

ENVIRONMENTAL STATEMENT

(FOR THE FINANCIAL YEAR ENDING 31ST MARCH, 2020)

DEVI SEA FOODS LIMITED

MULAGUNTAPADU
G.T.ROAD
SINGARAYAKONDA - 523 101
PRAKASAM (DIST.)



Prepared by:

SRI DURGA CIVIL AND ENVIRO CONSULTANTS
VIJAYAWADA

INTRODUCTION

Industrial pollution in our country is on increase and creating a high-risk environment various legislations viz. The water (prevention & Control of Pollution) Act, 1974 and Environment (Protection) Act, 1986 have come into force and organization Industrialization meant profit-making and environment was grossly neglected. It is being realized that in industry and environment also over the years awareness has brought in realization to consider Environmental Protection a bare necessity. Yet, the investments for such a protection are still considered a liability by many industrialists mainly due to lack of up-to-date scientific practices of environmental management. Consideration of environmental factors at par with production helps in minimizing material losses and also in reduction of liabilities in the long run.

The growing environmental pollution and the complexity of this problem with increasing risks from the regulatory controls needs an effective management tool so as to prevent pollution and to make pollution control Programmes cost-effective and feasible.

Environmental Audit is a technique being introduced for integrating the interest of the industry and the environment so that these could be mutually supportive. This technique is basically a part of industry's internal procedures in meeting their responsibilities towards better environment. Also India provides for submission of environment statement by all concerned industries, which would subsequently evolve into an environmental audit. A notification under the Environmental (Protection) Rules, 1986 has been issued on April 22, 1993, requiring industries to submit an environmental statement for the financial year ending on March 31 in Form V to the concerned State Pollution Control Boards on or before September 30 every year beginning 1993 (Annexure 1). The Department of Company Affairs also agreed to include this requirement as a part of the Director's Annual Report. The submission on an environmental statement is applicable to the following.

1. Those who require consent under the Water (Prevention & Control of Pollution) Act, 1974
2. Those who require consent under the Air (Prevention & Control of Pollution) Act, 1981, and
3. Those who require authorization under hazardous wastes (Management & Handling) Rules, 1989.

PHILOSOPHY OF ENVIRONMENTAL AUDIT

Definition

Environmental auditing is a management tool comprising a systematic, documented, periodic and objective evaluation of how well the management systems are performing with aim of:

- a. Waste Prevention and reduction.
- b. Assessing compliance with regulatory requirements.
- c. Facilitating control of environmental practices by a company's management, and
- d. Placing environmental information in the public domain.

In the industries, especially the chemical industries, raw materials are used in excess of the stoichiometric requirements because of the limitations on the practically achievable operational efficiencies and the raw materials purity. These excess usages of raw materials, unless recovered, find their way include non-product discharges in gaseous, liquid and solid phases. End-on-the pipe waste treatment techniques, where in all the wastes are carried to a common facility for treatment, is proving to be ineffective and uneconomical due to the complexity of the problems associated with waste generation, their quantity and characteristics. The waste generation may vary hourly, daily and seasonally, especially in case of the multiplicity of manufacturing product in the same premises. The waste water characteristics also widely vary from stream to stream discharged from various unit operations of a particular product. In this growing complexity of problems, the concept of waste prevention and reduction can workout to be more effective.

It is important to find out whether an industry is complying with environment standards and other regulatory requirements. It is also very essential to periodically monitor this aspect, determine the gaps and workout action plans for implementation within a reasonable time frame keeping in view the financial and other considerations of the Company. In cases of gaps for compliance with the regulatory requirement, the regulatory bodies could be apprised of these action plans and time obtained for implementation.

Thus the regulatory risk could be overcome and effective steps taken for pollution control. Many a times, the top management of a Company or an industry may not be aware of the factual situation of their industry from environmental angle. Such unknown facts from hidden liabilities more often than not expose an industry to regulatory risks. The management should be able to periodically review the environment practices of the Company to formulate/ modify the Company's environmental policy accordingly. It is also imperative that the management of a Company should have a clear picture of 'attitudes' and 'technical capabilities' of their organizational set-up for protecting environment, pollution control status, and their bounded social obligation related to environment so as to decide on the future mode of actions. Public are to be made aware of the environment information of the Company, especially to those who are shareholders, so as to build-in among them confidence. Environmental audition can be viewed as a 'management tool' internally and 'liaison' externally with the public and regulatory bodies.

BENEFITS OF ENVIRONMENTAL AUDIT :

Benefits of Environmental Audit Environmental auditing has far reaching benefits to the industry, to the society and the nation at large.

- i) Determines how well the process systems and pollution control systems are performing, and identifies the operations of poor performance.
- ii) Identifies potential cost savings which can be accrued through reduction in raw material consumption by way of waste minimization, and adoption of recycle/recovery/reduction in pollution load.
- iii) Increases awareness of environment requirements, policies and responsibilities.
- iv) Helps in understanding the technical capabilities and attitude of the environmental organization in a Company.
- v) Provides up-to-date environmental database of use in plant modification, emergencies etc.
- vi) Unravels surprises and hidden liabilities due to which regulatory risk and exposure to litigation can be reduced.
- vii) Ensures independent verification, identifies matters needing attention, and provides timely warning to management on potential future problems and helps to safeguard environment, and assists in complying with local, regional and national laws and regulations, with the Company's policy and with the environmental standards.
- viii) Evaluating training programmes and providing data to assist in training personnel.
- ix) Evaluating management to give credit for good environmental Performance.

OBJECTIVES OF ENVIRONMENTAL AUDIT:

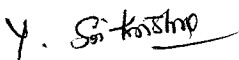
Objectives of the Environmental Audit helps in pollution control, improved production, safety and health and conservation of natural resources and hence its overall objective can be stated as achieving of sustainable development. However for conducting environmental audit, objectives are to be defined clearly, or else the audit procedure will be subject to varying interpretations which may yield and contribute to difference in approach thereby influencing the end results. The objectives of environmental audit in an industry are:

- i) To determine the mass balance of various materials used and the performance of various process equipment so as to identify usage of materials in excess than required, to review the conversion efficiencies of process equipment and accordingly fix up norms for equipment/performance and minimization of the wastes.
- ii) (a) To identify the areas of water usage and wastewater generation and determine the characteristics of wastewater; (b) To determine the emissions, their sources, quantities and characteristics; and (c) To determine the solid wastes and hazardous wastes generated, their sources, quantities and characteristics.
- iii) To identify the possibilities of waste minimization, and recovery and recycling of wastes.
- iv) To determine the performance of the existing waste treatment/control systems so as to modify or install additional or alternative control equipment accordingly
- v) To determine the impact on the surrounding environment (groundwater, stream, residential area, agricultural area, sensitive zone, etc.) due to the disposal of wastewater, emissions and solid wastes from the industry and accordingly identify suitable preventive measures, if necessary.
- vi) To verify compliance with the standards and conditions prescribed by the regulatory bodies under the Water Act, the Air Act and the Environmental (Protection) Act; and

- vii) To check the effectiveness of (a) organizational set-up of the industry for decision making and environmental management with special reference to their 'technical' view point, 'attitudinal' view point and training, and (b) environmental policy of the Company.
- viii) Environmental audit helps in assessing the use of raw materials (whether in excess or not) and various methods to be adopted to recover the same it also helps in periodical assessment of the treatment schemes adopted for abatement of various pollutants generated like wastewater, air and solid waste etc and to modify the same to achieve better working efficiency.
- ix) Environmental auditing has far reaching benefits to the industry to the society and nation at large. It helps in determining the working efficiencies of process and pollution control systems. It also aids in identifying the cost saving techniques that can be adopted and it provides an up to date environmental data for use in organization towards pollution control and increases the awareness of environmental requirements. It ensures independent verification, identifies matters needing urgent attention, provides warnings on potential futures problems and thus reduces exposure to litigation. It mainly helps in safeguarding the environment and assists in complying with regulatory norms of local, regional and national laws. Environmental audit thus in pollution control and in improving production, safety, health, and conservation of natural resources.

Recognizing the importance of the structures and comprehensive mechanism for ensuring that the activities and products do not have any adverse effects on environments, **M/s. DEVI SEA FOODS LIMITED**, Mulaguntapadu, Singarayakonda, Prakasam district retained Sri Durga Civil & Enviro Consultants, Vijayawada to under take the Environment Statement Studies.

or Sri Durga Civil & Enviro Consultants


Authorised Signator

INTRODUCTION:

M/s.DEVI SEA FOODS LIMITED plant is situated in 3-79/2 of Mulaguntapadu (village), Singarayakonda (Mandal), Prakasam District. The plant is located at a distance of nearly 2 KM from Singarayakonda. The plant is situated on the way of G.T. Road.

The Industry is produced processed Shrimp from the raw Sea Food. The Industry produced 11.6 T / Day of processed Shrimp during the financial year 2019-20. The raw material raw sea Food is available from local parties. The company does not have any problem in procuring the raw material.

PROCESS DESCRIPTION

Shrimp meant for export is processed in the following manner:

1. Raw material washing:

Pond raised shrimp when harvest is sent to the processing plant within 3 to 6 hours of time in head-on condition with the help of insulated trucks. Immediately after receiving the raw material at processing plant the same is water washed and a dip in water mixed with chlorine dioxide is also given.

2. Deheading:

After the shrimps are washed for fifth and other impurities, they are beheaded and vein is removed manually.

3. Grading:

After beheading the shrimps they are graded for different sizes and counts as per the importers specification. This process is inevitable in the sense that different grades of material fetch different export price.

4. Chemical Soaking:

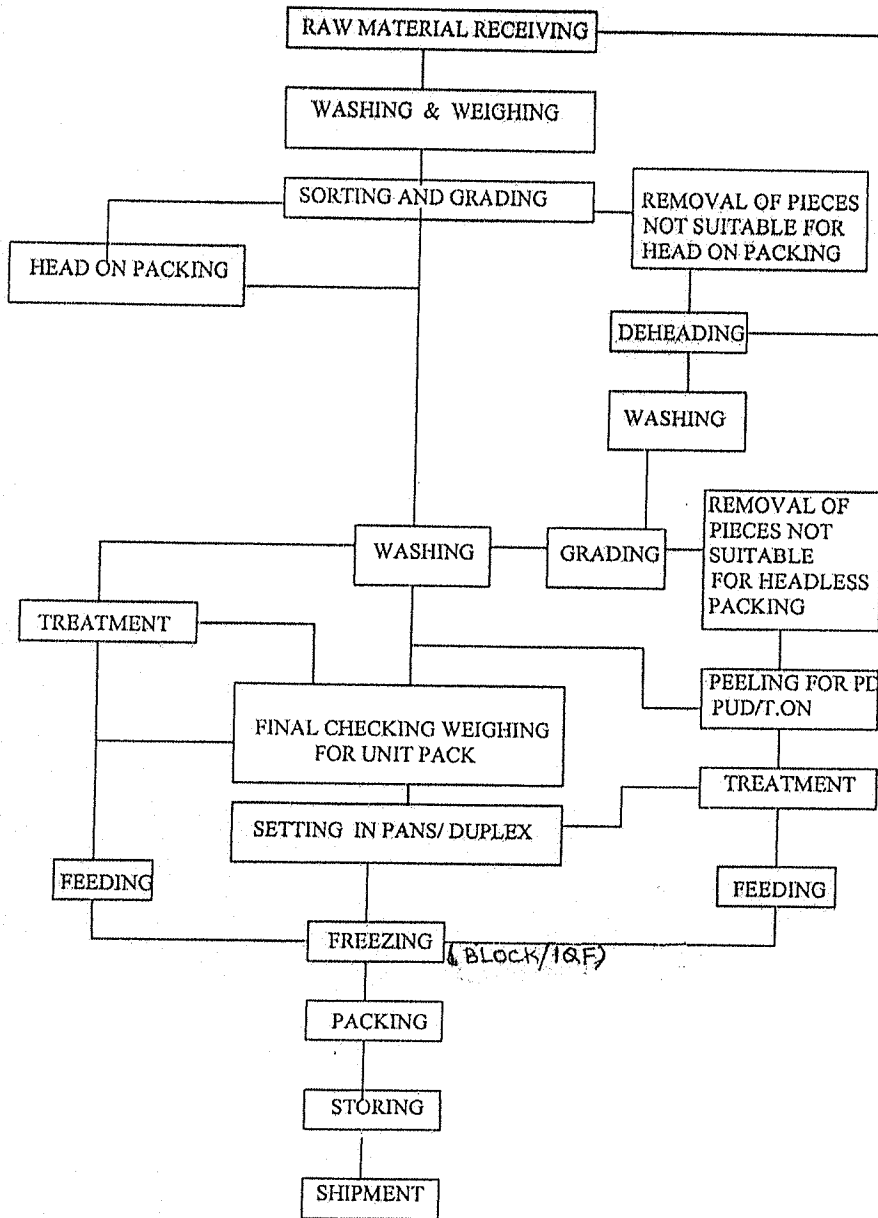
Once the grading of the shrimps is over the same are soaked in the solution prepared with Sodium Trio Polyphosphate as base. STPP is of food grade and due to the soaking the shrimps get pick up in weight by about 5% to 8% .

5. Freezing:

The soaked shrimps, which are already graded, are then fed to the IQF (Individually Quick Frozen) machine. The shrimps are manually fed on the conveyor belt of the freezer individually. The product temperature at this stage would be around + 10⁰ centigrade. The product with the help of the conveyor belt moves in to the IQF tunnel, which would be around 3 meters length. In the tunnel liquid nitrogen, which is at -90⁰ C is automatically sprinkled on the product and gets instantaneously frozen. This is called Cryogenic freezing and the nitrogen used is of food grade. In other words nitrogen is used as freezing media. The ideal consumption ratio of liquid nitrogen is 1: 1.5. After being frozen in the IQF tunnel the product comes out on the belt and the same is again given dip in the chilled water. After this the individually frozen shrimps are packed in the polythene bags of the sizes specified by the importers. After packing the product packs are kept in cold storage until shipment and during the waiting period the product temperature would be around - 18⁰centigrade .

DEVI SEA FOODS LTD
SINGARAYAKONDA
PRAKASAM DISTRICT
ANDHRA PRADESH INDIA

GENERAL PROCESS FLOW DIAGRAM



WATER REQUIREMENT AND GENERATION:

The water requirement for Washing, cooling and domestic purpose is 115000 Lts / Day. For the purpose of washings 100000 Lts/Day, cooling make up 5000 Lts / Day is consumed and the remaining 10000 Lts / Day is for domestic. The source of the water is from bore well.

WATER POLLUTION:

The waste water generated is from thorough washing of Shrimp after peeling to remove dirt. For treating the effluent, an effluent treatment plant is being operated regularly. The treated effluent is being utilised for greenbelt development purpose. The effluent generated from domestic section is being discharged through septic tank followed by soakpit.

AIR POLLUTION:

The main source of Air pollution is from generator of capacity 500 KVA&725KVA. The D.G sets are provided with accoustic enclosure for abating noise pollution.

AMBIENT AIR QUALITY:

Ambient Air Quality was conducted near main gate, and near processing plant. The parameters Particulate matter (PM₁₀), Particulate matter (PM_{2.5}), Sulphurdioxide and Oxides of Nitrogen are with in the limits to the standards stipulated by A.P.Pollution Control Board.

IMPACT OF POLLUTION:

Green belt is developed and good house keeping is also maintained. The management is giving priority for abating pollution and also for improving the greenbelt for balancing the eco-environment. The steps taken by the management has reduced the impact of pollution on the surrounding environment.

DEVI SEA FOODS LIMITED

MULAGUNTAPADU (VILLAGE)

SINGARAYAKONDA (MANDAL)

PRAKASAM (DISTRICT)

“FORM-V”

Environmental statement for the financial year ending the 31st March 2020.

PART-A

- I) Name and address of the Owner / occupier of Industry operation or Process. : **SRI P.BRAHMANANDAM.**
Managing Director
Devi Sea Foods Limited,
3-79/2,Mulaguntapadu,G.T.Road
Singarayakonda -523 101
Prakasam (District).
- II) Industry Category : Orange
Prawn processing unit
- III) Production Capacity : 12 TPD
- IV) Year of Establishment : 1997
- V) Date of last environmental Statement submitted : September 2019.

PART - B

Water and Raw Material Consumption

I) Water consumption m³ / Day

Process	:	100000 Lts/ Day
Cooling	:	5000 Lts / Day
Domestic	:	10000 Lts / Day

Process water consumption per
unit of product-output (1 MT)

Name of Products

During the previous
financial year
(2018-2019)

During the Current
financial year
(2019-2020)

Processed Shrimp

8 m³/ 1 Tonne of
product8.5 m³/ 1 Tonne of
product

(II) Raw Material Consumption :

Name of the Raw Materials	Name of Products	Consumption of Raw Material Per unit of output (1 MT)	
		During the previous financial year (2018-2019)	During the current financial year (2019-2020)
Shrimps	Processed Shrimp	1.45 T/1 T of Processed Shrimp	1.45 T/ 1 T of Processed Shrimp
Bleaching		2 Lt / 1 T of Processed Shrimp	2 Lt / 1 T of Processed Shrimp

PART - C

Pollution discharged to environment/unit of output.

(Parameter as specified in the consent issued)

Pollutants	Quantity of Pollutants Discharged (Mass / Day) (Kg / Day)	Concentrations pollutants in discharges (Mass / Volume) (Mg / Ltr.)	Percentage of variation from prescribed standards with reasons
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(a) WATER:

pH		7.8	All the parameters are with in limits.
T.D.S	188.0	1880	
T.S.S	4.5	45	
C.O.D	14.7	147	
B.O.D	2.8	28	
O & G		<1	

Note:- The quantity of effluent generated is 100 KLD.

(b) AIR:

S. NO.	RESULTS ($\mu\text{g}/\text{m}^3$)	STATION (1)	STATION (2)
1.	Particulate Matter (PM ₁₀)	91	77
2.	Particulate Matter (PM _{2.5})	35	26
3.	Sulphur dioxide	8	6
4.	Oxides of Nitrogen	20	17

Station (1): Near Main gate

Station (2): North Side of Processing plant

PART - ESOLID WASTES

 Total Quantity

During the Previous financial year (2018-2019)	During the current financial year (2019-2020)
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From Process (disposable waste)

1940 T/day

1960 T/year

From pollution control facility (sludge from ETP) 12 T/year

15 T/year

Quantity recycled or re-utilised
Within the unit.

- NIL -

- NIL -

Sold

ETP sludge is being used as manure
after drying and is used for
development of greenbelt.

Disposed

shrimp shells and heads are
disposed to poultry feed
manufacturing units.

PART - F

Please specify the characterisations (in terms of composition quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

No hazardous waste is generated from process. The Solid Waste generated from the process is disposable waste (shrimp shell). It is disposed to poultry feed manufacturing units. The sludge from ETP is being used as manure after drying and is used for developing greenbelt.

PART - G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

M/s.DEVI SEA FOODS LTD, has taken enough measures for abating pollution with respect to water, air and solid wastes and also in the development of green belt.

WATER POLLUTION:

The effluent is generated from thorough washing of the shrimp after peeling to remove dirt. For treating the effluents, an effluent treatment plant is being operated continuously. After treatment, it is being utilised for greenbelt development / irrigation purpose. The effluent generated from domestic section is being discharged through septic tank followed by soakpit.

AIR POLLUTION:

The main source of air pollution is from DG sets of capacity 500 KVA & 725 KVA. To abate noise pollution the DG sets are provided with acoustic enclosure. The Ambient air quality values of Particulate matter (PM₁₀), Particulate matter (PM_{2.5}), Sulphur dioxide and Oxides of Nitrogen are within the limits to the standards stipulated by A.P. Pollution control Board.

SOLID WASTE:

The Solid Waste generated from process is disposable waste (shrimp shell). It is disposed to feed manufacturing units.

The steps taken by the management has reduced the impact of pollution on the surrounding area.

PART - H

Additional measures/investment proposal for environmental protection including abatement of pollution, prevention of pollution.

Greenbelt is developed and it is being maintained. An amount of Rs.15 Lakhs is spent per annum for the maintenance and operation of effluent treatment plant. The solid waste i.e. head & shall wastes are disposed to feed manufacturing units through closed vehicles. The management is operating ETP continuously for treating the effluent. After treatment, it is used for the development of greenbelt/on land for irrigation purpose. The management is taking necessary safety measures to avoid any kind of danger. The management is giving priority for improving greenbelt.

PART - I

Any other particulars for improving the quality of the environment.

The management will take efforts to maintain clean and good environment in the premises.