

**EXECUTIVE SUMMARY**  
**OF**  
**ENVIRONMENTAL IMPACT ASSESSMENT REPORT**  
**FOR PUBLIC HEARING**

**OF**  
**Expansion project**  
**PROPOSED BY**



**M/s. Galaxy Surfactants Ltd.**  
Plot No. V-23, MIDC Taloja, & Plot No. 1,  
Nr. Taloja MIDC, Taluka - Panvel, Dist. – Raigad,  
State – Maharashtra

**FOR**  
**Surfactants and Speciality Chemicals**  
**Manufacturing Facility**



**GOLDFINCH ENGINEERING SYSTEMS PVT. LTD.**  
**NABET ACCREDITED EIA CONSULTANT**  
**THANE, MAHARASHTRA**

**OCTOBER 2014**

### 1.0 Introduction

M/s. Galaxy Surfactants Ltd. have proposed a change in product mix of the existing products by change in process, modernization resulting in expansion of the existing manufacturing product quantity at their operating unit at Taloja, Maharashtra without additional investments. This site is best suitable for the purpose because the proposed activity would be easily manageable both from production, pollution control and quality assurance point of view. All necessary infrastructures for this capacity are already conveniently available. There will not be any additional requirement of water, power and fuel for this proposal. Expansion of the manufacturing of surfactants and specialty chemicals is in the existing Plot nos. V-23, MIDC, Taloja, & Plot No. 1, Nr. Taloja MIDC, Taluka - Panvel, Dist - Raigad, State - Maharashtra - 410 208. The proposed production quantity after implementation of the proposal will be 17,052 MT/ Month.

As per the schedule of the Environmental Impact Assessment notification dated 14<sup>th</sup> September 2006, the proposed project by M/s Galaxy Surfactants falls as item 5(f) and under Category B covering Synthetic Organic Chemicals industry, requiring recommendation by State Level Expert Appraisal Committee (SEAC- Industrial) and approval / environmental clearance from the State Level Environmental Impact Assessment Authority (SEIAA). Since the project is proposed in a MIDC notified industrial area, no public consultation was required. The original proposal was submitted as category B2 as the production quantity would increase due to change in production of lower molar products in the same category and modernization, batch cycle time reductions in some existing products with no additional requirement of utilities or capital cost and no increment in effluent quantities. The proposal was considered by SEAC in their 77th meeting and it was classified as B-1 requiring EIA as per OM issued by MoEF on guidelines for categorization of B2 category of activities under EIA notification dated 23rd December 2013. However, based on the OM dated 16<sup>th</sup> May 2014 by Director MoEF, Public Hearing is also not exempted for the proposals in Industrial Estates / Parks which have not taken Environmental Clearance.

This Environmental Impact Assessment (EIA) report is prepared as per the direction of the SEAC in their 77th meeting to provide information on the potential negative and positive environmental impacts anticipated from the project. It also aims to make recommendations for the mitigation of the potential negative impacts and enhancement of the positive ones. A field survey of the project site already had been conducted based on the model TORs and potential environmental impacts of

project activities were identified, assessed, and documented. The EIA team carried out technical discussions with project proponent, field consultation with local authorities and the people in the vicinity.

Environmental Protection Act (1986) policies and rules have been considered during the assessment. The EIA report has been written as per the generic EIA format according to the requirement of the Ministry of Environment and Forests, Government of India. This EIA report is based on the studies conducted by M/s Goldfinch Engineering Systems Private Limited who have been provisionally accredited by QCI – NABET as EIA consultant organization.

### **1.1 PROJECT DESCRIPTION**

Proponent is proposing Expansion of the manufacturing of surfactants and specialty chemicals in the existing Plot nos. V-23, MIDC Taloja, & Plot No. 1, Nr. Taloja MIDC, Tal-Panvel, Dist-Raigad. State -Maharashtra-410 208. The proposed increase in production quantity will be 3509 MT/month out of the total 17,052 MT/ Month. The total plot area is of 77,802 Sq. M. Existing Project cost is approximately 227.80 Crores.

### **1.2 SITE LOCATION**

The Existing manufacturing plants of M/s. Galaxy Surfactants Ltd., are located at plot nos.V-23, MIDC, Taloja, & Plot No. 1, Nr. Taloja MIDC, Tal-Panvel, of State Maharashtra.

GPS Location: (Lat. 19. 094<sup>0</sup> N & Long. 73.119<sup>0</sup> E) with an elevation of 25 meters above sea level (MSL).

### **1.3 EXTENT OF STUDY & STUDY COVERED**

Environmental Impact Assessment report is prepared based on the baseline studies carried out during April 2012, May 2012 & June 2012. The Environmental parameters such as ambient air, water, soil, noise, were those selected for study areas which are likely to be affected by the project. The study area is defined as an area within 10kms radius around site as per the model ToRs specified by SEAC, Maharashtra for Synthetic Organic Chemical Industry sector.

### **1.4 METHOD OF STUDY**

Based on the MoEF guidelines studies were carried out and identified based on the nature of activities involved and their impacts caused on various environmental parameters. It subsequently suggests mitigation measures to be executed for safeguarding against any environmental degradation. Finally it suggests methods of implementing the environmental management plan.

## 2.0 PROJECT DETAILS

M/s Galaxy Surfactants Ltd. has proposed to manufacture the following products.

**Table 1.1: List of Products for Environmental Clearance**

<b>Sr. No.</b>	<b>Name of the Product</b>	<b>Existing Production Quantity (MT/Month)</b>	<b>Proposed additional production Quantity for Environmental Clearance (MT/Month)</b>	<b>Total Production Quantity (Existing + roposed additional) (MT/Month)</b>
1	Anionic surfactants (on 100% AM basis) such as Fatty Alcohol Sulphate, Fatty Alcohol ether sulphates etc.	5950	1190	7140
2	Ethylene Oxide Condensate	3500	1500	5000
3	Cationic Surfactants (on 100% AM basis) such as Betains, Quaternary Ammonium Salts etc.	1267	253	1520
4	Sulphosuccinates	50	10	60
5	Surfactant blends (on 100% AM basis) such as Syndet Soap-Granules/Noodles, Sparkle series etc.	1100	220	1320
6	Fatty Acid Esters, Fatty alkanol amides and esterquats	1416	284	1700
7	Conc. Sulphuric Acid (By Product)	110	22	132
8	Sodium Sulphate 20 - 25 % solution , Solids 37.5 MT/ M (By Product)	150	30	180
	<b>Total</b>	<b>13543</b>	<b>3509</b>	<b>17052</b>

### Detail of Changes To be Done in Operation Procedure For The Proposed Activity

The additional production quantity will be 3509 MT/ Month. The total magnitude of operation after the expansion will be up to 17052 MT/Month. The increase in production is purely due to by changes in process parameters as described as follows:

There will not be any increase in connected power load and effluent load.

## Anionic Surfactants

- GSL as continuous sulfation plant for manufacturing of anionic surfactants like fatty alcohol sulfates and fatty alcohol ether sulfates
- Technology is falling film sulfonation technology from Ballastra, Italy
- Input RM ( Fatty alcohol/Ethoxylated Fatty alcohol) rate is 1800 -2100 kg/hr by technology provider

### Proposed Process modifications

- GSL has conducted trials where these rates can be increased to 2400-2600 kg/hr by increased in SO<sub>3</sub> concentration to reactor which will result in higher output of 3450 kg/hr as against 2800 kg/hr on 100% AM

## Fatty Alcohol Ethoxylates

- GSL makes various moles ( 0.5 moles to 9.0 moles) of Fatty Alcohol ethoxylates by reacting fatty alcohols with ethylene oxide
- It is done by controlled addition of ethylene oxide in hot fatty alcohol
- Normally addition times are higher in higher mole ethoxylates as amount of EO to be added in high hence in higher mole ethoxylates batch cycle times are high
- GSL has put separate ethoxylation facility at Jhagadia, GIDC, Gujarat two years back and shifted most of higher mole ( 7 and 9 moles) ethoxylated products to Jhagadia plant
- Due to product transfer to Jhagadia, in same facility GSL ( Taloja) can produce 1500 MT/month more lower mole ethoxylates ( 0.5, 1, 2 & 3) without any investment and any extra effluent generation

## Fatty Alcohol Ethoxylates

- **Existing BCT in ethoxylation plant and Quantities produced of different Fatty alcohol ethoxylated**

Grades	1M	2M	3M	7M	Total
Production capacity, TPM	1000	1100	200	1200	3500
BCT, min	140	140	150	310	

- **Proposed BCT in ethoxylation plant and Quantities produced of different Fatty alcohol ethoxylated**

<b>Grades</b>	1M	2M	3M	7M	Total
<b>Production capacity, TPM</b>	1300	1100+1200X2=3500	200	0	5000
<b>BCT, min</b>	140	140	150	310	

### Fatty Alkanol Amides & Esters

- Fatty Alkanol Amides & Fatty Acid Esters are manufactured by simple amidification & esterification reactions
- GSL has reduced BCT by process monitoring and improvement in reaction kinetics by changing process conditions
- This has resulted in increased in productivity by >20%

### Surfactant Blends

- GSL is making surfactant blends for personal and home care industries
- These are surfactants blends and made by simply mixing in the vessels
- By improving overall mixing efficiencies, GSL proposing to reduce BCT and increase productivity without generation of additional effluents

### 2.1 POWER/ENERGY REQUIREMENTS

**Power:** The total power requirement for the existing project is 2500 KVA. The required power is available from MSEDCL and this will fulfill the need for additional production quantity. No additional power is required for the proposed activity.

<b>Connected Load</b>	6,343 KW
<b>Maximum Demand</b>	400 KVA
<b>Transformer Capacity</b>	5000 KVA
<b>Total Power Requirement</b>	3500 KVA

Number and capacity of DG set to be used (Existing)

<b>Capacity</b>	<b>Quantity</b>	<b>Fuel Used</b>
2 MW	1 No.	400 Lit/h
1000 KVA	1 No.	200 Lit/h

DG sets are provided with acoustic enclosure.

## 2.2 EFFLUENT GENERATION AND TREATMENT PLANT

Galaxy Surfactants Ltd. is having an ETP for treatment of Industrial & Domestic effluent. GSL has provided MBR Technology to cater to the pollution load of effluent.

The raw effluent will be collected in the Collection tanks (2 nos.). From here the effluent will be pumped to the Equalization tank. The raw effluent pumped from the collection tanks is collected in the Equalization cum Neutralization tanks (2 nos). Here, the effluents get equalized to ensure uniform organic and hydraulic loading on the subsequent treatment units. In this tank, the pH of the raw effluent gets neutralized by adding caustic / acid solution. Agitators are provided in the equalization tanks for uniform mixing. On line pH indicators are also provided in both tanks for monitoring the effluent pH. From here the equalized effluent is pumped to the existing Primary clarifier for settling of suspended solids. Two nos. of tanks (each 50 cu.m.) are provided for emergency storage of the raw effluent.

The suspended solids present in the effluent are settled in the Primary clarifier. The sludge settled in the Primary clarifier is dewatered in the Decanter Centrifuge or drained to the Sludge Drying Beds for drying. The dewatered primary sludge is disposed of suitably through CHWTSDF. The clarified effluents then pass through a Fine Screen for removing fine suspended matter like hair, fibers, etc. This is required for protection of the MBR membranes. The screened effluent which subjected to aerobic biological treatment in the existing Aeration tanks (I & II). The intermediate secondary clarifiers are bypassed since settling of biomass is not envisaged.

The two aeration tanks are operated in series. BOD & COD reduction is achieved in the existing Aeration tanks due to degradation of organic matter present in the effluent by aerobic microorganisms. The ammonical nitrogen present in the effluent is also removed here. Due to the MBR process, the aeration tank can be operated at a high MLSS level (approx. 8000 – 12000 mg/l). Additional diffusers are installed in the both aeration tanks for supplying the additional air. Required quantity of air is supplied by common Roots Type Air Blowers of suitable capacity. From the 2<sup>nd</sup> stage aeration tank, MLSS (Mixed Liquor Suspended Solids) is overflow into the MBR tank. The MBR modules are installed inside this tank. Treated Effluent is sucked through the MBR modules with the help of a pump. Air is supplied for scouring of the MBR modules. Biomass is recycled from the MBR tank back to the Anoxic tank with the help of Sludge Re-circulating pumps for maintaining constant MLSS in the Aeration tank.

The treated effluent produced from the MBR is of a high quality and can be utilized for any non-potable application like, gardening, toilet flushing, etc. It can also be used in Cooling Towers as make up water after softening treatment. The secondary sludge from the MBR system is dewatered using a Decanter Centrifuge. Total water requirement of 785 CMD will be the same as existing for domestic, Agriculture, Process & for cooling & boiler feed purpose. The source of water is MIDC and the same is adequate for enhancement of production due to modernization proposed.

**Table 1.2: Water Balance in CMD during Dry Season**

<b>Water Consumption</b>	<b>Utilization Existing</b>	<b>Existing loss</b>	<b>Existing Effluent</b>	<b>Additional Req'd. For Modernization</b>	<b>New Proposal Effluent</b>
Industrial cooling & Boiler	725	541	184	Nil	Nil
Industrial processing					
Domestic	40	10	30	Nil	Nil
Gardening	20	20	Nil	Nil	----
<b>Total</b>	<b>785</b>	<b>571</b>	<b>214</b>	Nil	<b>Nil</b>

**Table 1.3: Water Balance in CMD during Wet Season**

<b>Water Consumption</b>	<b>Utilization Existing</b>	<b>Existing loss</b>	<b>Existing Effluent</b>	<b>Additional Req'd. For Modernization</b>	<b>New Proposal Effluent</b>
Industrial cooling & Boiler	725	541	184	Nil	Nil
Industrial processing					
Domestic	40	10	30	Nil	Nil
Gardening	Nil	Nil	Nil	Nil	----
<b>Total</b>	<b>765</b>	<b>551</b>	<b>214</b>	Nil	<b>Nil</b>

### **3.0 BASELINE ENVIRONMENT**

Baseline environment of the study area incorporates the description of the various existing environmental settings within the area encompassed by a circle of 10 km radius around the proposed project site.



The baseline data is collected for the period during April - June, 2012. The primary data is collected to establish baseline scenario for the micro meteorology, ambient air quality, soil, water (surface and ground) quality, and noise levels. Table 1.4 and Figure 1.1 illustrates Air, Water, Soil and Noise monitoring locations and specific parameters of significance. The samples were collected from various locations around the periphery of the plant. The sampling details have mentioned in the below table.

**Table 1.4: Sampling Locations  
Air and Noise Monitoring**

<b>Sr No</b>	<b>Location</b>	<b>Designation</b>
<b>1.</b>	Boiler house	A-I
	Gate -2	A-II
	Gate -3	A-III
2.	Sidhi Karwale Village	A1
3.	Khevna village	A2
4.	Near Dena bank	A3
5.	Road Pale village	A 4
6.	Bel naka	A 5
7.	Pale village	A-6

**Surface Water Sampling**

<b>Sr No</b>	<b>Location</b>	<b>Designation</b>
1.	Near Road Pale village	SW1
2.	Near Galaxy Talao	SW2
3.	Near Karvale village	SW3

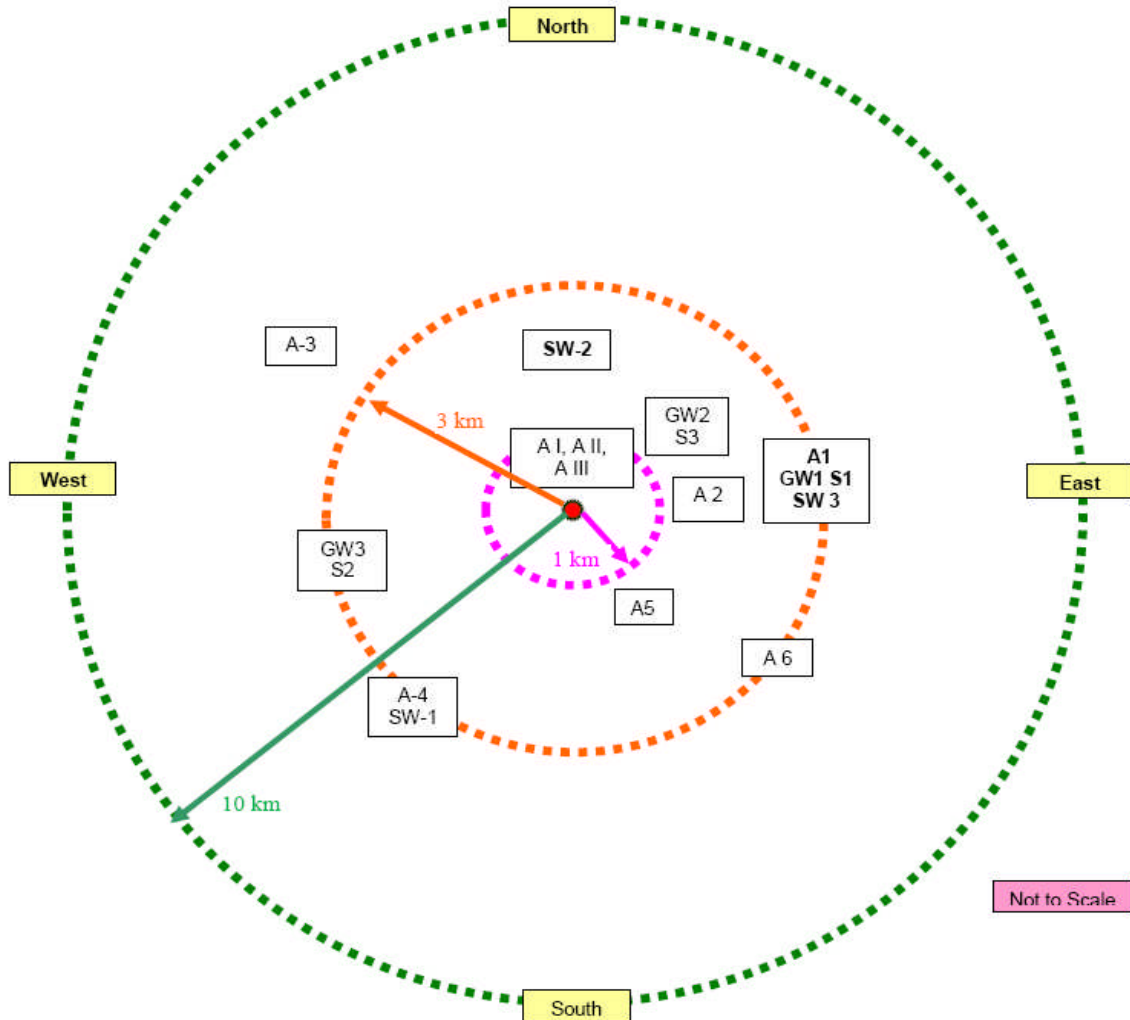
**Ground Water Sampling**

<b>Sr No</b>	<b>Location</b>	<b>Designation</b>
1.	Sidhi Karwale Village	GW1
2	Ghot Village	GW2
3	Nitlas Village	GW3

**Soil sampling**

<b>Sr No</b>	<b>Location</b>	<b>Designation</b>
1.	Sidhi Karwale Village	S1
2.	Nitlas Village	S2
3.	Ghot Village	S3

**Figure 1.1: Sampling Locations**



**3.1 AMBIENT AIR QUALITY**

Ambient air was sampled at 9 locations selected and each station was sampled for continuously 24 hours in each month. Parameters monitored were Particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), NO<sub>x</sub> and SO<sub>2</sub>. Ambient air was found to be within the prescribed regulatory limits. Within study area the average Ambient air quality is shown below:

	<b>April, 2012</b>	<b>May, 2012</b>	<b>June, 2012</b>	<b>NAAQS Standards</b>
<b>PM<sub>10</sub> (µg/m<sup>3</sup>)</b>	30.25 - 51.25	30.5 - 52.62	29.86 - 50.18	100
<b>PM<sub>2.5</sub> (µg/m<sup>3</sup>)</b>	22.1 - 42.35	23.5 - 41.35	19.71 - 40.4	60
<b>SO<sub>2</sub> (µg/m<sup>3</sup>)</b>	6.94 - 74.79	25.33 - 45.9	25.32 - 45.72	80
<b>NO<sub>x</sub> (µg/m<sup>3</sup>)</b>	20.4 - 49.71	8.25 - 25.34	19.54 - 71.66	80

### 3.2 WATER AND HYDROLOGY

Surface and ground water (bore well water) were sampled at 3 stations respectively. 15 Parameters were monitored and found to be within the prescribed regulatory limits.

### 3.3 NOISE

Ambient Noise levels in the study area were recorded to be within the limits stipulated by regulatory limits in the project area. The equivalent Noise levels during day and night time within study area are shown below:

Leq		April, 2012	May, 2012	June, 2012	CPCB Standards Industrial
Industrial area	Day time	67 – 68 dB(A)	68 – 70 dB(A)	66 – 72 dB(A)	75 dB(A)
	Night time	63.5 – 65 dB(A)	64.6 – 67 dB(A)	63.18 – 67 dB(A)	70 dB(A)
Residential area	Day time	52.5 – 55 dB(A)	51.2 – 54.2 dB(A)	52.3 – 54.2 dB(A)	55 dB(A)
	Night time	43.5 – 47.5 dB(A)	42.6 – 45 dB(A)	43.5 – 47.3 dB(A)	45 dB(A)

### 3.4 FLORA & FAUNA

Ecological and biodiversity status of the site: Characteristic of industrial habitat. No rare, endangered or legally protected species were found in the project site.

Ecological richness and value of the actual project site location: Very low.

National parks and sanctuaries within 10 km: None.

Ecologically rich areas within 10km: All of these areas are 10 km away from the project site

### 3.5 POPULATION

#### Panvel Taluka Population 2011

As per provisional reports of Census India, population of Panvel in 2011 is 3180,464; of which male and female are 169,597 and 148,867 respectively. Although Panvel city has its rural population is 218186 of which 113545 are males and 104641 are females and its urban / metropolitan population is 104641 of which 56052 are males and 44226 are females.

Population of the Taloja where project site is located has total population of 1763 out of which 1763 are male.

### **Panvel Taluka Literacy Rate 2011**

In education section, total literates in Panvel city are 153,138 of which 80,790 are males while 72,348 are females. Average literacy rate of Panvel city is 93.98 percent of which male and female literacy was 96.27 & 91.54%.

### **Panvel Taluka Sex Ratio 2011**

The sex ratio of Panvel city is 938 per 1000 males. Child sex ratio of girls is 901 per 1000 boys.

### **Panvel Taluka Child Population 2011**

Total children (0-6) in Panvel city are 17,512 as per figure from Census India report on 2011. There were 9,213 boys while 8,299 are girls. The child forms 9.70 % of total population of Panvel City.

## **3.6 LAND USE PLANNING**

The project is in existing factory in notified MIDC Industrial area, this is not a prime Agricultural Land. The land-use is already as "industrial". Thus there is no change in the status. This is flat land whereby no cutting-filling balances and there will be No/Low Borrowing from nature.

## **3.7 PUBLIC AMENITIES**

Government / MIDC has provided all infrastructure like assured Electrical power, continuous water supply with purification from water works like disinfection, the internal road network, external approach road, and networking with CHWSTDF (Common Hazardous Waste Storage Treatment and Disposal Facility), MWML at Taloja in vicinity established with support of MIDC and MPCB.

## **4.0 ENVIRONMENTAL ASPECTS**

### **4.1 AMBIENT AIR**

The source of Air emission would be from the industrial Boiler stack and Process emissions from various plants. The flue gas emission from coal/FO fired boiler will be released through stack with adequate height and process emissions through scrubbers with stacks above the height of the buildings. To reduce the air pollution at source Electrostatic Precipitator (ESP) is provided, the general working of ESP is mention below:

The organic stream in the exhaust stream is removed in electrostatic precipitator. The ESP consists of hexagonal shaped chambers having concentric electrodes. The electrodes are negatively charged and the hexagonal walls are grounded (+vely charged). The electrode is maintained with 20-30 kV

voltage across it. This causes electrons to flow through the wires to the wall. These electrons stuck the organic droplets and give them a negative charge which makes the organic particles to travel to the walls of hexagon. After accumulation this liquid accumulates is drained from bottom. The bottom cone of ESP has hot water arrangement to facilitate draining. The remaining gas is passed to the caustic scrubber.

#### **4.2 WATER RESOURCES**

Water requirement is met from MIDC supply. The existing water requirement is about 785.0 CMD. No additional water will be necessary for the proposed activity.

#### **4.3 NOISE LEVELS**

- The noise levels are below MPCB prescribed limits. There would be no change due to the proposed activity. All operating personnel are well acquainted with their respective operations and personnel protection equipment's will be provided to the operators in utility area.
- In house monitoring will be continued to be done regularly inside and outside the factory. The noise levels will always be within Maharashtra Pollution Control Board limits for industrial activity and Galaxy Surfactants will ensure 100% compliance record.
- Proper noise barriers, acoustic enclosures are and will be provided on noise generating equipment's like D G sets and cooling towers to minimize noise.
- No increase is anticipated at any of the Noise Monitoring locations or surrounding villages / area due to this proposal implementation.

#### **4.4 SOIL/LAND QUALITY**

The project proponents have taken all the precautions to make its solid waste areas impervious to water and leachate migration. There will be no liquid effluent discharge on land. This will avoid soil contamination. It follows that soil quality will not be adversely impacted by proposed production activity. The unit set up is in industrial area hence no change in land use.

#### **4.5 EOLOGICAL ENVIRONMENT**

##### **Suggested Mitigation measures**

- The water effluent should be treated before being discharged as per guidelines of MPCB.
- The air emissions should follow strict guidelines of MPCB as harmful air emissions may cause disturbance to the epiphytic species in the forest areas.
- Fencing should be erected to exclude conflict with wild animals.

- The plantations in the project location mainly consist of plants of ornamental utility. Strategic plantations of native and forest representing trees must be undertaken.
- Create native species dominated green belt and gardens to enhance bird life in the premises.

#### **4.6 SOCIO ECONOMIC IMPACT**

The socio economic status of the MIDC industries as a whole was observed and noted as reported by the people in nearby villages. MIDC has provided an opportunity for economic growth to the people. The industries have positively contributed to the growth and development of the region. No specific adverse socio economic impact due to Galaxy Surfactants Co. was noticed or reported.

#### **5.0 ENVIRONMENTAL MANAGEMENT PLAN**

An environmental management plan has been proposed to implement the mitigation measures. The plan will ensure that the adverse environmental impacts are minimized and the beneficial impacts area maximized.

##### **5.1 DOMESTIC SEWAGE**

Domestic wastewater generated will be treated separately in proposed Sewage Treatment plant of capacity 30 CMD. Treated wastewater will be reused for gardening.

##### **5.2 INDUSTRIAL EFFLUENT**

Trade effluent quantity will be same as existing 184 CMD. To treat the industrial effluent, the industry has provided an Effluent treatment plant for compliance of MPCB prescribed standards and discharge the entire treated effluent to CETP. The industry has become a member of the CETP for discharge of treated effluent.

##### **5.3 AIR POLLUTION MANAGEMENT**

The source of emission i.e. Flue Gas Emission is from existing industrial Boiler. The Flue gas emission is released through stack having adequate stack height. The process emissions from the reaction vessels will be recovered using vent condensers, ESP and scrubbers.

##### **5.4 SOLID & HAZARDOUS WASTE MANAGEMENT**

The Hazardous Wastes generated will be sent for further treatment and disposal to CHWSTDF (Common Hazardous Waste Storage Treatment and Disposal Facility), Mumbai waste management, Talaja.

## 5.5 GREEN BELT DEVELOPMENT

In and around the Industry of green plantation has already done. The area for green belt development within the factory premises is approximately 4080 sq. meters. Total 371 number of trees & shrubs planted in factory premises.

## 6.0 CORPORATE SOCIAL RESPONSIBILITY

Some of the CSR activities which are organized by Galaxy Surfactants are listed below:

- ❖ GSL have provided following facilities to a neighboring village school, Saraswati Vidya Mandir, Usatane, Taloja:
  - ✓ Library with books
  - ✓ Laboratory with lab instruments
  - ✓ Toilets for girls and boys
  - ✓ Arranged Drinking water
  - ✓ Provided benches in 3 class rooms
  - ✓ Constructed a class room
  - ✓ Carried out tree plantation in and around the school.
- ❖ Organized eye check-up camps for the school children of Usatane School.
- ❖ Provided assistance to neighboring Old Age Home, Taloja
- ❖ Provided assistance to Home for Mentally Challenged Children viz. Ameya Palak Sanghatana, Khoni, Taloja
- ❖ Carried out tree plantation in neighboring areas.
- ❖ GSL have undertaken hand hygiene activity in the rural areas and concentrated on the age group of 5 to 10 years children. The hygiene care is being taught to them through slides and games etc.

## 7.0 PROJECT COST AND EXPENDITURE FOR ENVIRONMENTAL ACTIVITIES

### Estimated project cost (Economic viability of the project)

**No additional Investment is envisaged.**

The existing Project cost is approximately 227.80 Crores.

#### Break Up:

Land	:	Rs. 7.49 Crores
Building/ premises	:	Rs. 45.68 Crores
Plant & Machinery	:	Rs. 174.63 Crores
Total Cost	:	Rs. 227.80 Crores

There is may be marginal increase of less than 10% due to provision of raw material & finished storage facility / inventory.

## **8.0. CONCLUSION**

It can be concluded that proposed project activity of Galaxy Surfactants is in the interest of common man, the society, the state and as the country as a whole.

1. Socio-economic benefits due to creation of direct/indirect employment. Moreover due to this project other direct and indirect businesses will be benefited.
2. Country will save valuable foreign exchange as import of these products will reduce by corresponding amount.
3. These Specialty Polymers also have export potential. Hence possibility of earning foreign exchange and increase in GDP.
4. The Flue gas emission from boiler will be left out through stack. The stack with adequate height as per CPCB norms will be provided.
5. Industrial wastewater will be treated by ETP within the premises.
6. The domestic wastewater generated will be treated in proposed STP and treated water will be used for gardening.
7. The noise generation will be reduced due to the measures provided in Environmental Management Plan.
8. The risk associated is identified by conducting risk assessment, HAZOP and recommendations of the same will be implemented. Moreover on site emergency plan also has been prepared to tackle any emergency if and when it arises.

Thus it can be concluded on a positive note that after the implementation of the mitigation measures and Environmental Management Plan the normal operation of M/s Galaxy Surfactants Ltd. will have negligible impact on environment and will benefit the country by way of saving foreign exchange and increase in the GDP and employment to the local people.