

FORM-1

For

Expansion of Existing fertilizer plant for Manufacturing of Nano-Urea

At

At Plot No. 72 hadbast 532, Khatoni No. 164, at Village Naya Nangal, District
Rupnagar, Punjab-140126.

SCHEDULE: 5(a), CATEGORY: A

PROJECT PROPONENT

M/s. National Fertilizers Limited, Nangal

DOC. No: MCPL/EMD/EIA&RA/2021-22 (FORM-I)

June, 2022

PREPARED BY



MANTEC CONSULTANTS PVT. LTD.

(QCI Accredited EIA Consultant at S.No.165 as per List of Accredited consultant Organizations/Rev.23rd, May 09th, 2022

(NABET Accredited EIA consultant, MoEF&CC and NABL approved Laboratory)

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S. No.	Items	Details																		
	Whether it is a violation case and application is being submitted under Notification No. S.O.804(E) dated 14.03.2017?	No																		
1.	Name of the Project	Expansion of Existing fertilizer plant for Manufacturing of Nano-Urea at Plot No. 72 hadbast 532, Khatoni No. 164, at Village Naya Nangal, District-Rupnagar, Punjab-140126 by M/s National Fertilizers Ltd.																		
2.	Serial no. in schedule Project Sector	5(a) Chemical Fertilizer Industrial Projects - 3																		
3.	Proposed capacity/area/length/tonnage to be handled/ command area/lease area/ number of wells to be drilled	Proposed Capacity: Nano Urea (liquid) : 75 KLD																		
4.	New/Expansion/Modernization	Expansion																		
5.	Existing capacity/Area etc.	<table border="1"> <thead> <tr> <th>Product/By-product</th> <th>Unit</th> <th>Existing/as per CTO</th> </tr> </thead> <tbody> <tr> <td>Urea</td> <td>MTD</td> <td>1450</td> </tr> <tr> <td>Ammonia</td> <td>MTD</td> <td>950</td> </tr> <tr> <td>Nitric Acid</td> <td>MTD</td> <td>554</td> </tr> <tr> <td>Ammonium Nitrate</td> <td>MTD</td> <td>360</td> </tr> <tr> <td>Sodium Nitrate /Nitrite (By-products)</td> <td>MTD</td> <td>15</td> </tr> </tbody> </table>	Product/By-product	Unit	Existing/as per CTO	Urea	MTD	1450	Ammonia	MTD	950	Nitric Acid	MTD	554	Ammonium Nitrate	MTD	360	Sodium Nitrate /Nitrite (By-products)	MTD	15
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6.	Category of project	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.	i) Location of unit ii) Village/town/city iii) District iv) State	(i) Plot No.: 72 hadbast 532, Khatoni No. 164, at Village Naya Nangal, District-Rupnagar, Punjab-140126 by M/s National Fertilizers Ltd. (ii) Naya Nangal (iii) Rupnagar																		

		(iv) Punjab
10.	Nearest Railway station/Air Port along with distance in kms.	Nangal Dam Railway Station - 1 Km/E Chandigarh International Airport - 86.58 Km/SE
11.	Nearest town, City, Distt. Head Quarter along with distance in kms	Nangal - 1Km/NE
12.	Village Panchayat, Zila Parishad, Municipal Corporation, Local body (Complete postal addresses with telephone nos. to be given)	Municipal Corporation Office, Nangal Address: 99Q2+M7P, Sector-5, Naya Nangal, Punjab 140126, India
13.	Name of Applicant	National Fertilizers Limited
14.	Regd. Address	Regd. Office: National Fertilizers Limited, Scope Complex, Core-III, 7, Institutional Area, Lodhi Road, New Delhi-110003
15.	Address for correspondence: Name/Designation Address Pin Code E mail Telephone Fax No.	Jogendra Chopra, General Manager (Technical), A-11, Sector 24, Noida - 201301, UP 201301 jchopra@nfl.co.in 0120 - 2412294, 2412445 0120 - 2412397
16.	Detail of alternative site, if any. Location of these sites should be shown on a topo-sheet.	Not applicable
17.	Interlinked Project	None
18.	Whether separate application for interlinked project has been submitted.	Not applicable
19.	If, Yes Date of Submission	N.A.
20.	If no, reason	NA
21.	Whether proposal involves approval/clearance under: if yes, details of same and status to given a) Forest (conservation) Act 1980? b) Wild life protection Act 1972? c) CRZ notification 1991?	No
22.	Whether there is any Govt. order/policy relevant/relating site?	No.

23.	Forest land involved (hectares)	No
24.	Whether there is any litigation pending against the project and / or land in which is project is proposed to be setup: a) Name of Court b) Case No. c) Orders/directions of Court, if any and its relevance with the proposed project.	No

(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.)

S No.	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 the land use, land cover or topography including increase in intensity of land use (with respect to local land use plan)	No	The proposed project is "Expansion of existing fertilizer Unit" that is located in non-notified industrial area. The land use of plot has already been allocated for industrial use. Hence, there will be no further change in land use
1.2	Clearance of existing land, vegetation and buildings?	No	Clearance work is not involved in the proposed project.
1.3	Creation of new land uses?	No	The land is for industrial purpose only, hence no further change in land use is required.
1.4	Pre-construction investigations e.g., bore houses, soil testing?	No	Not required
1.5	Construction works?	Yes	There will be construction of building for proposed Nano Urea plant along with bottle manufacturing and bottling unit besides auxiliary facilities under proposed expansion.
1.6	Demolition works?	No	No demolition work is envisaged.
1.7	Temporary sites used for construction works or housing of construction workers?	Yes	Temporary sites for housing of labour will be provided during construction phase from the existing facilities.



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1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations.	Yes	Only excavation work will be involved for foundations of Buildings or structures.
1.9	Underground works including mining or tunneling?	No	Not Applicable
1.10	Reclamation works?	No	Not Applicable
1.11	Dredging?	No	Not Applicable
1.12	Offshore structures?	No	Not Applicable
1.13	Production and manufacturing processes?	Yes	Industry is manufacturing Urea, Ammonia, Nitric acid, Ammonium Nitrate and Sodium Nitrate / Nitrite in existing plant. Now, it is proposed to manufacture Nano-Urea (Liquid) under proposed expansion along with the existing products. The total production capacity of Nano Urea Plant (liquid) will be 75KL/day. Manufacturing process is given in Pre-feasibility Report.
1.14	Facilities for storage of goods or materials?	Yes	Facilities for storage of raw material & finished goods are provided at site separately. Urea is stored in Urea Silo. Liquid Ammonia is stored in Horton Sphere and LP storage. Nano Urea bottles will be stored in Nano Urea Plant premises.
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	Liquid effluents : The total wastewater generation after expansion will increase from 1584 KLD to 1585 KLD. The wastewater generated from Urea plant containing Ammonia and urea is being treated in Urea Hydrolyser to recover CO ₂ and ammonia from wastewater. Recovered Ammonia and CO ₂ is being reused in the process. In Ammonia plant, the process condensate stripper has been provided to strip off the Ammonia, CO ₂ , methanol, etc. and recycled back to the process. Stripped condensate is being used as Boiler

S No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
			<p>feed water make-up after polishing.</p> <p>For other Effluent, ETP (Capacity- 1584 KLD) has already installed for treating wastewater from existing Ammonia and Urea plant.</p> <p>Nano Urea: The design philosophy behind the Effluent Treatment System of Nano Urea Project will be based on Zero Liquid Discharge outside the Plant premises. All the effluent generated within Nano Urea Project will be used within the fertilizer complex for Horticulture / landscaping. The sludge generated from the Effluent collection pits will be collected and stored within the plant premises in HDPE bags and then disposed-off to registered landfill site.</p> <p>In existing plant, the domestic wastewater is being discharged into Sewer.</p> <p>Hazardous Waste:</p> <p>There is generation of different kind of Industrial hazardous wastes from production process and other activities. Industrial hazardous wastes such as spent lube oil, spent catalyst are sold to recyclers. ETP sludge generated is disposed off at TSDF site, while other solid wastes are segregated in salable and non-salable waste. All waste is disposed as per Hazardous & Other Waste (Management and Transboundary Movement) Amendment Rules, 2021.</p> <p>Nano Urea : Other than spent lube / coolant oil, there will be no Hazardous waste generation from Nano Urea Plant.</p> <p>Plastic waste disposal</p> <p>All the plastic waste generated from Bottle and Cap manufacturing unit of Nano Urea Plant will be</p>





S No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
			<p>recycled after grinding and reused in manufacturing process. However, around 50 kg per month of plastic waste shall be generated from Bottle Manufacturing Unit and same cannot be used as raw material. There will be a provision that all such plastic waste materials will be sold / disposed-off to registered recycler.</p> <p>Discarded container / bags</p> <p>Raw materials of Nano Urea Plant will be received in bags and containers / drums. All the discarded drums / containers / bags shall be collected and stored in Scrapyard. From scrapyard, these shall be sold to authorized recycler / facility.</p>
1.16	Facilities for long term housing of operational workers?	No	<p>A well-equipped township has already been established for permanent employees.</p> <p>Existing township shall be sufficient to accommodate additional regular manpower of Nano Urea plant.</p>
1.17	New road, rail or sea traffic during construction or operation?	No	<p>Existing Road/Rail facility will be used during both construction and operation phase. Available infrastructure will be used for the proposed project.</p> <p>The unit is well connected to road and Railway line. SH-39 (0.482 km/NW), NH-503 (0.120 km/N) and Railway yard for transportation of finished product is also available within the plant area.</p>
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	No	<p>No additional transport infrastructure is required due to the proposed project. However, there will be increment in number of vehicles for transportation of finished product due to expansion project.</p> <p>Following routes will be used:</p> <p>1. NH-503: 120 Meter/N</p>

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			<p>2. SH-39: 482 Meter/NW</p> <p>Railway Station- Nangal Dam Railway Station : 1 Km/E</p> <p>Airport- Chandigarh International Airport : 86.58 Km/SE</p>
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
1.21	Impoundment, damming, culver ting, realignment or other changes to the hydrology of watercourses or aquifers?	No	Not applicable
1.22	Stream crossings?	No	None
1.23	Abstraction or transfers of water from ground or surface waters?	No	There will be no abstraction of water for the proposed project. Water will be sourced from existing supply from river Sutlej. Total water requirement of the proposed project will be 80 - 85 KLD for operation phase.
1.24	Changes in water bodies or the land surface affecting drainage or run-off?	No	None
1.25	Transport of personnel or materials for construction, operation or decommissioning?	Yes	<p>The raw material required for production of ammonia and Urea is Natural gas @1.1 MMSCMD which is being supplied through pipeline. The Power is supplied through PSPCL or from GTG. Raw materials required for Nano Urea Plant will be transported through Road.</p> <p>The finished product urea is sold in domestic market through Rail and trucks. The Rail yard has been established within the plant for transportation of finished product all over India. Mostly the finished product is being transported through Rail and rest through Road/Trucks.</p> <p>Nano Urea will be transported through Road</p>

S No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
			network in cartons to the desired locations. Construction material will be transported through Road.
1.26	Long-term dismantling or decommissioning or restoration works?	No	Not Applicable
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	No	Not Applicable
1.28	Influx of people to an area in either temporarily or permanently?	Yes	Construction workers will mostly be employed from local areas. The total manpower requirement will be as follows: During construction phase: 150 nos. of temporary employment will also be generated during construction phase through Contractor/Supplier. During operation phase: Total 300 Nos. (Regular Employee - 100 and Contract manpower - 200)
1.29	Introduction of alien species?	No	Not applicable.
1.30	Loss of native species or genetic diversity?	No	Not applicable.
1.31	Any other actions?	No	Not applicable.

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):

S. No.	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)	No	~500 acres of land has already been developed for fertilizer manufacturing unit. The project is located in Naya Nangal, Punjab. The proposed expansion will be done within the existing premises only. There will be no additional land required for proposed expansion.
2.2	Water (expected source & competing users) unit: KLD	Yes	The existing freshwater requirement is met by water supply from river Sutlej. Freshwater is being

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			consumed for process, cooling tower, make-up and domestic requirements of the plant. After Expansion, there will be requirement of additional 80 - 85 KLD of freshwater which will be suffice by existing supply. The total freshwater requirement will increase to 74,485 KLD.								
2.3	Minerals (MT)	No	Not applicable.								
2.4	Construction material–stone, aggregates, and / soil (expected source- MT)	Yes	Construction material like stone, steel, aggregates sand, reinforced and cement will be used for construction activities and shall be sourced locally.								
2.5	Forests and timber (source – MT)	No	None								
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	Yes	<p>There is continuous power supply either from PSPCL or from GTG.</p> <p>After Expansion, the total power requirement of plant will be 22 MW. The source of power supply will remain same after expansion.</p> <p>Power Back-up (DG sets)</p> <ul style="list-style-type: none"> • DG set capacity - 320KVA, 415V output , qty- 1 no. (For unit group of plants) • DG set capacity - 1450KVA, 415V output , qty- 2 nos. (For expansion group of plants) • DG set capacity- 810KVA, 415V output, qty- 1 no. (dedicated to GTG only) <p>Fuel Requirement</p> <table border="1"> <thead> <tr> <th>Particulars</th> <th>Fuel requirement</th> </tr> </thead> <tbody> <tr> <td>2 no. boiler furnaces of capacity 117 TPH each</td> <td>Pulverised coal @ 350 MTPD+ NG @ 0.07MMSCMD</td> </tr> <tr> <td>Primary Reformer of Ammonia Plant</td> <td>Natural Gas @0.83 MMSCMD</td> </tr> <tr> <td>Heat Recovery Steam Generator (HRSG) of capacity 100 TPH capacity with 45 TPH</td> <td>Natural Gas @0.2 MMSCMD</td> </tr> </tbody> </table>	Particulars	Fuel requirement	2 no. boiler furnaces of capacity 117 TPH each	Pulverised coal @ 350 MTPD+ NG @ 0.07MMSCMD	Primary Reformer of Ammonia Plant	Natural Gas @0.83 MMSCMD	Heat Recovery Steam Generator (HRSG) of capacity 100 TPH capacity with 45 TPH	Natural Gas @0.2 MMSCMD
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2.7	Any other natural resources (use appropriate standard units)	No	No other natural resource will be used.								

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

S.No.	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	<p>Hazardous chemicals being used in the complex are ammonia, Nitric Acid, Sulphuric acid, sodium hydroxide, and chlorine. Designated storage sites with appropriate safety measures have been provided in the unit. The Hazardous chemicals used for manufacturing are handled and stored as per the MSIHC rules and the hazardous waste rules 2021/ amendment, if any</p> <p>For proposed expansion, hazardous materials will be stored at designated facilities in the unit. Risk Assessment & Hazard Analysis of the same with consequence contouring shall be carried out. and will be provided in EIA Report</p>
3.2	Changes in occurrence of disease or affected disease vectors (e.g., insect or water borne diseases)	No	Proper drainage system and wastewater management measures are adopted in the plant. Therefore, no occurrence of diseases is anticipated.

S. No.	Information/Checklist confirmation	Yes /No	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
			Same will be followed after expansion.
3.3	Affect the welfare of people e.g., by changing living conditions?	Yes	The welfare of people will be affected and people's livelihood will be increased. Creation of direct and indirect employment to local people, consequent rise in income levels, associated commercial opportunities, social infrastructure development in such area etc. would improve living conditions of people.
3.4	Vulnerable groups of people who could be affected by the project e.g., hospital patients, children, the elderly etc.,	No	No people will be affected. The activity will be carried out within the premises.
3.5	Any other causes	No	Not envisaged.

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

S. No.	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	Not applicable.									
4.2	Municipal waste (domestic and or commercial wastes)	Yes	Domestic solid waste will be collected, segregated and disposed for reuse and to dumping yard.									
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	Yes	<p>Industrial hazardous wastes such as spent lube oil, spent catalyst are sold to recyclers. ETP sludge generated is disposed off at TSDF site, while other solid wastes are segregated in saleable and non-saleable waste. All waste is disposed as per Hazardous & Other Waste (Management and Transboundary Movement) Amendment Rules, 2021.</p> <p>Details are given below as:</p> <table border="1"> <thead> <tr> <th>Particulars</th> <th>Quantity (ton/annum)</th> <th>Disposal method</th> </tr> </thead> <tbody> <tr> <td>Used or Spent Oil</td> <td>50.5</td> <td>Approved Recyclers</td> </tr> <tr> <td>Spent Catalyst</td> <td>212.557</td> <td>Approved</td> </tr> </tbody> </table>	Particulars	Quantity (ton/annum)	Disposal method	Used or Spent Oil	50.5	Approved Recyclers	Spent Catalyst	212.557	Approved
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					Recyclers
			Carbon Residue	12297	Approved Recyclers
			Plastic Waste	90	Approved Recyclers
			HDPE Bags	10	Approved Recyclers
			Solid Waste	50	Approved Recyclers
			Discarded containers / Barrels (Plastic)	18	Approved Recyclers
4.4	Other industrial process wastes	Yes	Industrial hazardous waste such as spent catalyst, spent/used oil are being Collected and stored in MS drum, and Sold to authorized /registered recyclers. Spent carbon and spent resin are being collected and stored in HDPE bags, transported and disposed off to PPCB approved TSDF site / Co- processing in cement industries.		
4.5	Surplus product		NA		
4.6	Sewage sludge or other sludge from effluent treatment	Yes	STP Sludge will be generated and will be used as a manure for greenbelt development and in horticulture. ETP Sludge Shall be collected, dried, stored in HDPE bags and transported to TSDF site. .		
4.7	Construction or demolition wastes	No	None		
4.8	Redundant machinery or equipment	No	No redundant machinery or equipment within the plant		
4.9	Contaminated soils or other materials	No	Not envisaged		
4.10	Agricultural wastes	No	Not envisaged		
4.11	Other solid wastes	Yes	All the plastic waste generated from Bottle and Cap manufacturing unit will be recycled after grinding and reused in manufacturing process. All plastic waste materials will be sold / disposed-off to Registered recycler. Also, PWM Rules, 2022 shall be		

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

S. No.	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	Vehicular emission like CO and HC and dust generation due to use of construction machinery and vehicles during construction phase and during operation phase, there shall be no gaseous emission from process of manufacture of Nano Urea (liquid). However, appropriate control measures will be adopted in the plant to maintain emission standards.
5.2	Emissions from production processes	Yes	No gaseous emissions will be there from the production processes of Nano Urea plant.
5.3	Emissions from materials handling including storage or transport	Yes	Minimal increase in pollution of HC & CO ₂ due to increased transportation of raw materials & products will be controlled by using PUC certified vehicles. Water sprinkling will be done on internal and external approach roads to suppress the generated dust due to vehicular movement. During operation phase, fugitive emissions from material handling, loading/ unloading and transport of material are minimal due to closed loop system operated by trained workers. However, proper care would be taken to minimize the emissions.
5.4	Emissions from construction activities including plant and equipment	Yes	Fugitive emission may generate from material handling and construction activity. Water sprinkling will be done to control the fugitive emission.
5.5	Dust or odors from handling of materials including construction materials, sewage and waste	Yes	All the waste will be stored in designated places and shall be transported to TSDF in approved closed vehicles.
5.6	Emissions from incineration of waste	No	No incinerator is proposed
5.7	Emissions from burning of waste in open air (e.g., slash materials, construction debris)	No	Not applicable



Expansion of Existing fertilizer plant for Manufacturing of Nano-Urea, located at Plot No. 72 hadbast 532, Khatoni No. 154, at Village Naya Nangal, District Rupnagar, Punjab-140126 by M/s. National Fertilizer Limited, Nangal.

FORM-I

5.8	Emissions from any other sources	No	None
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6. Generation of Noise and Vibration, and Emissions of Light and Heat:

S. No.	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	Noise is expected to be generated during construction phase mainly. The proposed plant will have advanced technology and improved equipment's in terms of energy efficiency and less noisy. Suitable acoustic enclosures, ear muffs & ear plugs will be provided. Adequate noise control measures will be provided whenever required.
6.2	From industrial or similar processes	Yes	The DG sets are provided with proper acoustic enclosures to reduce the noise levels and all workers are equipped with proper PPE's.
6.3	From construction or demolition	Yes	Noise will be generated during construction activity and vehicular movement. Proper mitigation measure will be adopted to check the noise pollution during construction work.
6.4	From blasting or piling	No	No blasting or piling operations are involved.
6.5	From construction or operational traffic	Yes	Marginal increase due to increased transportation of raw material and finished product.
6.6	From lighting or cooling systems	Yes	There is generation of Noise from cooling Towers.
6.7	From any other sources	No	Not envisaged.

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:

S. No.	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	Hazardous materials/chemicals will be stored in an isolated area and all applicable precautions will be taken in storing and handling of hazardous chemicals to prevent accidents.

S. No.	Information/Checklist confirmation	Yes /No	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	No	All the wastewater will be treated in appropriate Treatment scheme and reused within the plant/Horticulture/ gardening / green belt development.
7.3	By deposition of pollutants emitted to air into the land or into water	No	The manufacturing process of nano-fertilizer plant is a closed loop reactor vessel setup with regulated control and steam being produced in existing plants is being used for operation of plant, therefore no gaseous emission shall be from Nano Urea Plant
7.4	From any other sources	No	Not envisaged
7.5	Is there a risk of long-term buildup of pollutants in the environment from these sources?	No	Not envisaged

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

S. No.	Information/Checklist confirmation	Yes /No	Details there of (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	No	<p>The existing complex envisages handling of natural gas, acid, Ammonia and other hazardous chemicals, which in case of leakage may pose fire and explosion.</p> <p>Suitable mitigation measures are being followed as under:</p> <ul style="list-style-type: none"> • Sensors and detectors are provided at strategic locations for early detection of any leak. • Fire hydrant system is provided as per defined guidelines to fight any emergency. • Fire extinguishers are made available near all machines and all persons are properly trained to extinguish the fire at source itself. • Preventive measures like SOP, Work Permit System, and Physical Monitoring are taken to eliminate the chance of accident on account of



			<p>explosion, spillages, fire or hazardous substances etc.</p> <ul style="list-style-type: none"> • Proper maintenance, operation and leak proof condition of machinery on regular basis are taken. • Emergency vehicles are made available at the site to provide transportation to hospital in case of any eventuality. <p>Same measures shall be taken for proposed Nano Urea plant.</p>
8.2	From any other causes	No	Not Envisaged
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, cloudburst etc)?	No	The proposed area does not come under any flood and high Seismic zone. There shall be remote probability to be affected by earthquake as study area belongs to Zone- III (as per Seismic Classification). Hence, the area is not sensitive to any possible earthquake.

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

S. No.	Information/Checklist confirmation	Yes /No	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
9.1	<p>Lead to development of supporting. Utilities, ancillary development or development stimulated by the project which could have impact on the environment e.g.:</p> <ul style="list-style-type: none"> ◆ Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.) ◆ Housing development ◆ Extractive industries ◆ Supply industries ◆ Other 	No	Proposed project is located within the existing fertilizer plant of NFL, Nangal which have well supporting infrastructure like roadways, railways, power supply, etc. Hence there will be no need of extra development.
9.2	Lead to after-use of the site, which could have an impact on the environment	No	None

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S. No.	Information/Checklist confirmation	Yes /No	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
9.3	Set a precedent for later developments	Yes	The proposed expansion project will set a precedent example for application of Sustainable agriculture practices by adoption of Nanotechnology that will give higher yield efficiency without damaging the environment.
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	No	Not Applicable

(III) Environmental Sensitivity:

S. No.	Areas	Name/ Identity	Aerial distance (within 15 km.) Proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	None	Not Applicable
2	Areas which are important or sensitive for ecological reasons – Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	Satluj River, Soan River, Ramgarh Parla PF Bour PF Thapal PF Palsed PF	0.155 Km/E 3.51km/W 9.07 Km/N 7.21 Km/NE 6.70 Km/NE 3.51 Km/NE
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	Satluj River, Soan River, Ramgarh Parla PF Bour PF Thapal PF	0.155 Km/E 3.51km/W 9.07 Km/N 7.21 Km/NE 6.70 Km/NE

		Palsed PF	3.51 Km/NE
4	Inland, coastal, marine or underground water	Satluj River, Soan River, Bhakra-Nangal Dam Govind Sagar Lake Nangal Reservoir	0.155 Km/E 3.51km/W 7.82 Km/NE 7.83 Km/NE 646 Meter/NE
5	State, state, National boundaries	Punjab-Himachal	806.69 Meter/W
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	NH-503 SH-39	0.120 km/N 0.482 km/NW
7	Defense installations	No	None
8	Densely populated or built-up area.	Nangal	1Km/NE
9	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	Govt. Shivalik College Mojowal, Govt. Hospital Nagal Shiv Mandir Municipal Community Centre	0.251 km/SE 1Km/NE 0.835 km/NW 1.49 Km/N
10	Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)	None	There are no Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals).
11	Areas already subjected to pollution or environmental damage. (Those where existing legal environmental standards are exceeded)	None	There are no areas already subjected to pollution or environmental damage. (Those where existing legal environmental standards are exceeded).
12	Areas susceptible to natural hazard which could cause the project to present		The site is located at transition from Moderate (Zone III) to High (Zone IV) seismic risk



Expansion of Existing fertilizer plant for Manufacturing of Nano-Urea, located at Plot No. 72 hadbast 532, Khatoni No. 164 at Village Naya Nangal, District Rupnagar, Punjab-140126 by M/s. National Fertilizer Limited, Nangal.

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environmental problems (earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions)		zones- Suitable measures will be adopted during design & construction stage.
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"I hereby given undertaking that the data and information given in the application and enclosure 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 give, if any to the project will be revoked at our risk and cost".

Date: 01/07/2022

Place: Noida, Uttar Pradesh


Authorized Signatory
