

EXECUTIVE SUMMARY

Introduction

M/S Basant Agro Tech (I) Ltd has proposed restart of manufacturing facility, revamping & expansion of existing SSP fertilizer manufacturing facility located at Gut No. 314, Kadholi-Paldhi road, at Village Kadholi in Erandol Tehsil of Maharashtra. The expansion shall be based on expansion of production capacity of SSP & GSSP production.

Project Description

M/s Basant Agro Tech (I) Ltd. has taken up a sick unit belonging to M/s. Patel Narayandas Bhagwandas Fertilizers Pvt. Ltd. Existing products and their quantities and list of products proposed under expansion are listed in **Table 1**.

Table - 1: List of Existing & Proposed Products & Capacities

Sr. No.	Product	Existing Capacity (TPA)	Proposed Capacity (TPA)
1	Single Super Phosphate (SSP)	31200	132000
2	Granulated Single Super Phosphate (GSSP)	31200	108000

Need for Expansion Project

Worldwide India is known as agricultural country and continuous to be. Even today 60% of the Indian population is directly or indirectly associated with agriculture as means of occupation.

Due to continuously increasing population, pressure and dependency on agriculture is constantly increasing. This leads to increased demand of chemical fertilizers which help in getting good quality & high yield of crops.

Phosphatic fertilizers are largely used chemical fertilizers in India as farm lands in many parts of western & central part of India are deficient in phosphates. Hence, the usage in India and continuously increasing demand, itself justifies the increase in manufacturing capacity at plant facility in village Kadholi.

Justification of Site

The total area of plot is 39,100 sq. m. Adequate land is available to accommodate and set – up plant and machinery required for production of proposed products. Existing plant facility will be restructured and vacant land will be brought in use for proposed expansion. Site is located in Central Maharashtra in Jalgaon district which has soil deficient in sulphur & phosphate. The proposed plant will cater to markets in/near Jalgaon & also to districts in Gujarat & Madhya Pradesh.

Terms of Reference (ToR)

As per provision in EIA notification, 2006, the ToR for the project was presented to SLEAC in its 55th meeting held on 22th May, 2012 & SLEAC approved the submitted model ToR and addressed to carry out Environmental Impact Assessment including Public Hearing activity thereafter. Compliance to TOR granted by SLEAC is represented in Table 1.1 of chapter 1 of EIA report.

Process Characteristics

Single super phosphate manufacturing process comprises of reaction of rock phosphate with concentrated sulphuric acid at 60-70°C. The operation involved in the manufacturing process are Grinding, Acidulation, Pollution control, Acid dilution, Packaging. Single super phosphate is sprayed with water in milling operation to form granulated SSP. The SSP manufacturing process attributes to following characteristics:

- High conversion rate, selectivity & yield.
- Low area requirement.
- Low fuel & utility requirements.
- Low air emissions & effluent generation.
- Minimal solid waste handling requirements.
- Hydrofluorosilicic acid generated in scrubber operation will be reused in process.
- Precipitated silica is useful as a filler material in finished product.

Special Project Features

The project pertains to expansion by increasing manufacturing capacity. The increase in capacity shall be achieved by exercise of de-bottlenecking. About 33% of plot land is kept reserved for green belt and about 110 trees will be planted as a part of expansion. The plant shall be run on electrical power and bio coal, 62 KVA capacity DG set is provided as stand by and shall be run on HSD in case of emergencies.

Pollution Control Measures

Major emissions from the SSP and GSSP process vent shall be of Hydrogen Fluoride & SPM respectively. A three stage wet scrubber will be installed to control emissions of HF into atmosphere to less than 15 mg/Nm³ (CPCB standard). The product from wet scrubber which is hydrofluorosilicic acid is completely recycled to the process as it increases yield of the final product.

Cyclone precipitator & Dust collectors are provided to SSP & GSSP process to control SPM emissions from plant. Project proponent proposes to carry out regular stack monitoring from MoEF approved agencies or laboratories.

Solid waste of silica and ash from bio coal burning will be used as filler in finished product. No any solid waste discharge shall be there from plant.

Baseline Environmental Conditions**Land Environment**

The proposed expansion shall be achieved in existing plot of 39100 Sq. M. Hence there will not be any change in plot land-use pattern. Nearest village is Kadholi at around 2.48 Km, SE of site.

The rock of the district is Deccan trap basaltic rock. Murrummy soil and occasionally hard rock is found at higher altitudes. Major portion of study area is found under agriculture. Most of the agriculture is rain-fed, while in some portion irrigated crops like banana, vegetables etc. are cultivated.

Air Environment

The baseline air quality was established by monitoring major air pollutants PM₁₀,

PM_{2.5}, SO₂, NO_x & Hydrogen Fluoride at four locations in study area for 24 hours during summer 2012. The air quality was observed to be within the NAAQS norms for residential and rural area. Table gives the range of values observed & the applicable environmental standard.

Location		PM₁₀ (µg/m³)	PM_{2.5} (µg/m³)	SO₂ (µg/m³)	NO_x (µg/m³)	HF (PPM)
Savde	Maximum	46.25	16.76	35.10	38.96	BDL
	Minimum	30.58	11.31	21.35	20.18	BDL
	Percentile (98%)	45.15	18.09	34.89	37.23	BDL
NMU Jalgaon	Maximum	46.25	19.24	35.30	38.96	BDL
	Minimum	32.56	11.31	21.35	20.18	BDL
	Percentile (98%)	76.98	27.17	34.70	48.47	BDL
Kadholi	Maximum	61.49	22.75	34.58	40.58	BDL
	Minimum	34.51	11.36	20.88	21.33	BDL
	Percentile (98%)	58.91	21.79	34.35	39.83	BDL
Paldhi	Maximum	54.28	23.34	30.08	42.34	BDL
	Minimum	29.99	11.26	18.63	23.16	BDL
	Percentile (98%)	53.82	23.14	30.99	41.98	BDL
Onsite	Maximum	65.29	34.99	38.45	39.48	BDL
	Minimum	37.42	15.14	25.48	25.45	BDL
	Percentile (98%)	65.17	31.37	37.80	42.13	---

AAQM Norms	100	60	80	80	--
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Water Environment

The project site is located on relatively leveled land. Ground water is source of fresh water in the plant for process consumption and utility purposes. Ground water quality was assessed at four locations in 10 km surrounding area of plant facility. From results, it is observed that ground water is hard in character but can be used as source of water. Girna river flows 3 km East of site but is dry during most of the year.

M/S Basant Agro Tech (I) Ltd has made provision for septic tank & soak pit where the industry sewage water is discharged.

Soil Environment

Mainly three types of soils have been observed in the study area; the black cotton soil at lower altitude, coarse grained murrummy soil along middle stretch, while a small portion particularly along river banks shows alluvial soil. The soil quality is good for tree plantation and green belt development.

Noise Environment

Noise monitoring was carried out at 5 locations same as NAAQ monitoring in summer of 2012. Noise levels observed in this region are within the CPCB standards for day time & night time. The reason being population density is relatively low.

Biological Environment

The plant facility is located at a distance of 2.4 km from village Kadholi. Core zone is occupied by agricultural land and reserve forest. On the North of the plant facility, there is a scrub. At South of the plant there is reserve forest at around 700 meters distance. Buffer zone also comprises of small and medium size hills, and seven reserve forests having presence of indigenous species of trees and shrubs. But major land-use in the study area remains for agriculture. There is no notified national park/ wild life sanctuary present in the study area of the project.

Socio Economic Environment

The nearest human habitation is 2.48 km SE of project (village Kadholi). Buffer zone has 47 villages and one city, villagers have agriculture as their main occupation and source of income but few villagers work as employees/ workers in the industries. Buffer zone is also not densely populated.

Major part of the buffer zone is covered by farm lands and Hilly area. Major source of water for the human activities and agriculture in buffer zone is ground water which is extracted through bore wells or open wells. All the villages in buffer area and Kadholi have good literacy rate, healthy sex ratio but less percentage of working population. More details are given in chapter 3 of the EIA report. Villages have all the basic infrastructure facilities such as water, electricity, education and sources of employment.

Environment Management Plan

A comprehensive Environment Management plan highlighting in-built environment management features (*as given in pollution control measures above*) and to promote all round growth of the area is prepared. The plan incorporates environment management measures during construction and operation phases. The capital cost for environmental control & management measures estimated to be Rs. 98.61 lacs which includes following:

Environmental Controlling Measures	Capital Investment in lacs	O&M Cost/Annum in lacs
Air Pollution Control	47.00	2.50
Environmental Monitoring	----	0.75
Effluent Management System	17.00	0.75
Hazardous waste & Solid Waste Management	10.00	1.20
Green Belt Development	09.11	1.30

Occupational Health & Safety	4.00	0.25
Social welfare & Upliftment	8.00	0.25
Hydrological & rain water studies	3.50	-----
Total	98.61	7.00

Project Cost Considerations

The total project cost for the proposed expansion has been estimated to be Rs. 10.89 crore. The capital cost for environmental control measures estimated to be Rs. 98.61 lacs.

Basant Agro Tech (I) Ltd is expected to maintain this capital & annual budgetary allocation and at the end of each year to revise the budget based on previous year's experiences and price/cost changes.