



# Seshasayee Paper and Boards Limited

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CIN : L21012TZ1960PLC000364

Ref: ENV/ W-1/433

2024 09 11

The Member Secretary  
Tamilnadu Pollution Control Board  
76 Mount Salai, Guindy  
Chennai 600 032

Dear Sir,

**Sub: Submission of Environmental Statement for the financial year 2023-24**

We file herewith the Environmental Statement for the financial year ended  
31<sup>st</sup> March 2024, in **Form V**, "in duplicate".

Thanking you,

Yours faithfully  
**For Seshasayee Paper and Boards Limited**

**GANESH BALAKRISHNA BHADTI**  
**Director (Operations)**

Encl:

cc: Joint Chief Environmental Engineer  
Tamilnadu Pollution Control Board  
No: 9, 4<sup>th</sup> Cross Street, Brindhavan Road, Fairlands  
Salem- 636 016

District Environmental Engineer  
Tamil Nadu Pollution Control Board  
No: 298/A, Thiruvalluvar Nagar, Salem Main Road,  
Komarapalayam, Namakkal District - 638 183

The Director(s)  
Regional Office (South Eastern Zone)  
MoEF & CC, Govt., of India,  
The Handloom Export Promotion Council Building 34  
(Old No 18) Cathedral Garden Road, Nungambakkam,  
Chennai 600 034





***SESHASAYEE PAPER AND BOARDS LIMITED***

**PALLIPALAYAM, CAUVERY R.S. P.O  
ERODE 638 007, NAMAKKAL DISTRICT  
Unit: Erode**

***ENVIRONMENTAL STATEMENT  
2023-24***

***SEPTEMBER 2024***

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## **FORM V**

(See rule 14)

### **Environmental Statement for the Financial Year ended 31<sup>st</sup> March 2024**

#### **PART A**

- (i) Name and address of the owner/occupier of the industry operation or process : GANESH BALAKRISHNA BHADTI  
Director (Operations)  
Seshasayee Paper and Boards Limited  
Pallipalayam,  
Cauvery R.S.P.O  
Erode 638 007  
Namakkal District
- (ii) Industry Category : Red
- (iii) Production Capacity - Units : 1,65,000 tonnes / annum
- (iv) Year of Establishment : 1962
- (v) Date of last Environmental Statement submitted : 25 09 2023 (for 2022-23)

## **PART B**

### **(i) Water Consumption:**

Kl/day

|                                  |   |       |
|----------------------------------|---|-------|
| Total water consumption of which | : | 28004 |
| a) Process                       | : | 19889 |
| b) Cooling                       | : | 1678  |
| c) Domestic                      | : | 6437  |

### **Name of Products:**

### **Process water consumption per unit of product (t)**

|                                           | During the<br>previous financial<br>year <u>2022-23</u><br>(1) | During the<br>current financial<br>year <u>2023-24</u><br>(2) |
|-------------------------------------------|----------------------------------------------------------------|---------------------------------------------------------------|
| 1 Paper and Paper Boards of all varieties | 42.2 kl                                                        | 43.0 kl                                                       |

### **(ii) Raw Materials Consumption:**

| <u>Name of raw materials*</u> |             | <u>Name of product</u> | <u>Consumption of raw materials per unit of output (t)</u> |                                                  |
|-------------------------------|-------------|------------------------|------------------------------------------------------------|--------------------------------------------------|
|                               |             |                        | During the previous financial year <u>2022-23</u>          | During the current financial year <u>2023-24</u> |
| 1                             | Wood        | ) Paper and            | 2.09                                                       | 1.96                                             |
| 2                             | Market Pulp | ) Paper Boards         | 0.00                                                       | 0.00                                             |
| 3                             | Bagasse     | ) of all               | 0.22                                                       | 0.24                                             |
| 4                             | Waste Paper | ) varieties            | 0.02                                                       | 0.03                                             |
| 5                             | Bamboo      | )                      | 0.00                                                       | 0.00                                             |

(\*) Industry may use codes if disclosing details of raw material would violate contractual obligations. Otherwise, all industries have to name the raw materials used.

## PART C

Pollution discharged to environment/ unit of output

(Parameters as specified in the consent issued)

| <u>Pollutants</u> | Quantity of pollutants discharged (mass/day) <u>2023-24</u> | Concentration of pollutants discharged (mass/volume) (Outlet of Secondary Biological Effluent Treatment System based on <b>Activated Sludge Process* &amp; ESPs</b> ) | Percentage of variation from prescribed standards with reasons |
|-------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
|-------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|

|    |               |                                       |                                                                                                                                                                                                  |                                |
|----|---------------|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| a) | Treated Water | 19405 m <sup>3</sup> per day (volume) | Extract from the Analysis Report of Advanced Environmental Laboratory, Tamil Nadu Pollution Control Board, Salem, for the period <b>April 2023 to March 2024</b> , enclosed - <b>Enclosure 1</b> | Within the standards<br><br>** |
|----|---------------|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|

| <u>Parameters</u> | Kg/d    | ppm         |
|-------------------|---------|-------------|
| TSS               | 721.9   | 37.2        |
| TDS               | 26047.3 | 1342.3      |
| Chlorides         | 8221.9  | 423.7       |
| Sulphates         | 3838.3  | 197.8       |
| BOD               | 333.8   | 17.2 (max)  |
| COD               | 3372.6  | 173.8 (max) |

|    |     |                                                                                                                                                                                          |                                 |
|----|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| b) | Air | Ambient Air Quality and Stack Monitoring Survey Analysis Reports of Advanced Environmental Laboratory, Tamil Nadu Pollution Control Board, Salem, enclosed - <b>Enclosures 2 &amp; 3</b> | Within the standards<br><br>*** |
|----|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|

| <u>Parameters</u> | Kg/d   | mg/Nm <sup>3</sup>              |
|-------------------|--------|---------------------------------|
| SPM               | 33.53  | 27.0 (Lime Kiln)                |
| SPM               | 104.35 | 71.5 (Chemical Recovery Boiler) |
| SPM               | 74.38  | 21.5 (Captive Power Plant-CPP)  |

(\*) We have installed - HDPE Lined Anaerobic Lagoon, Pith / Screw Presses, Primary Clarifier, Vacuum Belt Filters (2 Nos), Clariflocculator one number for coloured 1-3 Paper Machines effluent and another one for 4&5 Paper Machines white water recycling, Aeration Basin with 12 Surface Aerators of 50 hp each, Secondary Clarifier, Sludge Thickener and Decanter Centrifuge (Secondary Biological Effluent Treatment System, based on **Activated Sludge Process**).

(\*\*) Our treated waste water continues to be utilized **on land for irrigation** purposes in about 2140 acres of dry and barren lands, mostly of sandy loam soil. Our final treated wastewater (Secondary Clarifier Outlet) complies with the inland surface water discharge standards prescribed.

We have installed online continuous monitoring system for the effluent parameters - Flow, pH, TSS, BOD & COD and the same is connected to Care Air Centre, Chennai.

A new sewage treatment plant is installed for treatment and used for plantation inside the mill.

(\*\*\*) We have installed electro-static precipitators (**ESPs**) in all the stacks attached to the Boilers. The Ambient Air Quality and Stack Monitoring Surveys conducted by Advanced Environmental Laboratory, Tamil Nadu Pollution Control Board, Salem from 11 08 2023 to 12 08 2023 and from 09 01 2024 to 10 01 2024, indicate compliance with prescribed standards in this regard.

We have installed an online continuous monitoring system for the parameters - SPM, SO<sub>2</sub> & NO<sub>X</sub>, and the same is connected to Care Air Centre, Chennai.

Two CAAQMS stations are installed up and downstream direction and the same is connected to Care Air Center, Chennai

Hence the question of variation of concentration from prescribed standards does not arise.

c) The Ambient Noise Level Surveys (at Boundary Line & Inside the plant) conducted by Advanced Environmental Laboratory, Tamil Nadu Pollution Control Board, Salem from 11 08 2023 to 12 08 2023 and from 09 01 2024 to 10 01 2024 indicate compliance of prescribed standards in this regard. Copies of the said reports are enclosed. **Enclosures 2 & 3.**

## **PART D**

### **Hazardous Wastes**

(As specified under the Hazardous Wastes (Management, Handling & Transboundary Movement) Rules, 2016

| <u>Hazardous Wastes</u>                                                                                           |                  | <u>Total Quantity (As such)</u>                   |                                                  |
|-------------------------------------------------------------------------------------------------------------------|------------------|---------------------------------------------------|--------------------------------------------------|
| Description                                                                                                       | Quantity         | <u>During the previous financial year 2022-23</u> | <u>During the current financial year 2023-24</u> |
| (a) From process:<br>Used/ Spent Oil<br>Category 5.1                                                              | 7.5<br>T/Annum   | 7.438 t/annum<br>i.e 20.38 kg/day                 | 7.442 t/annum<br>i.e 20.33 kg/day                |
| (b) ETP Chemical sludge<br>from waste water<br>treatment<br>Category 35.3                                         | 36000<br>T/Annum | 30803<br>84.3 t/day                               | 22153.63<br>60.54 BD t/day                       |
| (c) Spent chemicals<br>Category 32.1                                                                              | 24000<br>T/Annum | 16701 t/annum<br>45.75 t/day                      | 17752.74t/annum<br>48.5 BD t/day                 |
| (d) Empty<br>barrels/containers/li<br>ners contaminated<br>with hazardous<br>chemicals /wastes<br>Category – 33.1 | 3.75<br>T/Annum  | 1.58 t/annum                                      | 3.00 t/annum                                     |
| (e) Spent ion exchange<br>resin containing<br>toxic metals<br>Category – 35.2                                     | 3 T/Annum        | Nil                                               | 2.7 t/annum                                      |

**PART E**

**SOLID WASTES**

| Description                                     | <u>Total Quantity</u>                                                                            |                                                           |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
|                                                 | During the<br>previous<br>financial year<br><u>2022-23</u>                                       | During the<br>current<br>financial year<br><u>2023-24</u> |
| <b>From process (Solid in BD)</b>               |                                                                                                  |                                                           |
| 1 Cinder (Fly ash)                              | 47.18 t/day                                                                                      | 47.66 t/day                                               |
| 1 Quantity Disposed / Reused<br>within the unit | (i) Cinder to Cement Industries and<br>also used for making hollow blocks<br>/ compressed bricks |                                                           |

## **PART F**

Please specify the characteristics (in terms of concentration and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes:

| <b><u>Solid Wastes</u></b> | <b><u>Quantity/day</u></b> | <b><u>Disposal Method</u></b>                                                   |
|----------------------------|----------------------------|---------------------------------------------------------------------------------|
| 1) Cinder                  | 47.66 t/day                | To Cement Industries and also used for making hollow blocks / compressed bricks |

### **Hazardous Wastes**

|                                                                           |                 |                                                                                                                                   |
|---------------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------|
| 1) Used / Spent Oil                                                       | 20.33kg/day     | Used internally as Lubricant in chains and conveyors and balance quantity disposed to TNPCB Authorized Recycler.                  |
| 2) Filter Cake (ETP Sludge)                                               | 60.54 BD t /day | To Board Making units                                                                                                             |
| 3) Spent chemicals - Lime Sludge                                          | 48.5 BD t/day   | To Cement Industries                                                                                                              |
| 4) Empty barrels/containers/line rs contaminated with hazardous chemicals | 3.0 t/annum     | Generation, Collection, Storage, and send to TNPCB Authorized Utiliser for decontamination                                        |
| 5) Spent ion exchange resin containing toxic metals                       | 2.7 t/annum     | Generation, collection, Storage and utilised for Energy Recovery in its Captive Boiler as per SOP issued by CPCB in December 2020 |

### **Characterizations of Solid Wastes / Hazardous Wastes:**

|     |                  |   |                                                                                         |
|-----|------------------|---|-----------------------------------------------------------------------------------------|
| (a) | Lime Sludge      | : | Semi-solids - In-organic in nature - about 40% solid content - mostly Calcium Carbonate |
| (b) | Cinder           | : | Semi-solids - In-organic in nature - about 60% solid content                            |
| (c) | Filter Cake      | : | Semi-solids - about 20% solid content of which Organics 60% and In-organics 40%         |
| (d) | Used / Spent Oil | : | Mineral Oil - 99%, Antioxidant /Antifoam PPD - 1% ; Flash Point - C.COC 200 min         |

## **PART G**

Impact of the pollution control measures taken on conservation of natural resources and consequently on the cost of production:

### **(a) Innovative Irrigation Scheme using Treated Waste Water - “Waste into Wealth”:**

By using the treated waste water for irrigation, the following unique and distinctive advantages are derived:

- (i) Discharge of treated wastewater into river avoided.
- (ii) About 2140 acres of dry and barren lands, mostly of **sandy loam soil**, converted into cultivable wet lands - (**Conversion of dry lands into wet & cultivable lands**).
- (iii) Up- liftment of Rural Economy - Improvement in the **standard of living** of the local farmers due to increased agricultural income and substantial enhancement in the value of their land holdings.
- (iv) Development of vast **“Green Belt”** in and around our mill.
- (v) Use of large volume of Bagasse as raw material for paper making has reduced the use of bamboo and wood, thereby preserving natural forest resources - improving the **Green Cover** and **Ecological Balance**.
- (vi) Use of large volume of Bagasse as raw material for paper making has reduced the consumption of input chemicals and alkali load in wastewater, thereby further improving the quality of wastewater.

### **(b) Waste Water Recycled & reused: ( Paper Machine Effluent Recycled - PER)**

Waste water from Paper Machine Section constituting about 30% of the total quantity of wastewater generated, is recycled, treated and reused within the mill. Apart from this, the Company has implemented various other wastewater recycling and water conservation measures as detailed in (d) (5) below, resulting in a significant reduction in the quantity of freshwater drawal from the river and the consequential reduction in the quantity of wastewater generation and discharge.

### **(c) Studies by Tamil Nadu Agricultural University: (TNAU)**

Under a Corpus Fund-derived Endowment Scheme, the Department of Environmental Sciences, Tamil Nadu Agricultural University, Coimbatore (**TNAU**), is continuously studying the impact of irrigation scheme using our treated wastewater, on Soil and Ground Water. **Enclosure – 4, 5 & 6**

**(d) Sustainable Development Measures:**

**1. Cleaner Production Technology:**

This technology has been introduced with a view to **minimize pollution load at the source** itself instead of the end of pipeline method, by reducing the consumption of water, energy, raw materials, fuels, chemicals, etc. This system has also facilitated the Company to optimize the usage of all these resources.

**2. Housekeeping and Safety:**

The Company attaches paramount importance to House Keeping and Safety within the mill premises. All the sections in the mill have been grouped into various zones and periodical inspections are being carried out by a High Level Committee specifically assigned with the task of evaluating “**House Keeping and Safety**”. This Committee allots marks to each zone and cash awards are being distributed based on their ranking and performance, to encourage and motivate all the employees for further improvements in this regard.

**3. Use of Bio-fuels:**

In order to reduce the use of natural fossil fuels like Coal, Lignite, etc., one of the Power Boilers was retrofitted to use renewable bio-fuels like coconut shell, Bagasse pith, etc. This has considerably helped the Company to

- ★ Increase the use of renewable bio-fuels such as coconut shell, Bagasse pith, etc., in Power Boilers
- ★ Reduce change over time
- ★ Use appropriate fuel mix in Power Boilers
- ★ Reduce the generation of cinder
- ★ Reduce the use of fossil fuels and conservation of natural resources
- ★ Improve boiler operations and housekeeping

This is in addition to Black Liquor Solids (BLS) being used as **Green Fuel** in Chemical Recovery Boiler to generate Steam which is used in the process as well as for generation of **Green Power**. (Renewable Energy Source).

#### **4. Bagasse for Paper Making:**

Bagasse is a solid fibrous material left after the extraction of juice from the sugarcane and it was conventionally burnt as in-house fuel in the sugar mill boilers to generate Steam and Power.

SPB has pioneered the innovative utilization of sugarcane Bagasse on a large scale as an alternate to wood for paper making.

In fact, the State Government owned Tamil Nadu Newsprint and Papers Limited (TNPL), the first World Bank-assisted Newsprint and Paper Project in India, came to be established only with the active involvement of SPB, in the capacity of Project Consultants, right from the development of concept through its execution, Start Up, Commissioning and Successful Operations with strong Software and programming supply. TNPL also uses bagasse to manufacture paper and newspapers.

Bagasse is eco-friendly on several counts, to name a few:

- It is a renewable source of Fiber and an alternative to wood / Bamboo.
- It consumes relatively less chemicals in the pulping and bleaching processes, thus paving the way for a lower alkali/ pollution load.

#### **5. Back Water Recycling:**

As early as 1984, the Company introduced " Paper Machine Effluent Recycling (PER) System", by which the entire white water from all paper machines is collected, pumped to a Clariflocculator for treatment and reused within the mill. This has enabled the Company to reduce raw water consumption to a considerable extent. In order to further reduce the raw water consumption, various other water recycling / conservation measures were implemented, as detailed hereunder.

During the year **2023-24**, the Company implemented the following water recycling/conservation measures:

- ❖ C1 clarifier underflow drained water has been diverted to old RO clarifier.  
Expected water saving of 240 m3/day

- ❖ In SRP collection of sealing water from the evaporator and reuse as make-up water in sealing water tank. This project was implemented. Saving in water about 240 m<sup>3</sup>/day.
- ❖ Reuse of the SRP secondary condensate in old mist cooling tower makeup. Water saving about 150M<sup>3</sup>/day.
- ❖ Limekiln support roller # 3 A,B,C,D cooling water outlet has been taken back to tank and closed loop.
- ❖ Recover the white water from MG machine during white and NSS run along with MF white water for onward treatment in C3 clarifier and reuse in RDH incoming pulp dilution. Water saving 250 m<sup>3</sup>/day.
- ❖ ETP filter house vacuum pump fresh water replaced with CPP cooling tower blow down water. Water saving 200 m<sup>3</sup>/day.

**(e) Unique advantages and environmental issues addressed by the innovative and novel irrigation scheme using Company's treated waste water:**

Apart from the various environmental issues addressed by this innovative and novel irrigation scheme using Company's treated waste water, the continuing success of this irrigation scheme, is directly related to the unique and distinct advantages as detailed hereunder:

➤ **Enhancement in sugarcane yield**

The yield of sugarcane is superior and higher in the fields irrigated with treated paper mill wastewater when compared with fresh water irrigation. The **yields are proved to be higher by about 10 to 15 % when compared to those irrigated with fresh water** (100 to 125 tonnes of sugarcane per hectare). This has been corroborated by various Research Studies.

➤ **Colour reduction in waste water, soil acting as a "Filter Media"**

The treated paper mill waste water percolating from the fields, after being used for irrigation, is **void of colour** and rich in "**Dissolved Oxygen**" as the soil acts as a good colour removing media with particular reference to **sandy loam soil** available in the neighbourhood of the Company.

➤ **Organic matter increases the amount of active surface of soil due to promotion of granular structure**

The organic matter present in treated waste water of paper mill promotes a "**granular structure**" which permits soil to hold more of both water and air. In other words, the organic matter increases tremendously the amount of active surface in each square inch of soil. All chemical and physical activities take place on the surface of each soil particle.

➤ **Goodwill of people in surrounding villages**

The success of this unique and innovative irrigation scheme is mainly attributable to the total involvement of local farmers to whom it is the "**Life Line**". There is improvement in the sugarcane yield, agricultural income, ready market for their produce, standard of living and employment opportunities for farm labourers, which have all boosted the rural economy and morale of the local farmers. Added to this, the technical guidance provided to them under the lift irrigation scheme, the various community development activities voluntarily undertaken by the Company under its **Corporate Social Responsibility (CSR)** initiatives, as detailed under (e) of Part I and the periodical redressal meetings with the local farmers, have taken care of their entire needs, thus earning their "**Goodwill**".

➤ **Completely Closed Circuit System evolved on long term sustainable basis**

By this unique irrigation scheme, the entire treated waste water of the Company is utilized for irrigation purposes, for cultivating sugarcane, which is supplied to Ponni Sugars, who in turn, release the entire Bagasse to the Company for paper making. This irrigation scheme, thus not only enables the Company to avoid its waste water discharge into the river, but also paves way for a completely "**Closed Circuit System**", evolved on a long term sustainable basis with a visionary approach.

➤ **Identification of renewable source of fiber (Bagasse) for paper making**

Conventionally, all the sugar mills used to burn the Bagasse in their boilers as a fuel, thus wasting a renewable source of fiber for paper making. The Company installed fossil fuel fired boiler in Ponni Sugars, thus ensuring the entire release of Bagasse to SPB for paper making.

➤ **Reduction of Alkali Load**

"**Alkali Load**" reduced due to usage of Bagasse for papermaking and consequential reduction in the consumption of cooking chemicals.

➤ **Ecological Balance**

The use of Bagasse for paper making contributes to preservation of environment and maintenance of "**Ecological Balance**" since roughly about **3.7 tonnes of wood** are left uncut for every **6 tonnes of Bagasse** used for paper making.

Our final treated waste water (outlet of **Secondary Biological Effluent Treatment System based on " Activated Sludge Process"**), after complying with the stringent inland surface water discharge standards prescribed, is being used on dry and barren lands, mostly of **sandy loam soil**, for irrigation purposes, the details of which are as under:

| Sl. No.                                        | Name of the Irrigation Scheme                   | Registration No. | Area in acres (Sugar Cane) | Additional area in acres (Plantation) |
|------------------------------------------------|-------------------------------------------------|------------------|----------------------------|---------------------------------------|
| 1                                              | Gravity Flow (since 46 years)                   | --               | 200                        | --                                    |
| 2                                              | Odapalli- Pappampalayam Lift Irrigation Society | 1/1983           | 550                        | 170                                   |
| 3                                              | Odapalli- Mukkuparai Lift Irrigation Society    | 59/1986          | 425                        | 30                                    |
| 4                                              | Kattur Lift Irrigation Society                  | 6/1989           | 400                        | 273                                   |
| 5                                              | Vellayankadu Lift Irrigation Society            | 76/1998          | 39                         | 21                                    |
| 6                                              | Own / Lease Lands                               | --               | --                         | 32                                    |
| <b>Total area under Lift Irrigation Scheme</b> |                                                 |                  | <b>2140 acres</b>          |                                       |

**(f) Large Scale Plantation\_ - "Tree Farming Activity ":**

The Company has taken up a **"Tree Farming Activity "**, under which the Company produces quality Clonal plants of Eucalyptus, Casuarina and Malaivembu in the Company's SPB Nursery and Casuarina Seedlings in diversified Production Centres nearer to the prospective farmers who will procure them from the Company. The details for the financial year 2023-24 are as under:

| Production Centre      | Species                         | Target Nos.  | Supply Nos.  | Category                                                |
|------------------------|---------------------------------|--------------|--------------|---------------------------------------------------------|
| SPB Nursery            | Eucalyptus Hybrid Clones        | 14,80,000    | 8,00,010     | Bipartite agreement with farmers under Contract farming |
| "                      | Casuarina Clones                | 15,25,000    | 7,69,290     |                                                         |
| "                      | Casuarina Seedlings             | 3,00,000     | 2,78,190     |                                                         |
| "                      | Malaivembu Clones               | 3,40,000     | 43,320       |                                                         |
| "                      | Subabul seedlings               | 80,000       | 35,620       |                                                         |
| Outside Clonal Nursery | Casuarina Clones                | 55,00,000    | 21,28,000    | Tree farming                                            |
| Cuddalore outsourcing  | Casuarina bare-rooted Seedlings | 20,00,00,000 | 20,00,79,000 |                                                         |

**Area planted under Tree Farming:**

| Year         | Area Planted (Acres) |               |            | Total Area (Acres) |
|--------------|----------------------|---------------|------------|--------------------|
|              | Eucalyptus           | Casuarina     | Others     |                    |
| 2005-06      | 1671                 | 1340          | --         | 3011               |
| 2006-07      | 1875                 | 3727          | --         | 5602               |
| 2007-08      | 850                  | 2990          | --         | 3840               |
| 2008-09      | 690                  | 1714          | --         | 2404               |
| 2009-10      | 583                  | 1243          | --         | 1826               |
| 2010-11      | 785                  | 6919          | --         | 7704               |
| 2011-12      | 1316                 | 8169          | --         | 9485               |
| 2012-13      | 1133                 | 10130         | --         | 11263              |
| 2013-14      | 1110                 | 18397         | --         | 19507              |
| 2014-15      | 1383                 | 17712         | 3          | 19098              |
| 2015-16      | 1661                 | 18436         | 11         | 20108              |
| 2016-17      | 673                  | 13732         | 35         | 14440              |
| 2017-18      | 463                  | 14790         | 54         | 15307              |
| 2018-19      | 466                  | 15513         | 38         | 16017              |
| 2019-20      | 460                  | 16275         | 66         | 16801              |
| 2020 -21     | 516                  | 18464         | 35         | 19015              |
| 2021-22      | 515                  | 19494         | 33         | 20042              |
| 2022-23      | 595                  | 21870         | 37         | 22502              |
| 2023-24      | 727                  | 23988         | 49         | 24769              |
| <b>Total</b> | <b>17472</b>         | <b>234903</b> | <b>361</b> | <b>252736</b>      |

The details of area coverage under Tree farming & Contract farming for 2023-24 are as under

| Description                | Area (acres)  |
|----------------------------|---------------|
| <b>Total acres covered</b> | <b>24,769</b> |

The Company arranges for planting of around 20.41 crores (20,41,33,430) of saplings, for 2023-24 under Tree Farming & Contract Farming Activities.

## **PART H**

### **Additional measures / investment proposals for environmental protection including abatement of pollution:**

#### **(1) MDP:**

The objectives of the recently implemented Mill Development Plan (MDP) at a cost of Rs 350 crores of which about Rs 289 crores was earmarked for Environmental Management, are as under:

- ◇ To meet MoEF's charter on Corporate Responsibility for Environmental Protection.
- ◇ To adopt the best available technology and environment-friendly processes.
- ◇ To replace the ageing machinery for reduction of pollution loads at source.

The reduction in Pollution Loads has been achieved by installation of the following environment friendly and technologically advanced systems and equipment, among others:

- ◇ Rapid Displacement Heating (RDH) System of cooking with pump out discharge.
- ◇ Four Stage Brown Stock Washing and Two Stage Oxygen Delignification in RDH Wood Pulp Mill to enhance the kappa reduction across the Brown Stock Washing system by curbing the Alkali loss.
- ◇ Installation of a Twin Roll Press in RDH Pulp Mill at the end of the Unbleached stage for recovering the maximum possible WBL to the Recovery Cycle and subsequent reduction in the ClO<sub>2</sub> consumption.
- ◇ Elemental Chlorine Free (ECF) bleaching with chlorine dioxide and hydrogen peroxide (both for Wood pulp & Bagasse pulp).
- ◇ New chemical recovery boiler with 2 nos of ESP, Multi Effect - Energy Efficient - Free Flow - Falling Film Evaporator with Crystallisation Technology and on line stack monitoring system for SPM.
- ◇ New lime mud re-burning kiln with ESP and on line stack monitoring system for SPM.
- ◇ Reausticizing system for White Liquor Production.
- ◇ Water recycling measures to reduce the demand on fresh water.
- ◇ Recovery of Methane from Anaerobic Lagoon and used as fuel in Lime Kiln.

Huge capital investment has been made for the installation of following Pollution Control and environment friendly systems/ equipment:

| Description                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------|
| Rapid Displacement Heating ( <b>RDH</b> ) System of Cooking                                                                                  |
| Oxygen De lignification System ( <b>ODL</b> )                                                                                                |
| Elemental Chlorine Free ( <b>ECF</b> ) Bleaching System with Chlorine Dioxide & Hydrogen Peroxide                                            |
| Multi Effect Energy efficient free flow falling film Evaporators with crystallization technology                                             |
| Energy efficient Chemical Recovery Boiler with large economizer and <b>ESP</b> (4 fields) and on line Stack Monitoring System for <b>SPM</b> |
| Lime Kiln with <b>ESP</b> (3 fields) and on line Stack Monitoring System for <b>SPM</b>                                                      |
| Pressure Screening of Digested Pulp                                                                                                          |
| New Causticizing System                                                                                                                      |
| Water Recycling Measures to further reduce the demand on fresh water                                                                         |
| Capturing of methane from anaerobic lagoon and used as fuel in limekiln and replacing a part of furnace oil.                                 |

## (2) Perform, Achieve & Trade (PAT Scheme):

The first PAT cycle commenced from 01 04 2014 and completed by 31 03 2015. Monitoring & Verification (M&V) of energy performance (Energy Audit) as per M&V Guidelines issued by Bureau of Energy Efficiency (BEE), Government of India has been conducted by BEE certified Energy Auditor. The second PAT cycle commenced from 01 04 2016 for a period of 3 years ending on 31 03 2019. The second PAT cycle have achieved specific Energy consumption of 0.4329 Metric tones of Oil equivalent [MTOE] / Tonne of Equivalent Finished Product [EFP] against the specified target of 0.609 MTOE / t (EFP). As the outcome, SPB have been awarded +21057 energy saving certificates.

## **PART I**

**Any other relevant particulars in respect of environmental protection and abatement of pollution:**

**(a) Accreditations:**

The Company has upgraded its Integrated Management Systems and has been accredited with **ISO 9001** Certification (2015 version) (Quality Management System - QMS), **ISO 14001** Certification (2015 version) (Environmental Management System - EMS), **OHSMS 45001** Certification (2018 version) (Occupational Health and Safety Management System), and **ISO 50001** Certification (2015 version) Energy Management System – EnMS, by M/s Det Norske Veritas, The Netherlands.

**(b) FSC Certification :**

The Company has also obtained International Certification from Forest Stewardship Council (**FSC**), for a further period of 5 years from 01 05 2021 to 30 04 2026, for the following 3 standards:

- FSC Standard for Chain of Custody (FSC-STD-40-004 V3-0)
- FSC Standard for Controlled Wood (FSC-STD-40-005 V3-1) and
- FSC Standard for Multi-site (FSC-STD-40-003 V2-1)

**(c) Q - E - E - G- H - S Policy:**

The Company has adopted a unified **Q - E - E - G- H - S** Policy covering:

- Q - Quality
- **E - Environment**
- E - Energy
- **G - Green Resources**
- H - Occupational Health
- S - Safety

Which is as under:

We, at SPB are committed to continually improve our Quality, **Environment**, Energy, **Green Resources**, Occupational Health and Safety Management Systems with a view to promote:

- trust of customers and other stakeholders
- **abatement of pollution**
- **efficient use of energy, water and other resources**
- **Larger use of Green resources and renewable energy**
- well being of employees and safety of occupational work place
- competence and effective participation of all employees and service providers and
- compliance of all applicable legal and other requirements

**(d) FSC - Controlled Wood Procurement Policy:**

"We, at SPB are committed to procure wood, wood fibre and pulp from environmentally and socially responsible sources and to avoid sourcing:

- Illegally harvested wood.
- Wood harvested in violation of traditional and civil rights.
- Wood harvested in forests where high conservation values are threatened by management activities.
- Wood harvested in forests being converted to plantations or non-forest use.
- Wood from forests in which genetically modified trees are planted".

**(e) TPM Policy :**

We, at SPB are committed to achieve excellence in our operations by:

- ❖ Pursuing goals of zero accidents, zero breakdowns, zero customer complaint, zero defect, zero pollution, and zero waste.
- ❖ Creating a pleasant, safe, clean and productive and participative work environment.
- ❖ Manufacturing quality products at competitive cost through technology and team work and
- ❖ Enhancing OEE of our processes and equipments.

with the practice of TPM as a way of life, by all employees

**(f) Unique advantages of Lift Irrigation Scheme using Treated Waste Water:**

The unique and innovative successful irrigation scheme using the treated wastewater, apart from the distinct advantages detailed under Part G (a) & (e) has also resulted in the following specific benefits to the farming community

in the neighbourhood for whom it is the “Life Line”:

- (i) **Value addition to land holdings of local farmers.**
- (ii) **Increase in sugarcane yield.**
- (iii) **Ready market for sugarcane in Ponni Sugars.**
- (iv) **Improvement in employment opportunities for rural public.**
- (v) **Increased agricultural income for local farmers.**
- (vi) **Improvement in the standard of living of local farmers.**

**(g) Corporate Social Responsibility (CSR) Initiatives:**

The Company has undertaken the following Community Development Measures in the adjoining Villages, as part of its **Corporate Social Responsibility (CSR)** initiatives, which include:

**(1) Drinking Water Facilities: (CSR)**

Provision of well protected and treated Drinking Water through a Network of 400 drinking water taps under the Rural Drinking Water Scheme, launched by the Company, in the neighbouring villages

Apart from the above 400 drinking water taps installed by the Company, daily supply of about 2.5 lakh litres of protected & treated Drinking Water through 5 Overhead Tanks constructed by TWAD Board and maintained by Local Panchayats, for distribution to Public, is also being provided.

**(2) Community Health Centres: (CSR)**

Provision of Community Health Centres (**4 Nos**) at the following villages:

- Ayakkattur
- Odappalli
- Pappampalayam
- Cauvery R.S

**with full time qualified Physician, Paramedical Staff and Free Medical facilities.**

**(3) CSR Activities at SPB Colony:**

- Two Churches, a Mosque and a Hindu Temple complex for employees and public in the neighbourhood
- Conducting Free Eye Camps, Blood Donation Camps, Diabetic Check

Up Camps, etc., for employees & public in the neighbourhood

- Provision of illuminators in the Highways Road from Railway Under Bridge to SPB Schools
- World Environment Day, etc. celebrated every year by inviting School children's - participation by the public in the neighbourhood, to create awareness among them
- Company provided land for ESI Hospital & Staff Quarters for the benefit of employees and public in the neighbourhood
- Company provided land for a 110 KV Sub-station of State Electricity Board for supplying quality power for the benefit of employees and public in the neighbourhood
- Company provided land free of cost for the Government High School, Pappampalayam for the benefit of public in the neighbourhood
- Company operates a Retail Outlet (IOC) for supply of **Quality and Quantity (Q & Q)** - Petrol & Diesel for the benefit of employees and public in the neighbourhood
- Company provides accommodation for the Public Library of Alampalayam Town Panchayat
- Company provides accommodation for 2 Post Offices & Quarters for Postal Staff (SPB Colony Post Office & Cauvery RS Post Office)
- Company provides accommodation for the Nationalized Bank - UCO Bank, Kadachanallur Branch and 2 ATMs of UCO Bank and State Bank of India
- Company contributes to a Type Writing Institute & Computer Training Centre, for the benefit of employees and public in the neighbourhood
- Company provides accommodation for 2 Co-operative Fair Price Shops for distribution of Ration Items to the public in the neighbourhood
- Company provides accommodation for a Tailoring & Embroidery Training Centre run by Tamil Nadu Labor Welfare Board for the benefit of employees and public in the neighbourhood
- Company provides accommodation for a Creche and Reading Room run by Tamil Nadu Labor Welfare Board for the benefit of employees and public in the neighbourhood.

#### **(4) CSR Activities for the Financial Year 2023- 24:**

- As part of CSR activities, company has spent Rs. 421.15 lakhs lakhs in total for the financial year 2023– 2024. As enclosed Annexure - 7
- Promoting Education, Expenditure on running own schools and providing infrastructure facilities to other educational institutions run by Tamil Nadu State Government bodies company has spent Rs. 95.36 lakhs
- Company contributes to laying of Bitumen Roads / Drainage Deepening Work in near by villages.
- Company provides to supply of Drinking Water to nearby villages and has spent Rs 130.46 lakhs
- Company contributes towards improved Irrigation facilities for Lift Irrigation Scheme in nearby villages.
- Company contributes to running and maintenance of Rural Primary Health Centres and other contributes to charitable institutions, rural development programs, educational assistance to deserving students, medical assistance, medical camps, etc.
- Company contributes to promoting health care including preventive health care (Covid-19 Relief activities) company has spent Rs. 23.14 lakhs in total for the financial year 2023– 2024.

#### **(h) Vision, Mission & Values:**

In our pursuit of Entrepreneurial Excellence, we epitomize the core values of our founder (late) Sri S Viswanathan, on Quality, Environment, Energy, and Occupational Health & Safety Management Systems. This is enshrined in our **“Vision”, “Mission” & “Values”** Statement, which is as under:

##### **Vision:**

To Excel as a trusted, socially responsible and customer driven organization providing maximum value to all stakeholders.

##### **Mission:**

To manufacture quality products at competitive cost through technology and teamwork.

**Values:**

- Ethical Practices
- Customer Focus
- Commitment to Society, Safety and Environment
- Professional and Transparent Management
- Empowerment and Accountability
- Adaptability to 'Change'
- Innovation and Creativity
- Emphasis on Human Resources Development, Cost Reduction, Productivity Enhancement and Resource Conservation.

**(i) World Class Manufacturing Programme (WCM):**

SPB has also embarked upon a **"World Class Manufacturing" (WCM)** programme which is a holistic approach to productivity and Quality improvement. WCM is focused on the elimination of all forms of wastes and non-value adding activities in the organization. This is achieved through the creation of a culture of continuous improvement based on the involvement of all Employees.

As part of the WCM, SPB is actively practicing the 5S Techniques for improving **"Work Environment"**, which includes "Total Productive Maintenance" (TPM) tool.

**SORT (SEIRI)**

- ❖ Separate Unwanted Items
- ❖ Tie Red Tags to the Unwanted Items
- ❖ Move the Unwanted Items to Red Line/Other Area in time
- ❖ Dispose the Unwanted Items appropriately

**SET IN ORDER (SEITON)**

- ❖ Design Layout for Storage & Work Place
- ❖ Mark Places for Every Item in the Location
- ❖ Place Every Item in its Marked Location
- ❖ A place for Everything and Everything in its Place

**SHINE (SEISO)**

- ❖ Clean up Work Place using Proper Tools as per Cleaning Schedule
- ❖ Inspect using senses (seeing, hearing, touching, smelling)
- ❖ Identify, Register & Eliminate Abnormalities

## **STANDARDISE (SEIKETSU)**

- ❖ Establish Standards/Procedures
- ❖ Follow Standards/Procedures
- ❖ Create Visual Controls
- ❖ Maintain Visibility in the Work Place for Identification, Direction, Safety, Operation, etc.

## **SUSTAIN (SHITSUKE)**

- ❖ Self Discipline at Work Place
- ❖ Give Suggestions
- ❖ Carry on 5S Activities as a matter of Habit and Enthuse Others to Practice 5S
- ❖ Conduct Self-Audit

Adoption of 5-S Techniques for improving the "Work Environment", is aimed at in achieving

- ❖ Zero Abnormality
- ❖ **Zero Pollution**
- ❖ Zero Waste
- ❖ Zero Accident
- ❖ Zero Defect
- ❖ Zero Customer Complaint

As a part of this WCM programme, all Employees have been grouped under "**Autonomous Manufacturing Teams**" (AMT) and are being exposed to various "**Lean Tools**".

Under WCM, effective Management Tools such as Total Quality Management (TQM), Total Productive Maintenance (TPM), Zero Abnormality Movement (ZAM), 5 S, PDCA Cycle (Plan, Do, Check & Act), Root Cause Analysis (RCA), Six Sigma's, Waste Elimination, Visual Management, etc., are practiced to achieve economies of operation. **The Company has received the Certificate of Membership from TPM Club of India.**

**(j) Promotion of Ancillary Units:**

**1 Ponni Sugars (Erode) Limited:**

The Company promoted the establishment of its sister concern namely M/s Ponni Sugars (Erode) Limited, during 1984, in the adjacent compound, coinciding with the promotion of the lift irrigation scheme wherein treated wastewater of SPB is being utilized for irrigating sugarcane and other crops in about 2140 acres of dry and barren lands owned by marginal farmers in the neighbouring villages.

This sugar mill utilizes the sugar cane from the lift irrigation scheme area for manufacturing sugar and spares the Bagasse (Sugar cane residue) to SPB for manufacture of paper. This sugar mill provides direct employment to about 300 persons and indirect employment to about 10,000 persons by way of various industrial/agricultural operations and fieldwork.

**2 Lift Irrigation Scheme:**

This apart, the massive Lift Irrigation Scheme using treated waste water of SPB provides improved employment opportunities to rural people and generation of more income for their livelihood, as detailed above. This lift Irrigation scheme provides various agricultural and allied jobs to the rural people, thus paving way for generation of employment opportunities and more income for them by way of value addition to their land holdings / increased sugarcane yield and improved Standard of Living.

**(k) Eco - friendly methods:**

- i. Installation of Electro Static Precipitators
- ii. Secondary Biological waste water treatment system
- iii. Increased Co-generated Power
- iv. Use of final treated waste water in pulp mill
- v. installation of Pith Press / Screw Press for Pith removal
- vi. Installation of Save-all Clarifier System in all the existing paper machines for back water recycling and fiber recovery
- vii. Installation of high efficiency Poly-disc save all filters in Paper Machine 5 for back water recycling and fiber recovery
- viii. Installation of high efficiency enclosed hood system with heat recovery system in new paper machine

- ix. Installation of energy efficient refining system in new paper machine
- x. Retrofit arrangements in Power Boilers
- xi. Replacement of steam turbines in paper machine with energy efficient DC motor drives
- xii. Installation of high efficiency three stage screening system with five stage centri-cleaning system to minimize fiber loss in new Paper Machine
- xiii. Installation of DCS in Pulp Mill along with RDH pulping, ECF Bleaching and ODL Systems.
- xiv. Installation of New chemical recovery boiler with ESP, Multi Effect - Energy Efficient - Free Flow - Falling Film Evaporator with Crystallisation Technology and Lime Mud Re-burning Kiln, both with ESP and on line stack monitoring system for SPM
- xv. Installation of R S ERCO Chlorine Dioxide Process to generate Chlorine Free Chlorine Dioxide for use in process to minimize AOX generation
- xvi. Installation of Mist Cooling System for Evaporator Condensate Cooling and used as sealing water to minimize fresh water usage
- xvii. Installation of Pump-out System for Pulp Discharge instead of blowing to minimize fugitive emission of Reacted Sulphides
- xviii. Usage of Molecular pure oxygen @ 99.7% purity for ODL / EOP stages in fiber line to ensure best possible efficiency and lower impact on environment
- xix. Heat Recovery Systems through installation of Wide Gap Plate (WGP) Heat Exchangers to capture heat prior to disposal to minimize Fossil Fuel Consumption
- xx. Installation of methane gas recovery system from Bagasse effluent and foul condensate from evaporators which is treated in anaerobic lagoon. The recovered methane gas is used as fuel in Lime kiln replacing part of furnace oil
- xxi. Installation of methane gas recovery system from Canteen effluent which is treated in anaerobic digester at Chummary hostel. The recovered methane gas is used in cooking as a bio fuel
- xxii. Installation of alkali scrubbing system in evaporators and RDH Wood Pulp Mill to control Odour

**(I) Eco - friendly Materials:**

- i. Use of Bagasse
- ii. Use of Wood from man-made plantation only (ethical sources)
- iii. Dispensation with use of bamboo

- iv. Higher use of non-fossil fuel
- v. Lower use of fossil fuels
- vi. Higher use of low ash fuels
- vii. Maximum recycling and reuse of process water
- viii. Lower use of raw water
- ix. Better house-keeping
- x. increased chemical recovery efficiency
- xi. eliminated the use of chlorine
- xii. Use of hydrogen peroxide
- xiii. Decreased consumption of power and steam
- xiv. Higher capacity utilization

#### **(m) Association for Sharing Knowledge (ASK)**

An Association viz” **Association for Sharing Knowledge (ASK)** - (High level team) has been formed for the purpose of sharing knowledge among our employees. This Association has been organizing lectures on various subjects related to Paper Industry and other relevant topics.

#### **(n) GreenCo Certification**

The Company has obtained the **GreenCo Certification** and has been rated Green Co **Gold** by Confederation of Indian Industries (CII). This rating has been achieved through the stupendous efforts taken by the Company on the Environmental front.



**GreenCo focuses on:**

- Minimizing Environmental Impact and Global Warming
- Elimination of Wastes
- Maximizing Green Resources in Our Business
- Sustainable Development



**(o) CII EHS Excellence: Special Award in Energy / Carbon Footprint for the year 2023**



- (p) EHS Award from CII SR EHS Excellence Awards Silver Award for the year 2023



We have secured CII SR EHS Excellence Award for the year 2023. Dr. K. Rajkumar, Chief Manager – Environment and Mr. Nallathambi M, Chief Manager – Safety had participated and received the award.

**(q) Kurunkadugal scheme 2023-2024**

We have developed a green belt by planting tall tree saplings (Kurunkadugal scheme) Total 624 saplings planted under kurunkadugal scheme.

| S.No | Tree Species | Planted Nos. |
|------|--------------|--------------|
| 1    | Neem         | 51           |
| 2    | Conacarus    | 425          |
| 3    | Pungan       | 49           |
| 4    | Illupai      | 88           |
| 5    | Neer marudhu | 4            |
| 6    | Poovarasu    | 85           |
| 7    | Naval        | 5            |
| 8    | Magilam      | 1            |
| 9    | Amond        | 1            |

We herewith enclosed the photos of tree saplings under Kurunkadugal scheme your kind reference.



(r) Mission LiFE

We are pleased to inform your esteemed Board that we have grandly celebrated the function in our factory premises on **20.05.2023**. **Mr. Ganesh Bhaddi, Director (Operations)** addressed the gathering about the theme for **Mission LiFE** viz. **“LIFESTYLE FOR ENVIRONMENT”**. He emphasized on importance of conservation of energy, all natural resources for the protection of environment and ecology. While talking on the subject he stressed the need to propagate this message to all friends, colleagues, family and society members to bring awareness about the environment. This talk was focused on preparing Pro-Plant – People for the future. At the end he mentioned that going green, mindful and deliberate utilization of resources, minimizing waste etc., are essential for sustainability. This was followed by **Mission LiFE Pledge in English**. **Mr. K Shanmugam, Sr. General Manager (Environment)** and **Dr. K Rajkumar, Chief Manager (Environment)** also, addressed our Employees and Contract Workmen, with a keynote speech about the theme and followed by **Mission LiFE Pledge in Tamil**. We enclose herewith a few photographs covering the said function



**(s) World Environment Day: 2023**

World Environment Day was celebrated in a grand manner in our Factory premises on 04 06 2022. The theme for this year's World Environment Day viz. **"Solution to plastic pollution"** was highlighted to the gathering Sr. General Manager (Environment) K Shanmugam and Chief Manager (Environment) Dr K Rajkumar. Tree saplings were planted in our industry premises during the occasion.



**(t) Paper Day Celebration 2023 (Eco-friendly Products)**

Every year on 1<sup>st</sup> August National Paper is celebrated in order to stress the importance of paper. This year Paper Day was celebrated by the Department of Environmental Sciences, Tamil Nadu Agricultural University Coimbatore on August 1, 2023 addressed by **Mr. Ganesh Balakrishna Bhadti, Director (Operations)** in collaboration with the Seshasayee Paper and Boards, Pallipalayam. The event served as a platform to explore the environmentally conscious aspects of paper production and its significance in sustainable practices. Although the celebration is now behind us, its impact lingers on.



ERODE - 638 007  
Date: 2024 09 11

**GANESH BALAKRISHNA BHADTI**  
Director (Operations)