

**Environmental Impact Assessment
of Proposed Modernization of
Synthetic Organic Chemicals
Manufacturing Unit (173.88 TPA) at
Nagari and Thiruvallavayanallur villages,
Vadipatti Taluk and Madurai District, Tamil Nadu**

Executive Summary

Submitted to:

**Tamil Nadu Pollution Control Board
Regional Office, Madurai**

Sponsor :

**M/s. Kothari Phytochemicals International
(Division of Kothari Phytochemicals & Industries Limited),
Madurai**

EIA Consultant:

**KKB Envirocare Consultants Pvt. Ltd.,
Tarun Plaza, 1st Floor, 3-5-244, NFC Main Road, Krishna Nagar Colony,
Moula-Ali, Hyderabad-500 040**

December 2018

1.0 Introduction

M/s Kothari Phytochemicals International (Division of Kothari Phytochemicals & Industries Limited) proposes to modernize its APIs & Phytochemicals manufacturing to produce 173.88 TPA from existing production capacity of 888 TPA with a total investment of Rs. 14.64 Crores including the existing investment of Rs. 10.64 Crores in the existing plant premises of 11.75 Ha (29.03 Acre).

The modernization proposal will be in existing plant premises with SF No. 3/1A, 3/1B, 3/2, 4/1, 5/1A, 5/1B, 5/2, Nagari & 12/1A, 12/1B, Thiruvallavanallur village, Vadipatti Taluk and Madurai District, Tamil Nadu.

The modernization proposal is to manufacture 8 products including 5 new products of APIs & Phytochemicals with a reduced production capacity of 173.88 TPA from existing consent permitted production capacity of 888 TPA. The APIs products manufactured are used in API formulation industry, which are applicable for human consumption around the world after formulation activity. The draft EIA report is prepared considering the MoEF&CC approved Terms of Reference (ToR) vide letter no. IA-J-11011/180/2018-IA.II (I) dated 23-06-2018 and submitted to Tamil Nadu Pollution Control Board (TNPCB) for conducting public consultation / hearing. On obtaining the minutes of the public hearing, final EIA report will be prepared incorporating the industry's response to the issues raised in public Consultation and submitted to the MoEF&CC for its appraisal.

2.0 Project Description

M/s Kothari Phytochemicals International modernizing its APIs & Phytochemicals manufacturing for both domestic and international markets. The unit was incorporated under the Companies Act on 1976. All the drugs manufactured will meet the international standards, which bear testimony to its commitment to adopt strict quality standards set by international quality agencies. The salient features of the proposed modernization are presented below:

1.	Name & Address	M/s Kothari Phytochemicals International (Division of Kothari Phytochemicals & Industries Limited), Nagari & Thiruvallavanallur Villages, Vadipatti Taluk and Madurai District, Tamil Nadu.
2.	Area of the project	11.75 Ha (29.03 Acre) in the existing plant premises
3.	Latitude and Longitude	Latitude: 10 ⁰ 01' 3.45" N; Longitude: 78 ⁰ 0' 29.60" E
4.	Elevation	169 m MSL
5.	Products	Manufacture of 8 APIs & Phytochemicals products

6.	Production capacity	Existing: 888 TPA Proposed Modernization:173.88 TPA Total after modernization: 173.88 TPA
7.	Capacity of Boilers	Existing: 3 TPH Oil fired boiler
8.	Capacity of DG sets	Existing: 125 KVA and 2 x 380 KVA DG sets are used as standby during power failure. No Change after Modernization
9.	Water requirement	Existing: 45 KLD Total after Modernization: 58.0 KLD (Fresh water: 32 KLD and Reuse water: 26 KLD)
10.	Power requirement	Existing: 400 KVA(CMD) - No additional power
11.	Fuel requirement	Furnace oil consumption: 200 kg/hr HSD- 180 lph for DG sets No Change after Modernization
12.	Manpower	70 nos. (Existing). No additional Manpower (Direct-50 nos & 20 nos. Indirect)
13.	EMP Budget for EHS EMP Recurring cost	Rs. 3.81 Crores in addition to the existing Rs.3.14 Cr. Rs. 0.84 Crores per annum
14.	Corporate Environmental Responsibility (CER) Budget	Rs. 5 lakhs

2.1 Process Description

The manufacturing process of APIs & Phytochemicals consists of chemical synthesis extending to a maximum of 2 stages of processing involving different type of chemical reactions. These products manufactured are used in API formulation industry, which are applicable for human consumption around the world after formulation activity. Technology for manufacturing proposed products is available from in-house R&D & private consultants. Industry will implement the proven technologies in the R&D for the cost effective & environmental friendly practices. The process descriptions, flow chart, route of synthesis and material balance etc. for the manufacturing of proposed products are presented in Chapter 2 of EIA report. In the manufacturing process various kinds of solvents will be used, so the quantity of different solvents used, recovered, lost and solvent balance cycle is described in EIA report. The proposed products are presented below:

Proposed Products, their Capacities and Therapeutic Category

Sl. No.	Products	CFO permitted (TPA)	Total after Modernization (TPA)	Status	CAS No.	Therapeutic Category / End use
1.	Tolbutamide	840	42.0	Reduced	64-77-7	Anti-Diabetic
2.	Chlorpropamide		39.0	Reduced	94-20-2	Anti-Diabetic
3.	Calcium Sennoside	24	40.6	Increased	A – 52730-36-6 B- 52730-37-7	Stimulant Laxative
4	Sennosides	--	8.6	New	A – 52730-36-6 B- 52730-37-7	Stimulant Laxative
5	Colchicine	--	2.0	New	64-86-8	Antigout Agent
6	Thiocolchicoside	--	2.0	New	602-41-5	Muscle Relaxant
7	Brucine*	24	10.8	Increased	5787-00-8	Denaturants
8	Strychnine*		28.8		57-24-9	Central Stimulant
Total		888	173.88			

Note: *Total Alkaloids modified into 2 products (Brucine & Strychnine)

Source: M/s **Kothari Phytochemicals International** (Division of Kothari Phytochemicals & Industries Limited)

3.0 Description of the Environment

3.1 Topography

The project study area (10 km) is exhibiting mostly plain / Hilly topography. This project site is located adjacent to road connecting Sholavandan to National Highway (NH-44), which is at 0.7 km (E). Ayyankottai village at 0.8 km (NNE); Nagari village at 0.7 km (ENE); Sholavandan railway station is at 4.6 km in W direction. Madurai International Airport is at 21 km in SSE direction to the project site. The transportation of raw material and finished products can be arranged by road, rail and air to the domestic and international destinations.

3.2 Study period

Baseline environmental data generation of study area was carried out during summer season from March to May 2018. Data has been generated by following the approved procedures of the Ministry of Environment, Forests and Climate Change and the Central Pollution Control Board guidelines. Study area of 10 km radial distance around the site has been considered for the EIA study.

3.3 Meteorology

Meteorological data for summer season 2018 have been generated in the existing plant site. The predominant wind direction during the study period is NE, ENE, E, NNE, ESE, SE, SSE and S sectors accounting to about 63.7 % of the total time respectively. Wind speeds during this period were varying from 0.5 – 8.2 m/s. Average wind speed is 1.94 m/sec for 24 hours. Temperature during the study period is 19.75 °C minimum and 39.05 °C maximum.

3.4 Ambient Air Quality

The National Ambient Air Quality Standards (NAAQS) parameters & VOC were monitored at 9 locations during the study period. The maximum 24 hourly PM₁₀ and PM_{2.5} concentrations at all locations varied from 46.3 - 60.6 µg/m³ and 22.6 - 30.2 µg/m³ respectively. The maximum concentrations of SO₂ were observed in the range from 8.6 - 16.6 µg/m³. The NO₂ concentration was in the range from 20.4 - 33.4 µg/m³. NH₃ concentrations at all locations are below detectable limits, except at plant site, which is ranged from 1.1 to 1.6 µg/m³. The Volatile Organic Compounds monitored at difference locations in the study area were found in the range of BDL, the highest being at plant site. The VOC observed at various work zone areas of the existing plant site varies from BDL to 1.2 ppm. The HC & CO concentrations at all the locations were found below detectable limit. Monitored parameters of ambient air quality in the study area are well within the prescribed NAAQS standards.

3.5 Ambient Noise Levels

Ambient noise levels were monitored at 9 locations within study area. The observed noise level in the study area ranges from 51.3 - 56.7 dB (A) during day time and 41.5 - 53.4 dB (A) during the night time. The noise levels at all the locations in study area were observed well within the permissible limits prescribed by CPCB during day as well as night times.

3.6 Water Quality

Four samples of surface water and eight samples of groundwater were collected in study area. All the surveyed villages are having treated water facility for drinking purpose through Gram Panchayat bore wells. The tanks/cheruvu water is not used for drinking purpose but used for cattle feeding and washing of clothes etc. The Vagu (river) and reservoir water can be used as drinking water source after conventional treatment and disinfection. The ground water analysis results show that TDS, alkalinity, hardness, chlorides are marginally higher than acceptable limits as per IS 10500-2012.

3.7 Soil Quality

Ten soil samples were collected and analyzed. Potassium availability is good in neutral and alkaline soil. The predominant texture of soil in study area is Clay sandy loam. The analysis of the samples indicates that sand, silt and clay varies from 59.7 to 66.8 %, 9.2 to 19.3 % and 15.1 to 27.8 % respectively.

The pH values in the study area are varying from 6.3 to 7.8 showing slightly acidic to slightly alkaline during study period at all sampling locations. Organic matter (carbon) present in soil samples collected show as 1.5-2.1 %; more than sufficient in the study area. Nitrogen as N

presence varies from 155-185.6 kg/ha; better to sufficient, whereas phosphorus as P present varied from 8.9-15 kg/ha; is very less. Potassium as K present varied from 167.8 - 300.9 kg/ha; is less to better.

3.8 Sensitive Ecosystem

There are no ecologically sensitive areas such as Biosphere reserves, National Parks, Wildlife Sanctuaries or other protected areas within a distance of 10 km from the core area. There are two reserved forests in the buffer zone. None of the plant species and animals present in the study area belongs to threatened or endangered categories.

3.9 Biological Environment

There are no biosphere reserves within 10km radius of the study area. As there are no rare or endangered or endemic or threatened (REET) species of plants and animals, the proposed project is not going to pose any threat to local flora and fauna.

3.9.1 Flora & Fauna

During the present study, around 211 floral species are recorded from primary and secondary sources. Among trees species the IVI values are more for four tree species which are very significant in this region. They are *Cocos nucifera* showed highest IVI (30.78) followed by *Azadirachta indica* (24.05), *Balanites aegyptiaca* (21.42) and *Eucalyptus globules* (21.2). The Shannon indices value of study area is 2.747 indicates moderate diversity due to two RFs within the buffer zone of the study area.

From the list of flora and fauna, there are no Rare or Endangered or Endemic or Threatened (REET) species or any species listed in Schedule- I of the Wildlife (Protection) Act. Hence, species specific and habitat specific mitigation measures are not needed in this connection. The project site does not overlap with any of the recognized Ramsar sites. There are no Sanctuaries, National Parks, Tiger Reserve or Biosphere Reserve or Elephant Corridor or other protected areas within 10 km radius from core area.

Proposed activity involve in removal of few common natural vegetation during construction phase. Thus, there will be no major adverse impacts are envisaged. There are no migratory corridors, nesting and Breeding sites within the core zone.

Total Greenbelt area is 4.06 Ha (34.5%) of 11.7 Ha. Out of this, the management already had taken care of green belt within the industrial premises. The existing greenbelt tree species will not be disturbed. Only maintenance is needed. A large variety of other plant species suggested under the green belt plan and around 19.85 lakhs financial budget is proposed to develop the habitat.

4.0 Impact Assessment and Mitigation Measures

4.1 Air Environment

4.1.1 Process emissions

Manufacturing of synthetic organic chemicals will result in gaseous emissions like CO₂ & NH₃ are liberated from the process. NH₃ emissions will be scrubbed by using Chilled water / dilute H₂SO₄ solution. CO₂ emissions will be scrubbed by using caustic lye solution. Proposed scrubbers for the modernization project will scrub the process emissions.

Emissions from the reactors will be connected to dual scrubber with suitable chilled or room temperature liquid to scrub the gases effectively with water / dilute H₂SO₄ solution/ caustic lye solution. The scrubbed (ammonium sulphate solution) will be proposed to use in greenbelt and the remaining scrubber solution will continue to be sent to ETP for further treatment and reuse. Its impact on ETP will be reduced by selling as by-product for agriculture as fertilizer to nearby farmers. It is also reduces the releasing of NH₃ gas through stack of suitable height. The vents of the scrubber's gases will be dispersed into atmosphere through a stack above the production block. Hence, it is necessary to minimize the process emissions at source as well as to control effectively before sending out to atmosphere.

4.1.2 Fugitive emissions

The solvents used for the process will be stored in drums and bulk quantities will be stored in above ground storage tanks of suitable capacities. Solvents are handled in closed conditions and closed operations thereby reducing the losses in the form of evaporation. The industry will take measures for reduction of fugitive emissions by providing condensers with chilled brine / water / cooling water circulation to condensate the solvent vapor from the reactor, receiver and tank vents which ensure the maximum recovery. Chilled brine circulation will be carried out to condensate the solvent vapor and to the receivers of the solvent vapors which ensures the recovery of 97.12% and also controlled by closed operations and handling methods.

Good ventilation will be provided to reduce the workroom concentrations. Solvent vapors from the Catch pots will be connected to vent condensers. The height of the solvent receiver tank vent is above production block roof level and diameter is 20 mm. Industry is having simple distillation columns to recover the spent solvents after reaction. The capacity of the reactors is 2 x 1200 lit and 2 x 800 lit. Propose to provide 2000 lit, 1200 lit and 800 lit capacity solvent distillation columns with Primary and Secondary condenser facility to recover the solvents.

4.1.3 Emissions – Utilities

Existing oil fired 3 TPH Boiler and DG sets are the two sources of point source emissions. No addition utilities in the modernization project. Total furnace oil consumption is 200 kg/hr oil fired boiler. The gaseous emissions from fuel burning consist of common pollutants like SO₂, NO₂ and PM₁₀. To facilitate wider dispersion of pollutants, 35 m height of stack was installed for existing boiler to ensure the particulate emissions within statutory limit of SPCB (115 mg/Nm³). Suitable stack height (5 m) is provided to the each existing DG sets of 125 KVA and 2 x 380 KVA. The existing DG sets diesel consumption will be 180 lph. DG sets will be used as standby during power failure. It indicates there are no additional emissions from the modernization. Greenbelt development within the plant premises will help further in attenuating the pollutants emitted by the plant.

The stack details and flue gas characteristics along with emission rate for individual pollutants used for prediction of air quality impacts from the existing emission details are given below.

Stack Emission Details

Source	Stack Height (m)	Diameter (m)	Temperature (°C)	Flue Gas Flow rate (m ³ /hr)	Exit Gas Velocity (m/sec)	PM	SO ₂	NOx
						kg/hr		
Furnace oil / bio fuel Fired Boiler (Existing)								
3 TPH	35	0.5	150	6619	9.4	0.096	13.9	2.02
Diesel Generator (DG) sets (Existing)								
125 KVA	5	0.1	150	706	25	0.008	0.16	0.17
380 KVA	5	0.15	150	2146	33.7	0.024	0.475	0.51
380 KVA	5	0.15	150	2146	33.7	0.024	0.475	0.51

The GLC predictions

Pollutant	Maximum Incremental Level	Maximum Baseline	Maximum Resultant	NAAQ Standard (µg/m ³)	
				24 hrs	Annual
PM ₁₀	0.06	60.6	60.66	100	60
PM _{2.5}	0.03	30.2	30.23	60	40
SO ₂	8.53	16.6	25.13	80	50
NO ₂	1.24	33.4	34.64	80	40

From the above prediction, it is clear that maximum ground level concentrations of PM₁₀, PM_{2.5}, SO₂, and NO₂ emissions from the modernization plant emissions will be 60.66 µg/m³, 30.23 µg/m³, 25.13 µg/m³ and 34.64 µg/m³ respectively, which are within the permissible standards. Also, the maximum impact zone for all the pollutants is within 0.5 km radial zone from the proposed stacks.

The post - project scenario of PM, SO₂ and NO₂ levels after super imposing predicted increments over the study area at AAQ monitoring locations are well within the limits. The prediction results corresponding to PM, SO₂ and NO₂ indicate that the air quality impacts w.r.t. criteria pollutants exclusively from the existing Boiler & DG Sets would be insignificant and post-project status will remain within the prescribed NAAQS for residential, rural and other areas.

4.2 Noise Environment

The only noise generating sources are DG sets, motors and rotating machinery like pumps / blowers / compressors etc. DG sets are installed with inbuilt acoustic enclosures. DG sets will be functioning only at the time of power failure. There is no need for the workers to be near this unit continuously. However the workers in this area will always provide with ear muffs. The cumulative impact of all noise sources at boundary will be in the range from 50 to 55 dB (A). There will not be much effect on the nearest village (habitation), which is 0.8 km distance from the project boundary with a thick greenbelt of 10 m width. Hence, no significant impact is envisaged.

4.3 Water Environment

The wastewater generated from the plant will be from process, floor & reactor washings, utilities, Q.C, R&D, scrubbers and plant domestic waste. Total effluent expected from the production process, washings, utilities and domestic will be about 24.5 KLD, which will be segregated into Trade effluent and Domestic wastewater collected by gravity into a collection tanks separately. These effluents will be pumped to the RCC lined tanks for storage and neutralization, then sent to ETP and treated with ZLD concept. The treated effluent will be reused in cooling towers & boiler as makeup water. Flow chart is given below.

Effluent Treatment Flow as per Segregation

Effluent Characteristics	Quantity (KLD)	Treatment Flow
Trade effluent	21.5	Bar Screen → Collection Tank → Chemicals Dosing Tank → Flocculation Tank → Settling Tank → Clear Water Tank → Stripper with single effect evaporator (SEE) → SEE Condensate → Biological treatment → Collection Tank → Pressure Sand Filter → Activated Carbon Filter → ETP RO system → RO permeate water reuse in Boiler / Cooling tower. ETP RO rejects to SEE → SEE Slurry to Solar Evaporation pan / Tray Drier → Solar Pan Residues to TSDF. Sludge Holding Tank → Filter Press → Sludge Drying Beds → Dried sludge to TSDF and filtrate to ETP Clear Water tank
Domestic wastewater	3	Septic Tank followed by Soak Pit.

4.4 Land Environment

The proposed modernization project site (11.75 Ha) is plain existing land having little undulation as there is no crop development in this project site. Therefore, the Kothari Phytochemicals International plant activities are unlikely to alter the agricultural and land-use pattern in the study region.

4.4.1 Hazardous / Solid Waste

Hazardous / Solid waste generated from the various stages of proposed modernization of APIs & Phytochemicals manufacturing and its handling and disposal is given below:

Hazardous / Solid Waste Generation, Handling and Disposal

Sl. No.	Description	Proposed Quantity (TPD)	Stream	Handling Method	Disposal
1.	Organic residue from Process	0.2	28.1 of Schedule - I	HDPE Drums	Sent to TNWML, Gummidipoondi, Tamil Nadu for Incineration.
2.	Spent carbon	0.001	28.3 of Schedule - I		
3.	Inorganic & Evaporation salt (Process)	0.4	28.1 of Schedule - I	HDPE Bags	Sent to TNWML, Gummidipoondi, Tamil Nadu for Incineration.
4.	Evaporation salt (Non-Process)	0.1	35.3 of Schedule - I		
5.	ETP Sludge	0.1	35.3 of Schedule - I		
6	Waste pulp after extraction from process	14.2	--	HDPE Bags	Freely distributed to farmers in nearby villages as manure.
Other Hazardous / Solid Waste generation from the Plant					
7.	a) Detoxified Container / Liners drums, HDPE Carboys, Fiber Drums,	15 Nos./ month	33.1 of Schedule - I	Designated covered area	Disposed to SPCB Authorized agencies after complete detoxification
	b) PP Bags	3 Kg/month	--		
8.	Spent solvents (85.1 KLD + 0.3 KLD water)	85.4 KLD	28.6 of Schedule - I	Tanks / Drums	Recovered within the premises
9.	Waste oils & Grease	0.5 TPA	5.1 of Schedule - I	MS Drums	Sent to SPCB Authorized agencies for reprocessing
10.	Used Lead acid Batteries	30 Nos. / annum	A1160 of Schedule - III	Stored in Covered shed	Sent to suppliers on buy-back basis.
11.	Misc. Waste (spill control waste)	L.S.	--	Stored in Drums	TNWML, Gummidipoondi, Tamil Nadu
12.	Rejects	L.S.	--		

Sl. No.	Description	Proposed Quantity (TPD)	Stream	Handling Method	Disposal
13.	E- waste	L.S.	--	Designated covered area	Authorized re-processor or TNWML, Gummidipoondi, Tamil Nadu
14.	Waste papers & other types of packing scrap	L.S.	--		Sold to scrap vendors
15.	Canteen waste	L.S.	--	HDPE bags	Composted on site and reused for green belt
16.	Bio Medical Waste	LS.	--	Color coded containers	Sent to SPCB authorized Biomedical waste incinerator

Solid waste will be segregated, detoxified and collected in the HDPE Drums / Bags and will be stored in the covered and raised platform with Leachate collection system.

4.5 Socio-Economic Environment

Population in the study area as per 2011 census is 3,67,889 persons. Literacy pattern of the study area was reported to be around 81.63% of the total population of the study area. Total work force in the area was reported to be around 46.12%. Operation phase of proposed modernization project will require total workforce of direct (50) and Indirect (20) persons. There is no additional man power required for modernization. Under the Corporate Social Responsibility the Industry will develop a policy of developing the villages in the vicinity by identifying the requirements.

5.0 Handling of Hazardous Chemicals, Waste and Risk Assessment

The manufacturing of APIs & Phytochemicals has to handle many such chemicals that are hazardous in nature. Once these chemicals are used for some reactions, some hazardous wastes are generated. The industry will continue to provide special training to the workers handling Hazardous chemicals / wastes. Only highly trained personnel with personal protective equipment's (PPE's) will be allowed to handle such chemicals or wastes under strict supervision.

6.0 Occupational Health Hazards

The principle of occupational health hazards posing danger to the health of personnel are furnace oil handling area (for boiler feed), reactors area, boiler area, loading and unloading sections in the store area, solvent storage area, acid and alkali handling/storage areas, oil storage areas, Handling storage and disposal of Hazardous wastes etc., EHS cell will ensure employees in these areas to use PPEs with proper precautions. First aid boxes

are placed in all activity areas. Kothari Phytochemicals International has tie-up with local hospital which has ambulance facility for immediate action in case of any accident.

7.0 Greenbelt Development

Industry has developed the Greenbelt in and around the plant boundary to extent of 4.06 Ha (34.5%). The green cover proved beneficial such as retention of soil moisture, prevention of soil erosion, recharge of ground water, noise attenuation, dust control and moderation of the micro-climate of the area.

8.0 Post- Project Environmental Monitoring

The existing environmental management cell will be upgraded with necessary infrastructure. EHS Head reporting to the Director regarding regular monitoring and environmental performance of project area. Industry allocated Rs. 0.84 crores per annum as recurring cost (Operation & Maintenance) for Environmental Monitoring.

8.1 Construction Phase

The proposed modernization project envisages setting up of reactors in buildings and machinery, establishment of production and storage facilities. The construction activities are expected to last for about 6 months. Environmental monitoring measures during construction stage are given below.

- Ambient air quality parameters viz., PM₁₀ and PM_{2.5}, SO₂, and NO₂ will be monitored to ensure that ambient air quality standards would be met all the time.
- Basic amenities such as drinking water, sanitation & lighting will be provided to the construction workers.

8.2 Operation Phase

Air emissions from process areas, Boiler & DG sets, liquid effluents, hazardous and non-hazardous waste generation are envisaged. The following attributes which merit regular monitoring based on the environmental setting and nature of project activities are listed below:

- Source emissions and ambient air quality.
- Groundwater levels and ground water quality in surrounding bore wells.
- ETP effluent quality before and after treatment.
- Hazardous and solid waste characterization (Process hazardous waste, ETP sludge, used and waste oil).
- Soil quality.
- Noise levels (Ambient, machinery noise levels, occupational exposures)

- Ecological preservation and afforestation.
- Health checkup (every year) will be made as per the guidelines prescribed by the statutory body.

9.0 Rain Water Harvesting (RWH)

Industry proposed to develop RWH facilities within the plant premises based on the contours of the project. The Rainwater will be stored and reused in the utilities and excess if any will be routed to recharge pits within the plant premises. This has been quantified and given in the report.

10. Project Benefits

M/s. Kothari Phytochemicals International proposes to modernize its APIs & Phytochemicals manufacturing not only increases the market availability of therapeutic drugs but also reduces the import burden on the country and also support the government by paying the taxes to the exchequer. In addition to this certain social contributions will help in economic growth of the area. Adequate additional plantation is proposed inside the plant. The trees will maintain regional ecological balance and conform to soil and hydrological conditions. Indigenous species would be preferred. The management will continue to support the local administration and other form of assistance for the development of public amenities in this region. The health programme outlines a routine monitoring of health and safety of the work force. Most of the existing direct and indirect employments are from the nearby villages. Industry allocated Rs.5 lakhs towards Corporate Environmental Responsibility.