PROJECT

PRE-FEASIBILITY REPORT

FOR

THE PROPOSED NEW PROJECT

TO MANUFACTURE "Silica Based Aerogel Insulation Sheet"

@ 1440 m^2 per day

Under Activity: 5(f), Category: B

OF

M/s. AEROGEL ONE LIMITED

Located at:

Plot No.- 2921 & 2922, J -Type Area,
GIDC, Vapi - 396 195, Gujarat, INDIA.

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1. EXECUTIVE SUMMARY

1.0 About Project:

M/s. Aerogel One Ltd. proposes to setup its manufacturing unit for production of "**Silica Based Aerogel Insulation Sheet**", in the main chemical hub of the country at Plot No. 2921 & 2922, J-Type Area, G.I.D.C., Vapi - 396 195, Gujarat, INDIA.. The total production capacity will be @ 1440 m^2/day.

2.0 Highlights of the Project:

Sr. No.	Particulates	Description
1.	Project Location	M/s. Aerogel One Ltd. Plot No. 2921 & 2922, J-Type Area, G.I.D.C., Vapi - 396 195, Gujarat, INDIA.
2.	Project Activity, Category as per amendments	Project Activity: 5(f)- Synthetic Organic Chemicals, Category: B, but considered as cat.-A (Due to applicability of GC)
3.	Project Cost	Rs. 585.00 Lacks
4.	Total area of Project	5176.00 Sq. m.
5.	Products with capacity	Silica Based Aerogel Insulation Sheet @ 1440 m^2/day
6.	Power Requirement	500 KVA, Source: Dakshin Gujarat Vij Company Limited (DGVCL)
7.	Utilities (D.G. Sets, Boilers, Thermopack, etc...)	Thermic fluid heater (1+1 standby): 10 Lakh kcal /Hr. D.G. Set: 200 KVA
8.	Fuel Requirements	Natural Gas (for Thermic fluid heater): 138 Nm3/hr HSD (for D.G. Set): 50 L/hr
9.	Man Power	30 persons
10.	Air pollution Control Measures	• Adequate stack height will be provided for Thermic fluid heater and D.G. Set • Heat Exchanger will be installed to the vents for VOC control at work place.
11.	Water requirement & waste water generation with mode of disposal	• Total Fresh Water requirement will be 80 KL/day and Water supply will be met from GIDC water supply dept. • No industrial process waste water will be generated. • Cooling tower blow down water @13.50 KL/day will be used for plantation within the premises. • Domestic waste water @ 4.50 KL/day will be disposed of through Septic Tank.
12.	Solid / Hazardous waste Generation	Will be managed as per Hazardous Waste (Management, Handling And Transboundary Movement) Rules-2016.
13.	Nearest Highway	NH-8: 0.81 Km SE
14.	Nearest Railway Station	Vapi - 0.90 Km N
15.	Nearest Airport	Daman 10.32 Km NW (of Coast Guard only), Surat : 85.50 Km N & Mumbai- 140.00 Km S
16.	Nearest Forest/ Sanctuary/Eco-sensitive zone.	None

2. INTRODUCTION

I. Identification of Project and Proponent:

Name of the Project Proponent: M/s. Aerogel One Limited

M/s. Aerogel One Limited is a Small scale unit is located in notified industrial estate, GIDC Vapi, District Valsad, Gujarat, India. Aerogel One Limited is a company registered in India having its registered office at 401-402, Tirupati Tower, G.I.D.C., Char Rasta, Vapi, Gujarat, India - 396195. The company is classified as Limited company and is registered on September 10, 2015 with Registrar of Companies Ahmedabad as a Public limited Company by shares.

The company proposed to manufacture Silica based Aerogel Insulation Sheet @ 1440 m^2 per day.

The company is a registered Private Limited company and is promoted by three Directors. Details related to them are given below:

Sr. No.	Name of Directors	Background	Residential Address
1.	Sunil Nayak	Bachelor of Science	101-102, Amrapali CHSL, Nutan Nagar Vapi-396191 Dist Valsad, Gujarat
2.	Vidya Nayak	Bachelor of Commerce	
3.	Devdas Nayak	B.E. Civil.	

II. Brief description of nature of the Project:

M/s. Aerogel One Limited is proposing a new unit located at Plot No. 2921 & 2922, J-Type Area, G.I.D.C., Vapi in the state of Gujarat, the industrial belt of Gujarat (India) and is logistically well connected by road and rail. The company has experienced personnel and will install state of art machinery. Company's objective is focused on high quality products, continuous innovation, R&D & solution centric customer satisfaction.

M/s. Aerogel One Limited proposes a Small Scale manufacturing unit to manufacture Aerogel based Insulation Sheet. Aerogel insulation product can be found in a wide range of applications. Our proposed product is rapidly being adopted by facilities across the full spectrum of energy technology industries. Our thermal insulation sheet has diverse applications, such as, building & construction and other unique applications where traditional insulation fails to meet demanding energy conservation, environmental and architectural needs.

The Insulation sheets produced would be efficient in the range of 500-600°C resulting in energy conservation which caters 90% of the market.

As per the EIA notification- 2006 as amended the proposed new project for the production of **"Silica Aerogel Insulation Sheet"** which falls under item no. "**5(f) – Synthetics Organic Chemical Industries** "as per the EIA notification- 2006, hence required prior Environmental Clearance.

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

Aerogels are the best Thermal Insulation in the world and is based on Nano Technology. Presently only USA has this technology and patents for this product and some Chinese companies have copied this technology based on illegal reverse engineering of the US technology. Aerogels have application in highly critical applications and is a Project of National Importance since it has been used to insulate Steam Lines to Turbines that drive Submarines, Warships to even High Altitude Clothing that can keep our soldiers warm in hostile environments like Siachen. Similarly, it can be used to insulate steam and other hot lines in Oil Refineries, Petrochemical complexes, Fertilizer plants, Power Plants and such other high energy consuming industries because Energy Saved is Energy Produced. It will help our

nation to effect a massive reduction in our carbon foot-print. Its advanced and highly efficient properties can help develop and sustain advanced systems like Solar Thermal Storages and other High Tech applications where cutting edge performance is the order of the day.

IV. Demand–Supply Gap:

The demand of such products is tremendous in our country and there is a huge gap in the demand supply.

V. Imports vs. Indigenous production:

Proposed products manufacturing in the country will be very much viable &acceptable compare to imports due to our grass-root technology, efficient productivity and EHS-GMP compliances. Our products approval & DMF filing for leading overseas customers gives tremendous boost to our export; which earns valued forex revenue generation for our county.

VI. Export Possibility / Domestic / export Markets:

The Aerogel based Insulation sheet market has fast progressing growth and there is ample opportunity in indigenous as well as export market.

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

There will be very good opportunity of employment generation of workmen directly for 30 nos. and indirectly for about 10 nos. due to the proposed project.

3. PROJECT DISCRIPTION

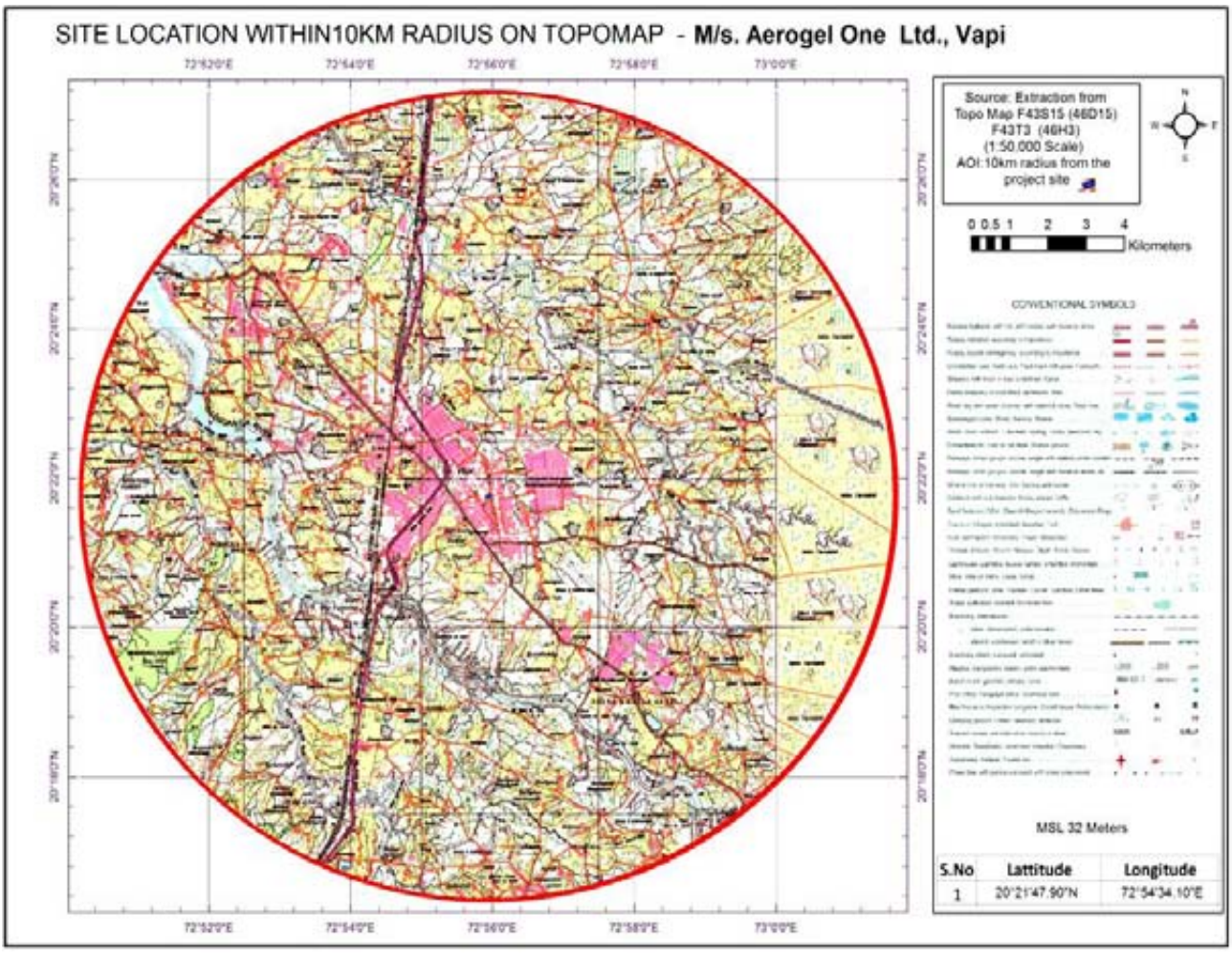
I. Type of Project including interlinked and interdependent projects, If any :

The proposed project is not interlinked and interdependent project of the company.

II. Location (map showing general location, specific location, and project boundary & project site layout) with coordinates:

The map showing general location, specific location and project boundary and project site layout of M/s. Aerogel One Ltd. unit located at Plot no. 2921 & 2922, J-Type Area, G.I.D.C, Vapi, Tal.-Vapi, Dist.-Valsad, Gujarat-396195. The latitude and longitude of the project site is 20°21'47.84"N and 72°54'33.89"E.

Figure No- 3.1 Location Map showing the Project site



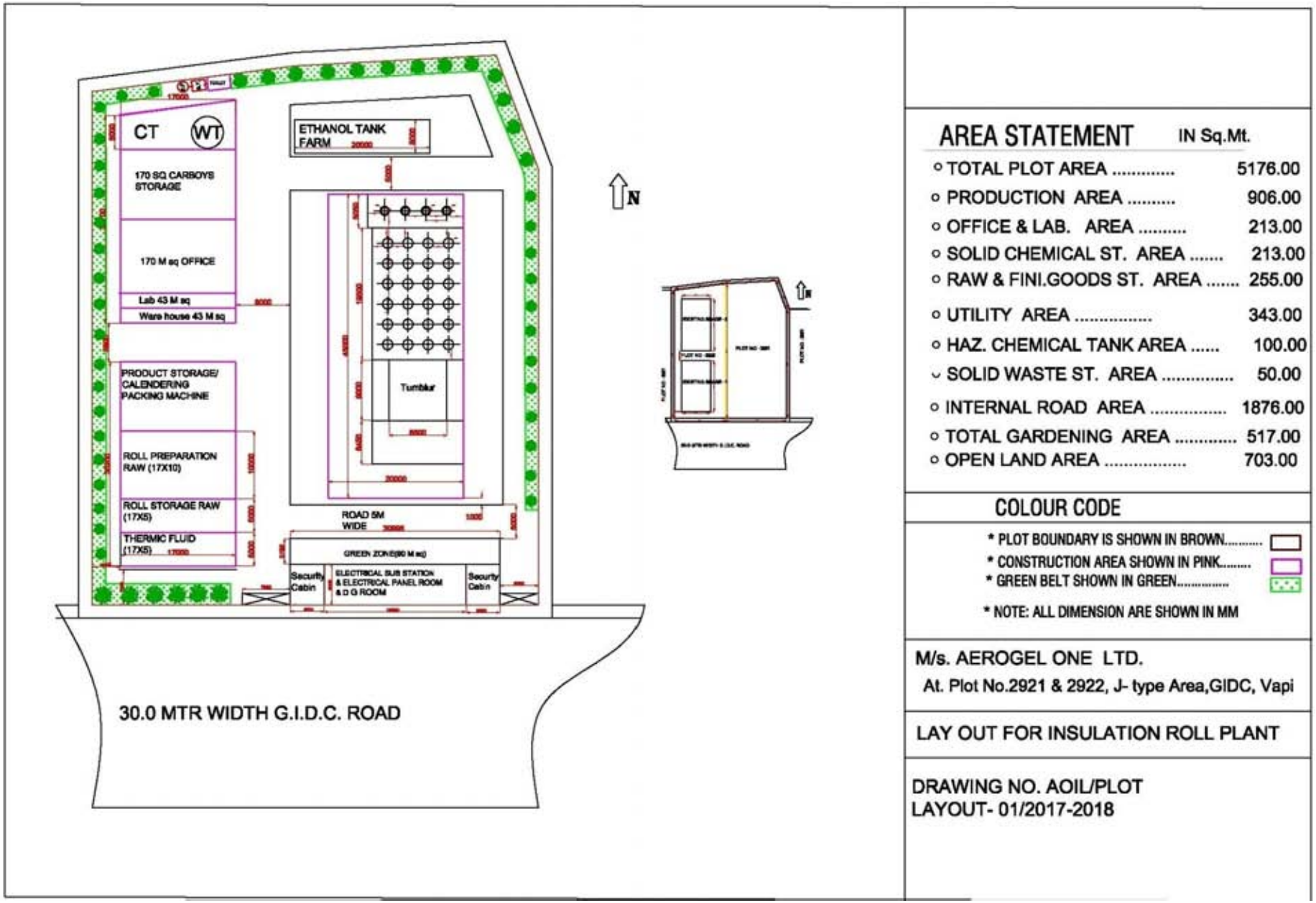
III. Profile of Project Site:

Sr. No.	Nearest Infrastructure Feature	Distance from Project Site
1	Geographical Position	Lat.: 20°21'47.84"N, Long.: 72°54'33.89"E
2	Elevation above Sea Level	22 Meters (Approx.)
3	Nearest Village	Tanki Falia- 0.58 km NE
4	Nearest Town	Vapi - 0.98 km N
5	Nearest National Highway	NH-8: 0.81 Km SE
6	Nearest State Highway	SH 185 (1.11 Km NE)
8	Nearer RW Station	Vapi- 0.90 Km N
9	Nearest Airport	Daman 10.32 Km NW (of Coast Guard only), Surat : 85.50 Km N & Mumbai- 140.00 Km S
10	Nearest Surface water Resource/Reservoir	Arabian Sea (10.5 Km W) Damanganga River (2.28 Km S) Kolak river (5.48 Km NE)
11	Forest Patches	No patches of Reserve Forest within the study area of project site.
12	Location of Archaeologically /Historically important places	--
13	National Park/Sanctuary or Ecologically sensitive Area	Dadra& Nagar Haveli Wild Life Sanctuary is approx. 23.91 Km SE
14	National or State Boundary	Dadra & Nagar Haveli - 3.75 Km SE Daman – 2.25 Km NW
15	Tourist Places	Dadra & Nagar Haveli – 3.75 Km E Daman – 5.1 km W
16	Selection of project Site and Detail of alternate Site.	Proposed project is in the GIDC Notified Industrial area having proper industrial infrastructure hence alternate site consideration is not envisaged.
17	Size or Magnitude of Operation	Small Scale

Plot site Area Statement:

Area Statement	Area (in m^2)
Total Area	5176.00
Construction Area	2080.00
Open Land Area	703.00
Internal Road Area	1876.00
Greenbelt Area	517.00

IV. Site Layout Plan:



AREA STATEMENT IN Sq.Mt.

TOTAL PLOT AREA	5176.00
PRODUCTION AREA	906.00
OFFICE & LAB. AREA	213.00
SOLID CHEMICAL ST. AREA	213.00
RAW & FINI.GOODS ST. AREA	255.00
UTILITY AREA	343.00
HAZ. CHEMICAL TANK AREA	100.00
SOLID WASTE ST. AREA	50.00
INTERNAL ROAD AREA	1876.00
TOTAL GARDENING AREA	517.00
OPEN LAND AREA	703.00

COLOUR CODE

* PLOT BOUNDARY IS SHOWN IN BROWN.....
* CONSTRUCTION AREA SHOWN IN PINK.....
* GREEN BELT SHOWN IN GREEN.....

* NOTE: ALL DIMENSION ARE SHOWN IN MM

M/s. AEROGEL ONE LTD.

At. Plot No.2921 & 2922, J- type Area,GIDC, Vapi

LAY OUT FOR INSULATION ROLL PLANT

DRAWING NO. AOIL/PLOT LAYOUT- 01/2017-2018

V. Details of alternate sites considered and the basis of selecting the proposed site, particularly the environmental considerations gone into should be highlighted:

The company has acquired plot for the proposed new manufacturing unit in the GIDC Notified Industrial area having an excellent locational advantage & very good industrial infrastructure including CETP, COE, VIA, etc. Hence alternate site consideration is not envisaged.

VI. Size or magnitude of operation:

As per the proposed project cost the project is covered under Small Medium Scale category of manufacturing industries, it comes under Small scale segment of the industry.

VII. Project description with process details (a schematic diagram/ flow chart showing the project layout components of the project etc. should be given):

Detailed project & product profile details –

- **LIST OF FINISHED PRODUCT(S) and its end use**

Sr. No.	Name of Product	Production Capacity	End use of the product
1.	Silica based Aerogel Insulation Sheet	1440 m^2/day	Thermal Insulation

- **INFRASTRUCTURE, MACHINERIES, EQUIPMENT & TECHNOLOGIES:**

⇨ In-house technology, Installation of the plants, machineries and suitable manpower will be required to manufacture the above mentioned product with proposed capacity.

⇨ To get the best results in terms of quality and quantity, the company will invests in the best available state-of-the-art plant - machinery and leverages of grass-root technologies duly supported by excellent marketing network will enable the project to get best of results.

- M**ANUFACTURING PROCESS:**

The company shall use the best available documented & developed green & eco-friendly non-hazardous process technology for the production of our product. This section includes the manufacturing process of the product, chemical reactions, flow diagrams and mass balance of the product.

Product: Silica based Aerogel Insulation Sheet

Production Capacity: 1440 m^2/day (16 Rolls/ day)

Manufacturing process:

Silica based Aerogel Insulation sheet manufacturing process comprises of following three steps.

Step-I: Preparation Solutions and its adsorption in the glass fiber mat (roll),

Step-II: Soaking of roll and

Step-III: Drying of roll.

<u>Step-I: Preparation of Solutions and its adsorption in the glass fiber mat (roll)</u>

- First two types of solutions are prepared, Solution-A and Solution-B.
- Solution-A is prepared through mixing of Titanium Iso-propoxide and Ethanol.
- Solution-B is prepared by addition of Ethanol, Water, Silica and Methyl based precursors to which ammonia based catalysts are added and mixed.
- Eventually both solutions prepared are mixed to form a mixture, which is then adsorbed in the Glass fiber mat (roll).

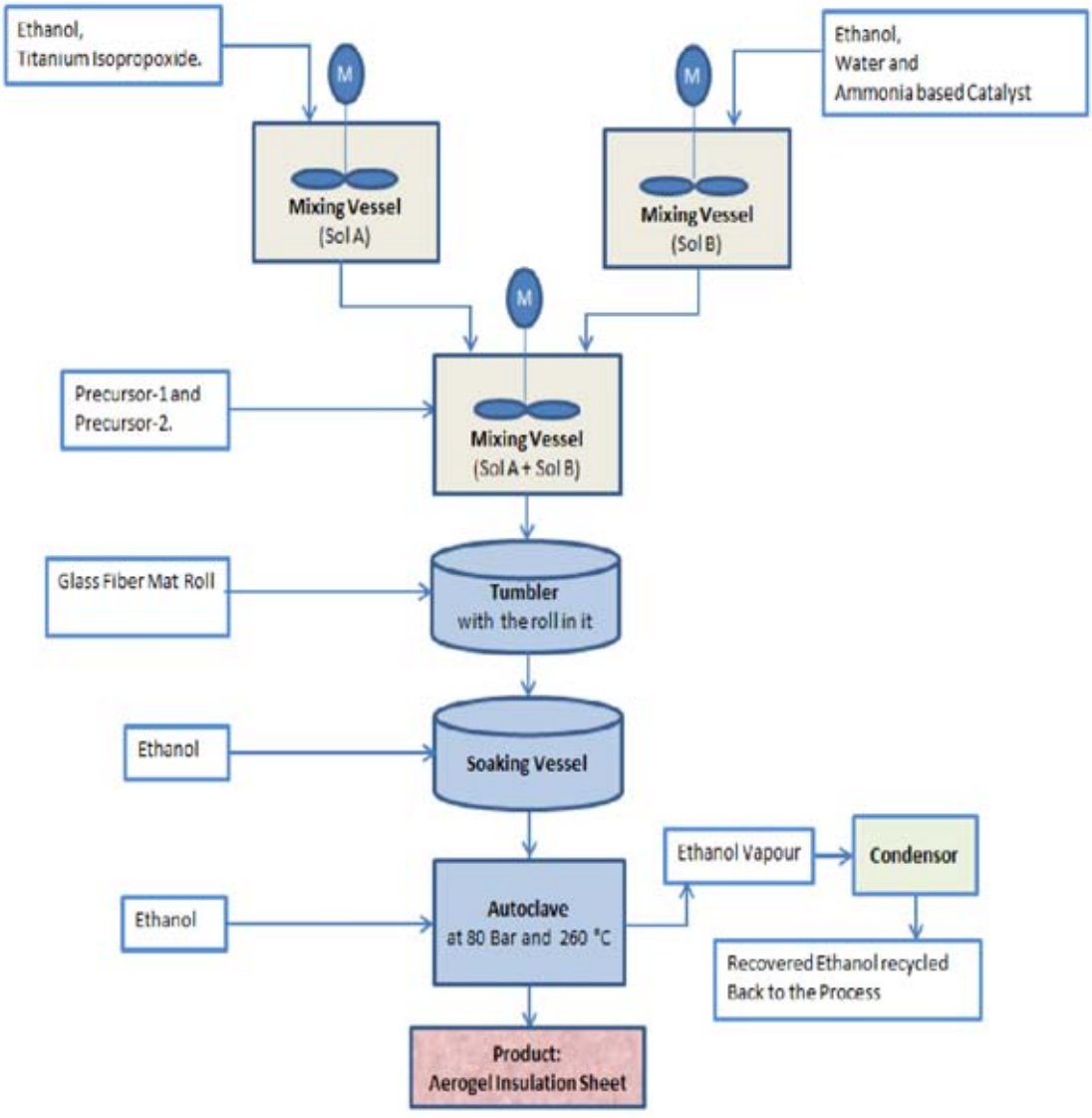
Step-II: Soaking

- The Glass fiber mat (roll) adsorbed with mixture of Solutions is soaked in Ethanol for continuously 3 days.
- After each day the Ethanol from vessel is withdrawn and is fed with fresh Ethanol.
- At the end of 3rd day the roll is ready for Drying.

Step-III: Drying

- The roll after soaking is dried in autoclave with the help of Ethanol at high pressure and temperature i.e., at 80 bar pressure and 260°C temperature.
- This condition of drying in autoclave is then maintained for 3 hours.
- After completion of the autoclave cycle, the pressure of autoclave is released by depressurizing the Ethanol vapors.
- The Ethanol vapour is then condensed and reused in the next process.
- The Roll is unwounded, calendared and is ready for dispatch.

Process flow diagram:



Chemical reaction:

4 R- Si + R1-CH_3 + 0.005TiO-R3 + 5.5 H_2O + Fiber Roll ---------->

(4 SiO_2 + 16R-OH + 0.005 TiO_2 + 0.02 IPA + CH_3OH + $SiO_{1.5}$-CH_3+Fiber Roll)

Product

VIII. Raw material required along with estimated quantity, likely source, marketing area of final product(s), mode of transport of raw material and finished product:

Detailed raw material requirement along with estimated quantity, likely source, marketing area of final products, mode of transport of raw material and finish product is as under.

- **Marketing area of final products:**

Aerogels have application in highly critical applications and is a Project of National Importance since it has been used to insulate Steam Lines to Turbines that drive Submarines, Warships to even High Altitude Clothing that can keep our soldiers warm in hostile environments like Siachen. Similarly, it can be used to insulate steam and other hot lines in Oil Refineries, Petrochemical complexes, Fertilizer plants, Power Plants and such other high energy consuming industries because Energy Saved is Energy Produced. It will help our nation to effect a massive reduction in our carbon foot-print. Its advanced and highly efficient properties can help develop and sustain advanced systems like Solar Thermal Storages and other High Tech applications where cutting edge performance is the order of the day.

Product wise raw material list:

Sr. No.	Product	Raw Material	Unit	Consumption Quantity per Month
1	**Silica based Aerogel Insulation Sheet**	Glass Fiber Roll	m^2	43200.00
		Ethanol	KL	5.00
		Silica based Precursor	KL	65.000
		Methylene based Precursor	KL	16.200
		Ammonia based Catalyst-1	KL	0.475
		Ammonia based Catalyst-2	KL	4.750
		Titanium Isopropoxide	KL	0.325
		Water	KL	135.000

Transport and storage details of Raw materials:

Sr. No.	Raw Material	Max. Storage Quantity	State of RM	Means of storage	Source of supply	Mode of transportation
1.	Silica based Precursor-1	10.00 KL	Liquid	RM storage are in a closed container	Manufacturer	By road
2.	Methylene based Precursor-2	6.50 KL	Liquid		Manufacturer	By road
3.	Ammonia Based Catalyst-1	150 liters	Liquid		Manufacturer	By road
4.	Ammonia based Catalyst-2	1500 liters	Liquid		Manufacturer	By road
5.	Titanium Isopropoxide	350 liters	Liquid		Manufacturer	By road
6.	Ethanol	92.00 KL	Liquid	Storage Tank	Manufacturer	By road

IX. Resource optimization/ recycling and reuse envisaged in the project, if any, should briefly outlined:

The raw materials packed in carboys and stored in the warehouse.

- ⇨ Ethanol will be recovered from the process will be reused in the next batch.
- ⇨ By adoption continuous improvement in technology and process the desired reduction in process waste generation will be achieved.
- ⇨ By proper and efficient handling of raw materials, wastages of raw materials will be reduced.

X. Availability of water its source, energy/power requirement and source should be given:

Availability of water its source energy/power required and its source.

- **Water Requirement:**

Sr. No.	Particulars	Quantity (in KL /day)
1.	**Domestic**	**5.00**
2.	**Gardening**	**0.50**
3.	**Industrial**	
	Process	4.50
	Cooling	70.00
	Sub-Total of Industrial requirement	**74.5**
	Total Requirement	**80.00**
Water consumed in the process will be consumed along with the product. **Source:** Fresh water requirement will be catered from GIDC water supply dept.,Vapi		

- **Power Requirements and its source:**

Sr. No.	Particulars	Total	Source
1.	Power- Electricity requirement	500 KVA	Dakshin Gujarat Vij. Company Ltd. (DGVCL)
2.	D.G. Set (as Standby Source)	200 KVA	From authorized manufacturer.

XI. Quantity of waste to be generated (liquid and solid) and scheme for their Management/disposal:

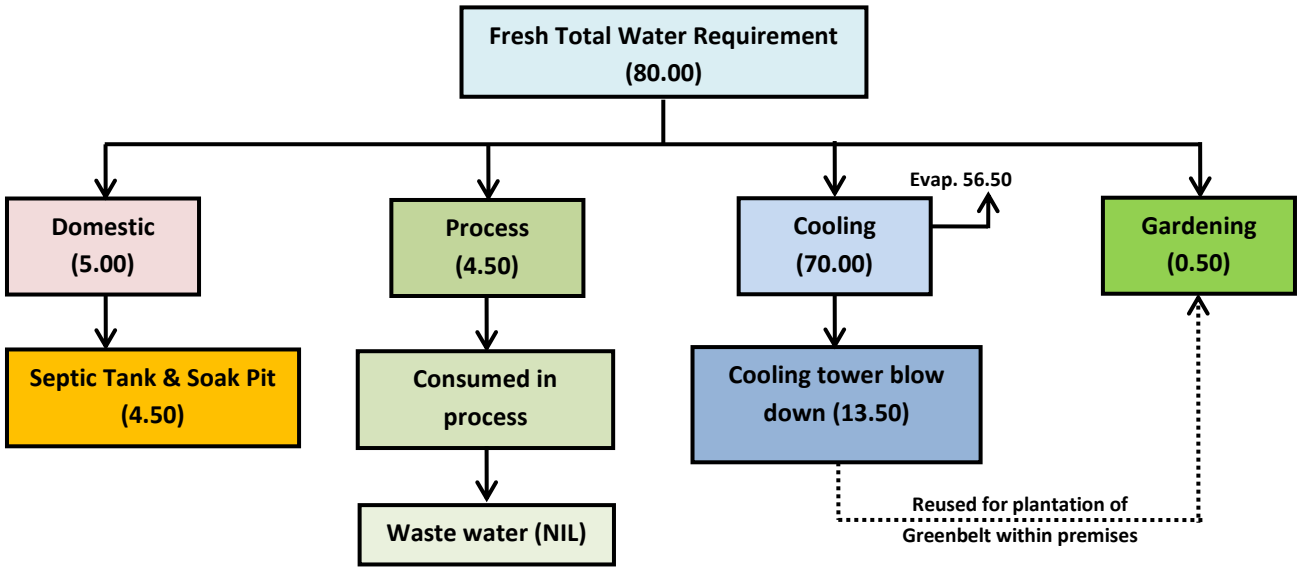
- **Quantity of Waste Water (liquid waste) generation and its management :**

Waste water generation:

Sr. No.	Particulars	Quantity (in KL /day)
1	**Domestic**	**4.50**
2	**Industrial**	
	Process	0.00
	Cooling tower blow down	**13.50**
	Sub-Total Industrial	13.50
	Total	**18.00**
Note: Domestic waste water will be disposed off through adequate soak pit and septic tank.		

- There is no generation of industrial effluent for the proposed project activity.
- Cooling tower blow down waste water will be collected, tested and will be used for plantation within the premises.
- Domestic waste water generated @4.50 KL/day will be disposed off through adequate soak pit and septic tank.

Water Balance Diagram



Note: All quantity of Water and Wastewater are shown in KL/day.

DETAILS OF AIR POLLUTION CONTROL MEASURES AFTER PROPOSED CHANGE:

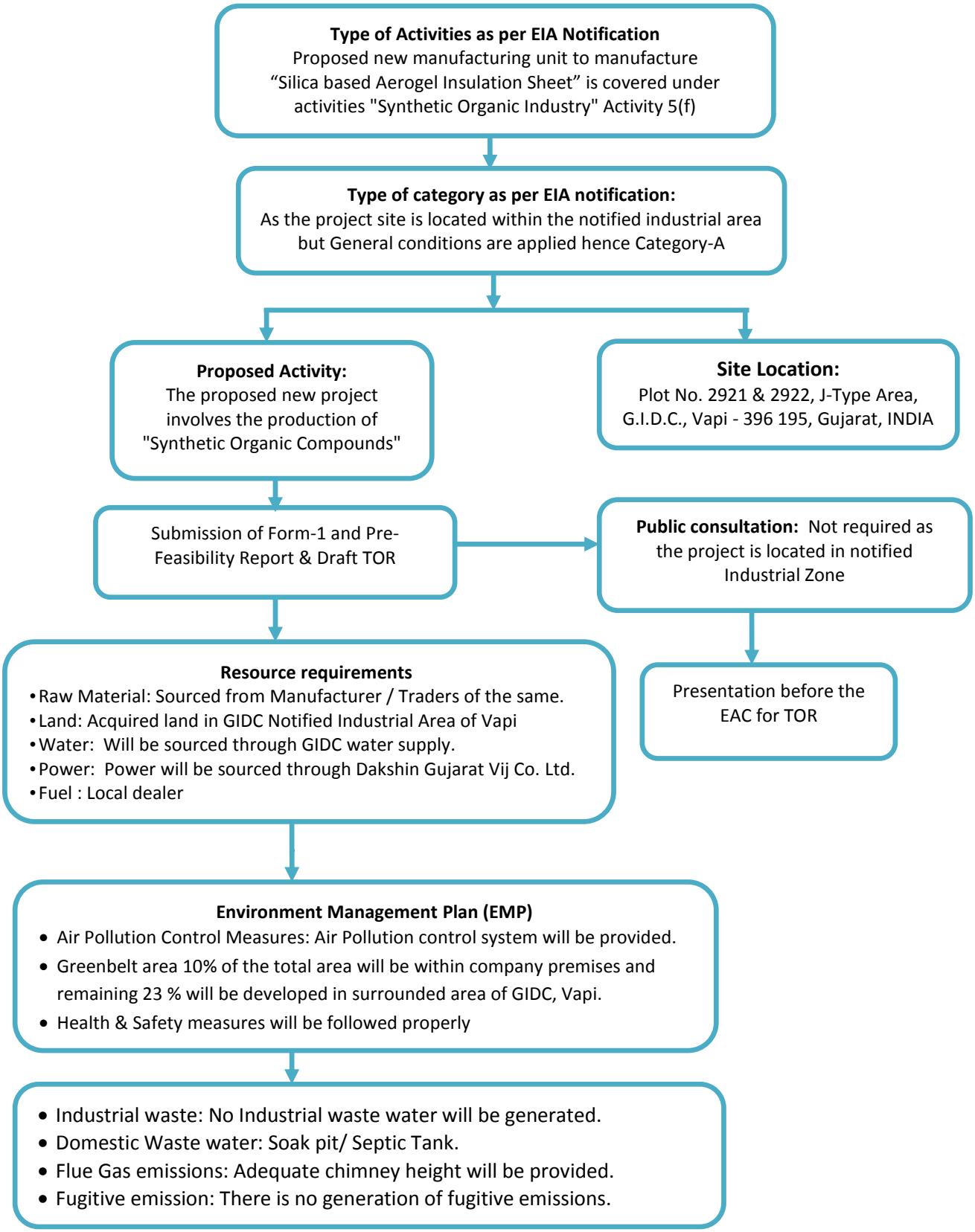
Sr. No.	Stack Attached	Type of fuel and consumption	Air Pollution Control Measures	Parameter
1.	Thermic fluid Heater- 1 No.+ 1 No. stand by (Capacity: 10 Lakh K.cal/hr)	Natural Gas: 138 Nm3/hr	Adequate Stack height of 30 m and diameter 450 mm will be provided.	PM <150 mg/Nm^3 SO_2 < 100 ppm NOx< 50 ppm
2.	D.G. Set - 1 No. (Capacity: 200 KVA)	HSD: 50 L/hr	Adequate stack height 11 m and acoustic enclosure is provided and operated only during power break down.	PM <150 mg/Nm^3 SO_2 < 100 ppm NOx< 50 ppm

Hazardous Waste Management:

During our proposed production activities hazardous wastes will be generated as per HW (M, H & TM) Rules 2016 and will be managed as follows.

Sr. No.	Name of the Waste	Source	HW Sch. Category	Quantity	Method of Disposal
1.	Discarded materials Drum, Liners/ Bags/ Carboys	Raw Materials	33.1	300 Nos./ Year	Collection, storage and disposal by sending back to raw material supplier or to registered decontamination facility.
2.	Used Oil	Utility	5.1	100 Lit/Year	Collection, storage and disposal by selling to registered recyclers.

XII. Schematic representations of the feasibility drawing which give information of EIA purpose:



4. SITE ANALYSIS

4.0 Site Analysis

I. Connectivity:

The project is located in notified Industrial Estate of Vapi, Gujarat which is very well connected to National Highway no.8 and Western Railways. And the nearest Mumbai airport and port are 180 KM away from the project site by road.

II. Land Form, Land use and Land ownership:

The land is in the form of industrial shed owned by Gujarat Industrial Development Corporation. The total plot area (5176.00 Sq. m.) taken on lease by M/s. Aerogel One Ltd. The land is located in the Notified Industrial Area of GIDC, Vapi (Notification no.xGHU/75-45,GID:1974/4084/(10), dated : 6th May 1975).

III. Existing Infrastructure/ land use pattern

Proposed project will be located within the GIDC notified industrial area of Vapi which has available infrastructure like water, electricity, roads, rail, transportation and drainage system, CETP and TSDF Site. Surrounding area is consisting with agriculture, other industrial units.

IV. Soil classification and Land use classification:

General soil classification of the area is as under:

The area, being of basaltic formation, falls under the broad soil group of red loams and black clay soils. The transmission of water through similar parent material seems to have influenced the development of different physiographic characteristics of the soils in the area.

The area in between the hills with sloping lands contains dark yellowish brown to very dark grayish brown gravelly clay loam to clayey soils of shallow to moderate thickness. The dissected hill and steep slopes suffer from severe erosion hazards. The steep hill slopes are almost devoid of soil.

V. Climate data from secondary sources:

Rainfall Data:

The climate here is tropical. The winter months are much rainier than the summer months in Valsad. This climate is considered to be as according to the Köppen-Geiger climate classification. The temperature here averages 26.9 °C. Rain fall about 1500 mm approximately of precipitation falls annually during 2015.

VI. Social Infrastructure available:

Vapi GIDC infrastructure owes itself largely to the initiatives of G.I.D.C., in building the Industrial infrastructure and in attracting young entrepreneurs from Gujarat and other neighboring states. Equally, the growth of the social infrastructure - School, Colleges, Hospital, vocational train ing - stems from the bold initiatives of the Gyandham School, Ashadham School, etc. Haria Hospital, other private hospitals. National Highway No. 8 passes through Vapi. It is connected to all major cities. Vapi railway stations on the Mumbai-Ahmedabad rail link of Western Railway (India) has become the direct beneficiary in terms of revenues due to daily commuters. The Union territories as well as Vapi town, Bhilad, Umbergaon, and Pardi, only 5–40 km from Vapi, There are good residential and commercial areas. Daman and Silvassa (the capital of Dadra and Nagar Haveli) attract both Indian and international tourists.

5. Planning Description

5.0 Planning Brief.

I. Planning Concept (Type of industries, facilities, transportation etc) Town and Country Planning /Development authority Classification:

There is a cluster of numerous large-scale, medium-scale and small-scale industries, engaged in manufacture of variety of products in the Gujarat Industrial Development Corporation (GIDC) notified area of Vapi. GIDC notified industrial area of Vapi has the entire available infrastructure like water, electricity, roads, rail, and transportation, availability of raw material, CETP, TSDF Site and drainage system.

II. Population Projection:

Not applicable

III. Land use planning (breakup along with green belt etc.):

The project is located within the Notified Industrial Area by Government of Gujarat and due to the proposed project there will not be any change in the land use pattern of the region.

Plot Area Statement:

Area Statement	Area (in m^2)
Total Area	5176.00
Construction Area	2080.00
Open Land Area	703.00
Internal Road Area	1876.00
Greenbelt Area	517.00

IV. Assessment of Infrastructure demand (Physical & Social):

The proposed infrastructure to manufacture products will be built with standard engineering design considering all the relevant parameters related to environment, health and safety.

Facilities like road and communication are good. Banks, ATM's and medical facilitiesare also adequate.

V. Amenities/ Facilities:

Education- schools including middle, secondary and higher secondary schools, Colleges, social welfare hostels.

Medical and Health- Community Health Centre, & Primary Health center are available nearby area.

Power and water- All the villages are electrified and drinking water facilities are extended to all villages.

Rail and Road- The project site is very well connected by road through State Highway no. 8, Western railways.

6. Infrastructure Details

6.0 Proposed Infrastructure:

I. Industrial Area (Processing Area):

Basic infrastructure developed already and the required additional plant and machineries will be installed after getting statutory clearance.

II. Residential Area (Non Processing Area):

No residential area is involved in the proposed project. The employs are accommodated in nearby Residential areas

III. Green Belt:

Green belt area will be provided and maintain at the tune of about 33% of the total land area as the project site is within the developed industrial area.

IV. Connectivity (Traffic and Transportation Road/ Rail/ Metro/ Water ways etc):

The project site is very well connected by road through National Highway no. 8 and western railways.

V. Drinking Water management (Source& Supply of water):

Water requirement will be fulfilled through GIDC water supply.

VI. Sewerage System:

Sewerage water is disposed off to soak pit through septic tank.

VII. Industrial Waste Management:

No industrial waste water will be generated from the industrial activity of the proposed project.

7. Rehabilitation and Resettlement (R&R) Plan:

I. Policy to be adopted (Central/ State) in respect of the project affected persons including home oustees, land oustees and landless laborers (a brief outline to be given):

The proposed Industry does not envisage any disturbance to local community or the village since the land is acquired and fully owned by GIDC –Vapi Notified industrial Area. The proposed project will not affect the home oustees, land oustees and landless laborers. Hence there is no R & R plan required.

8. Project Schedule & Cost Estimates:

I. Likely date of start of construction and likely date of completion (Time schedule for the project to be given):

After obtaining Environmental clearance and necessary permission from GPCB, the tentative date of Commencement of the project would be between 21st to 28th Nov., 2017.

II. Estimated project cost along with analysis in terms of economic viability of the project:

Estimated project cost along with the analysis in terms of economic viability of the project Plant & Machinery, Pipeline & Fittings, Electrical Installation, Safety systems, etc. are the major heads considered in the Capital Cost Projection for the proposed project. Environment Protection has also been considered in planning the Cost Projection, which will include Green belt development, safety systems, etc.

Capital Cost Projection:

Sr. No.	Purpose	Cost (Rs. in lakh)
1.	Land (is on lease)	0.00
2.	Building and Civil Works	25.00
3.	Plant & Machinery and other fittings	550.00
4.	Environmental protection measures	10.00
	TOTAL :	**585.00**

The company will provide budgetary provision for the recurring expenses for environmental issues while planning the allocation of funds during the annual budgetary planning.

Recurring Cost per annum:

Sr. No.	Component	Proposed (Rs. in Lacs/annum)
1.	Environment & Safety Management System	4.00
2.	Greenbelt Maintenance	1.00
3.	Enterprise social contribution	2.35
	Total	**7.35**

9. Analysis of Proposal (Final Recommendations):

I. Financial and social benefits with special emphasis on the befit to the local people including tribal population, if any, in the area:

Proposed expansion activity will provide benefits to the local people in terms of financial and social welfare.

- Local people will get direct financial benefit by way of employment.
- Local people will get some contracts of supply and services to get indirect income.
- Company will contribute in improving education and health facilities in nearby area.