

LAKSHMI PHARMACHEM

**SY.NO. 219/1(PART), 219/2(PART) AND 221(PART),
RAMANNAPALEM VILLAGE, TIRUVURU MANDAL, KRISHNA DISTRICT,
ANDHRA PRADESH**

PRE-FEASIBILITY REPORT

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SUBMITTED TO
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
GOVERNMENT OF INDIA
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Pre - Feasibility Report

Lakshmi Pharmachem

Sy. No. 219-1, 219-2 & 221,
Rammanapalem Village, Tiruvuru Mandal,
Krishna District, Andhra Pradesh

1. Executive Summary

M/s. Lakshmi Pharmachem located at Sy. No. 219/1(Part), 219/2(Part) and 221(Part), Ramanapalam Revenue village, Kakarla Gramapanchayati, Tiruvuru Mandal, Krishna District, Andhra Pradesh proposed to establish synthetic organic chemicals (Bulk drug and intermediates) manufacturing unit in an area of 10 acres. Capital cost of proposed unit is 25 crores towards production blocks, facility for utility proposed and ZLD system.

The site at the intersection of 17° 03'32" (N) latitude and 80° 37'30" (E) longitude. The plant site is surrounded by open agricultural lands in west direction, road followed by proposed Nifty Labs Pvt. Ltd., Unit - II in east direction, proposed Desi's Labs in south direction, road connecting site to the NH-221 in north direction. The main approach road is NH-221 is at a distance of 1.2 km in northeast direction. The nearest habitation from the site is Ramannapalem located at distance of 3.5 km in SE direction. Edulla Vagu flowing from SW to NE is at a distance of 4.5 km in south direction, Kattaleru River Stream flowing from SW to NE is at a distance 5.2 km in west direction. Kakarla RF is at a distance of 50m in west direction to the site.

2. Introduction of the Project

2.1 Identification of Project and Project Proponent:

The objective of this pre-feasibility study is to provide information for proposed bulk drug and intermediate manufacturing unit located at Sy. No. 219/1(Part), 219/2(Part) & 221(Part), Ramanapalam Revenue village, Kakarla Gramapanchayati, Tiruvuru Mandal, Krishna District, Andhra Pradesh.

2.1 Brief Description of Nature of the Project:

The synthetic organic chemicals manufacturing will involve series of chemical reactions to get the final Product. The products of reaction are purified, filtered and dried before packing the final product. The Chemical reactions require various supporting services like Heating, Cooling and Agitation etc.

2.2 Need for the project and its importance to the country and or region:

World population is growing at an alarming rate. In the Indian sub continent population growth is more than that of developed countries. To meet the needs and comforts of ever-growing population industrialization became inevitable.

2.3 Demands-Supply Gap:

The project is envisaged to meet the demand supply gap in both domestic market and export market.

2.4 Imports Vs. Indigenous Production:

The project shall meet the reduce imports in some of the intermediate products and also enhance the foreign exchange reserves in view of the proposed exports of few products.

2.5 Domestic/export Markets:

The products shall cater to both domestic and export markets.

2.6 Employment Generation (Direct and Indirect) due to the project:

The proposed project will generate employment about 200 no.s directly and indirectly.

3. Project Description

3.1 Type of Project including interlinked and interdependent projects, if any:

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3.2 Size or magnitude of operation:

Proposed products and manufacturing capacity is presents in the Table given below

Manufacturing Capacity

S.No	Name Of the Product	Cas No	Capacity	
			Kg/Day	TPM
1	Cis-Bromo Benzoate	61397-56-6	1000	30
2	2,3-Dimethyl-4--nitropyridine-N-oxide	37699-43-7	750	22.5
3	Lansoprazole	103577-45-3	300	9
4	Rabeprazole Sodium	117976-90-6	300	9
5	Omeprazole	73590-58-6	300	9
6	3,5-Dimethyl-4-nitropyridine-N-oxide	14248-66-9	500	15
7	Cis-[[2-(2-(2,4-Dichlorophenyl)-2-(1H-1,2,4-triazol-1-yl-methyl)-1,3-dioxolan-4-yl)methyl] methane	67914-86-7	500	15

	sulfonate			
8	Cis-Tosylate	154003-23-3	500	15
9	Pantaprazole Sodium Sesquihydrate	138786-67-1	300	9
10	Itraconazole	84625-61-6	200	6
11	Esomeprazole Magnesium Trihydrate	217087-09-7	200	6
12	Ketaconazole	65277-42-1	200	6
13	1-[2-(2-Hydroxy ethoxy)Ethyl]Piperazine	13349-82-1	200	6
14	2-Hydroxy methyl-3-methyl-4-(3-methoxy propoxy) pyridine. Hydrochloride	118175-10-3	300	9
15	2-Chloromethyl-3-methyl-4-(3-methoxy propoxy)Pyridine.	153259-31-5	600	18
16	2-[[[4-(3-methoxy propoxy)-3-methyl-2-pyridinyl]methyl] thio]-1H-benzimidazole	117977-21-6	450	13.5
17	2-(Hydroxy methyl)-3-methyl-4-(2,2,2-trifluoroethoxy) Pyridine. Hydrochloride	103577-66-8	450	13.5
18	2-(Chloro methyl)-3-methyl-4-(2,2,2-trifluoroethoxy) pyridine Hydrochloride	127337-60-4	400	12
19	2-[[[3-methyl-4-(2,2,2-trifluoro ethoxy)-2-pyridinyl]methyl] sulfanyl]-1H-benzimidazole	103577-40-8	400	12
20	2-[[[3-methyl-4-(nitro)-2-pyridinyl]methyl] sulfanyl]-1H-benzimidazole	152402-98-7	400	12
21	4-[4-[4-(4-Hydroxy Phenyl) -1-Piperazinyl]phenyl] 2,4-dihydro-2-(1-Methyl Propyl)-3H-1,2,4-Triazole-3-One		400	12
Total (Worst Case 8 Product on Campaign Product)			4750	142.5

3.3 Process Description with process details (a schematic diagram/flow chart)

Process description is as in the Form I Annexures.

3.4 Raw material required along with estimated quantity likely source, marketing area of final product/s, mode of transport of raw material and finished product.

All the raw materials required for manufacturing available in India. There are no banned chemicals or products which are proposed to be used.

3.5 Availability of water its source, energy/power requirement and source should be given

Water is required for washing, cooling tower makeup, steam generation and domestic purposes. The required water shall be drawn from ground water sources in addition to reuse of treated wastewater. The total water requirement is in the order of 330 KLD consisting of 211 KLD fresh water and balance of 119 KLD is recycled water. Total water balance is presented in [Table below](#).

Total Water Balance

Purpose	INPUT (KLD)		OUTPUT (KLD)	
	Fresh Water	Recycled Water	Loss	Effluent
Process	70			77*
Washings	5			5
R&D Lab	1			1
Scrubber	2	3		5
Boiler Feed	42		36	6
Cooling Tower	70	108	158	20
DM Rejects	10			10
Domestic	9		1	8
Gardening	2	8	10	
Gross Total	211	119	205	132
Total	330		337	

* Process effluents contain soluble raw materials, byproducts, solvents etc.

3.5.1 Electricity:

The required energy shall be drawn from AP Transco. DG set of 2 x 1010 and 2 x 500 kVA is proposed.

3.6 Quantity of wastes to be generated (liquid and solid) and Scheme for their Management/disposal:

Quantity of Effluent Generated and Mode of Treatment

Description	Quantity (KLD)	Mode of Treatment
HTDS Effluents		
Process	77	Sent to Stripper followed by MEE and ATFD. Stripper Condensate sent to Cement Plants for Co-Incineration. MEE and ATFD Condensate sent to Biological treatment plant followed by RO. RO rejects sent to MEE and permeate is reused in cooling towers, boilers make-up and scrubbers.
Washings	5	
Scrubber Effluent	5	
RO/DM rejects	10	
Total - I	97	
LTDS Effluents		
R & D	1	Sent to Biological Treatment System followed by RO. RO permeate reused for cooling towers, boilers make-up and scrubbers. RO rejects sent to MEE.
Boiler Blow downs	6	
Cooling Tower Blow downs	20	
Domestic	8	Sent to Sewage Treatment Plant and treated wastewater reused for gardening..
Total - II	35	
Grand Total (I+II)	132	

Total Solid Waste Generated and Mode of Disposal

S.No	Description	Units	Quantity	Mode of Treatment/Disposal
1	Ash from Boiler	TPD	18	Sold to Brick manufactures and cement plants
2	Organic residue	TPD	2.5	Sent to TDSF/Cement Plants for Co-incineration
3	Solvent Residue	TPD	4	Sent to TSDF/Cement Industries
4	Spent Solvent	KLD	50	Recovered within plant premises and reused
5	Mixed Solvent	KLD	10	Sent to authorized recovery units/Cement plants for co-incineration
6	Stripper Distillate	KLD	2	Sent to Cement Industries for Co-incineration.
7	Spent Carbon	Kg/day	60	Sent to Cement Industries for Co-incineration.
8	Inorganic Residue	TPD	1	Sent to TSDF
9	Evaporation salts	TPD	7	Sent to TSDF
10	ETP Sludge	TPD	1.2	Sent to TSDF/ Cement plants for co-incineration
11	Detoxified containers	No.s/Yr	10000	Sold to authorized vendors
12	Waste oil	KLPA	10	Sent to Authorized Recyclers
13	Used batteries	No.s/Yr	300	Sent to Authorized Recyclers

4. Site Analysis

4.1 Plant Location

M/s. Lakshmi Pharmachem located at Sy. No. 219/1(Part), 219/2(Part) & 221(Part), Ramanapalam Revenue village, Kakarla Gramapanchayati, Tiruvuru Mandal, Krishna District, Andhra Pradesh proposed to establish synthetic organic chemicals (Bulk drug and intermediates) manufacturing unit in an area of 10 acres. Capital cost of proposed unit is 25 crores towards production blocks, facility for utility proposed and ZLD system.

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5. Planning Brief:

The project is envisaged to be completed in 2020 as it involves installation of higher capacity processing equipment's besides improving of yield and the production shall be initiated thereon. Consultants are identified for preparing the detailed project report.

6. Proposed Infrastructure:

6.1 Power Requirement and Supply/Source

The required energy shall be drawn from AP Transco. Standby DG sets of 2 x 1010 kVA and 2 x 500 kVA capacity are proposed in case of load shutdown period. It is proposed to establish 2 x 8 TPH Coal fired boilers to meet the steam requirement both for process and ZLD system out of which 1 x 8 TPH shall be kept as standby.

6.2 Utilities

List of Utilities

S.No	Utility	Proposed
1	Coal Fired Boilers (TPH)	2 x 8*
2	Thermic Fluid Heaters (K.cal)	2 x 2 Lac.
3	DG Sets (KVA)#	2 x 1010 2 x 500

#DG sets will be used during load shut down by Transco.

*1 x 8 TPH fired boiler shall be kept as standby.

6.3 Waste management

Liquid Effluents

The main sources of effluent generation from the plant are process, washings, Scrubber, blow downs from utilities like cooling tower, boiler & domestic effluents. The process effluents are segregated on the basis on TDS and COD loads and treated in Effluent treatment system. The effluent generated from the domestic sent to biological treatment plant along with LTDS effluents. Treated effluent reused for cooling towers make-up and scrubbers.

Air Pollution

The sources of air pollution from the plant are from utilities proposed. The emissions from the boilers are passed through bag filters before releasing into atmosphere through a chimney. Coal Ash will be collected in ash silo to dispose in closed condition. The stack heights are provided as per the guidelines of CPCB for effective stack heights.

Solid waste

Solid wastes are generated from the process, solvent distillation, collection/neutralization tank, waste oil from DG sets, used batteries from DG sets. The ash from boiler is sold to brick manufacturers. The solid wastes; evaporation salts, and filtration aids shall be disposed to the TSDF, while the hazardous wastes of organic nature i.e., distillation residues shall be disposed to authorized cement units and other wastes like used oil and used batteries shall be sent to authorized recyclers. The other solid wastes expected from the unit are containers, empty drums which will be used for packing product, and or returned to the product seller or sold to authorized buyers after detoxification, while the sludge from treatment plant shall be sent to TSDF.

7. Rehabilitation and Resettlement (R&R) Plan

Not applicable as the land area 10 acres.

8. Project Schedule & Cost Estimates**8.1 Likely date of start of construction and likely date of completion (Time schedule for the project to be given)**

2020

8.2 Estimated project cost along with analysis in terms of economic viability of the project

The estimated cost of the project is approximately Rs. 25 crores

Project Cost		
		Rs. In Crores
Plant& machinery		12.0
Civil buildings		3.0
Structures		2.0
Total		17
Pipe lines & insulation	20% on plant & machinery	2.6
Electricals & instrumentation	10% on plant & machinery	1.3
Erection & commissioning & painting	8% on plant & machinery and structures	1.1
Land & development		0.5
Material handling equipment charges		0.3
Laboratory equipment		1.0
Safety eqpt		0.4
Furniture, fixtures, computers, lighting etc		0.4
Total		7.6
Contingencies & pre-operative expenses	5% on the above	0.3
Project Cost		25.0