



EXECUTIVE SUMMARY

S.NO.	DETAILS	INFORMATION			
1	Name of the Project	Expansion of Synthetic Organic Chemical Plant			
2	Name of Project Proponent	M/s. Ran Chemicals Pvt. Ltd.			
3	Capacity	Product	Existing (MT/day)	Proposed (MT/day)	Total (MT/day)
		Polyester based resin & other polyester	28	36	64
		Finishing agents & preparations used in textile	1.4	14.6	16
		Spent Menthol and Glycol	1.2	0.8	2
		Total	30.6	51.4	82
4	Regulatory Framework	Category 5 (f) “Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates) as per EIA Notification, 2006			
5	Location	Khata No. 45, Mouza-Khapri, PO-Kalambi, Tehsil- Kalmeshwar, District Nagpur, MS			
6	Toposheet No.	55K/15 & 55K/16			
7	Geographical Coordinate	Latitude	Longitude	Elevation (MSL)	
		21° 09' 56.43" N	78° 53' 25.42" E	346	
8	Area Requirement	Plot Area: 27600.00 sq. m Net Plot area: 7229.00 sq. m Area for green Belt Development: 2386.00 sq. m.			
9	Water Requirement	Construction Phase: 30 m ³ /day Operation: 200 m ³ /day Source: MIDC Water Supply			
10	Power Requirement	Total power requirement is 1000 KW which will be sourced from MSEDCL. Two nos. of DG sets of 500 & 320			



S.NO.	DETAILS	INFORMATION
		KVA capacities shall be installed as backup support in case of power failure
11	Man Power Requirement	Total Manpower requirement: 172 Total Administrative: 103 Total Workers: 69
12	Project Cost	2000.00 Lakhs
13	EMP Cost	Capital Cost: 61.0 Lakhs Recurring Cost: 17.0 Lakhs/years
14	Eco Sensitive Zone (National Park, Wildlife Sanctuary, Biosphere Reserve, Wild Life Corridors etc.)	Not within 10 km radius from Project boundary
15	Historical & Archeological Important Place, Defense Establishment	Not within 10 km radius from Project boundary

A. INTRODUCTION

Expansion of Synthetic Organic Chemical plant is located at Khata No. 45 Mouza-Khapri, PO-Kalambi, Tehsil- Kalmeshwar, District Nagpur, MS. Location map, Plant Layout and view of existing plant is displayed below:



**EXPANSION OF SYNTHETIC ORGANIC CHEMICAL PLANT AT KHATA
NO. 45, MOUZA-KHAPRI, PO-KALAMBI, TEHSIL-KALMESHWAR,
DISTRICT-NAGPUR MH BY M/S. RAN CHEMICALS PVT LTD.**

**DRAFT
ENVIRONMENTAL
IMPACT ASSESSMENT
REPORT**

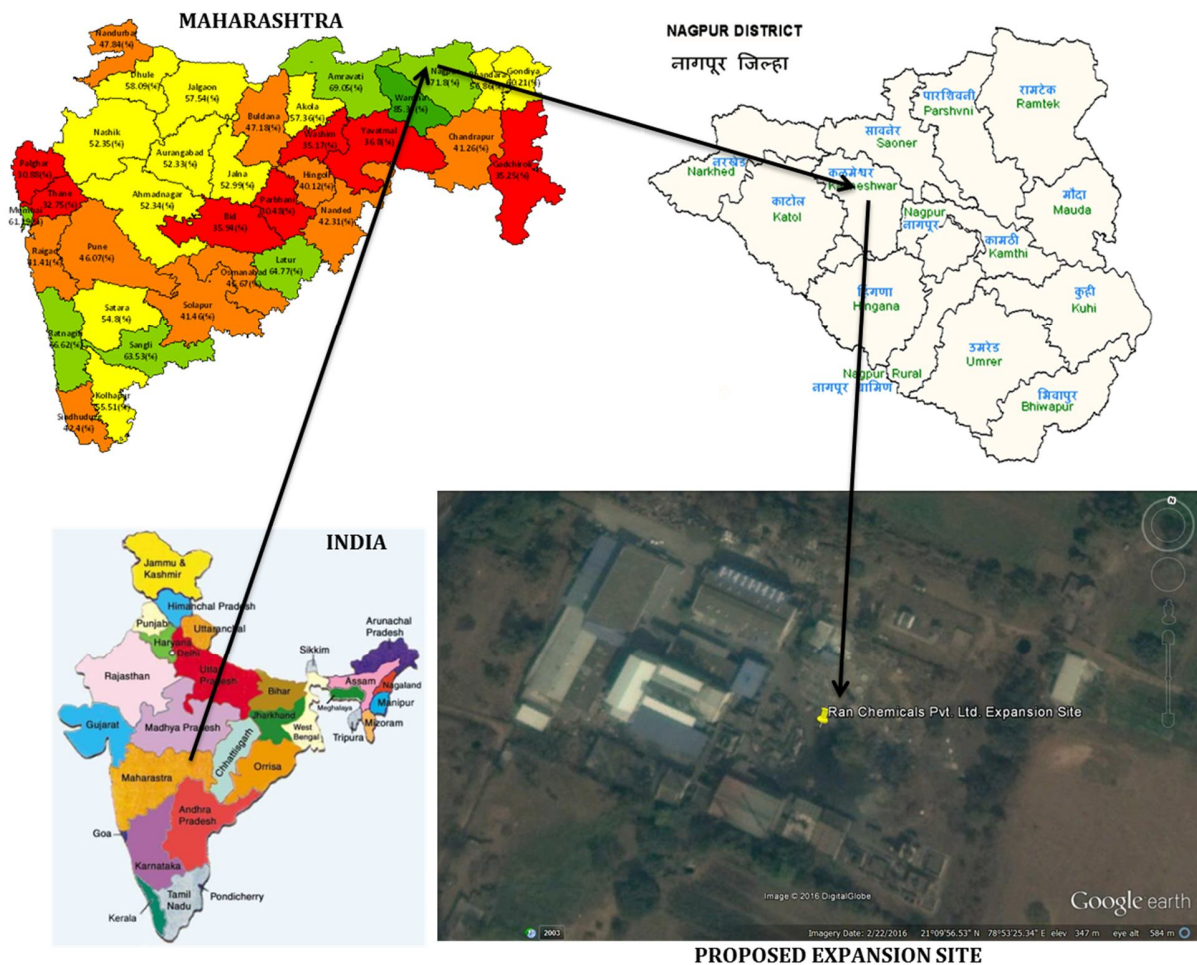


Figure No.1: Project Location Map



**EXPANSION OF SYNTHETIC ORGANIC CHEMICAL PLANT AT KHATA
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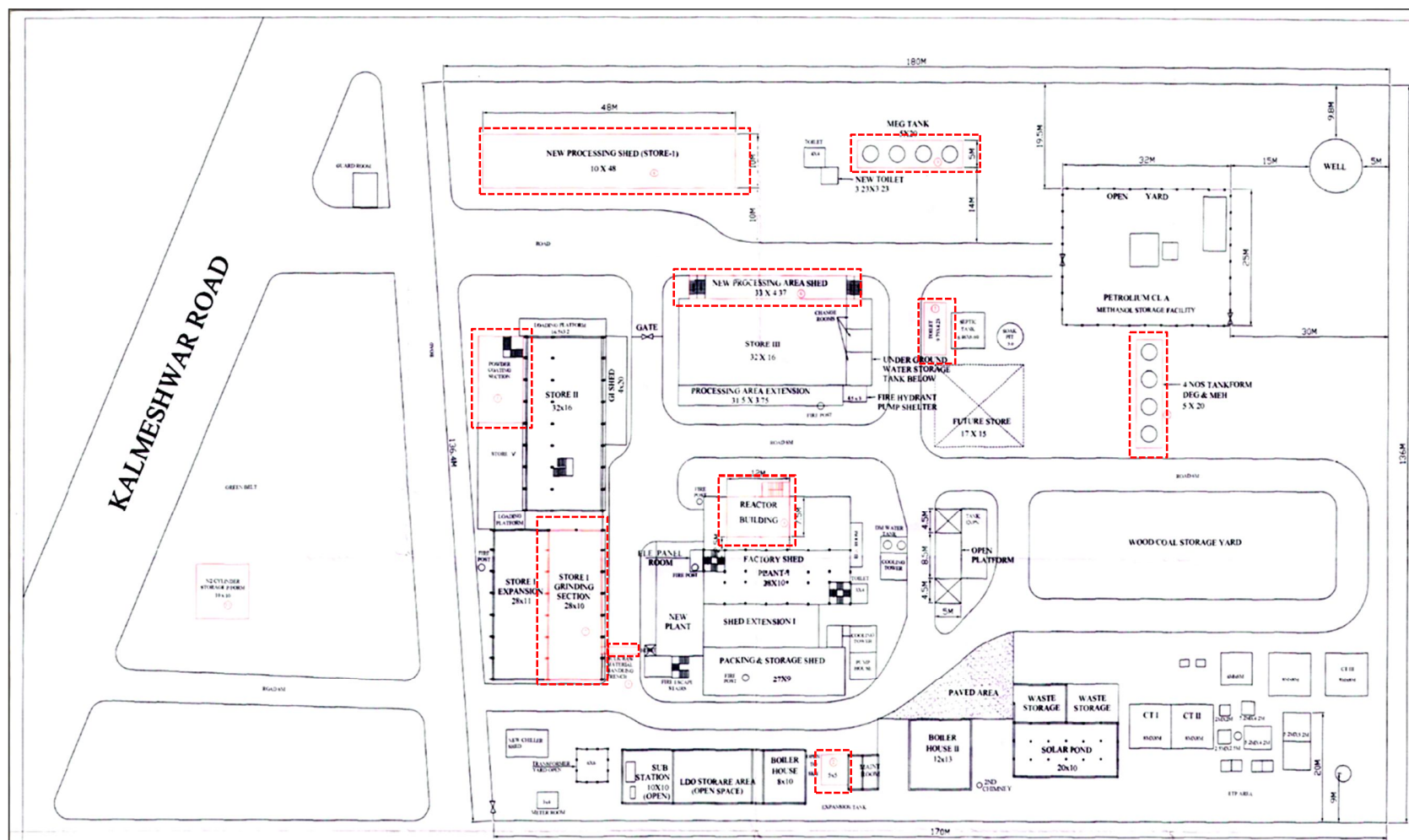


Figure No.2: Detailed Plat Layout

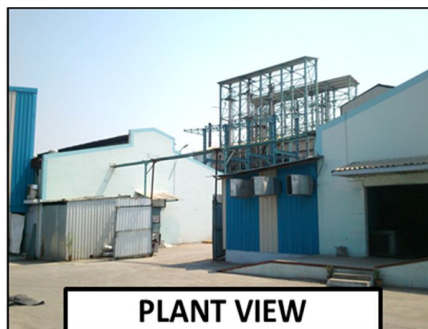


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PLANT VIEW



PLANT VIEW



ADMIN BUILDING



PLANT VIEW



MAIN GATE



SECURITY CABIN



STORE AREA



TRANSFORMER



DG SETS



CONVEYOR BELT



VIEW OF PRODUCT



RAW MATERIAL STORAGE

Figure No.3: View of Existing Plan



B. CHRONOLOGY OF THE PROJECT

S. NO.	PARTICULARS	DATE
1	Online Application Submitted to MoEFCC Online Portal	24 th Oct. 16
2	ToR Presentation & Approval	26 th Dec. 16
3	Baseline Environmental Studies	1 st Jan, 17 to 31 st March, 17

C. SCOPE OF STUDY

- ✚ Preparation of EIA report complying with the conditions of ToR given by EAC-II on its 17th meeting & Standard ToR published by MoEFCC in April, 2015
- ✚ Baseline data collection for different environmental parameters for one non monsoon season (1st January 2017 to 31st March 2017)
- ✚ Impact assessment and suggestion of mitigation measures to minimize the impacts
- ✚ Preparation of Environmental Management Plan and Environmental Monitoring Plan
- ✚ Submission of Draft EIA/EMP report to MPCB to conduct Public hearing
- ✚ Preparation of Final EIA/EMP report by incorporating details of Public hearing, view/observation and suggestion of local public and commitment made by project proponent
- ✚ Submission of EIA/EMP with Additional Studies Reports to EAC-II for Final Technical Presentation

D. BASELINE ENVIRONMENTAL STUDIES

Study Season

The studies were conducted during the Pre Monsoon season (1st January 2017 to 31st March 2017).

Study Area

The study area for monitoring of environmental quality includes 10 km radius from boundary of the project site. Site area covers the 10 KM radial study area in Survey of India (SOI) topo-sheet nos. 55K/15 & 55K/16.

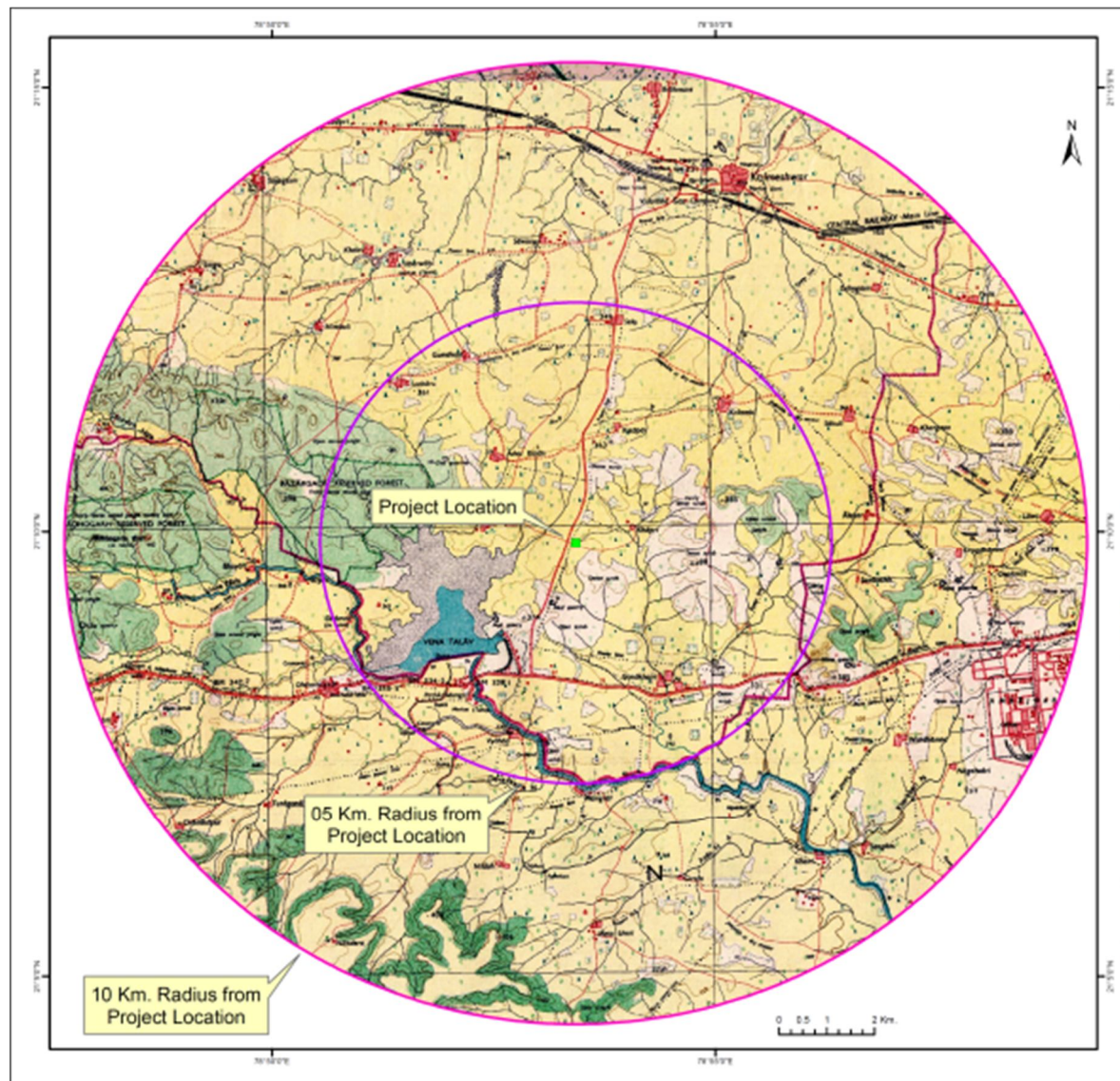


Figure No.4: 10 Km radius Study area on toposheet

Meteorology

Wind Speed: 0.4 Km/hr to 11.5 Km/hr

Wind Direction: N, NE, NW

Relative Humidity: 15.0 % to 60.0 %

Rainfall: Average Annual Rainfall is 1100 mm

Temperature: 17.5 °C to 34.7 °C

Ambient Air Quality Monitoring

Monitoring Location: 8 Locations



PM-10: 35.4 $\mu\text{g}/\text{m}^3$ to 65.3 $\mu\text{g}/\text{m}^3$

PM-2.5: 15.1 $\mu\text{g}/\text{m}^3$ to 31.4 $\mu\text{g}/\text{m}^3$

NOx: 8.3 $\mu\text{g}/\text{m}^3$ to 29.3 $\mu\text{g}/\text{m}^3$

SO₂: 1.2 $\mu\text{g}/\text{m}^3$ to 26.2 $\mu\text{g}/\text{m}^3$

SURFACE WATER

Sampling Location: 3 Locations

pH: 8.4 to 8.6

Total Dissolved Solid: 181 to 200 mg/l

Total Hardness: 100 to 240 mg/l.

GRIUND WATER

Sampling Location: 8 Locations

pH: 7.2 to 7.8

Total Dissolved Solid: 441.0 to 661.0 mg/l

Total Hardness: 268 to 500.0 mg/l

NOISE MONITORING

Sampling Location: 8 Locations

Day time: 43.9 dB (A) to 47.1 dB (A)

Night time: 39.9 (A) to 41.9 dB (A)

SOIL SAMPLING

Sampling Location: 8 Locations

pH: 7.2 to 7.9

EC: 0.1 to 0.4 mmhos/cm

Nitrogen: 119.0 Kg/ha to 356.9 Kg/ha

Phosphorus: 74.9 to 99.8 Kg/ha

Potassium: 85.4 to 211.1 Kg/ha

Organic Matter: 0.3 % to 1.7 %



ECOLOGY

- ✚ No National Park, Wild Life Sanctuary, Bio-Spheres Reserve or Wind Life Corridor are present or identified in the Study area
- ✚ Amaltas, Kachnar, Babool, Karanj, Neem, Teak, Shisham, Tendu, Karwand, Gudvel, Wild Saga and Bamboo are common flora species of the study area
- ✚ As per secondary information Grey jungle fowl, Blue rock pigeon, Black drongo, Indian roller, Indian roller, Three striped Palm squirrel, Rufous Tailed Hare, Pied kingfisher, Maral, Katla, Rohu are some common faunal species of study area

SOCIO-ECONOMIC STUDY

- ✚ Total population of the region as per 2011 census is 48430 out of which 25497 are male and 22933 are female
- ✚ Total number of households in the region about 10706
- ✚ Sex ratio (number of male per thousand female) in the region is 899 this shows that male population is higher in the region as compared to the female population
- ✚ Out of the total population Scheduled Caste (SC) and Scheduled Tribe (ST) population is about 8608 (17.77%) and 5664 (11.70%) respectively
- ✚ Total main worker population is about 36.81%, 6.64% comes under marginal worker category and 56.55% belongs to non-workers category
- ✚ Literacy rate of the population in the study area is about 69.31%

E. IMPACT PREDICTION

Environmental Aspects	Likely Impacts
Land Environment	
Construction Phase	✚ Solid & Hazardous waste generation from construction activities ✚ Construction waste generation (Metallic & Non Metallic) ✚ Unplanned dumping of waste may cause ground water contamination
Operation Phase	✚ Unplanned dumping of waste may cause ground water contamination



Environmental Aspects	Likely Impacts
	- Waste generation during material handling - ETP sludge is hazardous may cause human health if not handled properly - Generation of material rejects may cause pollution if not managed properly
Water Environment	
Construction Phase	- Domestic Waste water generation - Contamination of Water bodies is construction waste dumped openly
Operation Phase	- Effluent Generation - Domestic waste water generation
Terrestrial Ecology	
Construction Phase	- No existing plant shall be replaced/removed - Regular Green Belt development will help to reduce air and noise pollution
Operation Phase	- Regular Green Belt development will help to reduce air and noise pollution - No plantation shall be removed
Noise Environment	
Construction Phase	- Material handling may produce noise - Material transportation may produce noise - Construction activities may produce noise
Air quality	
Construction Phase	- Operation of plant machinery - Transportation of Raw material and final products - Noise from public vehicle - Noise may produce from Material handling
Socioeconomic environment	
Construction Phase	- Construction activities may disturb the life style - Transportation of construction may produce



Environmental Aspects	Likely Impacts
	pollutants which ultimately impact social environment ✚ Job opportunity will be generated
Operation Phase	✚ Job opportunity will be generated ✚ Indirect employment may be also generated ✚ Emission from stack may impact on human health

F. ENVIRONMENTAL MANAGEMENT PLAN

AIR POLLUTION MANAGEMENT

- ✚ Closed storage of coal has been already provided
- ✚ Ash is being stored at safe place in existing unit. Same practices shall be continued in expansion unit also
- ✚ Regular maintenance of Air Pollution Controlling Devices
- ✚ Regular water sprinkling in and around the project site
- ✚ Maintenance of all internal and main road
- ✚ All storage, handling & transfer shall be done with properly designed facilities
- ✚ Regular water sprinkling shall be carried out in and around the plant site
- ✚ Thick green belt of approx. 33% of total plot area shall developed
- ✚ Internal roads shall be concreted so that fugitive emission shall be minimized
- ✚ Regular maintenance of Vehicles with PUC

WATER & WASTE WATER MANAGEMENT

- ✚ Regular chemical analysis of Effluent at inlet and outlet point shall be conducted
- ✚ All data shall be maintained related with ETP operation
- ✚ No effluent/waste water shall be discharged out of the plant premises
- ✚ All the chemicals will be stored and handled safely based on the requirement of MSDS
- ✚ Preventive maintenance program will be developed and implemented
- ✚ Separate arrangement shall be done for drinking water
- ✚ Separate drainage system shall be done for Effluent and storm water



SOLID & HAZARDOUS WASTE MANAGEMENT

- ✚ Main solid and hazardous waste from the plant are Sludge from ETP, Spent Solvent, Discarded containers/barrels/bags, waste oil and other municipal solid waste.
- ✚ Company has already made agreement with CHWTSDF (Butibori, Nagpur) for management of Hazardous waste
- ✚ All Hazardous Waste shall be disposed as per Hazardous and Other Waste (Management & Trans-Boundary Movement) Rule, 2016
- ✚ All construction waste shall be managed as per Construction & Demolition Waste Management Rule, 2016
- ✚ All Electronic waste generated during construction of and operation phase shall be managed as per E-Waste Management Rule, 2016
- ✚ Municipal Solid Waste shall be managed as per Municipal Solid Waste Management Rule, 2016

ODOR MANAGEMENT PLAN

- ✚ Odor generally generated from Process, ETP & Sludge storage area
- ✚ Avoid the direct contact of sunlight with odor producing material
- ✚ Regular transportation of Sludge and other odor producing material to CHWTSDF
- ✚ Personal Protective Equipment shall be provided to the workers while handling of chemical and raw material
- ✚ Thick green belt shall be developed which help to restore the aesthetic value
- ✚ Ensure the proper housekeeping
- ✚ Proper aerobic condition will be maintained in Effluent Treatment Plant
- ✚ Spraying of anti-odor chemicals wherever required

GREENBELT DEVELOPMENT

- ✚ Green belt will be developed along plot boundary for width of 3 to 5 meters using varieties of plant species suitable to local environment.
- ✚ Approx. 33% of total area shall be developed under greenbelt
- ✚ Species type will be selected based on soil characteristics, and other related aspects to mitigate pollution effects due to noise, odor, dust etc.
- ✚ The plant species will be as per EIA, and MoEFCC/CPCB guidelines.



- ✚ The green belt is proposed to be developed within the project area at the following places viz, along the periphery of project boundary, roads, and around the facility site.

NOISE POLLUTION MANAGEMENT

- ✚ noise generating sources will be insulated
- ✚ All rotating items shall be lubricated
- ✚ Green belt shall be developed
- ✚ Ear-muffs/plugs shall be provided where ever required

OCCUPATIONAL HEALTH & SEFETY MANAGEMENT

- ✚ Adequate space will be provided for equipment repair or removal
- ✚ Lightning protection will be provided
- ✚ Hydrant System, Fire Detection and Alarm System and Different types of Fire Extinguishers shall be provided
- ✚ Safety equipment for handling of chemicals shall be provided
- ✚ Housekeeping of the plant will be maintained
- ✚ Only authorized person shall be allowed to enter the plant
- ✚ On-site and Off-site emergency plan should be prepared and readily available for an unlikely event of emergency
- ✚ Frequent safety mock drills shall be conducted
- ✚ Regular health checkup camp to the worker

