



सत्यमेव जयते

File No.: SIA/TG/IND3/498957/2024  
Government of India  
Ministry of Environment, Forest and Climate Change  
(Issued by the State Level Expert Appraisal Committee(SEAC),  
TELANGANA)

\*\*\*



Dated 26/07/2025



To,

I Ravindra Reddy  
VIRUPAKSHA ORGANICS LIMITED  
Plot No's.: B-1 & B-2, IDA, Gandhi Nagar, Medchal -Malkajgiri District, Hyderabad, Telangana –  
500 037, Gandhi Nagar, MEDCHAL MALKAJGIRI, TELANGANA, 500037  
virupakshaolu3@gmail.com

**Subject:** Grant of Standard Terms of Reference (ToR) to the proposed Project under the EIA Notification 2006-  
and as amended thereof-regarding.

**Sir/Madam,**

This is in reference to your application submitted to SEAC vide proposal number  
SIA/TG/IND3/498957/2024 dated 14/07/2025 for grant of Terms of Reference (ToR) to the project  
under the provision of the EIA Notification 2006-and as amended thereof.

2. The particulars of the proposal are as below :

(i) ToR Identification No.	TO24B2404TG5637452N
(ii) File No.	SIA/TG/IND3/498957/2024
(iii) Clearance Type	Fresh ToR
(iv) Category	B1
(v) Project/Activity Included Schedule No.	5(f) Synthetic organic chemicals industry Proposed expansion of existing Bulk Drugs & Drug Intermediates Manufacturing unit from production capacity 25.00 TPM to 199.00 TPM by Virupaksha Organics Limited, Unit-V (Formerly Anu's Laboratories Ltd., Unit-II) in an area of 5.381 Acre (21777.02 Sqm)
(vii) Name of Project	
(viii) Name of Company/Organization	VIRUPAKSHA ORGANICS LIMITED
(ix) Location of Project (District, State)	SANGAREDDY, TELANGANA
(x) Issuing Authority	SEAC
(xi) Applicability of General Conditions	NO

3. The **SEAC** has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and after detailed examination hereby decided to grant Standard Terms of Reference to the instant proposal of **M/s. VIRUPAKSHA ORGANICS LIMITED** under the provisions of the aforementioned Notification.
4. The brief about products and by products as submitted by the Project proponent in Form-1 (Part A, B) and Standard Terms of Reference are annexed to this letter as Annexure (1).
5. The Ministry reserves the right to stipulate additional TORs, if found necessary.
6. The Standard Terms of Reference (ToR) to the aforementioned project is under provisions of EIA Notification, 2006 and as amended thereof. It does not tantamount to approvals/consent/permissions etc required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.
7. The granted letter, all the documents submitted as a part of application viz. Form-1 Part A and Part B are available on PARIVESH portal which can be accessed by scanning the QR Code above.

#### **Copy To**

1. The Chairman, SEAC, TG for kind information.
2. The Member Secretary, TGPCB for kind information.
3. The EE, RO: Sangareddy, TGPCB for information.
4. The IRO, MoEF&CC, GoI, Hyderabad for kind information.
5. The Secretary, MoEF&CC, GoI, New Delhi for kind information.

**Annexure 1**

#### **Standard Terms of Reference for conducting Environment Impact Assessment Study for Synthetic organic chemicals industry and information to be included in EIA/EMP report**

##### **1. Executive Summary**

Sr. No.	Terms of Reference
1.1	Executive Summary

##### **2. Introduction**

Sr. No.	Terms of Reference
2.1	Details of the EIA Consultant including NABET accreditation
2.2	Information about the project proponent
2.3	Importance and benefits of the project

##### **3. Project Description**

Sr. No.	Terms of Reference
3.1	Cost of project and time of completion.

Sr. No.	Terms of Reference
3.2	Products with capacities for the proposed project.
3.3	If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.
3.4	Details of existing products and production, if any, along with present product/production details in tabular format, to verify the compliance of the EIA Notifications.
3.5	List of raw materials required and their source along with mode of transportation.
3.6	Other chemicals and materials required with quantities and storage capacities
3.7	Details of Emission, effluents, hazardous waste generation and their management.
3.8	Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract)
3.9	Details of boiler/gensets (including stacks/exhausts) and fuels to be used
3.10	Process description along with major equipment's and machineries, process flow sheet (quantitative) from raw materials to products to be provided
3.11	Hazard identification and details of proposed safety systems.
3.12	<p>Expansion/modernization proposals:</p> <p>a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Integrated Regional Office of the Ministry of Environment, Forest and Climate Change as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, copy of the latest CTO and status of compliance of Consent to Operate for the ongoing/existing operation of the project from SPCB shall be attached with the EIA-EMP report.</p> <p>b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.</p>

#### 4. Site Details

Sr. No.	Terms of Reference
4.1	Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.
4.2	A topo-sheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco-sensitive areas and environmentally sensitive places)

<b>Sr. No.</b>	<b>Terms of Reference</b>
4.3	Details w.r.t. option analysis for selection of site
4.4	Co-ordinates (lat-long) of all four corners of the site.
4.5	Google map-Earth download of the project site.
4.6	Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.
4.7	Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.
4.8	Land-use break-up of total land of the project site (identified and acquired), government/private - agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area)
4.9	A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area
4.10	Geological features and Geo-hydrological status of the study area shall be included.
4.11	Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects)
4.12	Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land. Documents related to conversion of land for Industrial purpose.
4.13	R&R details in respect of land in line with state Government policy.

**5. Forest, wildlife and CRZ related issues (if applicable):**

<b>Sr. No.</b>	<b>Terms of Reference</b>
5.1	Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable)
5.2	Land-use map based on High resolution satellite imagery of the proposed site delineating the forestland (in case of projects involving forest land more than 40 ha)
5.3	Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.
5.4	The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Wardenthereon

Sr. No.	Terms of Reference
5.5	Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area
5.6	Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife
5.7	Recommendations and NOC from the concerned State/UT Coastal Zone Management Authority on CRZ angle

## 6. Environmental Status

Sr. No.	Terms of Reference
6.1	Determination of atmospheric inversion level at the project site and site-specific micrometeorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.P <ul style="list-style-type: none"> <li>• AAQ data (except monsoon) at 8 locations for PM10, PM2.5, SO2, NOX, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Study should indicate minimum, maximum value of different parameters for the period (3 months) collected. Collected data should be supported by the reference data of either CPCB or SPCB. AAQ data &amp; GLC of pollutants from stack emissions should suggest technology/ measures- Best Practiced Technology (BPT) indicating best achieved results.</li> </ul>
6.2	Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
6.3	Surface water quality of nearby River (100m upstream and downstream of discharge point) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.
6.4	Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC, if yes give details.
6.5	Ground water monitoring at minimum at 8 locations shall be included.
6.6	Noise levels monitoring at 8 locations within the study area.
6.7	Soil Characteristic as per CPCB guidelines.
6.8	Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
6.9	Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
6.10	Socio-economic status of the study area.

## 7. Environment Impact and Environment Management Plan

Sr. No.	Terms of Reference
7.1	Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.
7.2	Water Quality Modelling – in case of discharge in water body
7.3	Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.
7.4	A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules 1986.
7.5	Details of stack emission and action plan for control of emissions to meet standards
7.6	Measures for fugitive emission control
7.7	Details of hazardous waste generation and their storage, utilization and management. Copies of MOU regarding utilization of solid and hazardous waste in cement plant shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
7.8	Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.
7.9	Action plan for the green belt development plan in 33 % area i.e. land with not less than 2,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.
7.10	Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.
7.11	Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.
7.12	Action plan for post-project environmental monitoring shall be submitted.
7.13	Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.

## 8. Occupational health

Sr. No.	Terms of Reference
8.1	Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers
8.2	Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during preplacement and periodical examinations give the details of the same. Details regarding last month analyzed data of above mentioned parameters as per age, sex, duration of exposure and department wise.
8.3	Details of existing Occupational & Safety Hazards. What are the exposure levels of hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
8.4	Annual report of health status of workers with special reference to Occupational Health and Safety.

### 9. Corporate Environment Policy

Sr. No.	Terms of Reference
9.1	Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
9.2	Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
9.3	What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
9.4	Does the company have system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report
9.5	Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.

### 10. Corporate Environmental Responsibility (CER)

Sr. No.	Terms of Reference
10.1	Adequate funds, as per the Ministry's OM/Guidelines, shall be earmarked towards the Corporate Environmental Responsibility based on Public Hearing issues/socioeconomic issues and item-wise details along with time bound action plan shall be included (CER activities shall be related to environment). Socio-economic development activities need to be elaborated upon. For the projects where public hearing is not conducted, CER plan shall be provided based on socio-economic study of the area.

### 11. Additional studies/Measures to be considered

Sr. No.	Terms of Reference
11.1	Provide latest and ecofriendly technology for product manufacturing.
11.2	Emphasize on Green chemistry/Clean Manufacturing
11.3	Provide CAS No. of products along with product list.
11.4	Provide details of amount of carbon sequestered in their unit through greenbelt/other modes, in case of expansion project.
11.5	Life structure and sustainability for carbon and water foot print.
11.6	Detailed pollution Load estimation.
11.7	Transportation of Hazardous substance, effluents etc shall be carried out through authorized and GPS enable vehicles/Trucks only.
11.8	Category of Hazardous Wastes shall be mentioned in the EIA/EMP report and in presentation.
11.9	Details of greenhouse gases and emissions shall be provided.
11.10	Greenbelt shall be developed in the first year of the project and wind breaks shall be erected.
11.11	Study area map shall be overlapped with all the associated features.
11.12	Emphasize on green fuels.
11.13	The project from NCR shall not use Coal as fuel. Further, PP shall avoid use of Coal in the CPAs and elsewhere also if alternatives are available.
11.14	Provide the Cost-Benefit analysis with respect to the environment due to the project.
11.15	Details of carbon foot prints and carbon sequestration study w.r.t. proposed project needs to be spelled out. Proposed mitigation measures also need to be analyzed and submitted for further appraisal of the EAC
11.16	Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.
11.17	A tabular chart with index for point wise compliance of above TORs and its details needs to be submitted in the EIA/EMP Report.

## 12. Specific Condition

Sr. No.	Terms of Reference
12.1	Details on solvents to be used, measures for solvent recovery and for emissions control.

Sr. No.	Terms of Reference
12.2	Details of process emissions from the proposed unit and its arrangement to control.
12.3	Ambient air quality data should include VOC, other process-specific pollutants* like NH <sub>3</sub> *,chlorine*,HCl*,HBr*,H <sub>2</sub> S*,HF*,etc.,(*-as applicable)
12.4	Work zone monitoring arrangements for hazardous chemicals.
12.5	Detailed effluent treatment scheme including segregation of effluent streams for units adopting 'Zero' liquid discharge.
12.6	Action plan for odour control to be submitted.
12.7	A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they co-process organic solid/hazardous waste generated.
12.8	Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
12.9	Action plan for utilization of MEE/dryers salts.
12.10	Material Safety Data Sheet for all the Chemicals are being used/will be used.
12.11	Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
12.12	Details of incinerator if to be installed.
12.13	Risk assessment for storage and handling of hazardous chemicals/solvents. Action plan for handling & safety system to be incorporated.
12.14	Arrangements for ensuring health and safety of workers engaged in handling of toxic materials.
12.15	Details of carbon foot prints and carbon sequestration study w.r.t. proposed project needs to spelled out. Proposed mitigation measures also needs to be analysed and submitted for further appraisal of the EAC.

### Additional Terms of Reference

N/A

### Annexure 2

### Details of Products & By-products

Name of the product /By-product	Product / By-product	Existing	Proposed	Total	Unit	Mode of Transport / Transmission	Remarks (eg. number)
(s)-1-Dimethylamino-2-methyl-pentan-3-one (Tapentadol hydrochloride intermediate)	Product	5	0	5	Tons per Month	Road	Existing product dropping after expansion
4-(4-chloro-1-oxobutyl)-2,2-dimethyl	Product	16	0	16	Tons	Road	Existing product

Name of the product /By-product	Product / By-product	Existing	Proposed	Total	Unit	Mode of Transport / Transmission	Remarks (eg. number)
phenyl acetic acid methyl ester					per Month		dropping after expansion
Cyano Diol Base	Product	4	0	4	Tons per Month	Road	Existing product dropping after expansion
(3ar,4s,7r,7as) Hexahydro-1h-4,7-Methanoisindole-1,3(2h)Dione.(Mid-02)	Product	0	0.5	0.5	Tons per Month	Road	Proposed Product after Expansion
2-[4-(4-Chloro-Butyryl)-Phenyl]-2-Methyl-Propionic Acid Methyl Ester (Codpa)	Product	0	25	25	Tons per Month	Road	Proposed Product after Expansion
2-Chloromethyl-4-Methyl-Quinazoline (Cmq)	Product	0	3	3	Tons per Month	Road	Proposed Product after Expansion
3-Methoxymorphinan	Product	0	5	5	Tons per Month	Road	Proposed Product after Expansion
4-Amino 1,2,4-Triazole	Product	0	8	8	Tons per Month	Road	Proposed Product after Expansion
4-Chlorobutanoyl Chloride (4cbc)	Product	0	8	8	Tons per Month	Road	Proposed Product after Expansion
8-Bromo-7-(But-2-Ynyl)-3,4,5,7-Tetrahydro-3-Methyl-1h-Purine-2,6-Dione (Bbx)	Product	0	2	2	Tons per Month	Road	Proposed Product after Expansion
Azacyclonol (Aza)	Product	0	10	10	Tons per Month	Road	Proposed Product after Expansion
Diol Base [(4-[4-Dimethylamino-1-(4-Fluoro-Phenyl)-1-Hydroxy-Butyl]-3-Hydroxymethyl-Benzonitrile)]	Product	0	25	25	Tons per Month	Road	Proposed Product after Expansion
Fexofenadine Hydrochloride (Mac)	Product	0	15	15	Tons per Month	Road	Proposed Product after Expansion
Meta Bromo Anisole	Product	0	10	10	Tons per Month	Road	Proposed Product after Expansion
Meta Chloro Anisole	Product	0	20	20	Tons per Month	Road	Proposed Product after Expansion
Alpha Pyran	Product	0	1	1	Tons per	Road	Proposed Product after Expansion

Name of the product /By-product	Product / By-product	Existing	Proposed	Total	Unit	Mode of Transport / Transmission	Remarks (eg. number)
					Month		
Methyl(2-(4-(2-(4-(1-(2-Ethoxyethyl)-1h-Benzo[D]Imidazol-2-Yl) Piperidin-1-Yl) Ethyl) Phenyl)-2-Methylpropanoate (Bls-05)	Product	0	2	2	Tons per Month	Road	Proposed Product after Expansion
Ethyl 7-Bromo-2,2-Dimethylheptanoate (Bpa-01)	Product	0	4	4	Tons per Month	Road	Proposed Product after Expansion
Methyl 2-(4-(2-Bromoethyl) Phenyl)-2-Methylpropanoate (Bsn-04)	Product	0	1	1	Tons per Month	Road	Proposed Product after Expansion
Clopidogrel Bisulfate	Product	0	5	5	Tons per Month	Road	Proposed Product after Expansion
4,5,6,7-Tetrahydrothieno[3,2-C]Pyridine Hydrochloride	Product	0	1	1	Tons per Month	Road	Proposed Product after Expansion
1-(2-Ethoxyethyl)-2-(Piperidin-4-Yl)-1h-Benzo[D]Imidazole (Epi-02)	Product	0	1	1	Tons per Month	Road	Proposed Product after Expansion
5-(2-Fluorophenyl)-1h-Pyrrole-3-Carbaldehyde (Fpc-04)	Product	0	1	1	Tons per Month	Road	Proposed Product after Expansion
(R,Z)-3-(3-Methoxyphenyl)-N,N,2-Trimethylpent-3-En-1-Amine Hydrochloride	Product	0	10	10	Tons per Month	Road	Proposed Product after Expansion
(2r,3z)-3-(3-Methoxyphenyl)-N,N,2-Trimethylpentan-1-Amine Hydrochloride	Product	0	10	10	Tons per Month	Road	Proposed Product after Expansion
Fexofenadine (Crude)	Product	0	10	10	Tons per Month	Road	Proposed Product after Expansion
Aluminium hydroxide	By-Product	0	957.8	957.8	Kg per Day	Road	By-product of 2-(4-Chloro-butylphenyl)-2-methylpropionic acid methyl ester
Aluminium hydroxide	By-Product	0	328.2	328.2	Kg per Day	Road	By-product of Fexofenadine Hydrochloride (crude)
Sodium acetate	By-Product	0	393.7	393.7	Kg per	Road	By-product of 2-(4-Chloro-butylphenyl)-2-methylpropionic acid methyl ester

Name of the product /By-product	Product / By-product	Existing	Proposed	Total	Unit	Mode of Transport / Transmission	Remarks (eg. number)
					Day		phenyl]-2-methylpropionic acid methyl ester
Sodium acetate	By-Product	0	134.8	134.8	Kg per Day	Road	By-product of Fexofenadine Hydrochloride (crude)
Potassium chloride	By-Product	0	297.7	297.7	Kg per Day	Road	By-product of Fexofenadine Hydrochloride (
[(1r, 2r)-2-(Methylsulfonyloxymethyl)Cyclohexyl] Methylmethanesulfonate (Lurasidone Intermediate)	Product	0	0.5	0.5	Tons per Month	Road	Proposed Product after Expansion
Alpha - (1h -1, 2, 4 -Triazol-1-Yl) - 2, 4 - Difluoro Acetophenone	Product	0	5	5	Tons per Month	Road	Proposed Product after Expansion
Tramadol Nitrate	Product	0	5	5	Tons per Month	Road	Proposed Product after Expansion
Pivalic acid	By-Product	0	39.9	39.9	Kg per Day	Road	By-product of (R)-Piperidin-3-Amine
20% HCl solution	By-Product	0	940.4	940.4	Kg per Day	Road	By-product of 3-Methoxymorphine
Dextromethorphan Hydrogen Bromide	Product	0	10	10	Tons per Month	Road	Proposed Product after Expansion
Potassium chloride	By-Product	0	179.3	179.3	Kg per Day	Road	By-product of Fexofenadine Hydrochloride (crude)
(R)-Piperidin-3-Amine	Product	0	1	1	Tons per Month	Road	Proposed Product after Expansion
Sodium acetate	By-Product	0	219.2	219.2	Kg per Day	Road	By-product of Fexofenadine Hydrochloride (
Succinimide	By-Product	0	33.5	33.5	Kg per Day	Road	By-product of 5-fluorophenyl)-1-pyrrole-3-carbaldehyde

Name of the product /By-product	Product / By-product	Existing	Proposed	Total	Unit	Mode of Transport / Transmission	Remarks (eg. number)
Manganese dioxide	By-Product	0	199.6	199.6	Kg per day	Road	By-product of Fexofenadine Hydrochloride (
Manganese dioxide	By-Product	0	121.4	121.4	Kg per Day	Road	By-product of Fexofenadine Hydrochloride (crude)
20% HCl solution	By-Product	0	57.9	57.9	Kg per Day	Road	By-product of [(1R,2R)-2-(meta-sulfonyloxymethylcyclohexyl) methanemethane sulfonamide (Lurasidone Intermediate)
20% HCl solution	By-Product	0	7745	7745	Kg per Day	Road	By-product of 2-(4-Chloro-butylphenyl)-2-methylpropionic acid methyl ester (CODPA)
20% HCl solution	By-Product	0	566.1	566.1	Kg per Day	Road	By-product of Fexofenadine Hydrochloride (MAC)
20% HCl solution	By-Product	0	202.66	202.66	Kg per Day	Road	By-product of Clopidogrel Bisulfate
20% HCl solution	By-Product	0	47.87	47.87	Kg per Day	Road	By-product of 4,5,6,7-tetrahydrothienoc[5,4-c]pyridine hydrochloride
20% HCl solution	By-Product	0	754.15	754.15	Kg per Day	Road	By-product of A - (1H -1, 2, 4 - Triazol-1-yl) - 2-Difluoroacetophenone
20% HCl solution	By-Product	0	2653.86	2653.86	Kg per Day	Road	By-product of Fexofenadine (crude)
20% HCl solution	By-Product	0	98.66	98.66	Kg per Day	Road	By-product of (1-piperidin-3-amin