

**Government of Maharashtra**

SEAC2011/CR-711/TC2  
Environment department  
Room No. 217, 2<sup>nd</sup> floor,  
Mantralaya Annexe,  
Mumbai- 400 032.  
Dated: 26<sup>th</sup> June, 2013

To,  
M/s. Zuari Fertilizers & Chemicals Ltd.  
Jaikisaan Bhawan, Zuarinagar,  
Goa- 403726

**Subject: Environmental clearance for Proposed 30 MTPH Granulated SSP Manufacturing plant at plot No.K 2/5 & K 2/6 in Addl. Mahad MIDC,village Kalija by M/s Advantex (Zuari Fertilizers and Chemicals Limited - Environmental clearance regarding.**

Sir,

This has reference to your communication on the above mentioned subject. The proposal was considered as per the EIA Notification - 2006, by the State Level Expert Appraisal Committee, Maharashtra in its 69<sup>th</sup> & 71<sup>st</sup> meetings and decided to recommend the project for prior environmental clearance to SEIAA. Information submitted by you has been considered by State Level Environment Impact Assessment Authority in its 61<sup>st</sup> Meeting.

2. It is noted that the proposal is for grant of Environmental Clearance for Proposed 30 MTPH Granulated SSP Manufacturing plant at plot No.K 2/5 & K 2/6 in Addl. Mahad MIDC,village Kalija, Mahad. SEAC considered the project under screening category 5(a) B1 of EIA Notification 2006.

**Brief Information of the project submitted by Project Proponent is as:**

<b>Name of the project</b>	30 MTPH Granulated Single Super Phosphate Manufacturing Plant. (Annual Capacity: 1.98Lacs MT)
<b>Project Proponent</b>	ZuariFertilisers and Chemicals Limited,5 <sup>th</sup> Floor,
<b>Consultant</b>	EQMS India Pvt. Ltd.
<b>Proposed project</b>	New project
<b>Category</b>	5(a), B1
<b>Area Details</b>	<ul style="list-style-type: none"><li>• Total Plot Area (Sq. m): 30,000</li><li>• Total Build up Area (Sq.m): 20000</li></ul>
<b>Name of the Notified Industrial area / MIDC area</b>	Add. MIDC Mahad
<b>Estimated capital cost of the Project</b>	Total project cost: 43 crores INR. Land and Site Development: 3.20 crores Basic and detailed Engineering: 0.60 crores Total plant and Machinery: 38.45 crores



		Preoperative & Site facilities: 0.75 crores				
<b>Location details of the project:</b>		<ul style="list-style-type: none"> <li>• Latitude: 18°16'47.6" N</li> <li>• Longitude: 73°30'58.5" E</li> <li>• Location: Add. MIDC Mahad</li> <li>• Elevation above mean sea level(m): 100</li> </ul>				
<b>Distance from protected areas/ critically polluted areas/eco-sensitive areas/interstate boundaries</b>		None in 10 Km study area				
<b>Raw materials (including process chemicals, catalysts, additives).</b>	List of raw materials to be used	Physical & chemical nature of raw material	'Quantity (tonnes/year) full production capacity	Source of materials	Means of transportation (source to storage site) with justification	
	Rock phosphate	Solid	115000	Imported/RSMM L	Trucks	
	Sulphuric acid(98%)	Liquid Acidic	76000	Domestic/Chiplun/ Roha	Tankers	
	Water	Liquid	60000	MIDC	Pipeline	
	Fuel FO/HSD	Liquid	2200	IOCL	Tankers	
	Coal	Solid	6000	Domestic	Trucks	
<b>Production details</b>	Name of products, by-products & intermediate products		Existing (T/Year)	Proposed activity (new/modernization/expansion)	Total (T/Year)	
	A. Main products		Nil	GSSP - 600 MTPD	198000	
	B. By-products		Nil	Fluo-silicic acid (Inline) -	NA (Recycle)	



			130MTPD	to process)	
	C. Intermediate products	Nil	Powdered SSP-600 MTPD	198000	
<b>Rain Water Harvesting (RWH)</b>	<ul style="list-style-type: none"> <li>Level of the Ground water table: (Pre &amp; post monsoon): &gt;5 m &amp;&gt; 4 m</li> <li>Size and no of RWH tank(s) and Quantity: 10x10x2 m, 2 nos., and 400 m<sup>3</sup></li> <li>Location of the RWH tank(s): Near buildings</li> <li>Size, nos. of recharge pits and Quantity: 3 nos.</li> <li>Budgetary allocation (Capital cost and O&amp;M cost): 10 Lakhscapital cost+ 1 Lakh O&amp; M cost</li> </ul>				
<b>Total Water Requirement</b>	<p>Total water requirement:</p> <ul style="list-style-type: none"> <li>Fresh water (CMD):210</li> <li>Source: Supply from MIDC</li> </ul> <p>Use of Water</p> <ol style="list-style-type: none"> <li>Process:180</li> <li>Cooling water: 2</li> <li>DM water: Nil</li> <li>Drinking: 12</li> <li>Green belt: 5</li> <li>Fire service: 1</li> <li>Contingency: 10</li> </ol>				
<b>Storm water drainage</b>	<p>Natural water drainage pattern:The industry shall be located in Mahad MIDC area where all the drainage facilities are available.</p> <p>Quantity of storm water:290mm/hr( Max.rain fall)</p> <p>Size of SWD:Three sizes have been consider</p> <ol style="list-style-type: none"> <li>1.300 mm wide x300mm deep at start of the drain and 300mm wide x500 mm deep at end of the drain</li> <li>2.500mm wide x500mm deep at start of the drain and 500mm wide x1000mm deep at end of the drain</li> <li>3. Minimum Size: 1500 m m wide x 1500 mm deep &amp; maximum size: 1500 mm wide x 2000 mm deep. It is designed to handle maximum rainfall rate.</li> </ol>				
<b>Sewage generation and treatment</b>	<ul style="list-style-type: none"> <li>Amount of sewage generation (CMD): 10</li> </ul> <p>Generated domestic sewage would be handled in septic tank followed by soak pit and the outflow would be used for gardening in own factory premises.</p>				
<b>ETP Technology</b>	The plant is ZERO discharge.				
<b>Disposal of the ETP sludge (If applicable)</b>	The plant is ZERO discharge so entire liquid and sludge is recycled into process.				
<b>Solid waste management</b>	Sr. no.	source	Quantity (TPM)	Form (sludge/dry/slurry etc.)	composition
	1	Raw water treatment	Nil	Nil	Nil



	plant			
2	ETP	Nil	Nil	Nil
3	Process Fly Ash if coal is used	200	Dry	Typical
4	Spent catalyst	Nil	Nil	Nil
5	Oily sludge	0.4	Sludge	--
6	Others like battery waste, e-waste etc (Pl specify)	--	--	--

**Atmospheric Emissions (Flue gas characteristics SPM, SO<sub>2</sub>, NO<sub>x</sub>, CO, etc.)**

Flue gas characteristics (SPM, SO<sub>2</sub>, NO<sub>x</sub>, CO): Flue Gas emission shall be only from Emergency DG set of 400 KVA capacity for short duration when regular power supply would be disrupted.

Sr. no.	Pollutant	Source of emission	Emission rate(kg/hr)	Concentration in flue gas(g/Nm <sup>3</sup> )
1	SPM	DG set stack	0.28	9.0
2	SO <sub>2</sub>			
3	NO <sub>x</sub>	DG set stack	2.99	3353.8
4	CO	DC set stack	1.22	157.3
5	Other:Flou ride		Nil	Nil

**Stack emission Details:**  
(All the stacks attached to Process units, Boilers, captive power plant, D.G. Sets, Incinerator both forexisting and proposed activity). Please indicate the specific section to which the stack is attached.e.g.: Process

Plant section & units	Stack number	Height from ground level (m)	Internal diameter(top) (m)	Emission rate	Temp. of exhaust gases
SSP Stack	1	50	1.3	Flow: 64212 NM3/hr PM: 150 mg/NM3 SO2: 200 mg/NM3 NOx: 1 mg/NM3 F: 25 mg/NM3	65 deg C
GSSP Stack	1	40	1.2	Flow: 57316 NM3/hr PM: 150	60 deg C



section, D.G.Set, Boiler, Power Plant, incinerator etc. Emissionrate (kg/hr.) for each pollutant (SPM, SO <sub>2</sub> , NO <sub>x</sub> etc. should be specified					mg/NM <sup>3</sup> SO <sub>2</sub> : 250 mg/NM <sup>3</sup> NO <sub>x</sub> : 1 mg/NM <sup>3</sup> F: 25 mg/NM <sup>3</sup>		
Emission Standard	Pollutants(SP M,SO <sub>2</sub> etc)	Emission standard limit(mg/Nm <sup>3</sup> )	Proposed limit(mg/Nm <sup>3</sup> )	MPCB consent(mg/Nm <sup>3</sup> )			
	Fluoride (HF)	25	25	--			
	SPM	150	150	--			
Ambient Air Quality Data	Pollutan t	Permissible standard (µg/m <sup>3</sup> ) (annual)	Proposed concentration(µg/m <sup>3</sup> )	remarks			
	SPM	150	Largely within limits	--			
	RPM	60	Largely within limits	--			
	SO <sub>2</sub>	80	Largely within limits	--			
	NO <sub>x</sub>	80	Largely within limits	--			
	CO	2000 (8 hr)	Largely within limits	--			
Details of fuel used: Source of fuel; mode of transportation of fuel to site	Sr. no.	Fuel	Daily consumption (TPD/KLD)		Net Calorific value (KCal/kg)	% ash	% Sulfur
			Existing	proposed			
	1	Gas	Nil	Nil	Not applicable	--	--
	2	Naphtha	Nil	Nil	Not applicable	--	--
	3	HSD	Nil	6.6	10200	0.01	< 0.05
	4	Fuel oil for furnace	Nil	6.6	9700	0.1	<3.5
	5	Coal	Nil	18	3500-6500	30	<1
	6	Lignite	Nil	Nil	Not applicable	--	--
	7	Other(Pl specify)	Nil	Nil	Not applicable	--	--

	<p>Coal. Only one of the fuel shall be used based on economics.</p> <ul style="list-style-type: none"> <li>• Mode of transportation of fuel to site: Road Tankers / Trucks</li> </ul>			
<b>Energy</b>	<p>Power Supply:  Proposed Power Requirement: 48MWh/day from MSEB  Proposed: 400KVA for emergency requirement HSD based  Details of non-conventional renewable energy proposed to be used: We would seriously consider such proposals later.</p>			
<b>Green belt development</b>	<ul style="list-style-type: none"> <li>• Green belt area: Area in sq.m – 33% of total area</li> <li>• We have planned to carryout greenbelt development in 10000 square meter area, out of which 7500 square meter shall be developed with the trees at the periphery of the plant with one tree per 25 square rate and total 302 tree shall be planted. Balance area of 2500 square meter inside the plant has been reserved for shrubs plantation.</li> <li>• Number and species of trees to be planted: Propose to plant 1 tree per 25Sq. m area. Species shall be selected as per local advise of local horticulture expert.</li> </ul>			
<b>Details of Pollution Control Systems:</b>	Sr. no.		Existing Pollution Control System	Proposed to be installed
	1.	Air	Nil	4 stage scrubber for silicon fluoride & then 50 m stack. Venturi scrubber for the PM emission control
	2.	Water	Nil	This is zero effluent plant. We would recycle the scrubber effluent back to the system
	3.	Noise	Nil	Shall be decided based on the vendor recommendation for equipment, however operators shall be provided with Ear plugs / Ear muffs for work in noisy area.
	4.	Solid Waste	Nil	Approximately 10 - 15 kg/day of Municipal Waste will be generated from the various facilities of the project. Incase of use of coal as fuel, fly ash of about 6 MT/Day shall be generated and it would be sold to Cement / Brick manufacturers. The organic waste will be composted within the project site. The inert waste will be stored onsite, and will be supplied to scrap dealers.
<b>Environmental management plan budgetary allocation</b>	<ul style="list-style-type: none"> <li>• Capital cost (With Break Up):</li> <li>• O&amp;M Cost (With Break Up):</li> </ul> <p>Cost of environmental protection measures(Rs. Lakhs )</p>			
	Sr. no.		Recurring cost per annum	Capital cost
	1	Air pollution control	5	200
2	Water pollution control	10	100	



3	Noise pollution control	0.5	5
4	Environment monitoring & management	3	30
5	Reclamation borrow/ mined area	Nil	Nil
6	Occupational health	2	50
7	Green belt	1	20
8	Solid waste management	1	5
9	Others(Pl specify)	Nil	Nil
Total		22.5	410

3. The proposal has been considered by SEIAA in its 61<sup>st</sup> meeting decided to accord environmental clearance to the said project under the provisions of Environment Impact Assessment Notification, 2006 subject to implementation of the following terms and conditions :

- (i) Avoid edible fruit bearing plants and trees near the chemical plant. Species of ecological importance should be planted as per MoEF guidelines
- (ii) No additional land shall be used /acquired for any activity of the project without obtaining proper permission.
- (iii) For controlling fugitive natural dust, regular sprinkling of water & wind shields at appropriate distances in vulnerable areas of the plant shall be ensured.
- (iv) Regular monitoring of the air quality, including SPM & SO<sub>2</sub> levels both in work zone and ambient air shall be carried out in and around the power plant and records shall be maintained. The location of monitoring stations and frequency of monitoring shall be decided in consultation with Maharashtra Pollution Control Board (MPCB) & submit report accordingly to MPCB.
- (v) Necessary arrangement shall be made to adequate safety and ventilation arrangement in furnace area.
- (vi) Proper Housekeeping programmes shall be implemented.
- (vii) In the event of the failure of any pollution control system adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.
- (viii) A stack of adequate height based on DG set capacity shall be provided for control and dispersion of pollutant from DG set.(if applicable)
- (ix) A detailed scheme for rainwater harvesting shall be prepared and implemented to recharge ground water.
- (x) Arrangement shall be made that effluent and storm water does not get mixed.
- (xi) Periodic monitoring of ground water shall be undertaken and results analyzed to ascertain any change in the quality of water. Results shall be regularly submitted to the Maharashtra Pollution Control Board.
- (xii) Leq of Noise level shall be maintained as per standards. For people working in the high noise area, requisite personal protective equipment like earplugs etc. shall be provided.



- (xiii) The overall noise levels in and around the plant are shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures, etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989.
- (xiv) Green belt shall be developed & maintained around the plant periphery. Green Belt Development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO/ Agriculture Dept.
- (xv) Adequate safety measures shall be provided to limit the risk zone within the plant boundary, in case of an accident. Leak detection devices shall also be installed at strategic places for early detection and warning.
- (xvi) Occupational health surveillance of the workers shall be done on a regular basis and record maintained as per Factories Act.
- (xvii) The company shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling.
- (xviii) The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Waste (Management and Handling) Rules, 2003 (amended). Authorization from the MPCB shall be obtained for collections/treatment/storage/disposal of hazardous wastes.
- (xix) The company shall undertake following Waste Minimization Measures :
- Metering of quantities of active ingredients to minimize waste.
  - Reuse of by- products from the process as raw materials or as raw material substitutes in other process.
  - Maximizing Recoveries.
  - Use of automated material transfer system to minimize spillage.
- (xx) Regular mock drills for the on-site emergency management plan shall be carried out. Implementation of changes / improvements required, if any, in the on-site management plan shall be ensured.
- (xxi) A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.
- (xxii) Transportation of ash will be through closed containers and all measures should be taken to prevent spilling of the ash.
- (xxiii) Separate silos will be provided for collecting and storing bottom ash and fly ash.
- (xxiv) Separate funds shall be allocated for implementation of environmental protection measures/EMP along with item-wise breaks-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should reported to the MPCB & this department
- (xxv) The project management shall advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the marathi language of the local concerned within seven days of issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the Maharashtra Pollution Control Board and may also be seen at Website at <http://ec.maharashtra.gov.in>
- (xxvi) Project management should submit half yearly compliance reports in respect of the stipulated prior environment clearance terms and conditions in hard & soft copies to the MPCB & this department, on 1<sup>st</sup> June & 1<sup>st</sup> December of each calendar year.
- (xxvii) A copy of the clearance letter shall be sent by proponent to the concerned Municipal Corporation and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.

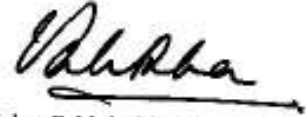




- (xxviii) The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
- (xxix) The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.
- (xxx) The environmental statement for each financial year ending 31<sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.
- (xxxi) The environmental clearance is being issued without prejudice to the court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision of the Hon'ble court will be binding on the project proponent. Hence this clearance does not give immunity to the project proponent in the case filed against him.
4. The environmental clearance is being issued without prejudice to the action initiated under EP Act or any court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision under EP Act or of the Hon'ble court will be binding on the project proponent. Hence this clearance does not give immunity to the project proponent in the case filed against him, if any or action initiated under EP Act.
  5. The Environment department reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the department or for that matter, for any other administrative reason.
  6. **Validity of Environment Clearance:** The environmental clearance accorded shall be valid for a period of 5 years to start of production operations.
  7. In case of any deviation or alteration in the project proposed from those submitted to this department for clearance, a fresh reference should be made to the department to assess the adequacy of the condition(s) imposed and to incorporate additional environmental protection measures required, if any.
  8. The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.



9. Any appeal against this environmental clearance shall lie with the National Green Tribunal, Van Vigyan Bhawan, Sec- 5, R.K. Puram, New Dehli - 110 022, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010



(Valsa R Nair Singh)  
Secretary, Environment  
department & MS, SEIAA

**Copy to:**

1. Shri. P.M.A Hakeem, IAS (Retd.), Chairman, SEIAA, 'Jugnu' Kottaram Road, Calicut- 673 006 Kerala.
2. Shri. Dr. S. Devotta, Chairman, SEAC, T2/302 Sky City, Vanagaram -Ambattur Road, Chennai - 600 095
3. Member Secretary, Maharashtra Pollution Control Board, with request to display a copy of the clearance.
4. The CCF, Regional Office, Ministry of Environment and Forest (Regional Office, Western Region, Kendriya Paryavaran Bhavan, Link Road No- 3, E-5, Ravi-Shankar Nagar, Bhopal- 462 016). (MP).
5. Regional Office, MPCB, Raigad.
6. Collector, Mahad.
7. IA- Division, Monitoring Cell, MoEF, Paryavaran Bhavan, CGO Complex, Lodhi Road, New Delhi-110003.
8. Director (TC-1), Dy. Secretary (TC-2), Scientist-1, Environment department.
9. Select file (TC-3).