

EXECUTIVE SUMMARY

FOR

EXPANSION AND CHANGE IN PRODUCT MIX

AT

**S.F. No. 457/3A, 457/3C, 457/4A, 457/4C, 457/4C (Part)
Ammoor Village, 12/5 (Part) Chettithangal Village,
Taluka: Walajah
District: Vellore
State: Tamil Nadu**

BY

M/s. SANSKAR CHEMICALS AND DRUGS PVT LIMITED.

EIA Consultant

HUBERT ENVIRO CARE SYSTEMS PRIVATE LIMITED, CHENNAI

**(NABET Accredited vide Certificate No. NABET/EIA/1619/RA0083 Valid Till: 23-01-2020
&MoEF Recognized Lab vide F. No. Q-15018/13/2016-CPW)**

November 2019

EXECUTIVE SUMMARY

I. Project Background

M/s Sanskar Chemicals and Drugs Private Limited was established in the year 2009 to manufacture Synthetic Organic Chemicals and Drugs. The company was originally under the name of J.R.P Intermediate Private Limited, incorporated on 2nd February 2000. M/s Sanskar Chemicals and Drugs is a Private Limited company, engaged in the manufacturing of synthetic chemicals and drugs. In order to meet the needs of the market, the company proposes to manufacture additional products within its existing premises at survey no. 457/3A, 457/3C, 457/4A, 457/4C, 457/4C (part) Ammoor village, 12/5 (Part) Chettithangal village, Walajah Taluka, Vellore district, Tamil Nadu.

The existing production capacity is 250 MT/Month with 5 products and 2 Nos of by products with the capacity of 141 MT/Month. The Proposed Expansion and Change in Product Mix is dropping the existing 3 products and adding 10 new products with capacity of 112.85 MT/Month and one by-product with capacity of 81 MT/Month respectively. Total products after expansion will be 12 with capacity 112.85 MT/month and one by- product with capacity 81MT/month. The project site is located in a private land and the land document is attached as **Annexure 1**.

The EC application was submitted in MoEF & cc vide proposal No. IA/TN/IND2/83875/2018. The Project falls in schedule 5(f) – Synthetic Organic Chemical Industry and under ‘A’ category. The project site is not in notified industrial area /estate and specific conditions not applied. Since the project site located near Ranipet SIPCOT industrial area at a distance of 2.88 Km towards WSW direction having a CEPI index score is 79.67, the project falls under ‘A’ Category. Standard ToR vide file No.IA-J-11011/361/2018-IA-II(I) dated 15 Nov 2018 was issued by MoEF&CC. As per Standard ToR, the EIA report has been prepared.

II. Management Commitment

M/s Sanskar Chemicals has an Environment Management Cell with well laid down Safety, Health and Environment Policy and place it at appropriate places in the factory premises. Safety Health & Environment (SHE) policy is to adhere with standard operating process in order to comply with the statutory and bring into focus any infringement of any norms and directives with regards to the SHE and to take further corrective actions.

III. Environmental Sensitive Areas

As see in **Table-I** below, there are no notified ecologically sensitive areas, State and National boundary within 15km from Project Boundary.

Table-1 Environmental Sensitive areas within 15km of the project

S. No	Areas	Proposed project location boundary in Km			
1.	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	Nil			
2.	Areas which are important or sensitive for ecological reasons – Wetlands, Watercourses or other water bodies, coastal zone, biospheres, mountains, forests	Sl. No	Description	Distance (Km)	Direction
		1	West Bank Main Canal	12.28	NW
		2	Ponnai / Bahuda River	7.29	SW
		3	Ammur RF	1.82	ENE
		4	Tiruvalam RF	7.89	WSW
		5	Kil Minnal RF	10.96	WSW
		6	Punganur RF	13.77	WSW
		7	Punganur RF	8.84	SW
		8	Kaveripakkam Lake	9.93	ESE
		9	Palar River	5.06	WSW
3.	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	Nil			
4.	Inland, coastal, marine or underground waters	Nil			
5.	State, National boundaries	Nil			
6.	Defence installations	Nil			
7.	Densely populated or built-up area	Ranipettai with a population of 50764.			

S. No	Areas	Proposed project location boundary in Km					
8.	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	S. No	Hospitals	Distance (~ km)	Direction		
		1.	Nithyasugam clinic	1.85	E		
		2.	Thirumalai mission hospital	2.38	SW		
		3.	Nithyasugamayurvedic hospital	1.92	SSE		
		4.	MM hospital	2.92	SSE		
		5.	Dr.L.ShanthiVimala clinic	3.70	SSW		
		6.	Scudder memorial hospital	3.76	SW		
		7.	Government urban primary health center	4.44	SE		
		8.	Kavitha hospital	4.65	SE		
		9.	Government headquarter hospital	4.64	SE		
		10.	Dr. Ganesh hospital	4.76	SSE		
		11.	Lakshmi Prasad hospital	4.70	SSE		
		12.	Lavany hospital	4.67	SE		
		13.	Dr.J.P.multispeciality clinic, walajahpet	5.18	SSE		
		14.	Vellore district headquarter hospital	4.42	SSE		
		15.	Walajah government hospital building 2	4.46	SSE		
		16.	Walajah govt. OP building	4.58	SSE		
		Schools and colleges					
		S. No	Schools and collages	Distance (~ km)	Direction		
		1.	The Geekay world school	0.80	ESE		
		2.	Little flower convent school	1.61	ESE		
		3.	LFC matric higher secondary school	2.73	NE		
4.	Govt. higher secondary school	2.78	NE				
5.	VRV girls higher secondary school	3.82	SSW				
6.	Gangadhar Govt. aided matriculate school	3.57	SSW				

S. No	Areas	Proposed project location boundary in Km			
		7.	Pincushion Montessori international school	3.25	SW
		8.	Balsam school	2.85	SW
		9.	Balsam academy	2.62	SW
		10.	Vedavalli vidyalaya	2.21	SW
		11.	Government high school	1.28	SW
		12.	Ranippettai engineering collage	8.03	SE
		13.	Shri Sitheshwarapolytechnique college	8.03	S
		14.	Govt. Boys higher secondary school	6.68	SSW
		15.	AnnaiSarada Matric Hr.sec school	6.72	SSW
		16.	Saraswathi school	6.49	SSW
		17.	Govt. school Tajpura	8.54	SSW
		18.	Shri Shantiniketan School	7.16	SSW
		19.	Thiru G Varadharajalu chettiar higher secondary school	7.04	SSW
		20.	Vedanikethan matriculated higher secondary school	6.54	SSW
		21.	SSS college of arts, science and management	6.10	SW
		22.	C.Abdul Hakeem collage of Arts and Science	7.94	SW
		23.	M.M.E.S. womens arts and science collage	7.96	SW
		24.	C. Abdul Hakkem college of Engineering & Technology	8.18	SW
		25.	Hindu vidyalaya CBSE school	3.92	WSW
		26.	CSI matriculate school	4.16	WSW
		27.	SIPCOT government higher Sec.school	4.37	WSW

S. No	Areas	Proposed project location boundary in Km			
		28.	St. Thomas nursery and primary school	4.50	WSW
		29.	Christ the king school	4.91	WSW
		30.	Sri vijayvidyalaya nursery and primary school	3.40	W
		31.	Arignar Anna govt. arts and science college for women's	5.85	SE
		32.	Tmt. Lakshmi loganathan matric school	7.62	SSW
		33.	Sri Rama Krishna school	6.18	SW
Industries					
S. No	Industries	Distance (~km)	Direction		
1.	Sundaram industries	2.01	SW		
2.	Citizen industries	1.76	SSE		
3.	Indira industries	2.65	WSW		
4.	Ultra marine and pigment limited	3.04	WSW		
5.	Green land packaging industries				
6.	Balaji oil industries	4.37	W		
7.	Mitsubishi heavy industries	4.41	W		
8.	Indira damper industries	5.14	WNW		
9.	Sri Ramana industries	6.41	NW		
10.	Sri lakshmi industries	7.57	NNW		
11.	Sri Hari industries	8.38	NW		
12.	Sajooka industries	8.37	NE		
13.	Nihal Dyes & mould service pvt.ltd	8.54	NE		
14.	Welcome industrial engineering	8.39	ENE		
15.	G.K. wood industry				

S. No	Areas	Proposed project location boundary in Km			
		16.	Satvik springs	0.19	SW
		17.	Indo cool composite private limited	7.04	NW
		18.	United founders private limited	3.18	WSW
		19.	Satvik springs	0.21	SSW
		20.	M/s. Neel Fabs	9.56	NW
		21.	Sri vari industries	9.07	WNW
9.	Areas containing important, high quality or scarce resources, (groundwater resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)	Nil			
10	Areas already subjected to pollution or environmental damage. (those where existing legal environmental standards are exceeded)	SIPCOT Ranipet is ~2.88 km in WSW direction, having CEPI score 79.67.			
11	Areas susceptible to natural hazard which could cause the project to present environmental problems, (earthquakes, subsidence, landslides, erosion or extreme or adverse climatic conditions)	<p>The project location is falls under Zone III (Moderate risk category). As per Vulnerability Atlas of India, There is no susceptible to natural hazards like subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions.</p> <p>Note :</p> <p>Seismic Zone-II : Low risk</p> <p>Seismic Zone-III : Moderate Risk</p> <p>Seismic Zone-IV : High Risk</p> <p>Seismic Zone-V : Very high Risk</p>			

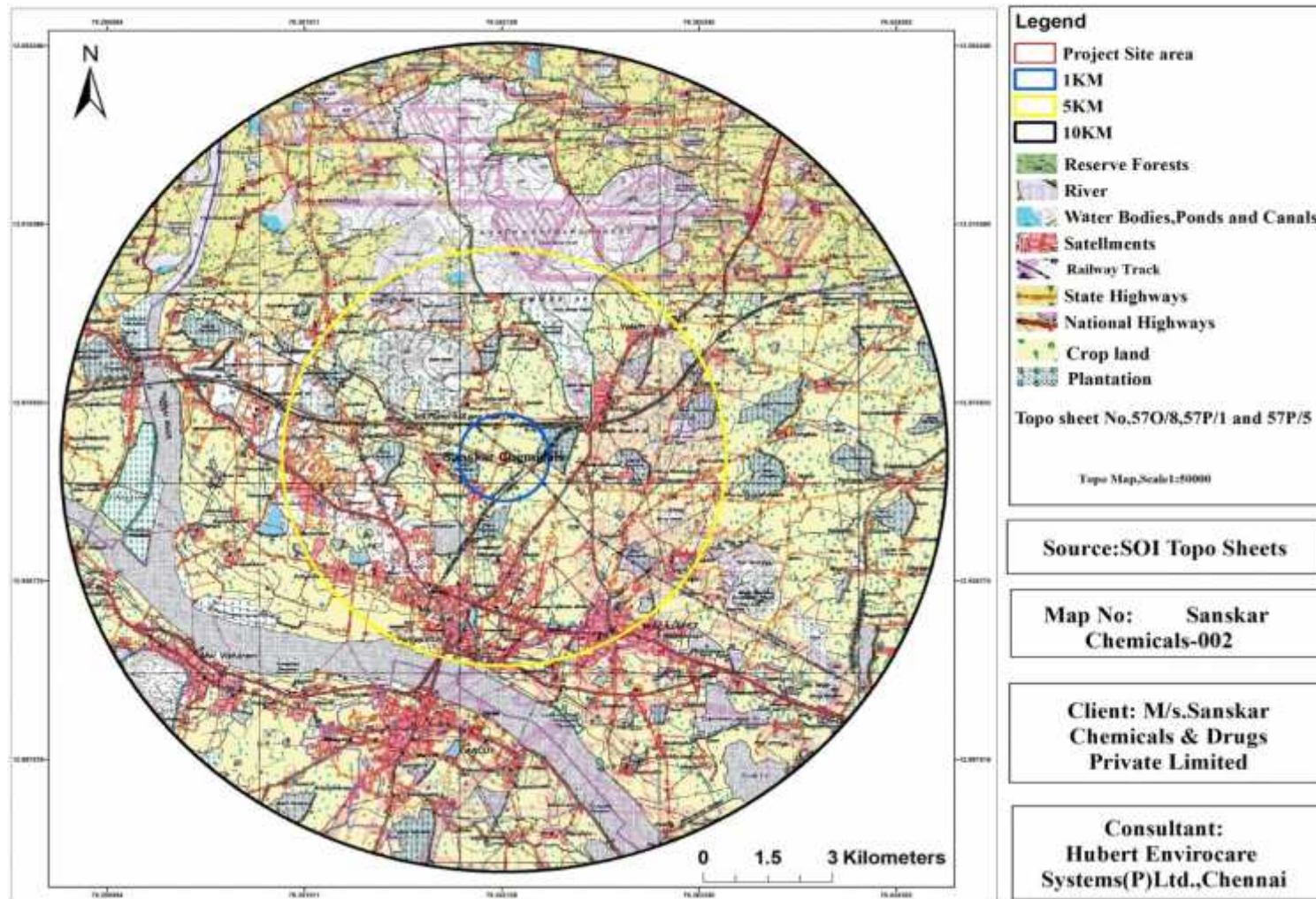


Figure 1 Topo map of the project

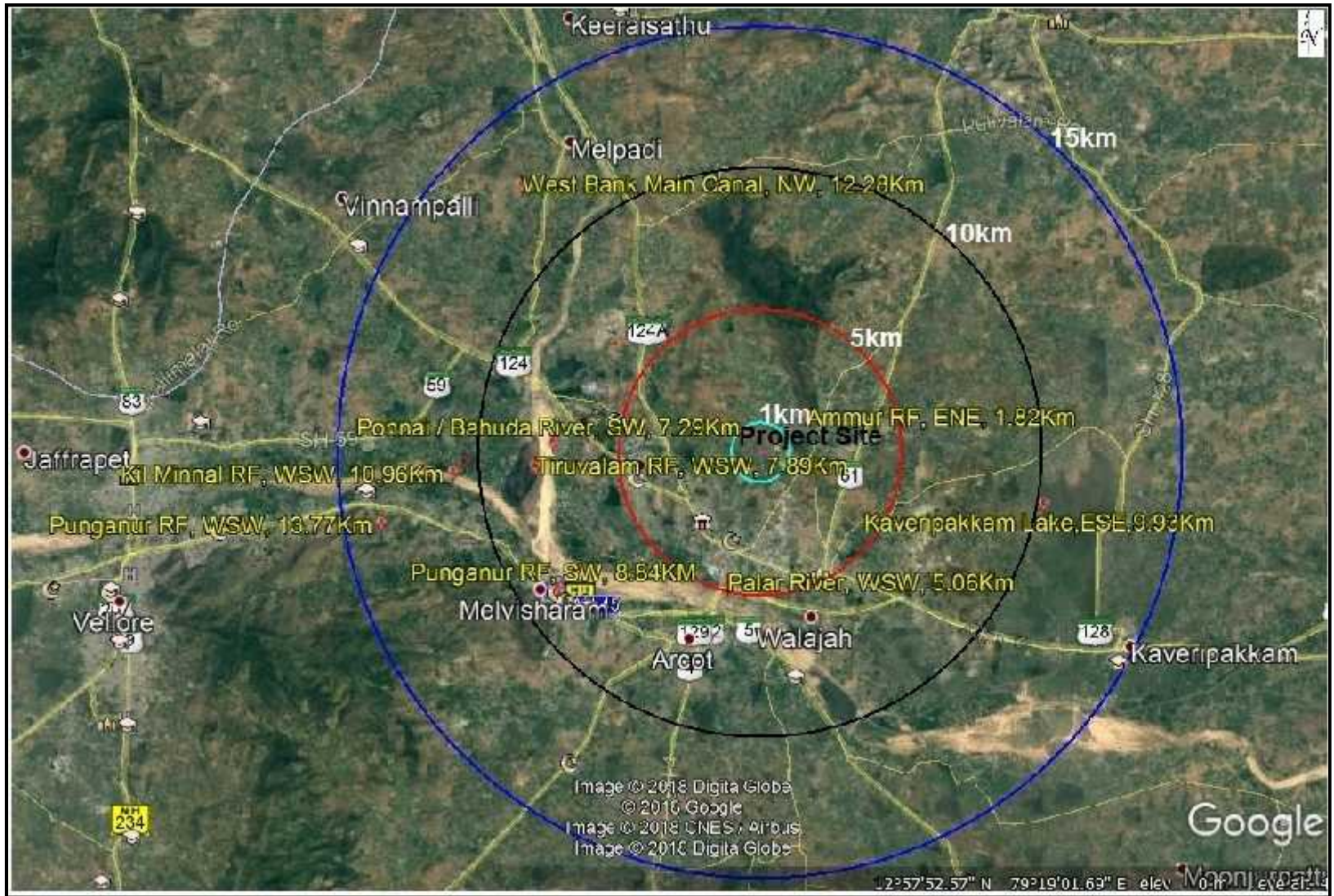


Figure-2 Environmental Sensitive map within 15km from Project boundary

IV. Project Description and Requirements

S. No.	Particulars	Details
1.	Name of Company	M/s. Sanskar Chemicals and Drugs private limited
2.	Project name	Expansion and Change in Product mix in existing facility
3.	Location	S.F. No. 457/3A, 457/3C, 457/4A, 457/4C, 457/4C (Part) Ammoor Village, 12/5 (Part) Chettithangal Village, Taluka: Walajah District: Vellore State: Tamil Nadu
4.	Site co-ordinates (center co-ordinates)	12 ^o 57'50.15" N 79 ^o 20'33.49" E
5.	Project Activity, Category as per amendments	Project schedule 5(f)- Synthetic Organic Chemicals Industry, Category A.

S. No	Products	Quantity (MT/Month)		Total Quantity after expansion
		Existing Products	Proposed Products	
1.	Poly Allamine Hydrochloride	20	-	20
2.	Isopropanol Hydrochloride	40	-	40
3.	Non ferric alum	90	dropped	0
4.	Basic chromium Sulphate	90	dropped	0
5.	Spent caustic lye solution	10	dropped	0
6.	Linagliptin	-	0.15	0.15
7.	Vildagliptin	-	1.5	1.5
8.	Trityl olmesartan medoximal	-	2	2
9.	Allyl Isopropyl acetyl urea	-	5	5
10.	Diacerine	-	0.2	0.2
11.	Sitagliptin	-	1	1
12.	Lexoprofen	-	2	2
13.	Isopropyl bromide	-	10	10
14.	Allyl Bromide	-	6	6
15.	Hydrogen Bromide	-	25	25
	Total	250	52.85	112.85
	By products			
1	Spent Sulphuric acid	81	-	81
2	Gypsum	60	dropped	dropped
	Total	141		81
Note: Non ferric alum, Basic chromium Sulphate and Spent caustic lye solution are dropped from the existing product.				
7.	Total Land area	The total plot area is 3745.18 sq. meters (0.925 Acres). land document is attached as Annexure I.		
8.	Greenbelt area	597.40 sq. m of land is dedicated for green belt which is 15.95% of the total plot area. In order to fulfill the mandatory requirement of 33% of green belt, an additional land of 900 sq. m will be allotted (15.95% +24.03%= 39.98 approx 40%) at Survey no 254/3B, Kolatheri village, Sholinghur Panchayat Union, Walajah Taluk, Vellore district, Tamil Nadu. Land document attached as Annexure II.		
9.	Proposed product with capacity	<ol style="list-style-type: none"> Existing 2 nos products retaining with 60 MT/Month Newly proposed 10 nos products with 52.85 MT/Month Total after expansion -12 nos products with 112.85MT/Month and by product: 1 no with 81 MT/Month. 		

10.	Water requirement	<p>The existing water requirement is 5 KLD.</p> <p>The total water requirement for the proposed project is 29 KLD.</p> <p>Fresh water requirement is 14.6 KLD.</p> <p>Source of water: Private tankers.</p>																																									
11.	Waste water and mode of disposal	<p>Effluent details for Existing and proposed unit</p> <table border="1"> <thead> <tr> <th>S No</th> <th>Description</th> <th>Ind. Effluent Generation(KLD)</th> <th colspan="2">Treatment Units</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Existing</td> <td>3</td> <td colspan="2">Solar evaporation pond</td> </tr> <tr> <td>2</td> <td>Proposed</td> <td>8</td> <td colspan="2">MEE</td> </tr> <tr> <td></td> <td>Total after expansion</td> <td>11</td> <td colspan="2">MEE</td> </tr> </tbody> </table> <p>Sewage generation and management</p> <table border="1"> <thead> <tr> <th>S. No</th> <th>Description</th> <th>Domestic (KLD)</th> <th colspan="2">Disposal</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Existing</td> <td>2.5</td> <td colspan="2">Septic tank</td> </tr> <tr> <td>2</td> <td>Proposed</td> <td>2.5</td> <td colspan="2" rowspan="2">Treatment by STP</td> </tr> <tr> <td></td> <td>Total after expansion</td> <td>5</td> </tr> </tbody> </table>				S No	Description	Ind. Effluent Generation(KLD)	Treatment Units		1	Existing	3	Solar evaporation pond		2	Proposed	8	MEE			Total after expansion	11	MEE		S. No	Description	Domestic (KLD)	Disposal		1	Existing	2.5	Septic tank		2	Proposed	2.5	Treatment by STP			Total after expansion	5
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4.	5.2	Spent oil (T/Month)	-	60	60																																			
17	Project cost (Estimate) in Rs.	4.25 Crores																																						

V. Baseline Study

S. No	Description	Details				
1	Monitoring Study Period	Mid January – End April 2019				
2	Meteorological Environment	S. No	Parameter	Observation		
		1.	Temperature	Min Temperature: 190C Max Temperature: 390C Avg Temperature: 28.620C		
		2.	Average Relative Humidity	72.12%		
		3.	Average Wind Speed	3.5 m/s		
		4.	Predominant Wind Direction	North East to South West		
3	Air, Noise, GW & Soil Quality monitoring locations	Station Code	Location	Type of Wind	Distance (km) from Project boundary	Azimuth Directions
		A1	Project site	-	-	
		A2	Ammur	u/w	2.62	NE
		A3	Walajapet	c/w	4.53	SSE
		A4	Arcot	c/w	6.37	SSW
		A5	Karai	d/w	4.01	SW
		A6	Tanthai Periyar Nagar	d/w	2.81	SW
		A7	Ranipet – SIPCOT	c/w	4.98	W
		A8	Kalpudur	c/w	3.98	NNW
4	Surface Water Sampling Locations	S. No	Name of the Water body	Location Code	Distance from Project Boundary	Direction from project boundary
		1	Lake near Walajapet	SW1	4.63	SSE

		2	Lake near Toppukana	SW2	7.52	SSW
		3	Pond near Karai	SW3	3.95	SW
		4	Lake near Thanthai Priyar Nagar	SW4	2.26	SSW
		5	Lake near Maniyampattu	SW5	5.25	WSW
		6	Settithangal lake	SW6	0.96	SW
		7	Lake near Edapalayam	SW7	2.64	WNW
		8	Lake near Kalpudur	SW8	4.34	NNW

VI. Baseline Summary of the Study Area

S. No	Parameters	Baseline Status
1	Ambient Air Quality	PM10 – 55.1- 71.1 $\mu\text{g}/\text{m}^3$ PM2.5 – 20.3-26.9 $\mu\text{g}/\text{m}^3$ NO2 – 16.4-23.7 $\mu\text{g}/\text{m}^3$ SO2– 7.1-12.4 $\mu\text{g}/\text{m}^3$ O3 - 9.6- 12.7 $\mu\text{g}/\text{m}^3$ Other parameters below Detectable limit
2	Water Quality	Surface Water pH -6.68 to 7.62 TDS – 500 mg/l to 2100 mg/l Total Hardness – 300 mg/l Ground Water pH –7.09 to 8.37 TDS - 226 mg/l to 1582 mg/l Total Hardness - 125 mg/l to 583 mg/l.
3	Noise Level	Within the commercial areas, Day time noise levels have significantly increased in locations Arcot and Walajapet. In Project Site the Day time and Night time noise level were in the CPCB standard. However the

		night time noise levels are well within the limits prescribed by CPCB.
4	Soil Quality	pH – 5.1 – 7.24 EC – 70 – 110.3 µS/cm. (< 2000 µS/cm) Nitrogen – 138 mg/kg to 561.65 mg/kg Phosphorous – 15.54 mg/kg to 46.69 mg/kg. Potassium – 94 mg/kg to 180 mg/kg
5	Ecology and Biodiversity	The study area comprise of barren land and agricultural cropland. The flora observed in the study area comprise of <i>Albizia amara</i> , <i>Albizia lebbeck</i> , <i>Moringa oleifera</i> , <i>Ficus religiosa</i> , <i>Calatropis gigantea</i> , <i>Prosopis juliflora</i> , etc.,
6	Socio Economic	The Socioeconomic profile of the study area shows that the majority of people in the study area work in non-agricultural sector. They have good educational infrastructures and the people in the study area are well connected to the educational infrastructures. The average literacy rate of the study area is 69.03 % which is less than the district literacy rate of 84.5 %. The people in the study area are well connected to Government primary health centres and Primary health sub-centres and also they have emergency ambulance service “108” which active all over the state

VII. Anticipated Environmental Impacts

S. No	Description	Details
7	Water Environment	The existing water requirement is 5KLD which will be increased up 29 KLD after proposed expansion. At present water requirement is met from private tankers. Wastewater will be segregated into Domestic and Industrial effluent. The and industrial effluent will be sent to Neutralization tank and MEE. The treated effluent will be used within the process and Zero liquid discharge concept will be maintained, hence no adverse impacts due to the proposed expansion project on the environment

8	Air Environment	Pollutant	Max Base line Conc. (µg/m3)	Predicted Conc. at source (µg/m3)	Total Conc. (µg/m3)	NAAQ standard	% Increase
		PM	84.5	0.353	84.85	100	0.42
		SO ₂	12.4	0.254	12.65	80	2.05
		NO _x	28.2	3.135	31.34	80	11.12
9	Noise Environment	<p>As a preventive measure for the noise reduction the following will be adopted.</p> <ul style="list-style-type: none"> Implementation of additional greenbelt for noise attenuation will be undertaken: shrub plantation; landscaping with horticulture; and Tree plantation at vehicle parking areas and along approach roads. <p>Various standards pertaining to vibrations are formulated by statutory bodies like Bureau of Indian Standards (BIS) and Director General of Mines Safety (DGMS), which is being practiced would be continued to mitigate the workers' health effects due to vibrations</p>					
10	Land Use	<p>The Hazardous wastes will be stored in isolated area above concrete platform under roofed shed. These wastes will be segregated & stored and will be disposed to the TNPCB authorized dealers/recycler/TSDF within a stipulated period of time (90 days). Hazardous waste materials will be properly disposed as per the Hazardous and Other wastes (Management, Handling and Transboundary Movement) Rules 2016</p>					

Others

S. No	Description	Details				
		S. No	Area of Monitoring	Number of Sampling Stations	Frequency of Sampling	Parameters to be Analyzed
1	Environmental Monitoring Program	1.	Meteorology	One	Hourly and Daily basis.	Wind speed and direction, Temperature, Relative Humidity, Atmospheric pressure, Rainfall.
		2.	Ambient Air Quality	2 Stations (In downwind)	Twice a week:24 hourly period	All the 12 parameters as per NAAQs, VOC, HCl, HBr, Chlorine
		3.	Noise	4 (two within plant premises and two	Once every season	Ambient Equivalent continuous Sound Pressure Levels (Leq)

				outside plant premises)		at day and Night time.
		4	Exhaust from DG set	2	Monthly	SPM,, SO ₂ , NO _x & CO
		5	Vehicular Emissions	Parking area	Periodic monitoring of vehicles	Air emission and noise, PCU
		6	Solid waste / Hazardous waste	Check conformance to HWM rules	Quantity and Quality monitoring	Periodically
		7	Soil	Two Locations within the Project Site	Yearly Once	Physico chemical properties, Nutrients, Heavy metals
		8	Terrestrial Ecology	Within 10km, around the project	Once in three years	Symptoms of injuries on plants
		9	Liquid Effluents	Main Plant Effluents	Weekly	pH, Temp, Conductivity, TSS, TDS, BOD, Phenol.
				STP	Monthly	
2	Pollution Control Measures	<p>The following pollution control measures will be adopted:</p> <ul style="list-style-type: none"> ➤ The D. G. Sets will be provided with a stack of 4m to allow dispersion of the pollutants. scrubbers for process stack and stack for boiler. ➤ Municipal Solid Wastes including food waste are disposed to municipal bin. ➤ Hazardous waste materials will be properly disposed as per the Hazardous and Other wastes (Management and Transboundary Movement) Rules 1989 and subsequent amendment in 2016 ➤ Awareness will be given to workers about the importance and conservation of terrestrial ecology and biodiversity. 				
3	Green Belt Development	<p>As per the rules and regulations laid by Ministry of Environment and Forest, Central Pollution Control Board (CPCB) and State Pollution Control Board (SPCB), it is legally mandatory to earmark 33% of the project area for greenbelt development to promote integration of environmental issues with industrial development projects. The total plot area is 0.3745 Ha. i.e. 0.925 Acres. 597.40 sq. m of land is dedicated for green belt which is 15.95% of the total plot area. In order to fulfill 33% of greenbelt, an additional land of 900 sq. m will be allotted (15.95% + 24.03% = 39.98 approx 40%) at Survey no 254/3B, Kolatheri village, Sholinghur Panchayat Union, Walajah Taluk, Vellore district, Tamil Nadu.</p>				

XI. Summary

- As seen above there is no marginal impacts on air, noise, water & soil environments.
- The products manufactured at this facility will be exported that will aid in adding to the revenue of the nation.
- Rain water harvesting will enhance the ground water table.
- During the project implementation, demand for goods and services required for the project will directly or indirectly contribute to the growth.
- Appropriate models and techniques were used to predict the impact of the proposed expansion project. However, the Potentials impacts identified are temporary in nature, to minimize impacts at every level of development, mitigation measures were suggested.
- It can be concluded on a positive note that after the implementation of the mitigation measures and environmental management plans, the proposed project activities during the operation phase would be manageable.