



# परियोजना विभाग

*कॉर्पोरेट कार्यालय*



**Setting-up of Di-Nitrogen Tetraoxide  
Production Plant (NPP)**

**on**

**Build Own Operate & Supply (BOOS) Model**

**for**

**Indian Space & Research Organisation  
(ISRO)**



## Overview – N<sub>2</sub>O<sub>4</sub> Plant

- ❖ NFL succeeded to get award for setting-up N<sub>2</sub>O<sub>4</sub> plant at Vijaipur for supply of product to ISRO at an investment of Rs. 349 Crore.
- ❖ Memorandum of Understanding (MOU) signed between NFL and ISRO on 4<sup>th</sup> May 2017.
- ❖ Highlights of the project:
  1. Technology/ equipment to be supplied by Rosoboronexport, Russia
  2. Capacity 3TPD
  3. IRR 14.29%
  4. Payback 7.74 yrs
  5. Return on Equity 49%
- ❖ To finalize Tri-partite agreement (TPA), many rounds of deliberations have taken place but certain issues remained un-resolved.
- ❖ The pending issues related to BGs, LD, Bank loans etc. are expected to be resolved soon.



**Setting -up of Agro-Chemical**  
**Manufacturing Facilities**

**at**

**Bathinda**



## Project Details

- ❖ NFL has planned to set up an Agro-chemical manufacturing facility at Bathinda.
- ❖ Consultant has been lined up for preparing TEFR.
- ❖ Consultant has submitted draft TEFR with following highlights :
  - Plant shall be at NFL's own land in Bathinda Unit
  - CAPEX – Rs 6 Crore (which includes Building, Plant & Machinery and other fixed assets)
  - Product Molecules – 28 Molecules (Insecticides / fungicides / herbicides )
  - Installed capacity – 2416 MT (granules / powder) & 1640 KL (liquid / emulsifying concentrate / suspension)
  - Total Operating cost – Rs 60 Crore / annum (which includes cost of raw materials, manpower, R&M, selling & Administrative)
  - Gross profit envisaged – Rs ----Crore / annum.



# **Seed Processing Unit**

**at**

**Indore, Bathinda & Panipat**



## Overview of Projects

- ❖ NFL presently produces seeds through seed growers & process through outsourcing. We are in to trading of processed seed also.
- ❖ NFL is setting up its own seed processing plants of 2 MT/Hr capacity each at Indore, Bhatinda & Panipat.
- ❖ **Indore Project:-**
  - M/s NPCC appointed as EPCM Consultant on 28.12.2017.
  - Soil investigation completed, Plan layout submitted to DIC indore for approval. Construction going to start soon.
- ❖ **Bhatinda Project:-**
  - M/s Mathur Ugam & Associates appointed as EPCM Consultant
  - Demarcation of project site done .
- ❖ **Panipat Project:-**
  - Soil investigation for proposed site is under process.
  - No consultant is appointed as design data of Bathinda unit will be used.



# Setting-up of Bentonite Sulphur Plant

**At**

**Panipat**



## Project Details

- ❖ Production started on 20<sup>th</sup> December 2017.
- ❖ As on 9<sup>th</sup> May, 2018, Panipat Unit has produced 1190 MT and dispatched 1070 MT Bentonite Sulphur.
- ❖ Although the Plant was commissioned on 20.12.2017, but owing to certain constraints in the machinery, the plant has not achieved 100% rated capacity.
- ❖ The LSTK contractor, M/s Nuberg Engg. Ltd. is expected to overcome the constraints by the end of May, 2018.
- ❖ Subsequently after the plant operation is stabilized at full rated production, the Guarantee Test Run (GTR) shall be conducted.



**Setting-up of Natural Gas Based  
Ammonia – Urea Complex  
at  
Ramagundam**



## Overview of Revival Project

- ❖ Joint Venture partners – NFL, EIL and FCIL
- ❖ Ammonia Capacity - 1 X 2200 MTPD, Licensor – HALDOR TOPSOE, DENMARK
- ❖ Urea Capacity - 1 X 3850 MTPD (1.27 MMTPA), Licensor – SAIPEM, ITALY
- ❖ Location - Ramagundum, Distt. Karim Nagar, Telengana
- ❖ Scheduled project completion - 36 Months from Zero Date – 25th Sep'2015 (Mech. Completion – Jul'18, Comm. – Sep'18)
- ❖ Project Cost - Rs. 5254 crore (based on Detailed Feasibility Report)
- ❖ Project Consultant – EIL – EPCM Consultant



## Present Status

- ❖ Equity participation – 26% each by NFL & EIL, 11% by FCIL and 11% by State Govt. of Telangana.
- ❖ Tying-up of balance 26% equity is under finalization with HTAS consortium and GAIL.
- ❖ Gas supply agreement signed with GAIL on 17.11.2017.
- ❖ As on 30<sup>th</sup> April 2018, actual physical progress is 81.9% against scheduled 99.6%.
- ❖ Manpower management consultancy (MMC) agreement signed on 24<sup>th</sup> Nov 2017 between NFL & RFCL.
- ❖ Recruitment of manpower (fresh as well as experienced) is under way. As per requirement, experienced employees of NFL are also being posted to RFCL on Secondment basis.
- ❖ Memorandum of Agreement (MOA) for Urea Marketing by NFL is under process for RFCL Board approval.
- ❖ Project is expected to be completed by March, 2019.



# **Setting-up of DAP / NPK Plant**

**at Bathinda**

**Through Joint Venture Route**

**With**

**HMEL & POSCO-DAEWOO**



## Overview – DAP / NPK Plant

- ❖ M/s HMEL approached NFL for setting-up 1250 MTPD DAP / NPK production facility at Bathinda through Joint Venture route.
- ❖ Three partners NFL, HMEL & POSCO-DAEWOO are involved.
- ❖ The proposal is based on the premise that Sulphur is available from HMEL refinery, Ammonia will be available from NFL after capacity enhancement of ammonia plant and Rock phosphate to be imported.
- ❖ M/s POSCO-Daewoo is in rock phosphate trading business.
- ❖ PDIL has been appointed as consultant for preparing TEFR .
- ❖ PDIL visited Bathinda on 17<sup>th</sup> April 2018 for feasibility study along with officials of NFL and HMEL and will submit the report by July, 2018.
- ❖ HTAS in principle has confirmed that ammonia plant capacity can be enhancement by 200 MTPD, but will require detail study to know the modifications required and the CAPEX involved.



**Setting-up of Solar Power Plant**

**on**

**Dahar Ash Ponds**

**at**

**Panipat**



## Project Details

- ❖ During the visit of C&MD to NFL Panipat in Nov 2017 , the issue of alternate use of Dahar ash pond was deliberated.
- ❖ One of the option discussed was to set up a solar power plant.
- ❖ It was thought prudent that before going for the project a consultant shall be engaged for preparation of TEFR.
- ❖ Budgetary offer from NTPC was obtained for preparing TEFR. The study was costing Rs. 80 Lac approximately.
- ❖ Keeping in view, the high cost involved in study by M/s NTPC, few other parties were contacted who have detailed know how on the subject.
- ❖ One such party, M/s InSolare Energy Pvt. Ltd. visited site at Panipat on 09.04.2018 for site survey and data collection. Party is visiting Noida office with the report and a presentation on 15.05.2017.



## **Development of Applicator**

**for**

## **Urea Ammonium Nitrate (UAN)** **Application**

**In Collaboration With**

**Indian Agriculture Research Institute**



## Background – UAN Applicator

- ❖ Liquid fertilizer solutions are popular in many countries.
- ❖ UAN solution - Urea + Ammonium Nitrate containing 28% ~ 32% N.
- ❖ UAN solutions are commonly
  - Injected into the soil beneath the surface,
  - Sprayed onto the soil surface,
  - Dribbled as a band onto the surface,
  - Added to irrigation water,
  - Sprayed onto plant leaves as a source of foliar nutrition.
- ❖ To enhance nutrient use efficiency, NFL in association with Indian Agricultural Research Institute (IARI) undertaken UAN applicator design project.



## Status & Benefits – UAN Applicator

- ❖ Design of UAN applicator for Basal, Foliar and Fertigation system developed.
- ❖ Field trials conducted on Paddy crop, Wheat crops and Vegetables till date are successful.
- ❖ All the trials on paddy crop and vegetables have been completed and final trial on wheat crop is under way.
- ❖ M/s IARI will submit the final report by June 2018.
- ❖ Results of trials conducted so far are quite encouraging. Approx. 30% saving on N<sub>2</sub> by weight is expected.
- ❖ M/s IARI will develop and supply one UAN applicator to NFL and thereafter, NFL will conduct the trials in the farm field of Nangal Unit.



**Cow Dung Processing and Its Conversion to  
Bio-Fortified Fertilizer with Enhanced  
Functionality:  
A Pilot Study**

**In Collaboration With**

**National Dairy Research Institute (NDRI),  
Southern Regional Station,  
Bengaluru**



## Overview – R&D Project

- ❖ ICAR-NDRI, Southern Regional Station, Bengaluru, submitted a research project proposal titled “Cow dung processing and its conversion to bio - fortified fertilizer with enhanced functionality” at an expenditure of Rs.129.74 lakhs.
- ❖ Draft agreement prepared and shared with NDRI for finalization.
- ❖ The project aims to bio-fortify the cow dung with micro-nutrients into high quality fertilizer which can help rejuvenate the soil health and at the same time get better value for the animal by-product.
- ❖ There is approx. 50 crore population of Livestock in the country.
- ❖ The organic matter from these livestock goes almost waste and need to be harnessed for both energy and quality manure.

# Overview – R&D Project

## **Study involves:**

1. Selection of digester and optimizing its operating conditions for max. production and digestion efficiency.
2. Evaluate organic and inorganic composition of the discharge slurry from digester.
3. Suitable fortification with botanicals/ herbs/ microbial/ value addition/ pH adjustment to enhance use of digestate as bio-fertilizer.
4. To transform the bio-fertilizer to suitable form through composting/ pelletizing/ dry-caking for longer storage and distribution.



## Setting-up of Mini Township

for

Employees Posted in Noida



## Overview of Project

- ❖ NFL is setting-up a township of 100 dwelling units for its CO employees in Noida.
- ❖ Estimated cost of the project is Rs. 60 ~ 75 Crore.
- ❖ After un-successful attempt of finding suitable builders meeting the eligibility criteria, NIT with revised eligibility criteria has been re-floated on 24<sup>th</sup> April 2018 with due date of 24<sup>th</sup> May 2018.
- ❖ In earlier attempts bidders were not eligible in terms of net worth, turn over, experience and absence of exclusive marketing & development right over the land.

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