

2012

Form 1 & TOR

30 TPH Fertilizer Blending unit for Customized NPK Production

at Zuarinagar, Sancoale, Marmugao, SouthGoa, Goa

June 2012

Project Proponent
Zuari Holdings Limited

Prepared by:

Zuari Project Group



(I) Basic Information

Serial No.	Item	Details	
1.	Name of The Project	30 TPH Fertilizer Blending Unit for Customized NPK Production	
2.	S. No. in the Schedule	5 (a)	
3.	Proposed capacity / area / length / tonnage to be handled / command area / lease area / numbers of wells to be drilled.	Hourly Production Capacity = 30 TPH Daily Production Capacity = 600 TPD Area = 14400 m ² (1.44 Hectares)	
4.	New / Expansion / Modernization	Expansion	
5.	Existing Capacity / Area etc.	Nil for Customized NPK	
6.	Category of Project i.e 'A' or 'B'	'A'	
7.	Does it attract the general condition? If yes, please specify.	No	
8.	Does it attract the specific condition? If yes, please specify.	No	
9.	Location	Zuarinagar	
	Plot / survey / Khasra No.	110 to 252	
	Village	Sancoale	
	Post	Zuarinagar-403726	
	Tehsil	Marmugao	
	District	South Goa	
10.	State	Goa	
	Nearest railway station / airport along with distance in kms.	Nearest Highway = NH-566 (0.5 km) Nearest Railway Station = Verna (5 kms), Cansaulim (5 kms) Nearest Port = Mamugoa Port Trust (8 kms)	
	Nearest Town, city, District headquarters along with the distance in kms.	Zuarinagar = 0.5 kms Verna = 5 kms Dabolim = 4 kms	
	Village Panchayats, Zilla Parishad, Municipal Corporation, Local body (complete postal address with telephone nos. to be given)	Zuarinagar, Village: Sancoale Post: Zuarinagar, Tehsil: Marmugao, District: South Goa, State: Goa PIN: 403726	
	13.	Name of the Applicant	V. K. Sinha
	14.	Registered Address	Zuari Holdings Limited Jaikisan Bhawan, Zuarinagar, Goa-403726
15.	Address for correspondence		
	Name	Ashok K Agarwal	
	Designation	DGM – Projects	
	Address	Zuari Holdings Limited 5th Floor, Tower A Global Business Park	

		M. G. Road Sector - 26 Gurgaon
	Pin Code	122002
	E-mail	Ashok.agarwal@zuari.adventz.in
	Telephone No.	0124-4827846
	Fax No.	0124-4212046
16.	Details of Alternative Sites examined, if any. Location of these sites should be shown on a toposheet.	Alt. 1: As per attached satellite image within existing fertilizer complex adjacent to selected site.
17.	Interlinked Project	No, the proposed blending unit is not interlinked to the revamp project of existing Ammonia, Urea, NPK and utilities under implementation.
18.	Whether separate application of interlinked projects has been submitted?	No, however EC already granted for revamp project.
19.	If yes, Date of submission	EC granted in Sept., 2009 for revamp project.
20.	If no, reason	Not Applicable
21.	Whether the proposal involves approval/clearance under if yes, details of the same and their status to be given.) a) The Forest (Conservation) Act, 1980? b) The Wildlife (Protection) Act, 1972? c) The C.R.Z Notification, 1991?	Not Applicable as our plants are already in operation for past 38 years
22.	Whether there is any Government Order / Policy relevant / relating to the site?	Not Applicable as our plants are already in operation for past 38 years
23.	Forest land involved (hectares)	Nil
24.	Whether there is any litigation pending against the project and/or land in which the project id proposed to be set up? a) Name of the court b) Case No. c) Orders / directions of the Court, if any, and its relevance with the proposed project.	None

(II) Activity

1. Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.)

SN	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.1	Permanent or temporary change in land use, land cover or topography including increase in intensity of land use (with respect to local land use plan)	No	The plot is already part of existing industry.
1.2	Clearance of existing land, vegetation and buildings?	Yes	The plot is under use for Naphtha storage which shall be redundant due to availability of NG / RLNG as feed stock within few months. Naphtha tank demolition shall be carried out to clear the site.
1.3	Creation of new land uses?	No	The plot is already an industrial land.
1.4	Preconstruction investigations e.g. bore holes, soil testing?	No	These studies have already been carried out in the past and reports are available.
1.5	Construction works?	Yes	The major construction works will involve civil works, erection & commissioning of plant equipment's, storages, packing plant, and utilities.
1.6	Demolition works?	Yes	Redundant naphtha storage tank demolition is involved.
1.7	Temporary sites used for construction works or housing of construction workers?	No	Maximized employment of local laborers is envisaged in plan to reduce the necessity of any off-site labor camp.
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	Yes	Above ground building structures will be storage Building, Blending Equipments, packing plant and office building. Excavation work will be limited to foundation of building and plants.
1.9	Underground works including mining or tunneling?	No	No mining or tunneling is envisaged in proposed project.
1.10	Reclamation works?	No	Not involved
1.11	Dredging?	No	Not involved
1.12	Offshore structures?	No	Not Applicable
1.13	Production and manufacturing processes?	Yes	Details of manufacturing process have been provided in Pre-Feasibility Report.
1.14	Facilities for storage of goods	Yes	More than half of the raw material would

SN	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
	or materials?		<p>be sourced from existing production facility. Storage facilities of goods or material will be as follows:</p> <ul style="list-style-type: none"> • Multiple Raw Materials – existing Storage • Raw Water Storage – Existing storage • Sulphuric Acid (98%) – Existing Storage • Finished Product (Bags) – Existing Storage
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	<p>The process for Blending Plant for Customized NPK Fertilizer Production is based on the concept of total recycling of the entire liquid effluent and achieving zero liquid discharge from the plant.</p> <p>The generated liquid effluent will be collected in a common sump and shall be reused in the process. Thus Zero Discharge will be achieved.</p> <p>The Blending Plant Project will generate some solid waste like empty bags (of raw materials), empty drums etc. There will not be any dust or waste product as all these are being recycled. The solid waste so generated will be disposed of as per rules.</p>
1.16	Facilities for long term housing of operational workers?	No	Residential facilities for housing of operational workers are not proposed in the project; however few management employees shall be accommodated in the existing township.
1.17	New road, rail or sea traffic during construction or operation?	Yes	During the implementation of project some new Equipment's /Vessels etc. will be transported. However during operation about 20 truck trips per day would increase to transport the increased raw material and additional 20 truck trips will be required to dispatch the additional production every day.
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	No	The project site is well connected with national Highways and state highways. Therefore no new infrastructure is envisaged.
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	Not Applicable
1.20	New or diverted transmission lines or pipelines?	No	Not Applicable

SN	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	No	Not Applicable
1.22	Stream crossings?	No	Not Applicable
1.23	Abstraction or transfers of water from ground or surface waters?	No	Water supply for the project will be met through existing water supply.
1.24	Changes in water bodies or the land surface affecting drainage or run-off?	No	Not Applicable
1.25	Transport of personnel or materials for construction, operation or decommissioning?	Yes	Daily transport of personal & material during construction and operation phases of the project will be by existing transport on existing roads only.
1.26	Long-term dismantling or decommissioning or restoration works?	No	Not envisaged
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	No	Not envisaged
1.28	Influx of people to an area in either temporarily or permanently?	Yes	<p>During construction phase, influx of the people will be about 100 - 150 based on the quantum of construction activities.</p> <p>During operation phase, the manpower requirement will be as follows:</p> <ul style="list-style-type: none"> • Officers : 5 nos. • Skilled Workers 12 nos. • Unskilled Workers 20 nos.
1.29	Introduction of alien species?	No	Not envisaged
1.30	Loss of native species or genetic diversity?	No	Not envisaged
1.31	Any other actions?	No	Not envisaged.

2. Use of Natural resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply):

SN	Information/checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
2.1	Land especially undeveloped or agricultural land (ha)	Yes	Total land for the proposed Blending Plant Facility is about 14400 m ² which is already industrial land.
2.2	Water (expected source & competing users) unit: KLD	Yes	<p>Construction Stage: Water requirement during the construction phase will be approximately 15 - 20 KLD. Domestic water requirement for construction workers would be approximately 2 KLD. The water requirement during this phase will be met from the existing sources.</p> <p>Operation Stage: During the operation phase of the project, water requirement will be about 200 KLD, which will be sourced from the existing source.</p>
2.3	Minerals (MT)	No	For the production of Customized NPK, various finished fertilizer shall be blended and granulated. Therefore no Minerals are proposed to be used.
2.4	Construction material – stone, aggregates, and / soil (expected source – MT)	Yes	Construction materials like stone, steel aggregates, sand & cement will be sourced domestically
2.5	Forests and timber (source – MT)	No	Not envisaged
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	Yes	<ol style="list-style-type: none"> 1. Diesel for EDG (10 KL) shall be sourced from local market. 2. NG (8000 SCMD) for generation of hot air be sourced from NG supply to main plants. 3. The electricity requirement of about 34,200 kWh/day will be sourced from either existing source or State Electricity Board.
2.7	Any other natural resources (use appropriate standard units)	No	Not envisaged

3. Use, storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health.

SN	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
3.1	Use of substances or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna, and water supplies)	Yes	Materials such as Phosphoric acid, Ammonia, H ₂ SO ₄ are already being used in the existing facility and NG / RLNG is going to be used soon. Therefore use of any new hazardous substance is not envisaged.
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	During the construction period, the activities may result in accumulation of water in the dugout areas of the site. This has the potential for creation of mosquitoes breeding and spreading of vector borne diseases. Careful attention will be given to the design and maintenance of the earthworks and drainage systems during construction and will be designed in such a way so as to avoid the creation of significant habitat areas for mosquito larvae. Insecticides may be used to prevent mosquito breeding.
3.3	Affect the welfare of people e.g. by changing living conditions?	Yes	The proposed project will generate direct and indirect employment opportunities during construction as well as operation phase for the local people based on their qualification and work experience.
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.	No	Not envisaged
3.5	Any other causes	No	Not envisaged

4. Production of solid wastes during construction or operation or decommissioning (MT/month)

SN	Information/Checklist confirmation	Yes No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
4.1	Spoil, overburden or mine wastes	No	All the excavated earth will be utilized within the project site. There would not be any mine waste due to the project.
4.2	Municipal waste (domestic and or commercial wastes)	Yes	1. No commercial waste 2. Domestic waste is being treated in existing domestic effluent plant. The recovered water is recycled as cooling tower make up and the dry residue/sludge is used as manure in our green belt plantation. The same practice will continue.
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	Yes	Only hazardous waste from the process will be in the form of used oil and waste oil, which will be sold off to the recyclers approved by MPCB/ CPCB.
4.4	Other industrial process wastes	No	Not anticipated
4.5	Surplus product	No	Not anticipated
4.6	Sewage sludge or other sludge from effluent treatment	Yes	Sludge from unit shall be used as filler in complex fertilizer in the existing facility.
4.7	Construction or demolition wastes	Yes	Insignificant
4.8	Redundant machinery or equipment	Yes	Scrapping of Naphtha storage tank shall generate metal scrap. This will be disposed off through scrap handling contractors.
4.9	Contaminated soils or other materials	No	
4.10	Agricultural wastes	No	
4.11	Other solid wastes	No	

5. Release of pollutants or any hazardous, toxic or noxious substances to air (Kg/hr)

SN	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources	Yes	Emission from combustion of NG / RLNGs will be mainly from hot air generator boiler. Emission from mobile sources will be mainly from trucks and/ or tankers, which will be used for transportation of raw materials and final products. However since Naphtha c/o to NG / RLNG is taking place in existing plant, the reduction in overall emissions is going to take place.
5.2	Emissions from production processes	Yes	As per MINAS, Emissions norms for the Phosphatic Fertilizer Plant: <ul style="list-style-type: none"> • Fluoride (HF) : 25 mg/Nm³ • SPM : 150 mg/Nm³ Blending Plant unit shall be equipped with gas scrubbing section to control the emissions from the plants within the prescribed limits.
5.3	Emissions from material handling including storage or transport	Yes	Minimal increase in pollution due to increased transportation of raw materials & products.
5.4	Emissions from construction activities including plant and equipment.	Yes	During the construction phase, emissions will be mainly due to operation of construction equipment's and machinery, DG sets.
5.5	Dust or odor from handling of materials including construction materials, sewage and waste	No	No dust from handling of material is expected due to the use of adequate pollution control measures. Water sprinkling will be carried out on site during construction phase to prevent dust pollution. No odor problem is expected from proposed project.
5.6	Emissions from incineration of waste	No	Not applicable
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	Burning of waste in open air during construction as well as operation phase will be discouraged.
5.8	Emissions from any other sources	No	Not Envisaged.

6. Generation of Noise and Vibration, and Emissions of Light and Heat:

SN	Information/ Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
6.1	From operation of equipment e.g. engines, ventilation plant, crushers	Yes	<p>The sources of noise of the Blending Plant are :</p> <ul style="list-style-type: none"> • Granulator, dryers and coolers, mixer, bucket elevators, screw conveyors, pumps etc. • The other sources of noise are the movement of vehicles used for transportation of raw materials and final product. <p>The proposed Blending plant will be a smaller project with advanced technology and improved equipment's both in terms of energy efficiency and less noisy.</p> <p>Material handling equipment's especially mixer, bucket elevators and pay loaders are noisy but the noise level is limited.</p> <p>PPEs will be provided to the workers.</p>
6.2	From industrial or similar processes	Yes	Same as 6.1
6.3	From construction or demolition	Yes	Noise will be generated during the construction phase of the project due to vehicular movement, use of construction equipment's and construction of plant.
6.4	From blasting or piling	No	No involvement of blasting or piling
6.5	From construction or operational traffic	No	Operations of vehicles during the construction as well as operation phase of the project will result in noise generation. Maximum noise generation at source will be of the order of 60 - 70 dB(A).
6.6	From lighting or cooling systems	No	
6.7	From any other sources	No	

7. Risks of contamination of land or water from releases of pollutants into the Ground or into sewers, surface waters, groundwater, coastal waters or the sea:

SN	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
7.1	From handling, storage, use or spillage of hazardous materials	Yes	Only hazardous material of concern is limited quantity of sulphuric acid (98%), NG and HSD, which will have adequate safety provision as practiced in the existing plant.
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	No	
7.3	By deposition of pollutants emitted to air into the land or into water	No	Air pollution due to the project would not be significant due to the adequate provision of air pollution control equipment's in the plant
7.4	From any other sources	No	
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	No	

8. Risk of accidents during construction or operation of the Project, which could affect human health or the environment

SN	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances	Yes	<p>No use of explosives is required for the project. The project does not involve any hazardous substances during construction period. During construction all the laborers will be provided with suitable personal protective equipment (PPE) as required under health and safety norms. Training and awareness about the safety norms will be provided to all supervisors and labors involved in construction activity. Adequate fire protection measures to be taken.</p> <p>During operation phase hazardous substance H₂SO₄, HSD and NG shall be used with adequate facilities to mitigate the consequences of spillage etc are already in place. The only new material handled will be NG/RLNG. However with our long experience of handling , Furnace Oil etc. we have no apprehensions</p>

			<p>handling NG/RLNG.</p> <p>A detailed risk assessment study will be carried out and adequate safety provisions based on the recommendation of risk assessment will be incorporated.</p>
8.2	From any other causes	No	
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, cloudburst etc)?	Yes	<p>Goa falls in earthquake zone 3, there is no history of major earthquakes or any other natural disaster in Goa.</p> <p>All civil structures shall be designed as per following IS codes.</p> <ul style="list-style-type: none"> • IS 1893-2002 • IS 4326: 1993 • IS 13920: 1993 • IS 456: 2000

9. Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality

SN	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
9.1	Lead to development of supporting utilities, ancillary development or development stimulated by the project which could have impact on the environment e.g.:	No	Our plant is operating at this site more than 38 years. Only minor development is expected due to Blending Plant Unit. Existing Infrastructure facilities are adequate
	• Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.)	No	
	• Housing development	No	
	• Extractive industries	No	
	• Supply industries	Yes	Customized NPK will be supplied to the farmers in the nearby marketing areas.
	• Other	No	
9.2	Lead to after-use of the site, which could have an impact on the environment	No	
9.3	Set a precedent for later developments	No	
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	No	The project site is inside the existing fertilizer facility. The proposed project will have only marginal cumulative effects.

(III) Environmental Sensitivity

S. No.	Areas	Name/ Identity	Aerial Distance (Within 15 km from proposed project location boundary)
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	Not Applicable as our plants are already in operation for past 38 years	
2	Areas which are important or sensitive for ecological reasons -Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	As above	
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	As above	
4	Inland, coastal, marine or underground waters	As above	
5	State, National boundaries	As above	
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	As above	
7	Defense installations	As above	
8	Densely populated or built-up area	As above	
9	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	As above	
10	Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)	As above	
11	Areas already subjected to pollution or environmental damage. (Those where existing legal environmental standards are exceeded)	As above	
12	Areas susceptible to natural hazard which could cause the project to present	As above	

S. No.	Areas	Name/ Identity	Aerial Distance (Within 15 km from proposed project location boundary)
	environmental problems (earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions)		

DECLARATION

I hereby given undertaking that the data and information given in the application and enclosures are true to the best of my knowledge and belief and I am aware that if any part of the data and information submitted is found to be false or misleading at any stage, the project will be rejected and clearance given, if any to the project will be revoked at our risk and cost.

Date: 25th June, 2012

Place: Gurgaon

Mr. V. K. Sinha
Vice President- Special Projects
Zuari Holdings Limited
Tower- A, 5th Floor, Global Business Park,
M.G. Road, Sector 26, Gurgaon-122002
(Project Proponent /Authorized
Signatory)

(IV). Proposed Terms of Reference for EIA Study

***Proposed Project is of Fertilizer Blending Unit for Production of Customized NPK by
M/s Zuari Holdings Limited (ZHL) at Zuarinagar Goa.***

Zuari Holdings Limited is in operation since 38 years. Environment Clearance has already been granted to carry out Naphtha to NG / RLNG c/o, revamp of existing Ammonia, Urea, NPK and utilities plants in September 2009. The impact of blending unit is minor for total emissions of complex due to simple mixing and steam granulation process.

Therefore we request for exemption of EIA study and Public Hearing for grant of Environment Clearance.