

EXECUTIVE SUMMARY

1.0 PROJECT DESCRIPTION

M/s Feel Organic is planning to set up a Formaldehyde manufacturing unit with production capacity of 100 MT/day at Khasra No. 345, Village Seehpur, H. B. No. 176, Tehsil- Derabassi, District- SAS Nagar, Punjab. The total plot area of the proposed unit is 36000 sq.ft. (3,344.5 sq.m or 0.83 acres). As per EIA Notification, the project falls under Category- 'A', Schedule 5(f) Synthetic Organic Chemicals Industry, as the project is located outside the Notified Industrial Area and located at a distance of 0.5 km from State boundary of Punjab-Haryana which requires Environmental Clearance from MoEF&CC.

The salient features of the project will be as under:

- **Production capacity:** 100 MT/day of Formaldehyde
- **Total Area of the project:** 36000 sq.ft. (3,344.5 sq.m or 0.83 acres)
- **Estimated project cost:** Rs. 500.00 Lakhs
- **Interlinked projects:** None

2.0 LOCATION & CONNECTIVITY

Project site is located at Khasra No. 345, Village Seehpur, H. B. No. 176, Tehsil- Derabassi, District- SAS Nagar, Punjab. The project site is adjacent to Rani Majra Road and accessible through NH-72. Lalru Railway Station located at a distance of 11 km in 'NW' direction; Chandigarh International Airport located at a distance of approx. 27 km in 'NW' direction.

3.0 BRIEF FEATURES OF PROJECT

Table 1: Size/magnitude of operation of project

S. No.	Parameters	Description
1.	Identification of the project	Formaldehyde manufacturing unit with production capacity of 100 MT/day falls under Category- 'A', Schedule 5(f) Synthetic Organic Chemicals Industry as per EIA Notification dated 14 th September, 2006 and its subsequent amendments.
2.	Project Proponent	Mr. Devinder Kumar Dhir (Partner) M/s Feel Organic

		E-mail: feelorganic99@gmail.com
3.	Brief description of nature of the project	<p>Formaldehyde manufacturing unit with production capacity of 100 MT/day located at Khasra No. 345, Village Seehpur, H. B. No. 176, Tehsil- Derabassi, District- SAS Nagar, Punjab by M/s Feel Organic.</p> <p>The total plot area of the proposed unit is 4000 sq. yard (3,344.5 sq.m or 0.83 acres) and 33.8% of plot area i.e. 1,129.24 sq.m. has been reserved for green area within the industry.</p>
4.	Salient Features of the Project Proposed	
4.1	Overall plant capacity	Proposed Quantity: 100 MT/day.
4.2	Area Details	Plot area: 4000 sq. yard (3,344.5 sq.m or 0.83 acres).
4.3	Location	<p>Project boundary coordinates of all corners are as follows:</p> <p>A: 30°26'13.50"N, 76°53'44.93"E</p> <p>B: 30°26'15.39"N, 76°53'44.81"E</p> <p>C: 30°26'15.48"N, 76°53'46.94"E</p> <p>D: 30°26'13.59"N, 76°53'47.04"E</p> <p>Google Earth Image showing project location & its surroundings within 500 m are attached along as Drawing 3.</p> <p>Project site and its study area falls in the Survey of India, Toposheet No. H43K15 and H43K14 is attached along as Drawing 5.</p>
4.4	Water requirement	<p>Source: Ground water (Borewell).</p> <p>Groundwater will be extracted only after getting permission from PWRDA.</p> <p>The total water demand for the unit will be 86 KLD; out of which fresh water demand will be 67 KLD which includes domestic, green as well as process water demand. The fresh water requirement will be met through Borewell.</p>

4.5	Wastewater	<p>➤ Industrial Effluent</p> <p>13.7 KLD of industrial effluent generation will be there from the washing and process and 7.3 KLD from RO reject which will be treated in a proposed ETP of capacity 25 KLD followed by two stage UF/RO system and Evaporator to be installed within the industrial premises. Treated effluent of 17.3 KLD capacity will be reused in cooling tower, boiler feed and in process water requirement to achieve Zero Liquid Discharge (ZLD).</p> <p>➤ Domestic Effluent</p> <p>2 KLD of domestic wastewater will be generated from the unit which will be treated in a septic tank and will be reused for green area demand.</p>
4.6	Man Power	Total work force of around 37 persons distributed in 3 shifts including technical, skilled, semi-skilled, administrative, etc.
4.7	Power requirement	<p>Total power requirement will be 175 kVA which will be supplied by Punjab State Power Corporation Limited (PSPCL).</p> <p>DG set of capacity 200 KVA will be provided as power back up.</p>
4.8	Alternative site	No alternate site is considered for the proposed project as the project shall set up on the purchased land.
4.9	Land form, Land use and Land ownership	<p>The land is an agricultural land. Earlier, Change in Land Use was obtained from Department of Town and Country Planning to set up Atta Chakki plant. Later on, CLU for change in purpose of land use (i.e. setting up formaldehyde unit in place of existing atta chakki) was also obtained vide Memo No. 973-STP(S)/SS-11(GI) dated 03.09.2021.</p> <p>However, the project falls within Industrial Zone as per the proposed Master plan of Lalru.</p>

4.0 METEOROLOGY

Meteorological data has been taken from October to December, 2021 of 10 km study area and is conducted by NABL and MoEF&CC approved laboratory. The predominant winds are mainly flowing towards North-West direction, with the secondary wind direction being from the South-East.

5.0 AIR QUALITY

PM_{2.5}, PM₁₀, SO₂ and NO₂ levels (Criteria Pollutants), H₂S as well as NH₃ were monitored at five locations in the 10 km study area by M/s Eco Laboratories & Consultants Pvt. Ltd. Monitoring stations were kept keeping in view of the dominant wind direction. On an average, the observed levels are as follows: PM₁₀ from 78 µg/m³ to 88 µg/m³ around the project location and 83 µg/m³ at the project site, PM_{2.5} varies from 43 µg/m³ to 50 µg/m³ around the project location and 46 µg/m³ at the project location, SO₂ from 7 µg/m³ to 11 µg/m³ around the project location and 9 µg/m³ at the project site and NO₂ from 16 µg/m³ to 23 µg/m³. The results when compared with National Ambient Air Quality Standards (NAAQS) of Central Pollution Control Board (CPCB) for "Industrial/ Residential/ Rural and Other Areas", it was observed that all the values of SO₂, NO₂, CO and PAH were within the prescribed limits. Average value of particulate dust as PM₁₀ & PM_{2.5} are within the 24 hours average NAAQ standards of 100 µg/m³ and 60 µg/m³ respectively.

6.0 NOISE QUALITY

Ambient noise levels were measured at 5 locations within the project location and 3 locations outside the project site within the 1 km radius of project. Noise levels varied from 48.6 dB(A) and 65.2 dB(A) during the day time and were 36.2 dB(A) and 53.4 dB(A) during night time in the study area. The obtained noise levels are well within prescribed limits for industrial area and marginally higher for residential areas indicating annoying environment for population and sensitive receptors.

7.0 WATER QUALITY

Groundwater monitoring was done at 8 locations at project and within study area. The ground water test results indicate that water is good in quality and safe for drinking purpose. In the study area, since the samples have been collected from different sites at isolated places, the level of concentration and different elements vary quite considerably which may be due to small aquifers. However, the levels of the various components are within acceptable/

permissible norms for drinking water.

As no effluent will be generated from the industry after the commissioning. Hence, surface water quality will not be affected due to the industry.

8.0 SOIL QUALITY

The soil samples were collected from project location and at 7 other locations within study area. The soil analysis results in the study area indicates that soil is neutral in nature and Sandy loam texture with medium class of fertility in the study area.

9.0 ECOLOGY

No plant or animal species were found as per the endangered list within 10 km radius of the project site. No other ecologically sensitive area like biosphere reserve, tiger reserve, elephant reserve, migratory corridors of wild elephant, wetland, national park and wildlife sanctuary are present within 10 km distance of the project location. The project site falls outside of the notified industrial area.

10.0 ANTICIPATED ENVIRONMENTAL IMPACTS & MITIGATION MEASURES

10.1 AIR QUALITY

The pollutants from the project will be from Boiler stack and DG set. DG will be used as source of power supply and will be used in case of power failure only. HSD/ LDO oil will be used as fuel in Boiler and DG set. Adequate stack height & acoustic enclosure will be provided to Boiler and DG set.

10.2 NOISE QUALITY

The operation of boiler and DG set etc. are the major sources of noise during operation phase of the project. DG. Set will be provided with acoustic enclosures and operated only during the power failure. All the workers engaged at and around high noise generating sources are being provided with ear protection devices like ear muffs/ plugs. They will be regularly subjected to medical check-up for detecting any adverse impact on the ears. The green belt will also help to prevent noise generated within the plant from spreading beyond the plant boundary. Workplace ambient level is not expected to be beyond 75 dB(A) during day time and 71 dB(A) during night time which is much below the limit specified for 8 hours of exposure.

10.3 WATER QUALITY

10.3.1 Domestic Effluent

Approx. 2 KLD of sewage will be generated which will be treated in septic tank.

10.3.2 Industrial effluent

The industrial effluent will be treated in ETP of capacity 25 KLD; which will further be used in process, boiling feed and cooling water make-up.

10.4 SOLID WASTE

10.4.1 DOMESTIC WASTE

Approximately, 10 kg/day (25 persons × 0.2 kg/person/day + 12 persons × 0.4 kg/person/day) of domestic waste will be generated. The solid waste will be disposed off as per Solid Waste Management Rules, 2016 and amendments thereof. The color coded closed bins for biodegradable and non-biodegradable waste shall be placed in each section. The biodegradable waste bin will be treated in compost pits. The waste from non-biodegradable waste bin shall be given to recyclers.

10.4.2 HAZARDOUS WASTE

The plant will generate following Hazardous waste as given below. The Hazardous waste will be collected, stored and disposed as per Hazardous Waste Management Rules, 2016 and amendments thereof.

S. No.	Name of Waste	Category	Quantity	Mode of Disposal
1.	Used Oil	5.1	0.1 KL/annum	To authorized recycler
2.	ETP Sludge	35.3	0.5 kg/day	To TSDF

11.0 GREENERY DEVELOPMENT

Green area of 1129.24 sq.m. (33.8%) will be provided inside the plant premises. Locally available type of trees which are resistant to pollutants will be planted. Tree plantation around the plant helps to arrest the effects of particulate matter and gaseous pollutants in the area besides playing a major role in environmental conservation efforts. The green belt would:

- mitigate gaseous emissions
- have sufficient capability to arrest accidental release
- effective in wastewater reuse

- maintain the ecological balance
- control noise pollution to a considerable extent
- prevent soil erosion
- improve the Aesthetics

All the species suggested are pollution tolerant, besides having an aesthetic appeal.

12.0 ENVIRONMENTAL MONITORING PLAN

The environment monitoring plan enables environmental management system with early sign of need for additional action and modification of ongoing actions for environment management, improvement and conservation. The environmental monitoring points will be decided considering the environmental impacts likely to occur due to the operation of project as the main scope of monitoring program is to track, timely and regularly, the change in environmental conditions and to take timely action for protection of environment. Monitoring of environmental samples will be done as per the guidelines provided by MoEF&CC/ CPCB/ PPCB. Separate records for water, wastewater, air & stack emission will be maintained regularly. Along with other budgets, budget for environmental management will be prepared and revised regularly as per requirement.

13.0 RISK MITIGATION MEASURES

Even with all precautions, disasters may take place. As such, an Emergency Plan will be formulated to take care of any disaster in the plant and surrounding areas. In order to prevent occurrence of any disaster, the plant will be provided with various safety and disaster control facilities. In addition to these, numerous material handling systems, heavy road transport, high-tension electric lines, overhead cranes and various other handling and transport systems always have chances of accidents.

14.0 PUBLIC CONSULATION

Public hearing for establishment of the unit will be conducted by Punjab Pollution Control Board (PPCB). The proceedings of the same will be incorporated in the final EIA report.

15.0 PROJECT BENEFITS

The project will overcome the demand and supply gap of steel product in the country. The proposed project will also generate additional revenue for the State Government. The formaldehyde availability will boost the various MSME industries and overall economic

scenario of the country. The project will create additional direct/indirect employment for people. Local people will be preferred for employment during construction and operation stage.

16.0 CORPORATE ENVIRONMENT RESPONSIBILITY (CER)

M/s Feel Organic will be responsible for implementation of the CER activities. The total estimated cost of the project is Rs. 500 Lakhs. Thus, Rs. 5.0 lakhs @ of 1% of total project cost are reserved towards CER as per Office Memorandum vide F. No. 22-65/ 2017-IA.III dated 01.05.2018. The following activities have been proposed to be covered under CER:

S. No.	Activities	Total Expenditure in 1 Year (in lakhs)	Timeline (Starting from date of grant of EC)	Total Expenditure (in lakhs)
1.	Providing drinking water filtration system, Renovation of toilets, providing books to needy students of Govt. High School, Rani Majra	5.0	1 year	5.0
Total		5.0 Lakhs	1 year	5.0 Lakhs

17.0 ENVIRONMENTAL MANAGEMENT PLAN

Environment Management Department will implement the EMP of this proposed project. All recommendations given in the EIA report including that of occupational health, risk mitigation and safety will be complied. Capital cost for the Environment Management Plan is estimated to be Rs. 69.5 lakhs and recurring cost per year will be Rs. 8 lakhs. Greenbelt and greenery development inside and outside the plant premises will be intensified by the EMD. Guidelines issued by the Central Pollution Control Board (CPCB) on greenbelt development will be followed. Environmental awareness programs for the employees will be conducted. EMD will ensure cleanliness inside the plant.
