT/Month		
Sewage and Trade Effluent Quantity	Sewage: 16.0 KLD Trade Effluent – Nil		
Sewage and Effluent Treatment Plant Details	Name of the Sewage Treatment Unit	Nos.	Dimensions
	Septic tank	1	2.4 m x 1.5 m x 1.0 m
	Soak Pit	1	3.5 m x 1.8 m x 1.0 m
Trade Effluent Disposal	No Trade effluent Generated		
Air Pollution Control Measures	Source of the Emission	Air pollution Control Measure	Stack Height
	Furnace	Stack	19.8 m
	Furnace	Stack	19.8 m
	Furnace	Stack	19.8 m
	Furnace	Stack	19.8 m
	Gas Generator Set 240 KVA	Acoustic enclosures with stack	6.0 m
Details of Hazardous / Non Hazardous Waste generated in the unit	Nil		
Details of Consent issued to the unit with validity	RCO under Water and Air Acts issued on 24/09/2020 with validity upto 31/03/2022		
Details of Hazardous waste authorization issued to the unit with validity	Non Hazardous waste – Packaging Material Waste – 25 Kg/month		
Details of Complaint received if any	Nil		
Action taken against the unit for violations, if any.	Nil		

Compliance of Consent Order Conditions for Kiran Global Chem Limited, Nagapattinam

SL. NO.	CONDITIONS	COMPLIANCE STATUS
	WATER ACT	
1.	The unit shall treat and dispose the sewage through septic tanks followed by soak pits arrangements.	The sewage is treated and disposed through septic tank followed by soak pit.
2.	The unit shall ensure that no trade effluent is generated from its manufacturing process	No trade effluent is generated from its process.
3.	The unit shall dispose the solid waste then and there without any accumulation inside the unit premises.	No accumulation of the solid waste in the premises.
5.	The unit shall not go for expansion without prior consent of the board	The unit has not expanded its manufacturing activities
6.	The unit shall not use 'use and throwaway plastics' such as plastic sheets used for food wrapping, spreading on dining table etc., plastic plates, plastic coated teacups, plastic tumbler, water pouches and packets, plastic straw, plastic carry bag and plastic flags irrespective of thickness, within the industry premises. Instead unit shall encourage use of eco friendly alternative such as banana leaf, arecanut palm plate, stainless steel, glass, porcelain plates/cups, cloth bag, jute bag etc.,	The unit has assured to comply this condition at all times.
	AIR ACT	
1.	The unit shall operate and maintain the Air Pollution Control measures continuously and efficiently so as to achieve the NAAQ/Emission standards prescribed by the Board.	The ROA of AAQ survey conducted on 16.09.2021 reveals that the parameters such as PM ₁₀ , PM _{2.5} , SO ₂ , NO ₂ are within the standards prescribed by the Board.
2.	The unit shall adhere to Ambient Noise Level standards prescribed by the Board.	The ROA of ANL survey conducted on 16.09.2021 reveals that the parameters are within the standards prescribed by the Board.
3.	The unit shall not go for expansion without prior consent of the board	The unit has not expanded its manufacturing activities
4.	The unit shall not use 'use and throwaway plastics' such as plastic sheets used for food wrapping, spreading on dining table etc., plastic plates, plastic coated teacups, plastic tumbler, water pouches and packets, plastic straw, plastic carry bag and plastic flags irrespective of thickness, within the industry premises. Instead unit shall encourage use of eco friendly alternative such as banana leaf, arecanut palm plate, stainless steel, glass, porcelain plates/cups, cloth bag, jute bag etc.,	The unit has assured to comply this condition at all times.

8. Reena Silicates Private Ltd, Nagapattinam

Name and Address of the unit	M/s Reena Silicates Private Ltd R.S No. 66/2, D. No.123C, Uthamacholapuram Village, Nagapattinam Taluk, Narimanam Post, Nagapattinam District – 611002.		
Product with Quantity	Sodium silicate Soluble Glass - 10 Tons/Month		
Raw Material with Quantity	1.Soda ash (Sodium carbonate)– 150 Tons/Month 2.Silica sand – 200 Tons/Month		
Sewage and Trade Effluent Quantity	Sewage: 1.6 KLD Trade Effluent – Nil		
Sewage and Effluent Treatment Plant Details	Name of the Sewage Treatment Unit	Nos.	Dimensions
	Septic tank	1	2.0 m x 1.8 m x 1.6 m
	Soak Pit	1	2.0 m x 1.5m x 1.5 m
Trade Effluent Disposal	No Trade effluent Generated		
Air Pollution Control Measures	Source of the Emission	Air pollution Control Measure	Stack Height
	Furnace – 2 Nos.	Stack	15.0 m
	D.G.Set-40 KVA	Exhaust Pipe	2.5 m
	D.G.Set-20 KVA	Exhaust Pipe	2.5 m
Details of Hazardous / Non Hazardous Waste generated in the unit	Nil		
Details of Consent issued to the unit with validity	RCO under Water and Air Acts issued on 16/09/2020 with validity upto 31/03/2021. The TNPCB has issued Common order dated 13.05.2021 extending the validity of Consent up to 31.03.2022.		
Details of Hazardous waste authorization issued to the unit with validity	Nil		
Details of Complaint received if any	Nil		
Action taken against the unit for violations, if any.	Nil		

Compliance of Consent Order Conditions for Reena Silicates Private Ltd, Nagapattinam

SL. NO.	CONDITIONS	COMPLIANCE STATUS
	WATER ACT	
1.	The unit shall treat and dispose the sewage through septic tanks followed by soak pits arrangements.	The sewage is treated and disposed through septic tank followed by soak pit.
2.	The unit shall ensure that no trade effluent is generated from its manufacturing process	No trade effluent is generated from its process.
3.	The unit shall dispose the solid waste then and there without any accumulation inside the unit premises.	No accumulation of the solid waste in the premises.
5.	The unit shall not go for expansion without prior consent of the board	The unit has not expanded its manufacturing activities
6.	The unit shall not use 'use and throwaway plastics' such as plastic sheets used for food wrapping, spreading on dining table etc., plastic plates, plastic coated teacups, plastic tumbler, water pouches and packets, plastic straw, plastic carry bag and plastic flags irrespective of thickness, within the industry premises. Instead unit shall encourage use of eco friendly alternative such as banana leaf, arecanut palm plate, stainless steel, glass, porcelain plates/cups, cloth bag, jute bag etc.,	The unit has assured to comply this condition at all times.
	AIR ACT	
1.	The unit shall operate and maintain the Air Pollution Control measures continuously and efficiently so as to achieve the AAQ/Emission standards prescribed by the Board.	The ROA of AAQ survey conducted on 15.09.2021 reveals that the parameters such as PM ₁₀ , PM _{2.5} , SO ₂ , NO ₂ are within the standards prescribed by the Board.
2.	The unit shall adhere to Ambient Noise Level standards prescribed by the Board.	The ROA of ANL survey conducted on 15.09.2021 reveals that the parameters are within the standards prescribed by the Board.
3.	The unit shall not go for expansion without prior consent of the board	The unit has not expanded its manufacturing activities
4.	The unit shall not use 'use and throwaway plastics' such as plastic sheets used for food wrapping, spreading on dining table etc., plastic plates, plastic coated teacups, plastic tumbler, water pouches and packets, plastic straw, plastic carry bag and plastic flags irrespective of thickness, within the industry premises. Instead unit shall encourage use of eco friendly alternative such as banana leaf, arecanut palm plate, stainless steel, glass, porcelain plates/cups, cloth bag, jute bag etc.,	The unit has assured to comply this condition at all times.

9. Sree Jaya Devi Industries Unit I, Nagapattinam

Name and Address of the unit	M/s Sree Jaya Devi Industries Unit I S.F No. 117/1b/1, Kuttalam Village, Narimanam Post, Nagapattinam Taluk, Nagapattinam District – 609703..		
Product with Quantity	Sodium silicate in Liquid Form – 450 Tons/Month		
Raw Material with Quantity	1. Soda ash (Sodium carbonate)– 125 Tons/Month 2. Silica sand – 175 Tons/Month		
Sewage and Trade Effluent Quantity	Sewage: 0.4 KLD Trade Effluent – Nil		
Sewage and Effluent Treatment Plant Details	Name of the Sewage Treatment Unit	Nos.	Dimensions
	Septic tank	1	3.05 m x 1.5 m x 1.8 m
	Soak Pit	1	2.0 m x 1.5 m
Trade Effluent Disposal	No Trade effluent Generated		
Air Pollution Control Measures	Source of the Emission	Air pollution Control Measure	Stack Height
	Furnace	Stack	21.0 m
	D.G.Set- 62.5KVA	Exhaust Pipe	4.5 m
Details of Hazardous / Non Hazardous Waste generated in the unit	Nil		
Details of Consent issued to the unit with validity	RCO under Water and Air Acts issued on 17/03/2021 with validity upto 31/03/2021. The TNPCB has issued Common order dated 13.05.2021 extending the validity of Consent up to 31.03.2022.		
Details of Hazardous waste authorization issued to the unit with validity	Nil		
Details of Complaint received if any	Nil		
Action taken against the unit for violations, if any.	Nil		

Compliance of Consent Order Conditions for Sree Jaya Devi Industries Unit I

SL.NO.	CONDITIONS	COMPLIANCE STATUS
	WATER ACT	
1.	The unit shall treat and dispose the sewage through septic tanks followed by soak pits arrangements.	The sewage is treated and disposed through septic tank followed by soak pit.
2.	The unit shall ensure that no trade effluent is generated from its manufacturing process	No trade effluent is generated from its process.
3.	The unit shall dispose the solid waste then and there without any accumulation inside the unit premises.	No accumulation of the solid waste in the premises.
4.	The unit shall not go for expansion without prior consent of the board	The unit has not expanded its manufacturing activities
5.	The operation of the unit shall not attract any public complaints.	No Complaints against the unit.
6.	The unit shall furnish the audited Balance Sheet every year for verification of the Gross Fixed Assets so as to collect the balance or consent fee, if any.	The unit has assured to comply this condition at all times.
	AIR ACT	
1.	The unit shall operate and maintain the Air Pollution Control measures continuously and efficiently so as to achieve the NAAQ/Emission standards prescribed by the Board.	The unit was not in operation. However, the APC measures are in operable condition.
2.	The unit shall adhere to Ambient Noise Level standards prescribed by the Board.	The unit has been instructed to adhere to the ANL standards at all times.
3.	The unit shall not go for expansion without prior consent of the Board	The unit has not expanded its manufacturing activities
4.	The operation of the unit shall not attract any public complaints.	No Complaints against the unit.
5.	The unit shall furnish the audited Balance Sheet every year for verification of the Gross Fixed Assets so as to collect the balance or consent fee, if any.	The unit has assured to comply this condition at all times.

10. Sree Jaya Devi Industries Unit II, Nagapattinam

Name and Address of the unit	M/s. Sri Jayadevi Industries Unit II S.F No. 117/1B/2, Kuttalam Village, Narimanam Post, Nagapattinam Taluk, Nagapattinam District – 609703.		
Product with Quantity	1. Sodium silicate in Liquid Form – 300 Tons/Month 2. Sodium silicate in Solid Form – 378 Tons/Month		
Raw Material with Quantity	1. Soda ash (Sodium carbonate)- 339 Tons/Month 2. Silica sand - 339 Tons/Month		
Sewage and Trade Effluent Quantity	Sewage: 1.5 KLD Trade Effluent – Nil		
Sewage and Effluent Treatment Plant Details	Name of the Sewage Treatment Unit	Nos.	Dimensions
	Septic tank	1	5.5 m x 2.5 m x 2.5 m
	Soak Pit	1	2.5m x 1.2m x 1.2 m
Trade Effluent Disposal	No Trade effluent Generated		
Air Pollution Control Measures	Source of the Emission	Air pollution Control Measure	Stack Height
	Furnace	Stack	21.0 m
	Boiler	Stack	8.33 m
	D.G.Set- 62.5KVA	Exhaust Pipe	4.0 m
Details of Hazardous / Non Hazardous Waste generated in the unit	Nil		
Details of Consent issued to the unit with validity	RCO under Water and Air Acts issued on 17/03/2021 with validity upto 31/03/2021. The TNPCB has issued Common order dated 13.05.2021 extending the validity of Consent up to 31.03.2022.		
Details of Hazardous waste authorization issued to the unit with validity	Nil		
Details of Complaint received if any	Nil		
Action taken against the unit for violations, if any.	Nil		

Compliance of Consent Order Conditions for Sree Jaya Devi Industries Unit I

SL.NO.	CONDITIONS	COMPLIANCE STATUS
	WATER ACT	
1.	The unit shall treat and dispose the sewage through septic tanks followed by soak pits arrangements.	The sewage is treated and disposed through septic tank followed by soak pit.
2.	The unit shall ensure that no trade effluent is generated from its manufacturing process	No trade effluent is generated from its process.
3.	The unit shall dispose the solid waste then and there without any accumulation inside the unit premises.	No accumulation of the solid waste in the premises.
4.	The unit shall not go for expansion without prior consent of the board	The unit has not expanded its manufacturing activities
5.	The operation of the unit shall not attract any public complaints.	No Complaints against the unit.
6.	The unit shall furnish the audited Balance Sheet every year for verification of the Gross Fixed Assets so as to collect the balance or consent fee, if any.	The unit has assured to comply this condition at all times.
	AIR ACT	
1.	The unit shall operate and maintain the Air Pollution Control measures continuously and efficiently so as to achieve the AAQ/Emission standards prescribed by the Board.	The ROA of AAQ survey conducted on 17.09.2021 reveals that the parameters such as PM ₁₀ , PM _{2.5} , SO ₂ , NO ₂ are within the standards prescribed by the Board.
2.	The unit shall adhere to Ambient Noise Level standards prescribed by the Board.	The ROA of ANL survey conducted on 17.09.2021 reveals that the parameters are within the standards prescribed by the Board.
3.	The unit shall not go for expansion without prior consent of the Board	The unit has not expanded its manufacturing activities
4.	The operation of the unit shall not attract any public complaints.	No Complaints against the unit.
5.	The unit shall furnish the audited Balance Sheet every year for verification of the Gross Fixed Assets so as to collect the balance or consent fee, if any.	The unit has assured to comply this condition at all times.



TAMIL NADU POLLUTION CONTROL BOARD
Advanced Environmental Laboratory, Trichy
REPORT OF ANALYSIS

R.O.A. No. 340/AEL-TRY Water Report 2021-2022 Dated: 23.08.2021

1. Sample Received From : The District Environmental Engineer,
Thanjavur - 621 713.
2. Nature and Number of Samples(s) : One No. of sample.
3. Date of Collection : 17.08.2021 at 11.55am
4. Date of Receipt of Sample : 17.08.2021 at 4.25pm
5. Code No. : VP0812/2021
6. Point of Collection : VP0812/2021- Bore well of
Thiru.Vetrikondam

Sl. No	Parameters	DEE Code	VP0812/2021
		LAB Code	775
		Unit	
1.	pH		6.97
2.	Colour	mg/l	*
3.	Total Hardness	mg/l	304
4.	Total Dissolved Solids	mg/l	606
5.	Total Alkalinity	mg/l	276
6.	SAR	mg/l	0.78
7.	Salinity	mg/l	*
8	Residual Sodium Carbonates	mg/l	*

* Not Analysed.


Dy. Chief Scientific Officer,


Chief Scientific Officer 24.8.21
AEL, TNPCB, Trichy



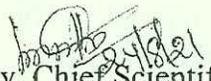
TAMIL NADU POLLUTION CONTROL BOARD
Advanced Environmental Laboratory, Trichy
REPORT OF ANALYSIS

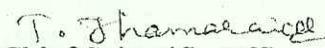
R.O.A. No. 341 /AEL-TRY Water Report 2021-2022 Dated: 23.08.2021

1. Sample Received From : The District Environmental Engineer,
Thanjavur – 621 713.
2. Nature and Number of Samples(s) : One No. of sample.
3. Date of Collection : 17.08.2021 at 12.15pm
4. Date of Receipt of Sample : 17.08.2021 at 4.25pm
5. Code No. : VP0813/2021
6. Point of Collection : VP0813/2021- Bore well of
Thiru.Ramamoorthy

SI. No	Parameters	DEE Code	VP0813/2021
		LAB Code	776
		Unit	
1.	pH		7.02
2.	Colour	mg/l	*
3.	Total Hardness	mg/l	260
4.	Total Dissolved Solids	mg/l	486
5.	Total Alkalinity	mg/l	288
6.	SAR	mg/l	0.77
7.	Salinity	mg/l	*
8	Residual Sodium Carbonates	mg/l	*

* Not Analysed.


Dy. Chief Scientific Officer,


Chief Scientific Officer 24.8.21
AEL, TNPCB, Trichy



Tamil Nadu Pollution Control Board
Stack Monitoring Survey Report of Analysis

Report No 19: /SM//2021 Date : 23.08.2021

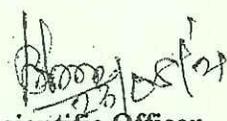
1. Name and Address of the Industry : M/s.Kiran Global Chems Limited.,
SF. No.42/5,6,8 &10
Dheepambalpuram Village,
Papanasam (Tk),
Thanjavur District
2. Date of Survey : 23.08.2021
3. Consent Order No : 2109239189905
4. Category : Red / Small

Stack Analysis Report

SI. No	Stack attached to	Stack Temp °K	Velocity in (M/sec)	Discharge rate in (Nm ³ /hr)	Pollutants (mg/Nm ³)		
					PM	SO ₂	NO _x
1.	Furnaces 2 Nos Capacity : 40 MT/Day APC : NIL Fuel : Natural Gas	632	16.6	5739	21	*BDL	127

* Below Detectable Limit

Note: Ambient Air Quality Survey could not performed because the entire surrounding is water logged with paddy cultivation and the possibility of drawing electricity for the operation of PM10 & Pm2.5 sampler is difficult and risky. The possibility for conducting AAQ survey may be during summer (after harvesting) season only.


 Chief Scientific Officer,
 AEL, TNPCB, Trichy.



Tamil Nadu Pollution Control Board

Stack Monitoring Survey Report of Analysis

Report No 18: /SM//2021 Date : 23.08.2021

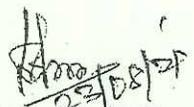
1. Name and Address of the Industry : M/s.Maharaj Soaps Industry (P) Ltd.,
SY.No.74/3, Dheepambalpuram Village,
Neikunnam panchayat,
Ammappettai (P), Papanasam (Tk),
Thanjavur District
2. Date of Survey : 23.08.2021
3. Consent Order No : 2105231803379
4. Category : Red / Small

Stack Analysis Report

SI. No	Stack attached to	Stack Temp °K	Velocity in (M/sec)	Discharge rate in (Nm ³ /hr)	Pollutants (mg/Nm ³)		
					PM	SO ₂	NO _x
1.	Gas Fired Furnace Capacity : 25 MT/Day APC : NIL Fuel : Natural Gas	551	14.1	4358	19	*BDL	246

* Below Detectable Limit

Note: Ambient Air Quality Survey could not performed because the entire surrounding is water logged with paddy cultivation and the possibility of drawing electricity for the operation of PM10 & Pm2.5 sampler is difficult and risky. The possibility for conducting AAQ survey may be during summer (after harvesting) season only.


Chief Scientific Officer,
AEL, TNPCB, Trichy.



TAMIL NADU POLLUTION CONTROL BOARD
ADVANCED ENVIRONMENTAL LABORATORY, CUDDALORE.

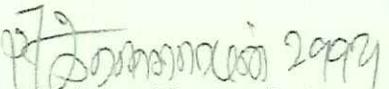
STACK MONITORING SURVEY – Report of Analysis.

1. Name of the Industry : M/s. Diamond Silicate,
2. Address of the Industry : 3 – 163/1, Vellakkudi Village,
Mannargudi Road,
Thruvarur – 613 704.
3. Date of Survey : 13.9.2021

Stack Monitoring Survey Results

Sl. No	Stack attached to	Stack Temp °K	Flue Gas Velocity in (m/Sec)	Gas Discharge Rate in (Nm ³ /hr)	Pollutants (mg/Nm ³)		
					PM	SO ₂	NO _x
1	Stack attached to Drop line Fuel: Natural Gas APC: Stack	308	15.31	15566	26	42	30


Dy. CSO


For Assistant Director (Lab) (a/c),
AEL, TNPCB, Cuddalore.



TAMIL NADU POLLUTION CONTROL BOARD
ADVANCED ENVIRONMENTAL LABORATORY, CUDDALORE.

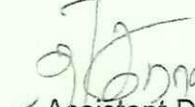
STACK MONITORING SURVEY – Report of Analysis.

1. Name of the Industry : M/s. Narimanam Silicate Unit – II,
2. Address of the Industry : Karuppur Road, Adiyakkamangalam Village,
Thiruvarur Taluk.
3. Date of Survey : 14.9.2021

Stack Monitoring Survey Results

Sl. No	Stack attached to	Stack Temp °K	Flue Gas Velocity in (m/Sec)	Gas Discharge Rate in (Nm ³ /hr)	Pollutants (mg/Nm ³)		
					PM	SO ₂	NO _x
1	Furnace Fuel: Natural Gas APC: Stack	312	15.41	14984	21	16	29


Dy. CSO


Assistant Director (Lab) (a/c),
AEL, TNPCB, Cuddalore.



TAMIL NADU POLLUTION CONTROL BOARD
ADVANCED ENVIRONMENTAL LABORATORY, CUDDALORE.

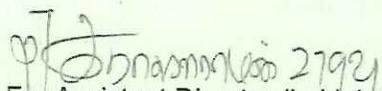
STACK MONITORING SURVEY – Report of Analysis.

1. Name of the Industry : M/s. Kiran Global Chem Limited,
2. Address of the Industry : S. F. No: 67/2 and 68/7 & 8,
Uthamacholapuram Village,
Nagapattinam District – 611 002
3. Date of Survey : 16.9.2021

Stack Monitoring Survey Results

Sl. No	Stack attached to	Stack Temp °K	Flue Gas Velocity in (m/Sec)	Gas Discharge Rate in (Nm ³ /hr)	Pollutants (mg/Nm ³)		
					PM	SO ₂	NO _x
1	Furnace – I Fuel: Natural Gas APC: Stack	318	15.24	25850	27	46	37
2	Furnace – II	Not in Operation					
3	Furnace – III						
4	Furnace – IV						


Dy. CSO


For Assistant Director (Lab) (a/c),
AEL, TNPCB, Cuddalore.



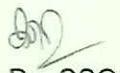
TAMIL NADU POLLUTION CONTROL BOARD
ADVANCED ENVIRONMENTAL LABORATORY, CUDDALORE.

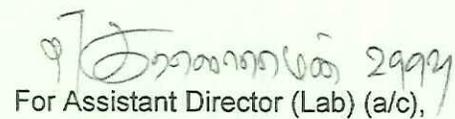
STACK MONITORING SURVEY – Report of Analysis.

1. Name of the Industry : M/s. Reena Silicate Industries Pvt. Ltd.,
2. Address of the Industry : 123 – C, Uthamacholapuram Village,
Narimanam Post, Boothangudi,
Nagapattinam District – 611 002.
3. Date of Survey : 15.9.2021

Stack Monitoring Survey Results

Sl. No	Stack attached to	Stack Temp °K	Flue Gas Velocity in (m/Sec)	Gas Discharge Rate in (Nm ³ /hr)	Pollutants (mg/Nm ³)		
					PM	SO ₂	NO _x
1	Furnace Fuel: Natural Gas APC: Stack	313	15.44	24015	21	12	26


Dy. CSO


For Assistant Director (Lab) (a/c),
AEL, TNPCB, Cuddalore.



TAMIL NADU POLLUTION CONTROL BOARD
ADVANCED ENVIRONMENTAL LABORATORY, CUDDALORE.

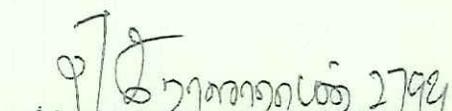
STACK MONITORING SURVEY – Report of Analysis.

1. Name of the Industry : M/s. Sree Jaya Devi Industries – Unit II,
2. Address of the Industry : Kutthalam Village, Nagapattinam – 609 703.
3. Date of Survey : 17.9.2021

Stack Monitoring Survey Results

Sl. No	Stack attached to	Stack Temp °K	Flue Gas Velocity in (m/Sec)	Gas Discharge Rate in (Nm ³ /hr)	Pollutants (mg/Nm ³)		
					PM	SO ₂	NO _x
1	Furnace Fuel: Natural Gas APC: Stack	314	15.15	22873	23	12	29


Dy. CSO


Assistant Director (Lab) (a/c),
AEL, TNPCB, Cuddalore.



TAMIL NADU POLLUTION CONTROL BOARD
ADVANCED ENVIRONMENTAL LABORATORY, CUDDALORE.
AMBIENT AIR QUALITY SURVEY – REPORT OF ANALYSIS.

1. Name of the Industry : M/s. Diamond Silicate,
 2. Address of the Industry : 3 – 163/1, Vellakkudi Village,
 Mannargudi Road,
 Thruvarur – 613 704.
 3. Date of Survey : 13.9.2021
 4. Duration of Survey : 8 Hours.
 5. Category : Red/Small
 6. Land use classification : Agricultural land
 7. Consent order No/Date : 2007231923997 valid up to 31.3.2025

Meteorological Conditions.

Ambient Temperature (°C)	Min	Max	Relative Humidity(%)	Min	Max
	26	32		60	90
Weather condition	Clear		Rain Fall (mm)	Nil	
Predominant Wind Direction	SW – NE		Mean Wind Speed (Km/hr.)	2.39	

Ambient Air Quality Survey Results

Sl. No	Location	Direction *	Distance (m)*	Height from GL (m)	Pollutants Concentration (µg/m ³)			
					PM ₁₀	PM _{2.5}	SO ₂	NO ₂
1	Near Furnace Stack	W	40	2	46	-	8	11
2	Near Main Gate	N	70	2	18	-	-	-
3	Silicate Storage Yard	SW	60	2	24	11	5	9
4	Near M/s. ONGC Ltd., EPS, Kamalapuram.	NE	110	2	37	18	7	12

Observation:-

1. Eastern side – Dry Agriculture land
2. Western side – Dry Agriculture land (M/s. ONGC Ltd, EPS, Kamalapuram)
3. Southern side – Dry Agriculture land
4. Northern side – Dry Agriculture land (M/s. ONGC Ltd, EPS, Kamalapuram)

[Signature]
Dy. CSO

[Signature]
For Assistant Director (Lab) (a/c),
AEL, TNPCB, Cuddalore.



TAMIL NADU POLLUTION CONTROL BOARD
ADVANCED ENVIRONMENTAL LABORATORY, CUDDALORE.
AMBIENT AIR QUALITY SURVEY – REPORT OF ANALYSIS.

1. Name of the Industry : M/s. Narimanam Silicate Unit – II,
2. Address of the Industry : Karuppur Road, Adiyakkamangalam Village,
Thiruvarur Taluk.
3. Date of Survey : 14.9.2021
4. Duration of Survey : 8 Hours.
5. Category : Red/Small
6. Land use classification : Agricultural land
7. Consent order No/Date : 2008226990242 valid up to 31.3.2024.

Meteorological Conditions.

Ambient Temperature (°C)	Min	Max	Relative Humidity(%)	Min	Max
	26	32		60	90
Weather condition	Clear		Rain Fall (mm)	Nil	
Predominant Wind Direction	SW – NE		Mean Wind Speed (Km/hr.)	2.82	

Ambient Air Quality Survey Results

Sl. No	Location	Direction	Distance (m)*	Height from GL (m)	Pollutants Concentration (µg/m ³)			
					PM ₁₀	PM _{2.5}	SO ₂	NO ₂
1	Near vacant land on Eastern side	E	110	2	18	-	9	13
2	Near Oil mill Gate Vacant land on the southern side of the Karuppur Road.	W	240	2	23	-	11	20
3	Vacant on the Northern side of the industry (Real Estate Paddy field) (NW)	NW	180	2	13	7	16	27
4	Agri land opposite to M/s. Narimanam Silicate (SW) – Unit I at Adiyakkamangalam.	SW	350	2	21	13	10	23

Dy. CSO

Assistant Director (Lab) (a/c),
AEL, TNPCB, Cuddalore.



TAMIL NADU POLLUTION CONTROL BOARD
ADVANCED ENVIRONMENTAL LABORATORY, CUDDALORE.
AMBIENT AIR QUALITY SURVEY – REPORT OF ANALYSIS.

1. Name of the Industry : M/s. Kiran Global Chem Limited,
2. Address of the Industry : S. F. No: 67/2 and 68/7 & 8,
Uthamacholapuram Village,
Nagapattinam District – 611 002.
3. Date of Survey : 16.9.2021
4. Duration of Survey : 8 Hours.
5. Category : Red/Small
6. Land use classification : Agricultural land
7. Consent order No/Date : 2008134016031 valid up to 31.3.2022

Meteorological Conditions.

Ambient Temperature (°C)	Min	Max	Relative Humidity(%)	Min	Max
	26	32		61	90
Weather condition	Clear		Rain Fall (mm)	Nil	
Predominant Wind Direction	SW – NE		Mean Wind Speed (Km/hr.)	2.58	

Ambient Air Quality Survey Results

Sl. No	Location	Direction *	Distance (m)*	Height from GL (m)	Pollutants Concentration (µg/m ³)			
					PM ₁₀	PM _{2.5}	SO ₂	NO ₂
1	Near M/s. Pream Industries	NE	120	2	42	28	21	46
2	Sodium Silicate yard	E	40	2	62	-	24	30
3	M/s. Reena silicate unit	W	80	2	32	-	19	27
4	Nagore – Kangalachery Bus stop (Vacant land)	SW	160	2	24	13	26	32

Observation:-

1. Eastern side – Paddy Field (Temple)
2. Western side – Agriculture Vacant land
3. Southern side – Dry Agriculture land (Nagore Bus Stop)
4. Northern side – Dry Agriculture land (Pream Industries area)

Dy. CSO

For Assistant Director (Lab) (a/c),
AEL, TNPCCB, Cuddalore.



TAMIL NADU POLLUTION CONTROL BOARD
ADVANCED ENVIRONMENTAL LABORATORY, CUDDALORE.

AMBIENT AIR QUALITY SURVEY – REPORT OF ANALYSIS.

1. Name of the Industry : M/s. Reena Silicate Industries Pvt. Ltd.,
2. Address of the Industry : 123 – C, Uthamacholapuram Village,
Narimanam Post, Boothangudi,
Nagapattinam District – 611 002.
3. Date of Survey : 15.9.2021
4. Duration of Survey : 8 Hours.
5. Category : Red/Small
6. Land use classification : Agricultural land
7. Consent order No/Date : 2008226861867/16.9.2020 valid up to 31.3.2021

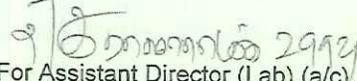
Meteorological Conditions.

Ambient Temperature (°C)	Min	Max	Relative Humidity(%)	Min	Max
	26	32		60	89
Weather condition	Clear		Rain Fall (mm)	Nil	
Predominant Wind Direction	SW – NE		Mean Wind Speed (Km/hr.)	2.38	

Ambient Air Quality Survey Results

Sl. No	Location	Direction *	Distance (m)*	Height from GL (m)	Pollutants Concentration (µg/m ³)			
					PM ₁₀	PM _{2.5}	SO ₂	NO ₂
1	Scaffolding Near Agri land in west side	SW	210	2	21	13	12	16
2	Nagore Road	W	180	2	18	-	10	15
3	Near Madras Chemicals	E	150	2	23	-	11	19
4	Dry land in Northern side	NE	300	2	16	11	8	19


Dy. CSO


For Assistant Director (Lab) (a/c),
AEL, TNPCB, Cuddalore.



TAMIL NADU POLLUTION CONTROL BOARD
ADVANCED ENVIRONMENTAL LABORATORY, CUDDALORE.

AMBIENT AIR QUALITY SURVEY – REPORT OF ANALYSIS.

1. Name of the Industry : M/s. Sree Jaya Devi Industries – Unit II,
2. Address of the Industry : Kutthalam Village, Nagapattinam – 609 703.
3. Date of Survey : 17.9.2021
4. Duration of Survey : 8 Hours.
5. Category : Red/Small
6. Land use classification : Agricultural land
7. Consent order No/Date : 2109137205930 valid up to 31.3.2021.

Meteorological Conditions.

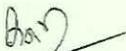
Ambient Temperature (°C)	Min	Max	Relative Humidity(%)	Min	Max
	26	32		60	90
Weather condition	Clear		Rain Fall (mm)	Nil	
Predominant Wind Direction	SW – NE		Mean Wind Speed (Km/hr.)	2.55	

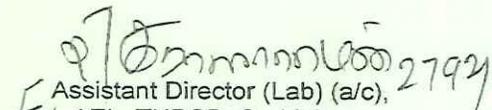
Ambient Air Quality Survey Results

Sl. No	Location	Direction *	Distance (m)	Height from GL (m)	Pollutants Concentration (µg/m ³)			
					PM ₁₀	PM _{2.5}	SO ₂	NO ₂
1	Near Narimanam Road	E	120	2	21	-	12	21
2	Near Kutthalam Village	NE	250	2	26	14	9	26
3	Near Main Gate	N	70	2	31	-	11	20
4	Near Coconut plantation Owned by M/s. Sree Jaya Devi Industries – Unit II.	SW	350	2	20	12	16	24

Observation:-

- Eastern side – Paddy Field / Narimanam Road.
- Northern side – Kutthalam village, Habitation.
- Western side – Agri land.
- Southern side – Coconut plantation Field owned by M/s. Sree Jaya Devi Silicates – Unit II.


Dy. CSO

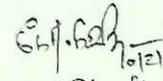

Assistant Director (Lab) (a/c),
AEL, TNPCB, Cuddalore.

ANNEXURE – 6

DEEPAMBALPURAM VILLAGE, THANJAVUR DISTRICT – SOIL SAMPLE TAKEN
DETAILS (FACTORY NEARBY LANDS)DEEPAMBALPURAM VILLAGE – SAMPLE TAKEN DETAILS
(FACTORY NEARBY LANDS)

Sl. No	Sample	Date of Sampling	Date of Analysis	Latitude	Longitude
1	S1 – 1-15 CM	17.08.2021	23.08.2021	10.8121°	79.3086°
2	S2- 16-25 CM	17.08.2021	23.08.2021	10.8121°	79.3086°
3	S3- 1-15 CM	17.08.2021	23.08.2021	10.8121°	79.3083°
4	S4 – 16-25 CM	17.08.2021	23.08.2021	10.8121°	79.3083°
5	S5- 1-15 CM	17.08.2021	23.08.2021	10.8121°	79.3084°
6	S6 – 16-25 CM	17.08.2021	23.08.2021	10.8121°	79.3084°


 வேளாண்மை அலுவலர்
 மண் பரிசோதனை நிலையம்
 ஆடுதுறை-612 101


 Assistant Director of Agriculture,
 Thanjavur.

SOIL ANALYTICAL DATA OF LAND OWNED BY M/S. KIRAN GLOBAL CHEMS LIMITED, THANJAVUR

SOIL ANALYTICAL DATA OF SOAP FACTORY OWNED LAND - DEEPAMBALPURAM VILLAGE

S.NO	STL NO	Sample Mark	Owner	Survey No	Texture	Lime Status	EC (dS/m)	pH	OC %	Available N Kg/ac	Available P ₂ O ₅ Kg/ac	Available K ₂ O Kg/ac	Available Sulphur ppm/ac
1	195	DEEPAMBAL PURAM S1 - 1-15cm	Factory owned land	42/1	CL	M	0.63	9.5	0.14	40.4	1.65	233.5	0.42
2	196	DEEPAMBAL PURAM S2 - 16-25cm		42/1	CL	M	1.20	10.1	0.29	50.0	5.0	229.5	1.80
3	197	DEEPAMBAL PURAM S3 - 1-15cm		42/2	SCL	M	0.69	10.8	0.34	56.4	5.0	249.0	3.59
4	198	DEEPAMBAL PURAM S4 - 16-25cm		42/2	CL	M	0.98	9.9	0.09	37.2	1.65	254.0	0.63
5	199	DEEPAMBAL PURAM S5 - 1-15cm		42/3	CL	M	0.50	9.0	0.31	53.2	1.65	265.5	0.31
6	200	DEEPAMBAL PURAM S6 - 16-25cm		42/3	SCL	M	0.60	8.8	0.40	59.6	3.3	292.0	1.04

M.S. Kiran Global Chems Limited
 கிரான்குலபல் ஆப்சாபரி
 மஸ் லிமிடெட் தனாவூர்
 ஆதிரை-612 101

(Signature)
 Assistant Director of Agriculture,
 Thanjavur.

DEEPAMBALPURAM VILLAGE, AMMAPETTAI BLOCK, THANJAVUR DISTRICT
POST HARVEST SOIL ANALYTICAL DATA

THANJAVUR DISTRICT - AMMAPETTAI BLOCK DEEPAMBALPURAM VILLAGE
POST HARVEST SOIL ANALYTICAL DATA

Date of Sample Taken: 18.10.2021

Date of Analysis: 20.10.2021

S. NO	Farmer Name	Survey No	Field area(h a)	Latitude	Longitude	pH	EC (dS/m)	OC %	Available Nutrients (Kg/ac)		
									N	P ₂ O ₅	K ₂ O
1	A. Vetricondan, S/o Annamalai, Deepambalpuram	41/3	0.40	10.8140°	79.3083°	7.9	0.38	0.36	88.4	1.65	136.0
2	R. Vijayakumar S/o Ramamurthy Deepambalpuram	16/3	0.40	10.8166°	79.3089°	7.6	0.25	0.33	85.2	5.00	145.5
3	M. Rengaiyan, S/o marimuthu Deepambalpuram	35/9	0.20	10.8141°	79.3086°	7.6	0.49	0.36	85.2	6.25	146.5
4	S. Vijayalashmi W/o Sekar Deepambalpuram	90/6	0.30	10.8138°	79.3091°	7.7	0.36	0.46	114.0	6.25	172.0

(Signature)
கனகசபை சிவசுப்பிரமணியன்
மணல் பரிசோதனை நிலையம், ...
சூடுதலை-612 101

(Signature)
Assistant Director of Agriculture
Thanjavur District.

**SOIL TEST DATA OF PERUNTHARAKUDI VILLAGE & ADIYAKAMANGALAM VILLAGE OF TIRUVARUR DISTRICT NEAR
SODIUM SILICATE INDUSTRIES**

**Government of Tamilnadu
Department of Agriculture and Farmer Welfare
Soil Testing Laboratory, Thiruvavur
Soil Test Report**

S.No	Lab No	Farmer Name With Address	Survey No	GPS No	EC	PH	Texture	Lime Status	Organic Carbon%	Nitrogen(Kg/ac)	Phosphorus(Kg/ac)	Potassium(Kg/ac)	Fe (ppm)	Mn (ppm)	Zn (ppm)	Cu (ppm)
1	S - 43	Panner Selvam S/O Ramaiyan, Karuppur Road Adiyakkamangalam Thiruvavur Block	10/4	Lat : 10.753544 N Long : 79.68144 E	1.54	7.08	Clay Loam	Nil	0.13	53	11.3	45	6.59	1.77	0.08	0.26
2	S - 44	Petha Perumal S/O Arunachalam Peruntharakudi, Koradachery Block	186/7	Lat : 10.751054 N Long : 79.596549 E	0.34	7.02	Clay Loam	Nil	0.09	50	1.02	15	5.79	1.89	0.17	0.39

[Signature]
Assistant Director of Agriculture
Soil Testing Laboratory
Thiruvavur

[Signature]
Senior Agricultural Officer
Soil Testing Laboratory
Thiruvavur

Counter Signed

[Signature]
Joint Director of Agriculture,
Thiruvavur.

**SOIL TEST DATA OF KUTHALAM, UTHAMASOLAPURAM AND NARIMANAM VILLAGE, NAGAPATTINAM DISTRICT
DURING 2019-20 AND 2020-21**

Thirumarugal Block - Village average Soil Data

VILLAGE AVG. (Validation 2019-20)	PH	EC	L.S	TEX	N(Kg/ha)	OC(%)	P(Kg/ha)	K(Kg/ha)	S (ppm)	B (ppm)	Fe (ppm)	Zn (ppm)	Mn (ppm)	Cu (ppm)
Kuttalam	6.85	0.18	nil	scl	104.22	0.28	57.63	108.19	28.06	0.50	6.82	0.69	5.19	0.78
Ratings	Normal	Low			Low	Low	High	Low	High	Medium	CL	below	above	below
Uthamacholapuram	6.39	0.29	nil	scl	119.94	0.33	62.19	115.94	43.75	0.50	0.62	4.73	0.64	4.73
Ratings	Normal	Low			Low	Low	High	Low	High	Medium	CL	CL	below	above
Narimanam	7.16	0.30	nil	scl	155.31	0.49	58.63	181.56	44.44	0.50	10.50	0.27	5.52	0.39
Ratings	Normal	Low			Low	Low	High	Medium	High	Medium	above	below	above	below
VILLAGE AVG. (AAO Wise Samples 2021- 22)	PH	EC	L.S	TEX	N(Kg/ha)	OC(%)	P(Kg/ha)	K(Kg/ha)	S (ppm)	B (ppm)	Fe (ppm)	Zn (ppm)	Mn (ppm)	Cu (ppm)
Kuttalam	6.03	0.26	nil	scl	167.33	0.48	54.53	348.17	29.87	0.33	5.66	0.43	3.63	1.19
Ratings	Normal	Low			Low	Low	High	High	High	Low	CL	below	above	below
Uthamacholapuram	6.70	0.28	nil	scl	168.86	0.21	104.00	281.82	17.22	0.34	5.64	0.96	2.50	0.82
Ratings	Normal	Low			Low	Low	High	High	High	Low	above	below	above	below
Narimanam	6.67	0.17	nil	scl	183.86	0.45	54.5	246.29	27.31	0.45	5.83	5.44	8.26	0.74
Ratings	Normal	Low			Low	Low	High	Medium	High	Low	CL	above	above	below

* Above CL - Above Critical Level

* Below CL - Below Critical Level


 Assistant Director of Agriculture (i/c)
 Nagapattinam

ANNEXURE -10

SOIL TEST DATA OF KUTHALAM VILLAGE AND UTHAMASOLAPURAM VILLAGE, NAGAPATTINAM DISTRICT NEAR SODIUM SILICATE INDUSTRY

Annexure I
SOIL SAMPLE RESULT REPORT

S. NO	LAB NO	FARMER NAME WITH ADDRESS	SURVEY NO.	GPS LOCATION Lat: Long:	EC	PH	TEXTURE	LIME STAT	OC%	N (Kg/ha)	P (Kg/ha)	K (Kg/ha)	FE (ppm)	ZN (ppm)	MIN (ppm)
1	99	Jeyaram, Amutha, Karthikeyan, No. 117/ Thirumarugal block	117/1B7	10.836381994N, 79.784935106E	0.29 Low	7.1 Neutral	Sandy Clay Loam	NIL	0.47 Low	175 Low	6 Low	91.39 Low	6.2 Above CL	0.7 Below CL	3.46 Above CL
2	100	Sivakumar, Uthamacholapuram village, Thirumarugal block	65/2	10.816500068N, 79.798913919E	0.68 Low	6.8 Neutral	Clay Loam	NIL	0.4 Low	165 Low	74 High	117.33 Medium	12.5 Above CL	0.98 Below CL	2.15 Above CL

* Above CL - Above Critical Level
* Below CL - Below Critical Level

S. S. S. S. S.
Assistant Director of Agriculture (I/c)
Nagapattinam

ANNEXURE -11

RESULTS OF KURUVAI CROP CUTTING EXPERIMENTS OF DEEPAMBALPURAM VILLAGE , THANJAVUR DISTRICT DURING 2017-18, 2018-19, 2019-20 AND 2020-21

Deepambalpuram village

S.No	Land Use Pattern	Area(Ha)
1	Net Cultivable Area	155.985
2	Forest	0
3	Current Fallow	1.42
4	Uncultivable Fallow	0
5	Cultivable Fallow	4.592
6	Grasslands	0
7	Land Put to Non Agricultural use and Purambokku	59.138
8	Tree Plantations	2.885
9	Other Fallow	0
	Total	224.02

Basic Facts Sheet
Deepambalpuram village

S.No	Details	Nos
1	Population	
	Male	310
	Female	320
	Total	630
2	Cattle Population	
	Goat	650
	Milch Animal	50
	Poultry	150
3	Irrigation	
	Canal Irrigation(Vennaru)	1
	Borewells	23
	Ponds	4
4	Cultivation Area	
	Paddy (Kharif)	55 Ha
	Paddy(Rabi)	90 a

CROP CUTTING EXPERIMENTS YIELD PARTICULARS
Deepambalpuram village

S.NO	YEAR	PADDY KHARIF Kg/ha	PADDY RABI Kg/ha	PADDY ZAID Kg/ha	BLACK GRAM Kg/ha	GINGELLY Kg/ha
1	2017-18	5020	4410	-	297	-
2	2018-19	3555	3999	-	-	497
3	2019-20	4121	4288	-	-	225
4	2020-21	3659	1875	3950	-	-


 வேளாண்மைத் தனி இயக்குனர்.
 அம்பாலபுரம்-614 401

TEST CROP PADDY YIELD OF THE FARMERS NEARBY INDUSTRY
HARVESTED ON 8.10.2021 AND 12.10.2021 (KURUVAI SEASON) IN
DEEPAMBALPURAM VILLAGE , THANJAVUR DISTRICT

KURUVAI TEST HARVEST DETAILS OF DEEPAMBALPURAM VILLAGE

S no	Farmer name	Date of harvest	Survey No	Field area ha	Grain yield kg/ha	Straw yield kg/ha	Distance from factory
1.	A.Vetrikondan, S/o Annamalai, Deepambalpuram	08-10- 2021	41/3	0.40	3198	4548	300 m
2.	R.Vijayakumar S/o Ramamurthy Deepambalpuram	12-10- 2021	16/3	0.40	4024	5400	800 m
3.	M. Rengaiyan, S/o marimuthu Deepambalpuram	12-10- 2021	35/9	0.20	3978	4152	500 m
4.	S. Vijayalashmi W/o Sekar Deepambalpuram	12-10- 2021	90/6	0.30	4548	8588	1000 m

02/11/21
வேளாண்மை உதவி இயக்குனர்
செயலகம்-614 401

RESULTS OF SAMBA PADDY CROP CUTTING EXPERIMENTS DURING 2016-17, 2017-18, 2018-19, 2019-20 AND 2020-21 IN PERUNTHARAKUDI AND ADIYAKAMANGALAM VILLAGE, TIRUVARUR DISTRICT

Tiruvarur District- Tiruvarur Block		
Adiyakamangalam Village		
S.No	Details	Nos
1	Population	
	Male	4216
	Female	4348
	Total	8564
2	Cattle	
	Goats	850
	Milch animal	280
	Poultry	650
3	Irrigation	
	Canal(Vettaru)	1
	Borewells	16
	Ponds	5
4	Cultivation area	
	Paddy (Kharif)	11
	Paddy (Rabi)	103

Crop Cutting experiments-Yield details- Peruntharakudi Village					
Year	Paddy kuruvai	Paddy samba	Paddy kodai	Black gram	Gingelly
2013-2014	Village not selected				
2014-2015	Village not selected				
2015-2016	Village not selected				
2016-2017	-	1452	-	-	-
2017-2018	-	4820	-	-	-
2018-2019	-	4642	-	-	-
2019-2020	-	4952	-	257	-
2020-2021	-	4849	-	263	-

19/1/21
Assistant Director of Agriculture,
Tiruvarur.

Counter Signed

[Signature]
Joint Director of Agriculture,
Tiruvarur.

RESULTS OF SAMBA PADDY CROP CUTTING EXPERIMENTS IN UTHAMASOLAPURAM AND NARIMANAM VILLAGE NAGAPATTINAM DISTRICT DURING 2018-19, 2019-20 AND 2020-21

Last 3 Years Yield details - Uthamacholapuram village, Thirumarugal block, Nagapattinam district.

S.no	YEAR	PADDY KURUVAI Kg/Ha	PADDY SAMBA Kg/Ha	PADDY KODAI Kg/Ha	BLACK GRAM Kg/Ha	GINGELLY Kg/Ha	Remarks
1.	2018-19	-	4736	-	-	-	
2.	2019-20	-	5120	-	-	-	
3.	2020-21	-	4925	-	-	-	Unseasonal rainfall

Yield in terms of Paddy.

Last 3 Years Yield details - Narimanam village, Thirumarugal block, Nagapattinam district.

S. NO	YEAR	PADDY KURUVAI Kg/Ha	PADDY SAMBA Kg/Ha	PADDY KODAI Kg/Ha	BLACK GRAM Kg/Ha	GINGELLY Kg/Ha	Remarks
1.	2018-19	-	4322	-	-	-	
2.	2019-20	-	4970	-	-	-	
3.	2020-21	-	5233	-	-	-	Unseasonal rainfall

Yield in terms of Paddy

S. S. Srinivasan, 24/10/2021,
Assistant Director of Agriculture,
Thirumarugal.

Assistant Director of Agriculture
Thirumarugal.

**BEFORE THE HON'BLE NATIONAL
GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI.**

**Original Application No. 142 of
2021(SZ)**

Suo Motu based on the news item in
The Hindu Tamil Newspaper ,
Chennai Edition Dated -06.06.2021,
" Soap factories spoiling Agricultural
Lands in the Cauvery Delta, which
has been declared a protected
Agricultural Zone: Farmers worried
about yields "-

Vs

The Secretary to Government,
Department of Environment ,
Climate Change & Forest ,
Govt., Secretariat, Fort St. George,
Chennai – 600 009 & 7 others

...Respondents

**REPORT OF THE JOINT
COMMITTEE IN THE MATTER OF
O.A.NO. 142 OF 2021 (SUO MOTU)
IN COMPLIANCE OF HON'BLE NGT
ORDER DATED 06.07.2021**

**Advocate for Respondent: TNPCB
Thiru. S. Sai Sathya Jith**

Date:09.11.2021

Hearing date on 10.11.2021

