

EXECUTIVE SUMMARY

(Category B; under Item 5(a), as per EIA Notification 14th September'2006 & its subsequent amendments till date)

FOR

“PROPOSED FERTILIZER MANUFACTURING PLANT”

**Location:- Plot No. A93/2 of Kurkumbh MIDC Industrial Area
& Gut No. 280 of Village Kurkumbh , Taluka-Daund, District-Pune,
Maharashtra- 413802**

**Production Capacity:- Single Super Phosphate (SSP): 400 MTPD;
Granulated Single Super Phosphate (GSSP): 400 MTPD;
Sulphuric Acid (SA): 200 MTPD**

TOR Letter No.	:	Letter No. IA-J-11011/121/2023-IA-II(I) dated 29th March 2023
Type of Project	:	Greenfield Project
Baseline Data Generation	:	Item No. 5(a); Chemical Fertilizers, Category A
Cost of Project Expansion	:	Rs. 41.70 Crores

PROMOTER

M/s RK Agro Industries
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Deccan Gymkhana, Pune, Maharashtra-411004

ENVIRONMENTAL CONSULTANT



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(Rev. 02) valid upto 07.12.2023

July 2023

Project: Proposed Fertilizer Manufacturing Plant at Kurkumbh MIDC Industrial Area, Kurkumbh, Daund, Pune, Maharashtra-413802
Promoter: M/s RK Agro Industries

1.1. PROJECT DESCRIPTION

M/s RK Agro Industries has proposed to install *Single Super Phosphate and Granulated Single Super Phosphate along with Sulphuric Acid Manufacturing Plant at Plot No. A93/2 of Kurkumbh MIDC Industrial Area & Gut No. 280 of Village Kurkumbh, Taluka-Daund, District-Pune, Maharashtra.* The company will be manufacturing Single Super Phosphate (400 MTPD), Granulated Single Super Phosphate (400 MTPD) and Sulphuric Acid (200 MTPD). The proposed project will include site development, main process plants along with Offsites facilities & Utilities, raw material and product storages, electrical substation, covered warehouses, manufacturing plant, administrative buildings, etc. As per the EIA Notification 2006 and subsequent amendments, proposed project falls under Activity 5(a) i.e., Chemical Fertilizers and requires prior environmental clearance under Category 'A'. The project site being in a notified industrial area; thus, project is exempted from Public Hearing as per Clause 7 (i) (III) of EIA notification 2006 & OM J-11011/321/2016-IA. II(I) dated 27.04.2018. Terms of Reference were granted to the project by MoEF&CC vide Letter No. IA-J-11011/121/2023-IA-II(I) dated 29th March 2023. With a view to assessing environmental impacts arising due to proposed fertilizer plant to carry out EIA/EMP Study as per the TOR Granted for the said project for getting necessary Environmental Clearance from MoEF&CC. The baseline studies were conducted from October-December 2022 by M/s J P Test & Research Centre.

Brief Description about the project is detailed in the table below:

Table 1.1 : Total Production Capacity

Sr. No.	Name of Product	CAS No.	Proposed Capacity (MTPD)
1	SSP	8011-76-5	400
2	GSSP	66455-26-3	400
3	Sulphuric Acid	7704-34-9	200

Table 1.2 : Salient Features of the Project

S. No.	Particulars	Unit	Details
1.	Total Project Cost	Rs. (In Crores)	41.70
2.	Total Plot Area	m ²	31289.4
3.	Green Area (34.71%)	m ²	10860.4
4.	Workers/Staff	No.	220
5.	Total Water Requirement	KLD	1005
6.	Fresh Water Requirement	KLD	666 (Source: MIDC Supply)
7.	Wastewater Generation	KLD	Industrial Effluent- 381 Domestic Sewage-8
8.	Wastewater Treatment Scheme	KLD	Industrial Effluent: ETP (250 KLD) followed by MEE (200 KLD) treatment. and reuse for Cooling Tower Makeup in Sulphuric Acid Plant & gardening Domestic Sewage: Treatment in STP (10 KLD) & reuse in gardening It will be a ZLD Unit.
9.	Water Reused within plant	KLD	339 KLD
10.	Wastewater Discharge outside premises	KLD	0 KLD
11.	Power Requirement (Captive Power & Grid Supply)	MW	4 (Captive Power- 1.2

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S. No.	Particulars	Unit	Details
			& Grid Supply- 3.8)
12.	DG Sets (Backup)	kVA	2x750
13.	Fuel Requirement (Bio Briquette & HSD)	TPD	18 TPD of Bio Briquette for GSSP furnace & 300 Liter/hr (2x150 Lit/hr) of HSD for DG sets of capacity 2x750 kVA during operative hours

1.2. DESCRIPTION OF THE ENVIRONMENT

The baseline environmental data generation has been done for the period of October-December 2022. The study area within a 10-km radius around the proposed plant site has been considered as an impact zone for EIA study.

1.2.1. Site Characteristics

The proposed site is located at Plot No. A93/2 of Kurkumbh MIDC Industrial Area & Gut No. 280 of Village Kurkumbh, Taluka-Daund, District-Pune, Maharashtra. Land falls partially within MIDC area and partially in Village Kurkumbh. The total plot area of the project site is 31289.4 sqm out of which 5269 sqm falls under MIDC area and the rest 26020.4 sqm in village Kurkumbh. Approx. 10860.4 sqm of green area will be developed on the premises. The coordinates of center of site are **Latitude:** 18°24'1.37"N and **Longitude:** 74°32'2.75"E. The proposed project site is easily connected via roads and railway networks. The nearest highway from the project site is NH-65 located 0.5 km in the south direction & SH-10 located 0.9 km in east direction. The nearest railway station to the proposed project site is Daund Railway Station located 8 km in ENE direction. The nearest airport from the project is Baramati Hospital located 20 km away in the southeast direction.

There are not any environmentally/ecologically sensitive areas in the 10 km study area of the proposed project site. However, there are a few reserved forests located in the vicinity of the project site. The nearest reserved forests from the project in 9.88 km in NNE direction. There is one distributary located near the proposed project site located 1.3 km north direction. Bhima River is flowing away from project at 11.16 km in north direction and Ghod River is flowing 12.50 km in North direction.

1.2.2. Land Use

Class	Area (Sq km)	Percentage
Agricultural Land	206.86	64.37
Open Shrub Land	75.92	23.63
Settlement	28.47	8.06
Waterbody	4.29	1.34
Vegetation	5.80	1.80
Total	321.34	100

1.2.3. Soil Quality

Soil samples were collected at 8 representative sampling locations. The soil analysis results are given below.

pH	7.28-7.51
Total Organic Matter	0.65-2.44 %
Nitrogen	250-318 kg/ha
Phosphorus	11.6-17.3 kg/ha

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Potassium	185-256 g/ha
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1.2.4. Water Environment

Eight ground water samples have been considered in the study area. The analysis results are presented below:

GROUNDWATER: The pH value of ground water is an important index of acidity or alkalinity. pH value of the sample varies from 6.79 to 7.33 in all locations, which is well within the specified standard of 6.5 to 8.5. Electric Conductivity levels vary from 142 to 2316 $\mu\text{mho/cm}$. Total dissolved solids range from 80 to 1462 mg/l which is within permissible limits of 500-2000 mg/l. The total hardness is an important parameter of water quality. The hardness values in ground water of the study area ranges between 45 to 724 mg/l which is well within the permissible limit (200-600 mg/l) at all locations. The calcium values in ground water of the study area were found to be 6– 168 mg/l & are well within the specified permissible limit (200-600 mg/l). Magnesium values in ground water of the study area were (7.29-74.07 mg/l) & are well within the specified permissible limit (30-100 mg/l) of Indian drinking water standard. The chloride values in ground water of the study area range between 20 to 379 mg/l which is well within the permissible limit (250-1000 mg/l). No biological and metallic contamination has been found in any of the ground water samples of the study area. Overall, the parameters in ground water sample were well within the permissible limit of Indian Standard IS: 10500-2012 all location. No metallic and bacterial contamination was found in the ground water samples.

SURFACE WATER: Bacterial and metallic contamination was observed in the surface water sample. However, the surface water was found to meet the Best Designated Use – ‘D’ Criteria of CPCB (i.e Propagation of Wildlife Fisheries).

1.2.5. Air Environment

To assess the baseline status of the air quality in the study area systematic ambient air quality monitoring has been carried out for criteria pollutants (PM₁₀, PM_{2.5}, NO_x, SO₂, CO & HF) at nine representative ambient air quality monitoring stations.

AMBIENT AIR QUALITY

Ambient air quality monitoring has been carried out with a frequency of two days a week at seven locations covering one complete season i.e., October-December,2022. The summary of these results for all the locations is given below. These are compared with the standards prescribed by Central Pollution Control Board (CPCB) for rural and residential zone.

Location		PM10 ($\mu\text{g}/\text{m}^3$)	PM2.5 ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)	NH ₃ ($\mu\text{g}/\text{m}^3$)	CO (mg/m ³)	VOC ($\mu\text{g}/\text{m}^3$)	HC (mg/m ³)
Project Site (AAQ-1)	Min	52	22	5.9	9.0	<20	0.22	<0.5	<5
	Max	84	52	10.8	18.3	<20	0.39	<0.5	<5
	Mean	65	32	7.5	11.5	<20	0.27	<0.5	<5
	98 %tile	83	49	10.3	17.4	<20	0.35	<0.5	<5
Kurkumbh Industrial Area (AAQ-2)	Min	54	26	6.2	9.1	<20	0.25	<0.5	<5
	Max	88	55	11.4	18.8	<20	0.41	<0.5	<5
	Mean	68	36	7.8	12.0	<20	0.32	<0.5	<5
	98 %tile	85	54	11.1	18.6	<20	0.40	<0.5	<5
Pandharewadi (AAQ-3)	Min	45	20	5.6	8.5	<20	0.32	<0.5	<5
	Max	66	28	9.6	14.5	<20	0.49	<0.5	<5
	Mean	57	23	6.9	11.4	<20	0.42	<0.5	<5

Location		PM10 (µg/m ³)	PM2.5 (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	NH ₃ (µg/m ³)	CO (mg/m ³)	VOC (µg/m ³)	HC (mg/m ³)
	98 %tile	65	27	8.8	14.3	<20	0.48	<0.5	<5
Khatalwasti (AAQ-4)	Min	43	20	8.5	8.8	<20	0.29	<0.5	<5
	Max	76	34	11.6	12.8	<20	0.46	<0.5	<5
	Mean	62	26	9.6	10.3	<20	0.38	<0.5	<5
	98 %tile	74	33	11.1	12.2	<20	0.45	<0.5	<5
Dhangarwada (AAQ-5)	Min	48	19	5.3	8.5	<20	0.31	<0.5	<5
	Max	71	32	9.8	13.9	<20	0.54	<0.5	<5
	Mean	57	24	8.4	11.1	<20	0.40	<0.5	<5
	98 %tile	68	31	9.8	13.9	<20	0.50	<0.5	<5
Samatanagar (AAQ-6)	Min	49	21	5.7	8.3	<20	0.28	<0.5	<5
	Max	69	28	9.8	12.3	<20	0.51	<0.5	<5
	Mean	56	24	7.8	10.6	<20	0.36	<0.5	<5
	98 %tile	66	27	9.6	12.3	<20	0.46	<0.5	<5
Patas (AAQ-7)	Min	47	19	5.6	9.0	<20	0.33	<0.5	<5
	Max	72	32	8.9	14.9	<20	0.66	<0.5	<5
	Mean	59	25	7.5	12.5	<20	0.41	<0.5	<5
	98 %tile	71	31	8.9	14.7	<20	0.59	<0.5	<5
Jiregaon (AAQ-8)	Min	43	18	5.2	8.20	<20	0.21	<0.5	<5
	Max	70	36	8.1	13.1	<20	0.38	<0.5	<5
	Mean	52	23	6.5	10.0	<20	0.29	<0.5	<5
	98 %tile	68	35	8.0	12.4	<20	0.38	<0.5	<5
Maladgaon (AAQ-9)	Min	48	19	5.7	8.9	<20	0.32	<0.5	<5
	Max	79	40	9.6	13.9	<20	0.49	<0.5	<5
	Mean	64	27	8.3	11.2	<20	0.41	<0.5	<5
	98 %tile	78	38	9.5	13.8	<20	0.48	<0.5	<5

1.2.6. Noise Environment

Eight ground water samples have been considered in the study area. The analysis results are presented below:

Location Code	Surveyed Location	Land Use	Day Time Leq dB(A)	Nighttime Leq dB(A)	National Standard Day Time Leq dB(A)	National Standard Nighttime Leq dB(A)
N-1	Project Site	Industrial	52.2	39.2	75	70
N-2	Kurkumbh Industrial Area	Industrial	68.4	56.3	75	70
N-3	Cross-Section of NH-65 & NH-160	Commercial	61.4	50.8	65	55
N-4	Maladgaon	Residential	52.1	41.6	55	45
N-5	Samatanagar	Commercial	53.8	42.2	65	55
N-6	Jiregaon	Residential	52.7	40.4	55	45
N-7	Khatalwasti	Residential	54.3	41.7	55	45

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Location Code	Surveyed Location	Land Use	Day Time Leq dB(A)	Nighttime Leq dB(A)	National Standard Day Time Leq dB(A)	National Standard Nighttime Leq dB(A)
N-8	Patas	Commercial	61.2	50.8	65	55

1.2.7. Biological Environment

There is no national park, wildlife sanctuary, biosphere reserve, wetland, protected and reserved forest is present in the study area (10 km area around proposed site). The study area comprises of agrarian and forest ecosystem. Vegetation is observed in open areas, vegetation along the agriculture field and roadside. The tree vegetation is mainly restricted along the roadsides, near agriculture field boundary and other open areas. The main species recorded in study area zone are *Acacia nilotica*, *Dalbergia sisoo*, *Albizia spp.*, *Tectona grandis*, *Azadirachta indica*, *Syzygium cumini*, *Aegle marmelos*, *Ficus religiosa*, *Ficus bengalensis*, and *Cassia fistula* etc. Ground vegetation covered by dominant shrubs and herbs is *Lantana camara*, *Zyziphus mauritiana*, *Argeone mexicana*, *Solanum surattense*, *Xanthium strumarium*, *Ipomea cornia*, *Ipomea fistulosa*, *Dhatura metal*, *Calotropis procera*, *Sida cordifolia*, *Canabis sativa*, *Chenopodium album*, *Cyanodon dactylon* and *Parthenium sps.* There are about 76 species of tree, 21 species of shrubs and 33 species of hers and grasses reported from the study area. On the application of different criteria of IUCN for the assessment of conservation status of taxa, no taxa were found threatened in the study area. The reported taxa have also not been enlisted in the Red Data Book of Indian plants. A list of 10 species of mammals reportedly found in the study area was compiled from secondary sources as well-found during survey. Out of the reported species 4 species are schedule-II species, other species belong to schedule IV and V. None of the species belong to the schedule-I of Indian Wildlife Protection Act (1972 and amended 2022). As per the present study, a total of 2 species of amphibians and 6 species of reptiles have been recorded in the study area. No Schedule-I species reported from the study area. A total of 35 species were recorded during this survey n & no RET species were reported.

1.2.8. Socio-economic Environment.

S.No.	Description	Number	% to total
1	Total Population - Gender wise	94187	100
	Male	48702	51.71
	Female	45485	48.29
	Sex ratio (No. of females per 1000 males)		934
2	Total Population (0-6 years) - Gender wise	11705	12.43
	Male	6265	12.86
	Female	5440	11.96
	Sex ratio (No. of females per 1000 males)		868
3	Total Population (Sector Wise)	94187	100
	Rural	87324	92.71
	Urban	6863	7.29
4	Total No. of Households	19302	100
	Average House hold size	-	4.88
	Lowest Household size (Village: Kurkumbh)	-	4.20

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S.No.	Description	Number	% to total
	Highest Household size (Village: Mergalwadi)	-	5.97
5	Total SC & ST Population	17059	18.11
	Total Population (SC)	14888	15.81
	Total Population (ST)	2171	2.30
6	Total Literates – Gender wise	64828	68.83
	Male Literacy (with respect to the male population)	36165	74.26
	Female Literacy (with respect to the female population)	28663	63.02
	Literacy gap between male and female	-	11.24
7	Total Workers & Work Participation Rate	43421	46.10
	Male (Number and % with respect to the male population)	26728	54.88
	Female (Number and % with respect to the female population)	16693	36.70
	Gender gap in workforce (in percentage)	-	18.18
8	Total Main Workers & percentage to total worker	39086	90.02
	Male (Number and % with respect to the male working population)	25169	94.17
	Female (Number and % with respect to the female working population)	13917	83.37
a)	Main Worker as Cultivator (Number and Percentage)	16743	42.84
b)	Main Worker as Agricultural Labour (Number and Percentage)	7993	20.45
c)	Main Worker as Household Industry Worker (Number and Percentage)	715	1.83
d)	Main Worker as Other workers (Number and Percentage)	13635	34.88
9	Total Marginal Workers & percentage to total worker	4335	9.98
	Male (Number and % with respect to the male working population)	1559	5.83
	Female (Number and % with respect to the female working population)	2776	16.63
a)	Marginal Worker as Cultivator (Number and Percentage)	1342	30.96
b)	Marginal Worker as Agricultural Labour (Number and Percentage)	1420	32.76
c)	Marginal Worker as Household Industry Worker (Number and Percentage)	200	4.61
d)	Marginal Worker as Other workers (Number and Percentage)	1373	31.67

1.3. ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measures
LAND ENVIRONMENT	
Permanent or temporary change on land use/land cover	Not Applicable. The project site being already having its land use as “Industrial”, there will be no change in land use.

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Impact	Mitigation Measures
Change in Topography	Not Applicable
Waste Generation	<ul style="list-style-type: none"> • Municipal Waste (domestic and or commercial waste) will be disposed as per Solid Waste Management Rules, 2016. • Industrial hazardous wastes such as spent lube oil, Discarded containers will be sold to recyclers. • Waste will be packed in drums/HDPE bags and stored at designated area. All measures will be taken to avoid littering. • All precautions will be taken to avoid spillage of chemicals (Acid) from storages. • Spillage will be managed by detection of leaks in the first place from structures or vessels. Spillage during loading unloading will be channelized properly to drains. • Paved area will be provided near the process area to avoid soil contamination. <p>The loading unloading activity will be done within a safe zone identified for handling acid.</p>
WATER ENVIRONMENT	
Groundwater Abstraction	There will be no abstraction of groundwater as it will be sourced by MIDC Supply.
Wastewater Generation	<ul style="list-style-type: none"> • SSP/GSSP process doesn't generated industrial wastewater. Only, there is generation of scrubbing waste (H_2SiF_6) which will be reused for sprinkling over product SSP or recycled for Acid dilution. • Domestic sewage will be treated in STP & will be reused within the premises for gardening. <p>Effluent from Sulphuric Acid Plant will be treated in ETP followed by MEE that will be further reused within the unit for making up of cooling tower.</p>
Discharge of Wastewater outside project	Not Applicable as it is a "Zero Liquid Discharge Unit".
Spillage	<ul style="list-style-type: none"> • Good Housekeeping practices will be maintained. • In case of spills of chemicals, dry adsorbents/cotton will be used for cleaning instead of water. • Spillage during loading, unloading & storage will be channelized properly to drains. • The transportation of the raw materials will be done in Leak Proof MS Tankers/Drums while transporting through trucks & tempo. Finished product will be transported in HDPE bags with covering of trucks. <p>All probable leakage areas such as pipelines, joints, pumps, and structure of reactor/ storage vessel will be inspected and maintained proactively.</p>
Mixing of Effluent with Rainwater	<ul style="list-style-type: none"> • Separate storm water and effluent line will be provided in the plant. <p>Cleaning of storm water drain/open channel in the plant will be done periodically and additionally every year before monsoon season.</p>
AIR ENVIRONMENT	
<ul style="list-style-type: none"> • Spillage/leakage of raw materials finished product 	<ul style="list-style-type: none"> • Adequate control systems will be provided to achieve norms on total fluoride (gaseous and particulate) • The rock phosphate will be transported under cover truck only.

Impact	Mitigation Measures
<p>during loading or unloading.</p> <ul style="list-style-type: none"> • Process emission from the vents attached to the process reactor. • Leakage of chemical • Product dust emission from drying and cooling during granulation process • Flue gas emission (PM, NO_x, SO₂) will be from stack attached with GSSP Plant and DG sets in which HSD will be used as fuel. • Fugitive emission (SO₂, NO_x & CO and HC) from vehicular traffic • Fugitive emissions of PM from product transportation and handling. 	<ul style="list-style-type: none"> • Material handling and milling of rock phosphate will be carried out in closed buildings. • All precaution and provision will be made for arresting the dust particle during crushing of rock and handling of SSP that includes covered conveyer system with dust collection system at transfer points. • Stack height for each point source emission will be provided in accordance with CPCB norms. • A four-stage fluorine scrubber will be provided to efficiently scrub the vent gases from the SSP/GSSP plant. Scrubber shall be installed for proposed expansion of SSP/GSSP Plant. • Cyclones will be provided with bag filter to mitigate emissions from granulation and rock drying unit. • Industry will install dust collection and extraction system at all material transfer points. • Bag filter will be installed in SSP grinding section & same will be installed for proposed plant. • The SSP/GSSP process happens under shed and powder SSP/GSSP shall be carrying about 6 % moisture. As such all products remains confine to shed area only even if become air borne. • Hydrofluorosilicic Acid formed will be reused for acid dilution for SSP/GSSP plant. • Attenuation of pollution/protection of receptors will be done through green belts/green cover. • Regular online monitoring of stacks will be done. • Regular water sprinkling will be done on roads to mitigate dust generation. • Masks and PPEs will be provided to labours. • Periodic monitoring of work area will be carried out to check the fugitive emission. • Good housekeeping practices will be adopted.
NOISE ENVIRONMENT	
<ul style="list-style-type: none"> ➤ Noise Impact due to factory's machinery operations. ➤ Noise impact due to vehicular movement ➤ Auditory Impact 	<ul style="list-style-type: none"> ➤ Equipment meeting standard of noise shall be used viz. silent DG set, etc. ➤ All engineering control practice shall be undertaken during installation of machinery to maintain noise level. ➤ Acoustical Enclosures and Mufflers will be provided at all required locations. ➤ Vibration pads and well-designed foundation will be provided at all heavy machinery areas. ➤ Noise generating units like machinery area, will be well insulated with enclosed doors. ➤ Earmuffs will be used while in high noise areas. Separate cabins will be provided. ➤ Acoustic treatment rooms will be provided at appropriate location. ➤ Well-developed road will be constructed within plant, for smooth and hassle-free movement of personnel without interference with the movements of the trucks.

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Impact	Mitigation Measures
	<ul style="list-style-type: none"> ➤ Proper and timely maintenance of machineries and preventive maintenance followed by PUC certification of vehicles will be made mandatory. ➤ Well-designed plantation will be done along boundary wall & over the identified green belt area to serve as noise barrier. ➤ Noise monitoring at site shall be done.
BIOLOGICAL ENVIRONMENT	
Endangered species and Contamination of Habitats:	<ul style="list-style-type: none"> • The incremental emission of air pollutants will not be likely to induce any significant changes in the ecology because the national ambient air quality standards will remain within the limits. • The project is therefore planned with most efficient air pollution control systems for achieving CPCB level from all the stacks, so that the impact on nearby ecosystem can be minimized. • Further the modelling study proves that the incremental MGLC of PM, SO₂, NO_x, HF generated from the proposed plant will be very less and overall incremental GLC will remain within the NAAQS. And it will not harm the ecology of the study area. • Most of the fugitive dust emission generation points are also fitted with efficient air pollution control systems (Plant deducting systems). • Water sprinkling / dry fog type system will be used at material handling points to suppress the generation of fugitive dust. • All the wastewater generated from the plant shall be treated and reused in process and greenbelt development. • Proposed plant will be zero liquid discharge based so no wastewater will be discharged. • All solid waste and hazardous waste shall be disposed as per norm. Therefore, impact of emission on the surrounding vegetation will be insignificant. • Dene Greenbelt development shall be done all along the plant boundary. Further development of gardens and lawns near admin building will mitigate the residual impact on natural resources which also create suitable habitats for avifauna.
SOCIO-ECONOMIC ENVIRONMENT	
The proposed expansion project will affect positively the welfare of local people through direct & indirect employment which will improve the Socio-economic status of the area	-
Dust and other emissions are expected during construction phase and local peoples may be affected. Due to Noise generation during the construction and operation	<ul style="list-style-type: none"> • Increase in population density in core zone study area due to workforce involvement during construction phase is only short-term impact. • The Proposed project does not involve any long-term dismantling or decommissioning, or restoration works.

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Impact	Mitigation Measures
phase of the proposed project, local people may be adversely affected. The proposed plant may contribute pollutants in the form of dust, gaseous	<ul style="list-style-type: none"> All the workers will be equipped with PPE's and the D.G with facility of acoustic enclosures has been provided to reduce the noise levels.

1.4. RISK ASSESSMENT & MANAGEMENT

Based on the QRA study results, following major recommendations have been made for Plant to improve the overall safety.

Recommendations for Frequency Reduction

- Ensure that dyke's integrity is maintained, and dyke drain valves is operated through administrative controls only to prevent loss of containment through dyke drain valve.

Recommendations for Consequence mitigation to avoid disasteous effect on scoiental risk.

- Ensure adequate inventory of SCBA sets is available in respective use area for emergency response.
- Train emergency responders and management team on consequence and damage distance of various emergency scenarios covered in this QRA and ideal emergency response in case of onsite and off-site emergency.

1.5. PROJECT BENEFITS

- It is an excellent source of three plant nutrients namely phosphate, calcium and Sulphur.
- After partial decontrol of fertilizer, SSP is one of the cheapest fertilizers, which farmers can afford to use.
- SSP is the cheapest source of Sulphur for the soil.
- Only phosphatic fertilizer which can utilize Indian rock phosphate deposits.
- SSP can help to convert unavailable nutrient in available form in the soil.
- SSP can help to improve physical as well as chemical properties of Soil.
- In case of SSP, the capital investment for producing for each ton of phosphate is lower as compared to Complex Fertilizers Plants.
- In case of SSP the project implementation period for plant set-up and gestation period for production is much less as compared to Complex Fertilizer Plant. Therefore, government is encouraging the SSP production to full fill the growing demand of fertilizers in the country.
- Besides, as compared to other phosphoric produce, SSP requires little technical skill. It will increase the indigenous production capacity of SSP/GSSP's.
- It will maintain stability in Indigenous / domestic market for Single Super Phosphate/GSSPs.
- It will reduce the import possibility of fertilizers to some extent and yield national saving.

1.6. ENVIRONMENT MANAGEMENT PLAN

The Environmental Management Plan (EMP) aims at the preservation of ecological system by considering in – built pollution abatement facilities at the mine site. Some of the major criteria governing environmental measures will be adopted.

1.7. CONCLUSION

Project: Proposed Fertilizer Manufacturing Plant at Kurkumbh MIDC Industrial Area, Kurkumbh, Daund, Pune, Maharashtra-413802

Promoter: M/s RK Agro Industries

EIA study was performed as per the approved ToR. Various environmental attributes were studied relating with aspects of mining activities. The related impacts were identified and evaluated. Considering all the possible ways to mitigate the environmental concerns, an Environmental Management Plan was prepared and accordingly fund was allocated. The EMP has been dynamic, flexible and subject to periodic review.

The project will increase the revenue of the State Govt. as well as help in the social upliftment of the local people. The greenbelt development programme will help in increasing the green cover in the nearby areas. Thus, the existing project is not likely to affect the environment or adjacent ecosystem adversely. The Senior Management will be responsible for the project review of EMP and its implementation to ensure that the EMP remains effective and appropriate. Thus, the proper steps will be taken to accomplish all the goals mentioned in the EMP and the project will have a positive impact in the study area.
