

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL SOUTHERN ZONE  
BENCH AT CHENNAI**

**Appeal No. 68 of 2021**

BETWEEN:

1. M/s. Sri Mahalakshmi Hatcheries  
Represented by its proprietor  
Mr. D. Sagar Reddy  
S/o D. Venkata Ramana Reddy  
Office at Srinivasa Satram, Kothapatnam Village,  
Kota Mandal, Sidavaram Post,  
Nellore - 524 411  
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Ph +91 8978374567
  
2. Mr. Pernati Shyam Prasad Reddy  
S/o Pernati Chenchurama Reddy  
Residing at Allampadu Village, Molanganuru ost,  
Kota Mandal, SPSR Nellore District  
Andhra Pradesh - 524 411  
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... Appellants

And

1. State Environment Impact Assessment Authority (SEIAA)  
Represented by its Chairman  
No.33-26-14, D/2 Near Sunrise Hospital,  
Pushpa Hotel Centre,  
Chalamvari Street, Kasturibaipet,  
Vijayawada 520010,  
Email: [chairman@appcb.gov.in](mailto:chairman@appcb.gov.in)  
Ph 0866 2463200.
  
2. Andhra Pradesh Pollution Control Board  
Represented by its Member Secretary,  
D.No.33-26-14, D/2 Near Sunrise Hospital,  
Pushpa Hotel Centre,  
Chalamvari Street, Kasturibaipet,  
Vijayawada 520010,  
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Ph 0866 2463200.
  
3. M/s. Divi's Laboratories Limited  
Represented by its Managing Director  
303, DIVIs towers,  
Cyber Hills, Gachibowli,  
Hyderabad 500 032.  
Email: [mail@divislaboratories.com](mailto:mail@divislaboratories.com)  
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... Respondents



**ADDITIONAL AFFIDAVIT FILED ON BEHALF OF THE 3<sup>RD</sup> RESPONDENT**

I, K. Subba Rao, aged about 57 years, representing the answering respondent, having office at 1-72/23(P)/DIVIS/303, Divi Towers Cyber Hills, Gachibowli, Hyderabad, Telangana, 500032, India, having temporarily come down to Chennai, do hereby solemnly affirm and sincerely state as follows:

1. I am the General Manager (erstwhile Deputy General Manager) of the answering Respondent herein and as such well acquainted with the facts of the case and competent to swear to the present Affidavit.
2. I state that during the hearing on 12.10.2022, submissions on behalf of the answering Respondent were made to point out that the discharge into the sea is only a NaCl or the saline water and the salinity level is much lower than the salinity of the sea water. This Hon'ble Tribunal heard brief submissions on behalf of all parties and directed the APPCB to file a detailed report to state whether the discharges of the answering Respondent are likely to contain only NaCl or any other pollutant mixed and whether the discharge even if it contains primarily NaCl, will alter the salinity of the sea water especially at the point of discharge. It was further pointed out on behalf of the answering Respondent that establishment of the ZLD will lead to a higher carbon footprint and therefore, it is not advisable to install the ZLD system. This Hon'ble Tribunal raised queries as to how and to what extent carbon footprint will be increased due to ZLD system. The answering Respondent seeks to set out its submissions in this regard as below:
3. The answering Respondent states that, as per the Environmental Clearance (EC) issued by State Environmental Impact Assessment Authority (SEIAA), Andhra Pradesh - Ministry of Environment, Forest and Climate Change (MOEF&CC) No: SEIAA/AP/VSP/IND/07/2020/1971/157.09/153.11- 318 dated 28.06.2021 for the proposed project, one of the conditions (at Paras 11 and 12) is as under:



**“Wastewater generation:**

11. The total wastewater generation is 2470 KLD, out of that; 1002 KLD is from Process; Reactor and Floor Washings - 180 KLD, Boiler - 425 KLD, Cooling Tower - 420 KLD, RO I DM plant- 200 KLD, Domestic Needs - 90 KLD, Hostels - 153 KLD shall be treated effluent meeting sea discharge limits shall be disposed into sea through a dedicated marine outfall.

12. High COD & Low TDS shall be sent to incinerator / stripper, Low COD & Low TDS shall be sent to conventional ETP and the Low COD & High TDS effluents are routed to-MEE and rejects of MEE shall be sent to ATFD. High TDS & High COD effluents shall be sent to Stripper with scrubber followed by MEE & ATFD, Stripper condensate shall be sent to authorized vendors/cement plants. The condensate of the MEE shall be sent to RO/Conventional ETP and treated along with LTDS & LCOD effluents. The permeate from the RO plant shall be used in the plant and rejects to MEE/Conventional ETP.”

Consent for Establishment (CFE) for the proposed project is issued by Andhra Pradesh Pollution Control Board (APPCB) Order No. 258/APPCB/CFE/RO-NLR/HO/2020 dated 02.12.2021, wherein one of the conditions for Treatment and Disposal methods of Industrial Effluent is given in Page no 05 of 11 under Table “Treatment & Disposal – Source of Effluent, Treatment Units, Mode of Final Disposal. Copy of CFE is attached as **Annexure – 1**.

Source of effluent	Treatment units	Mode of final disposal
HTDS - Process	MEE -13.5 KL/hr & ATFD - 3.5 KL/hr capacity	MEE condensate and ATFD condensate mixed with low TDS effluents
High COD – Process	Stripper - 15 KL/hr capacity	Stripper condensate to cement industries. Stripped off effluent to ETP.
HTDS & HCOD	Stripper-15 KL/hr, MEE -13.5 KL/hr & ATFD- 3.5 KL /hr	MEE condensate and ATFD condensate mixed with low TDS effluents for further treatment in ETP.
LTDS – Process, washings, scrubber water	ETP of 1200 KLD capacity consists of Oil & Grease traps, Equalization cum neutralization tanks, Primary settling tanks, Aeration tanks, Settling tanks, Sludge drying beds, Temporary storage tanks, Guard ponds (6nos. x 800 KL)	The treated waste water proposed to discharge into the sea through marine outfall.
LTDS (Boiler blow down, Cooling town blow down & DM plant/ Raw RO plant reject) + condensate from MEE, ATFD		
NaCl stream effluents	to Neutralize	The Neutralized NaCl effluents proposed to discharge into the sea through marine outfall.
Domestic	Two STPs of capacity 250 KLD each	To utilize for greenbelt development after treatment in STPs



4. Based on the said condition, the answering respondent treats the industrial effluent generated from the industry at different stages of the Effluent Treatment process. The proposed Captive Effluent Treatment Plant (ETP) with of three stages of Treatment process is:

- a) Primary Treatment – Solid Removal
- b) Secondary Treatment – Bacterial Decomposition
- c) Tertiary Treatment – Extra Filtration

5. All three stages of the treatment process are common in Zero Liquid Discharge (ZLD) ETP, and a similar treatment process is proposed for the answering respondent's Captive Effluent Treatment Plant (ETP).

- a) All Process effluent contains high organic and inorganic substance/chemicals which are sent to Forced Evaporation Process (MEE & ATFD) and no process effluent is allowed to discharge into the sea. The Respondent states that mixed salts generated as hazardous waste are sent to TSDFs and residues are sent to the Cement industry as Alternative Fuel – similar to ZLD System.
- b) It may be noted that effluent containing low organic and inorganic substance/chemicals are treated through primary and secondary treatment which removes maximum organic and inorganic substance/chemicals present in the effluent and converts that into ETP Sludge. This ETP Sludge is sent to TSDFs as Hazardous waste – similar to ZLD system.
- c) As per the condition in the EC, the treated effluent is sent for tertiary treatment to RO Plant for excess filtration, which will be reused/recycled by the industry – similar to ZLD system.
- d) Thereafter, only excess treated effluent and RO Rejects which are not reused in the industry is discharged into the sea – conventional treatment with sea discharge.



6. It is pertinent to state that the answering respondent has taken initiatives based on high level scientific approach in order to separate the NaCl salts as a separate stream of effluent from the process which is then goes through a neutralization process. This NaCl effluent contains the salt with the similar properties of sea salt present in sea water, which is further diluted with the excess treated water to meet the marine discharge standards and then discharged into the sea. The proposed process avoids mixing NaCl effluent with High TDS and High COD stream which is treated through forced evaporation process (MEE & ATDF) and generates tons of salts (i.e., MEE salts & ATFD salts). These salts are categorised as hazardous waste due to a mix of rejects salts from High TDS, High COD and is sent to TSDFs as per Hazardous and other Wastes (Management & Transboundary Movement) Rules, 2016, which eventually ends in TSDF Landfill.
  
7. The answering respondent states that they do not propose to discharge the total amount of effluent generated from the industry into the sea and it is the principal of ZLD system which is followed in every possible way in the proposed captive ETP to reuse/recycle the treated water in the industry. This will thus, reduce the quantity of freshwater intake. It is also not the case that the effluent is discharged without any treatment and industry effluent is treated properly which goes through all three stages in order to remove maximum chemical substance from the effluent and meet the below discharge prescribed standards and get rid of all kinds of toxicity as per the regulations and guidelines stipulated by the national level scientific experts and scientist of the various Regulatory boards like MOEFCC, CPCB, State PCBs, and National Industrial Scientific Research laboratory appointed by Government of India like NEERI, NIO, etc.
  
8. Being a pharmaceutical industry, the answering Respondent has limited possibilities to use the treated effluent in non-process activities to maintain the 99.99% purity in its bulk drug and API production process. Therefore, the excess treated effluent is proposed to be discharged into sea after meeting the Marine discharge Standards under the Schedule IV of Environmental



(Protection) Rules, 1986 notified by Ministry of Environment and Forests, Government of India vide G.S.R.422 (E), dt.19.05.1993 and amendments thereof. These prescribed standards are maximum allowable limits only and the treated effluent may not necessarily contain all constituents. If treated effluent meets the prescribed standards, there would not be any impact on the surrounding marine environment. It is stated that the industry shall install a marine discharge pipeline from Landfall point to a distance of 1 km into sea and the discharge is done at the depth of 8m under the sea with the help of three (3) + one (1) spare diffusers for high dilution rate in a short time period. The proposed dedicated marine outfall is designed based on the suggestion and conditions recommended by the expert committee of APPCB, APCZMA, SEAC, SEIAA and shall be installed as per the APPCB Marine outfall SOPs. The Proposed Marine Discharge Pipeline and diffusers designs are attached as **Annexure – 2.**

9. It is reiterated that before discharging into the sea, treated effluent is stored in a guard pond with double lock & key system of which one is held by the APPCB, and a pan tilt zoom online with night vision camera is installed and connected to CPCB and APPCB website for 24x7 surveillance. It is relevant to point out that the following precautionary measures are mandated by APCZMA under CRZ Rules 2011 and its amendments and by APPCB under the Water Act 1974 and Air Act, 1981 in order to allow treated effluent to discharge into sea to ensure that the treated effluents are free from toxic substances/chemicals which might affect the Marine Ecosystem:

- a) The quality of the water of the treated effluent stored in the guard pond for discharge is tested by APPCB in their labs to ensure it is in compliance with marine discharge standards by APPCB Regional/Zonal officials.
- b) The online continuous Effluent Quality Monitoring Station (OCEQMS) is installed and connected to APPCB and CPCB for 24x7 monitoring of effluent quality and quantity to find out the impact on marine life/flora/fauna, due to discharge into the sea.



- c) Bio - Assay test (Bureau of Indian Standards IS 6582 - Part 2) is conducted as per the guidelines of MoEF&CC and CPCB, to identify if toxicity of treated effluent will affect marine ecology. *Brachydanio rerio* (Zebra Fish) is used as a test fish species as this species is very sensitive to the toxicity present in marine water. Bio-assay test is conducted on different effluent in various concentrations and the test is conducted for 4 days (96 hours). The effects on zebra fishes in different concentrations will be noted down at regular time intervals and a report of the same is submitted to APPCB every six months.
- d) Regular Annual monitoring of coastal waters is carried out by a reputed institution, like NIO for testing water quality near the proposed Marine outfall point (MOP) location, under APPCB.

10. It is relevant to state that the APPCB has issued a notice (No. 2313/PCB/ZO-VSP/NIO/2022) to all sea discharge industries on 27.05.2022 with an instruction to assess the quality of treated effluent on monthly time scales for a period of one year through the bio-assay experiments and to assess the levels of trace metals and major organic compounds in the treated effluent by the CSIR-National Institute of Oceanography (NIO), Visakhapatnam. Accordingly, the answering respondent is carrying out monthly monitoring of Eco - Toxicity test of the treated effluent discharged into sea at its Unit - 2, Chippada Village, Vishakhapatnam District through CSIR-NIO and has been submitting the same to APPCB on a monthly basis. The CSIR - NIO tests the following parameters of the treated effluents that are stored in the guard pond:

- a) **Treated Effluent Characteristics** - Dissolved Oxygen (DO), Biological Oxygen Demand (BOD), pH, Nitrate - N, Phosphate - P, Silicate - Si, Total Suspended Matter (TSM), Chlorine.
- b) **Bacterial Counts** - Total Viable Count (TVC), *Escherichia coli* like organism Count, *Enterococcus faecalis* like organism Count, *Vibrio* like organism Count, *V. cholerae* like organism Count, *V. parahaemolyticus* like organism Count.



- c) **Bioassay Test** – Survival rate, Mortality rate, Median Lethal Concentration (LC<sub>50</sub>)
- d) **Trace Metals** – Vanadium (V), Chromium (Cr), Manganese (Mn), Iron (Fe), Cobalt (Co), Nickel (Ni), Copper (Cu), Zinc (Zn), Arsenic (As), Selenium (Se), Cadmium (Cd), Lead (Pb)

11. The CSIR – NIO concluded that all parameters tested in the treated effluent is well within the limits of CPCB Standards. Thus, the treated effluent has qualified for the bio-assay test since trace metal concentrations in the effluent is also very well within the limits of CPCB. The recent report of the same is attached as **Annexure – 3**. The Online CEQMS report of treated NaCl effluent discharged into sea of Unit – 2 is attached as **Annexure – 4**. The report is downloaded from APPCB website (Real Time Data Acquisition and Monitoring) and as is evident from the report, treated NaCl effluent is well within the standards of APPCB and CPCB Marine Discharge Standards.

12. Further, based on a direction issued by the Hon'ble NGT vide order dated 21.09.2020 in O.A. No. 829 of 2019 in the matter of Lt. Col. Sarvadaman Singh Oberoi vs Union of India & Ors., CPCB has requested all State PCBs to submit "*Information on Municipal Sewage, Industrial Effluent, Waste management scenario in Coastal Area*" along with an action plan in compliance with above mentioned order. Accordingly, APPCB has conducted a detailed study in 9 districts having coastal line covering distance of 975 Kms starting from Srikakulam to Nellore. Below are some of the facts as per the APPCB reports submitted to CPCB:

- a) There are 165 industrial industries with consent to discharge into sea located in the Coastal areas of Andhra Pradesh and an additional 126 industries located in 4 major Industrial clusters/parks/area, Vishakhapatnam which are issued with a single consent with single discharge point for their respective industrial cluster/parks/area.
- b) The APPCB has installed monitoring stations at 40 locations in the Coastal Marine outfall locations as per the guidelines of National Water



Quality Monitoring Programme (NWQMP), India and are monitoring from 2010.

- c) The APPCB has submitted annual average values of quality of Coastal Water of Bay of Bengal for the period from 2010-2011 to 2019-2020.
- d) One of the monitoring stations is installed at "Confluence of marine outfall of M/s. Divi's Laboratories Ltd., Chippada."
- e) The historical data (from 2010-2011 to 2019-2020) of Coastal water monitored in station near the answering respondent's unit discharge point presented in the report, shows that the industry has not changed or impacted the Coastal/Sea water quality due to the Treated effluent discharged by it. All the Coastal quality parameters are complying with the Primary Water Quality Criteria for SW IV norms (For Harbour Water) notified under the Environmental (Protection) Rules, 1986.
- f) At the conclusion of the report, it states that "From above it can be inferred that, there is no significant industrial pollution caused due to the full-fledged treatment systems provide by the industries. The Coastal waters at Some places are contaminated due to the flow of untreated sewage through drains joining into the Sea. The MA&UD department is proposing to develop adequate capacity of Sewage Treatment System (STPs) along with the requisite facilities for collection, transportation & treatment of Sewage." The report dated 23.11.2020 is attached as **Annexure – 5**.

13. From the above, it is evident that the Marine Discharge of Treated effluent from the industries which has full-fledged treatment systems has not created any significant pollution or has impacted the quality of sea water or the marine ecology/flora/fauna. A similar monitoring station is also installed near the Nellore coastal line, Krishnapatnam to monitor the quality of Coastal water.



14. Further, it is pointed out that the MoEF&CC and CPCB, Government of India has stipulated the Marine Discharge standards for industries after considering the safe exposure level concentration which will not disturb the marine ecosystem and the answering respondent industrial effluent will be treated in proposed captive ETP with the Best Available Technology (BAT) to achieve the prescribed standards.
15. In addition to the above, the industry has proposed to install a dedicated Marine discharge pipeline as per the APPCB SOPs. The pipeline distance from the Landfall point to Sea is 1 km and three (3) + one (1) spare Diffuser will be installed at a level of 8m below the sea. The applicant Hatchery intake sea water is located at a distance of 2.6 km from the industry discharge pipeline. As per the "Marine Environmental Impact Assessment Study for The Disposal of Effluent into the Sea" studied by an empanelled accredited body of the MOEF&CC viz. Indomer Coastal Hydraulics (P) Ltd., Chennai for the proposed bulk drug manufacturing unit, the effluent gets diluted to the order of 50 times at 250 mtrs from the proposed outfall during fair weather. During South-West monsoon and North-East monsoon periods due to combined action of wind and turbulent waves, it has been observed that the effluent gets diluted to the order of 50 times within 50 mtrs from the proposed outfall.
16. It is therefore submitted that, there will be no disturbance or adverse impact to the Appellants intake sea water that is located 2.6 km away due to the proposed industrial discharge treated effluent, as also that the proposed industrial discharge treated effluent will not hamper or cause any adverse effect to aquacultures. It is also submitted that the proposed area would strictly function in compliance with rules and regulations issued under all applicable laws, including laws relating to the protection of the Environment such as Environment (Protection) Act, 1986, Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981.
17. It is further submitted that, as per the International Journal "*Conventional and Zero Liquid Discharge Treatment Plants for Textile wastewater through the lens of Carbon footprint analysis*" published in the International Water Association



(IWA) by Authors from Environmental and Water Resource Engineering division, Indian Institute of Technology Madras (IIT-Madras), the Carbon footprint of the ZLD treatment plant was found to be nearly 35% higher than the carbon footprint of the conventional treatment plant with a capacity of 4.4 Million litres per day (4400 KLD). The said journal is filed herewith as **Annexure – 6**.

18. According to the report "*Analysis of flow and energy aspects of Zero Liquid Discharge (ZLD) technology in treatment of tannery effluents in Tamil Nadu, India*" prepared by The United Nations Industrial Development Organisation (UNIDO) and presented during 34<sup>th</sup> International Union of Leather Technologists and Chemists Societies (IULTCS Congress), Chennai, a comparative study of energy consumption, operating cost and CO<sub>2</sub>e emissions are calculated for RANITEC CETP with their conventional Primary, Secondary & Tertiary Treatment (PST) against additional ZLD stage installed to meet ZLD system. The said report is filed herewith as **Annexure – 7**. Some of the following impacts of additional ZLD stage as compared to the conventional treatment were found:

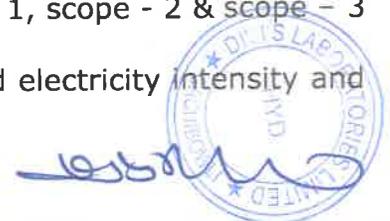
- a) The consumption of electrical energy went up nearly three (3x) times.
- b) The overall energy consumption (electrical and thermal) went up nearly Fifteen (15x) times.
- c) The share of ZLD energy in total energy consumed is about 93%.
- d) Total CO<sub>2</sub>e emissions per year is 20,686 tons/year, the share of ZLD stage alone is 17,298 tons/year.
- e) The ZLD stage has increased the CO<sub>2</sub>e emissions of the RANITEC CETP plant by about six (6) times.
- f) Salt residue represents a very serious environmental challenge, quantities generated by RANITEC plant is 5043 tonnes in just one year.

19. The above case study in India and the results published in International Journals undeniably confirms the enormous increase in Carbon footprint and additional mixed salts loads from ZLD Plant compared to the Conventional treatment. As stated hereinabove, the Respondent industry does not discharge



untreated effluent directly into the sea and the effluent is treated in the Captive ETP, has proposed to reuse/recycle the required treated water in the Industry and the excess treated effluent is stored in the guard pond which will be tested by APPCB and discharged into the sea only after meeting the Marine discharge Standard stipulated by MOEFCC and APPCB/CPCB as per the EPA act 1986, Water Act 1974. It is reiterated that the guard pond storage and discharge is under double Lock and key system with 24x7 online camera surveillance, if any contamination or Pharmaceuticals API concentration found in the treated effluent, the treated effluent is sent back to the ETP for further treatment and the same is not allowed to be discharged into the sea. Therefore, the proposed Captive ETP does not harm the environment/ecosystem since it generates less Carbon emission CO<sub>2</sub>e and Green House Gas (GHG), has a reduced additional mixed salt generation, reduced use of fossil fuel and electricity consumptions as compared to having an additional ZLD process.

20. It is submitted that the ZLD system is usually implemented by an industry that is located in a landlocked area, near river and lakes, where there is a chance of ground water contamination, locations of critical and overexploitation of ground water, and to reduce the ground water borewell intake. The answering respondent has not proposed to discharge the entire treated effluent into the sea. As the industry is located near coastal region, the respondent has proposed to discharge the excess treated effluent left after reusing/recycling the treated water in the industry as per its requirements and possibilities. Hence, it is submitted that there is no negative impact to the Environment due to the proposed marine discharge activity. By allowing an industry located near the coastal area to discharge the excess treated water into the sea after meeting the Marine Discharge Standards stipulated by CPCB and APPCB, in fact, it creates a positive impact to the environment by reducing carbon footprint (CO<sub>2</sub>), greenhouse gas (GHG), hazardous waste like rejected salts/mixed salts which eventually end in landfills. The answering respondent continuously strives to implement the Best Available Technologies (BAT) to reduce its carbon footprint, carbon emission (scope - 1, scope - 2 & scope - 3 emissions), water consumption intensity, energy and electricity intensity and



fossil fuel consumption. The answering respondent ensures that all possible methods are used to gradually increase reusing the treated effluent water into the system which will reduce the quantity of freshwater intake. This will help industry to become more sustainable.

21. In addition to the above, it is pointed out that the proposed site is surrounded by Industrial Parks i.e., North Node Krishnapatnam Industrial Estate in Chennai and Bangalore Industrial Corridor (CBIC) by National Industrial Corridor Development Corporation Limited, Government of India and Navayuga Industrial Estate/Park by Krishnapatnam Infratech Limited proposed for Synthetic Organic Chemical Industry.

22. Further, only three hatcheries are present in the 10 km radius of the proposed site and out of three, only Mahalakshmi Hatchery is functional which is located around 2.5 km away from proposed site. Teknomin Hatchery is partially operational and is located 2.2 km away and VSP Hatchery which is not in operation is located 2.8 km away from the proposed site. It is stated that, out of the two hatcheries, only Mahalakshmi Hatchery has installed a pump house for intake of sea water in seashore which is located 2.5 km away from the proposed marine discharge landfall point and 2.6 km away from the effluent discharge point (Diffuser Location in Sea at a depth of 8m). The answering respondent states that no sea water intake pipelines have been installed by the two other hatcheries as Teknomin hatcheries has removed its sea intake pipelines and VSF hatcheries has been non-functional for a long time. It may be relevant to state that these hatcheries are installed with wastewater discharge near high tide line, and they discharge their wastewater on the land near seashore without taking any measures for environmental safety. All three hatcheries are located inside the Coastal Regulation Zone 0 to 500m from the high tide line – Teknomin Hatchery is located at 340m from HTL, Mahalakshmi Hatchery (Appellant) is located at 347m from HTL and VSF Hatchery is located at 112m (0 – 200 No development Zone) from HTL. Google earth Satellite image details are filed herewith as **Annexure – 8**.


23. It is pertinent to submit that this Hon'ble tribunal in O.A. No. 5 of 2021, has noticed the way in which hatcheries operate and issued the following order on 29.09.2022:

*"(2). All the aquaculture (Shrimp hatcheries) farms which are operating in the CRZ area as defined under the CRZ Notification, 2011 and 2019 should obtain CRZ Clearance from CZMA apart from obtaining the registration under the CAA Act, 2005.*

*(3) Those hatcheries which are operating within the prohibited zone should be removed by the CAA and initiate prosecution.....*

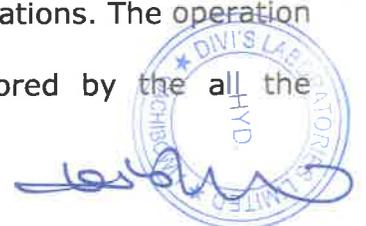
*(6) If the aquaculture activities are not coming under the purview of the State Pollution Control Board, steps may be taken to issue appropriate guidelines or directions to regulate these hatcheries and bring them under the purview of the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.*

*(7) The authorities are directed to ensure that there is no discharges of any chemical effluent in the "Inter Tidal Zone" affecting the health of inter tidal life and also polluting the shore waters.*

*(8) The small-scale fisheries may be separately identified and appropriate compensation be awarded. Finally, there should be a proper regulatory check over these hatcheries units and only those which are legally permissible with valid permission should be allowed to set up and operate"*

As the Appellant hatchery is operating in CRZ Area and discharge their wastewater on the seashore, the above order is applicable to them.

24. The Answering respondent states that its units at Hyderabad and Vishakhapatnam are in compliance with all the conditions and safety standards stipulated by MoEF&CC, CPCB, and State PCBs under Environmental Protection Act, 1981, The Water (Prevention and Control of Pollution) Act 1974, The Air (Prevention and Control of Pollution) Act 1981. It is stated that answering respondent prioritises health, hygiene, and the environment and has always adopted advance scientific approaches with implementation of best available technology to safeguard environment in its day-to-day operations. Never in the past has there been any evidence to establish that the answering respondent's functioning has caused any health problems to the people or has impacted the environment due to its manufacturing operations. The operation of the answering respondent is being closely monitored by the all the



regulatory authorities both national and international agencies, various stake holders and routine inspections and environmental audits are conducted from time to time to ensure that industry is in compliance with all applicable standards and norms. Since inception, no regulatory authority has found any violation of the conditions issued in EC, CFEs, CFOs, authorizations and therefore the allegation made by the appellant on the third respondent is a misconception and is vehemently denied.

25. An increase in the rate of population, a continuous change in lifestyle and physical environment has resulted in the demand of drugs, medicines to address the well-being of mankind. The sustainable development of an Indian pharmaceutical industry is important in order to make India one of the largest global providers of quality medicines at reasonable prices. The answering respondent has proposed to set up its Bulk Drug and API manufacturing unit in Krishnapatnam Industrial Area, Kothapatnam (V), Kota (M), SPSR Nellore District, Andhra Pradesh. With huge experience, expertise and being a pioneer in pharmaceutical industry, the establishment of new manufacturing units will enable easy availability, accessibility and affordability of lifesaving drugs widely used for controlling various types of diseases.

26. For the proposed manufacturing unit, Environmental Impact Assessment (EIA) studies was carried out by Ramky Enviro Services Pvt Ltd., an accredited EIA consultant by National Accreditation Board for Education and Training (NABET), Quality Council of India (QCI), MoEF&CC and Marine EIA Studies carried out by Indomer Hydraulics (P) Limited, Chennai which is an empanelled accredited body of the MOEF&CC along with Indian Remote Sensing (IRS), Anna University, Chennai as an authorised agency of Ministry of Environment, Forests and Climate Change for demarcation of CRZ area including HTL, LTL duly superimposing the activities on the map of approved Coastal Zone Management Plan (CZMP) who examined the environmental and social impacts and proposed the mitigation measures for identified impacts. All the team members who were involved in Terrestrial EIA/EMP and Marine EIA Studies are highly trained professional who holds PhDs and Post Graduations in specialized



subjects like, Environmental Experts (Air, Water and Solid Waste), Ecology and Biodiversity Experts, Risk Assessment and Hazardous Management, Hydrogeology expert, etc.

27. The above prepared reports and applications were submitted to regulatory authorities i.e., MoEF&CC (SEAC & SEIAA), APPCB, APCZMA who laid down standard safety norms and precautions which are to be adhered by the answering respondent to obtain the necessary approvals for the proposed industry as per the EPA Act 1981, Water Act 1974, Air Act 1981, and CRZ rules with further amendments. The regulatory authority boards consist of Scientists and Subject Experts with vast experience in the field of Environment has done detailed scrutiny of the application and carefully evaluated the identified impacts and discussed in detail with all the experts on the mitigations proposed of the identified impacts for the proposed industry. The regulatory expert committee has also considered all the representations and letters from various stake holders remarks like Fisheries Department, All India Shrimp Hatcheries Association, Joint Committee report dt. 07.03.2020 including the Appellant herein. Representations from nearby Hatcheries, suggestion from APPCB Regional Office Executive Engineer and issued a necessary clearances/approval as listed below for the answering respondent industry for Manufacturing Bulk drug and API. Accordingly:

- a) APPCB issued CFE (NOC) dated 28.10.2020 - for Marine Outfall to discharge of Treated effluent by laying of treated effluent discharge pipeline for Proposed Bulk Drug Manufacturing unit at Kota Mandal, Nellore, AP by the third Respondent.
- b) APCZMA issued CRZ (NOC) Clearance dated 04.02.2021 - to the third Respondent's Krishnapatnam Unit, Krishnapatnam Industrial Area, Kothapatnam Village, Kota Mandal, SPSR Nellore district, Andhra Pradesh - Proposal for discharge of treated effluent (1727 KLD) by laying of treated effluent discharge pipeline.



c) SEIAA has agreed the recommendation of SEAC, AP and recommended to issue Environmental Clearance (EC) dated 28.06.2021 to the third Respondent's Krishnapatnam Unit, Krishnapatnam Industrial Area, Kothapatnam Village, Kota Mandal, SPSR Nellore district, Andhra Pradesh.

d) Consent for Establishment (CFE) for the proposed project is issued by Andhra Pradesh Pollution Control Board (APPCB) vide Order No. 258/APPCB/CFE/RO-NLR/HO/2020 dated 02.12.2021.

28. In addition to above, answering respondent has submitted all the supporting document of the real-life facts, which shows that the treatment technology of the Captive Effluent Treatment plant and dispose of excess treatment effluent in the sea after meeting the marine discharge standards has been chosen based on a scientific approach as a sustainable solution. The industry has assessed all the pros and cons of the Best Available Technologies available in the Globe before proposing the coastal discharge of the excess treated effluent.

29. The implementation of ZLD system by an industry is to avoid any chemical contamination in the ground water and land/soil. This might be considered as the best solution for an industry located near rivers/lakes and landlocked locations where discharge of treated effluents will contaminate fresh water and agricultural fields. But despite the main goal of ZLD being reduction of water pollution and improving water sustainability, application of ZLD also results in unintended environmental impacts like, additional Waste generated in ZLD system like additional MEE Salts, ATDF salts, ETP sludge due to treating of RO rejects, and more chemicals are used to treat the waste water for reusing. ZLD system also consumes large amounts of energy leading to significant emission of Green House Gas (GHG), Carbon (CO<sub>2</sub>) emissions from the thermal process and filtration process. As the feed water becomes more concentrated due to continuous recycle of excess treated water in to the ZLD system, it increases the salinity. The requirement of additional energy for operating ZLD Treatment plant also increases. Hence, the carbon footprint from the additional energy, fossil fuel consumption, electricity consumptions will still be higher



than a Captive Effluent treatment with disposal option. The environmental impacts of ZLD need to be better understood in respect of the nature of the industry manufacturing process and geographical location of the industry. As mentioned hereinabove, being a pharmaceutical industry, the answering respondent is not permitted to use treated effluent water in its manufacturing process so as to maintain the 99.99 % purity and the treated effluent water is limited to use only in non-process activities like boilers, cooling towers, floor wash and gardening. Accordingly, the answering respondent has proposed to reuse the treated water in non-process activities and discharge the excess surplus treated water into sea after meeting the Marine Discharge standard stipulated by MOEF, CPCB and APPCB in a dedicated marine discharge pipeline. Moreover, the answering respondent is allowed to discharge effluent only if the ratio of PEC (Predicted Environmental Concentration) & PNEC (Predicted No Effect Concentration) is less than 1 ppm and those effluents having >1 ppm will be directly subjected to Forced Evaporation Systems. Therefore, all effluents with high concentration of Organic and inorganic compounds are treated in ZLD process through Forced Evaporation like MEE and ATFD.

30. The Respondent states that a pre-analysis of treated effluents will be carried at both in-house and externally by PCB Zonal Laboratory for various parameters prior to discharge. The effluents are treated in sophisticated facilities until it attains the Dissolved Oxygen ("DO") concentration of 4ppm. As per the notification issued by MoEF&CC Govt. of India, for the proposed industry, the Marine Outfall Position (MOP) has been designated by considering various parameters like Dispersion Modelling Study, Rate of Dilution and Marine Impact Assessment through an accredited /empanelled and reputed agency, Indomer Coastal Hydraulics Pvt Limited. It is pertinent to note that the proposed industry is Bulk Drug and API manufacturing industry, and no fermentation process is proposed, therefore, no antibiotic products are manufactured in the proposed unit and as such, there can be no antibiotics present in discharge water.



31. The answering respondent has also provided reports from various stakeholders and regulatory authorities like NIO, CPCB, APPCB, that confirm that marine discharge of treated effluent from the Industries which have full-fledged treatment systems do not create any significant pollution or adversely impact the quality of sea water or the marine ecology/flora/fauna, therefore, the Appellant's allegation that the treated effluent from the Industry impacts sea water intake for the hatcheries is without reason. In fact, the effluent from sewage drains and wastewater discharge from hatcheries has caused significant pollution to the quality of sea water.

32. The Appellant has filed an additional typed set of documents dated 11.10.2022 with various documents that are of no relevance. The answering Respondent wishes to respond to the same as hereunder:

- a) Document no.4 is the Environmental clearance issued in favour of answering respondent's unit located in Nalgonda, Telangana and the same is irrelevant to the present appeal.
- b) Document No.6 is an article published by The Hindu - the answering respondent states that the contents of the article is a general misconception. It is submitted that the answering respondent is not discharging any toxic effluent into the SEA. The discharge is only treated effluent after meeting the Marine Discharge Standard issued by MOEFCC and CPCB/ State PCB. It is further submitted that APPCB has entrusted the project to Council of Scientific & Industrial Research - National Institute of Oceanography (CSIR - NIO) to assess the impacts of treated effluent generated through the marine outfall from the industries situated in the coastal region of AP and NIO has concluded that there is no impact on the marine Ecosystem due to discharge of Industries treated effluent.
- c) Document No.7 is G.O. Ms. No. 64 - In this regard, it is stated that the proposed manufacturing unit is not in any of the locations (Medak, Ranga Reddy, Mahaboobnagar and Nalgonda District) mentioned in G.O. Ms. No. 64 which relates to the state of Telangana (Land locked



territory). The proposed project is located at Kothapatnam Village, Kota Mandal, Nellore District, Andhra Pradesh. Since the project is located near Bay of Bengal, it has the feasibility for the discharge of treated effluents into Bay of Bengal after meeting the sea discharge standards prescribed by APPCB in CFE/CFO based on the guidelines issued by CPCB and MOEFCC.

- d) Document No.8 is an article published by the Royal Society – In this regard, it is stated that this article is not anywhere related to treated water discharge by the pharmaceutical manufacturing industry. It states, *“Large centres of human population are often found in coastal areas and pharmaceutical releases via municipal effluent discharges are probable due to consumption of antibiotic by Human and veterinary population”*. It is about Wastewater Treatment Plants (WWTPs) of sewage wastewater which is not related to industry wastewater treatment plant. The article also provides clear information that *“Pond-based farms located in coastal areas are also a source of antibiotics entering coastal waters through leaks and discharge of wastewaters which can contain elevated concentrations of pharmaceuticals. Extremely high antibiotic concentrations of up to 2.5 mg l-1 were measured in water samples from shrimp ponds in Vietnamese mangroves [32].”* This is of extreme importance as it provides of that pond-based farms are also high source of antibiotics accumulation.

Even as per the article, the major source of pharmaceutical concentrations in the marine ecosystem are sewage effluents, **Aquaculture, Animal husbandry & Horticulture**, Waste Disposal (Leachate from Coastal landfill and Seafills). Both these articles have not presented any information that the pharmaceutical concentration in the marine eco system is due to industries effluent. The article concludes stating that **“The Majority of the data reported to the date of Pharmaceutical Concentration in the Marine Organisms for Antibodies used in Aquaculture.”**



- e) The Respondent states that proper treatment and disposal of hatchery wastewater discharge will reduce disease problems within the hatcheries. It is also revealed that most hatcheries are run as open systems, regular intake of seawater and release of effluents leads to water quality deterioration. It is also said that only a very few hatcheries employ wastewater treatment systems before discharging into the open environment. In the case of mortality due to disease, dead animals are disinfected with chemicals and disposed of either within the hatchery compound, outside the compound or into the sea close to the hatchery operation. The Appellant Hatcheries and the other two hatcheries are in CRZ Area i.e., located within 500m from High Tide Line, and they discharge their effluent on the seashore in open land and intake the Sea water pumphouse installed on seashore. These practices impact the seashore area, contaminate the land area and coastal ecosystem. The article submitted by Appellant itself is proof that the pharmaceuticals compound found in their fish and shrimp hatcheries are from the discharge of Aquaculture. Photographs of Appellant hatchery discharge outlet is attached as **Annexure – 9**.
- f) The Respondent states that Document Nos. 10 and 11 is irrelevant to the present appeal.
- g) The Respondent states that the Document No. 16 which is the requisition by the 3<sup>rd</sup> Respondent to consider the project under "B2" category in obtaining EC. In this regard, it is submitted that the MOEFCC Issued the Gazette Notification S.O 1223(E) stating that the MOEFCC "*deems it necessary to expedite the prior Environmental Clearances to the Projects or activities in respect of bulk drugs and intermediates*". Subsequently, the same provision has been extended further till December 2021 vide notification no. S.O. 2859(E). Based on above said notification, the answering respondent has made a new application for the proposed industry under B2 category.



- h) Document No. 17 is the Order of this Tribunal in O.A. No. 80/2020 – in this regard, it is stated that the complaint has been filed by a few disgruntled persons which is very generic in nature. One of the Respondents (Srini Pharmaceuticals) has, in fact, appealed in C.A. 2777 of 2020 against the order of this Hon'ble Tribunal wherein the Hon'ble Supreme Court has issued a stay order.
- i) With respect to Document Nos. 2, 9, 12, 13, 15, 18, 19 and 21, it is submitted that the same is already discussed in OA No. 126/2021 and has been disposed by this Hon'ble Tribunal in favour of answering respondent.
- j) With respect to document no. 22, it is submitted that the same is irrelevant for the present purposes and is solely being filed to mislead this Hon'ble Tribunal as the local villagers protested seeking for jobs in the proposed manufacturing plant at Kakinada District. The article itself mentioned that "The Company Responded favourable to the Minister suggestions" and the issue has been resolved.
- k) With respect to document no. 23, it is submitted that the answering respondent has duly obtained all the necessary clearances from the appropriate authorities after considering all the above facts. The committee of State Expert Appraisal Committee (SEAC) and the State Level Environment Impact Assessment Authority (SEIAA) have granted Environmental Clearance to the answering respondent after examining the project proposal; MOEF&CC OMs, CRZ Clearance from Andhra Pradesh Coastal Zone Management Authority (APCZMA); Consent for Establishment (CFE) from the APPCB for laying of marine outfall facility to discharge treated effluents.

33. It is re-emphasised that the answering Respondent has provided assurance that it shall strictly adhere to all the prescribed safety and standard norms approved by all the regulatory authorities.



It is therefore, humbly prayed that this Hon'ble Tribunal take the above submissions on record and dismiss the present appeal and pass such further order as this Hon'ble Tribunal may deem fit and proper in the facts and circumstances of the case and thus, render justice.

Solemnly affirmed and sincerely stated  
at Chennai on this the 12<sup>th</sup> day of November 2022  
and signed his name in my presence

**BEFORE ME**

*K. Chandrasekaran*  
F. No. 2330/2005  
**ADVOCATE, CHENNAI**

*K. Chandrasekaran*  
No. 8, 8th Street, D. R. K. Salai,  
Mylapore, Chennai - 600 004



**BEFORE THE HON'BLE NATIONAL  
GREEN TRIBUNAL SOUTHERN  
ZONE BENCH AT CHENNAI**

**Appeal No. 68 of 2021**

M/s. Sri Mahalakshmi Hatcheries  
And Anr.

... Appellants

And

SEIAA  
And 2 Ors.

... Respondents

**ADDITIONAL AFFIDAVIT FILED BY  
THE 3<sup>RD</sup> RESPONDENT**

**M/s. Rahul Balaji 670/95  
COUNSEL FOR 3<sup>RD</sup> RESPONDENT**