



Social Impacts and Political Management at the Time of Disasters – A Case Study of NACL, Srikakulam

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About the company

Nagarjuna Group is truly an enterprise on the move. The foundation of the Group was established in 1994 by technocrat entrepreneur Shri. K.V.K Raju. He started with an initial investment of US \$ 1.2 million and sowed the seeds of what is now one of the fastest growing industrial houses in India. Addition to a growing presence in Agribusiness, the Group has made significant investments in core sectors like Refining, Power generation and Life Sciences. Today, the asset base of Nagarjuna Group is over US \$ 2.5 billion. The Agribusiness Division of Nagarjuna is committed to enhance the availability of quality food supply for the future by developing products and services that contribute to increase farm productivity with business units of Plant Nutrition and Crop Protection.

Nagarjuna provides a complete range of cost effective agricultural inputs. Nagarjuna's products and services enjoy nationwide reputation in India among the farming community due to their consistent high quality. NACL have adequate capacities such as state-of-the-art infrastructure, skilled experienced manpower and technical absorption capabilities. In fact, Custom Synthesis and manufacturing are one of its inherent capabilities. The production lines are designed for a quick change over. It also has a Custom Synthesis

and Toll Manufacturing Division, which caters to the requirements of reputed overseas customers.

NACL has one of the largest Dealer Network spread across India, with marketing and sales offices in addition to an extensive Warehousing & Logistics Infrastructure to handle operations in 20 Indian States. NACL has tie-ups with large Indian Agrochemical Majors and MNC's for the domestic and export markets. The Current Gross Annual Sales of the Organization is approximately US \$ 138 million.

NACL has been assessed and certified as meeting the requirements of ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007. Quality at Nagarjuna Agrichem is a result of conscientious and consistent efforts. Naturally, each of its products ranks with the best in the world. The most stringent quality control tests mark every stage of manufacturing - from raw material sourcing to processing and packaging. Along with in-house norms and standards in eco-friendly operations and safe handling, we have the capabilities to standardize products and packaging to meet the prevailing regulatory demands of any country of the World. This primary focus on quality is the key to the wide acceptance for Nagarjuna products in many countries across the Globe. The Quality management facilities are equipped with modern

analytical equipment such as GC-Mass, LC- Mass, GLC, HPLC, UV Spectrophotometer and etc.

The Nagarjuna Agrichem product profile includes those tested and certified by best GLP Certified Independent laboratories in Europe & U.S.A. All the products conform to National and International Specifications. NACL operate one of the most modern and comprehensive Technical Agrochemical manufacturing plants, situated in Srikakulam district of Andhra Pradesh, India.

NACL formulates its formulations in a modern Formulation Plant situated in the East Godavari District of Andhra Pradesh. This location is situated in the scenic rice growing area on India's East Coast. This Unit is one of the few to have in a single location, integrated multi-line facilities capable of producing a variety of pesticide formulations such as liquids, wettable powders and granules simultaneously. This unit has the formulation technology to produce dry flowables and water based emulsions. The category wise annual installed capacities are Technical: 9,500 MT and Formulations (Liquids / Wettables / Granules): 38,000 KL/MT.

NACL has an impressive range of branded formulations in the categories of Insecticides, Fungicides and Herbicides. In addition to catering to the entire Indian subcontinent, we export both Technical and Formulation grade pesticides to some countries in Europe, Asia including the Middle East, Japan, USA, Australia and Africa.

Products manufactured by NACL

Nagarjuna Agrichem Limited, established during the year 1994 with a motive of Serving Society through Industry since then has been striving hard

to serve the Indian farmers by providing cost effective and eco friendly total crop solutions to improve their farm productivity. NACL has got entire range of Agrochemicals to take care of all the pest problems of major crops grown in India i.e. Paddy, Cotton, Chill, Vegetables, Pulses, Fruits and Oil seed. It has got a strong network of about 10,000 dealers across the country serving even the remote areas of the country. NACL product range includes Insecticides, Fungicides, Herbicides and Plant Growth Promoters.

To fulfill the dream of its founder to provide the entire farm inputs through a single outlet, NAGARJUNA as a group is providing all the farm inputs like Fertilizers, Micro Nutrients, Liquid Fertilizers, Drip Irrigation Systems and Agro Chemicals. NACL with its product strength of 55 brands, strong network and with its diversifying activities and future vision will continue to serve the Indian farmers for their sustainable growth and also for the economy of the country. NACL can manufacture and supply Technical grade Agrochemicals, Formulation Bulk and/or Formulated Finished Goods in the desired concentration based on Customers Requirement.

Nagarjuna's growing global presence is reflected in its exports. Today Nagarjuna is among the few companies in India exporting pesticide technical and formulations to as many as 24 countries including Australia, Bangladesh, Belgium, Brazil, Colombia, Egypt, France, Germany, Indonesia, Italy, Ivory Coast, Japan, Malaysia, Netherlands, Nigeria, Saudi Arabia, Singapore, Sri Lanka, Switzerland, Taiwan, Tanzania, Thailand, USA and Yemen.

To meet the growing demand in the international markets and improve its export business, the Group is constantly introducing new generics and formulations. To strengthen this process, Nagarjuna has generated complete packages of Chemistry, Toxicology, Residues and Bioefficacy data for all its manufactured technical.

Manufacturing and R & D

The process Development Skills of NACL are comparable to the Best Indian Companies. It is our belief that the R & D / Process Development Department of NACL are the second largest of any Indian Agrochemical Company in terms of size and scope of operation. Research and Development plays a critical role in NACL. The R&D division carries out work on process development of technical and intermediates, custom synthesis, process improvement, application research and basic research. NACL is involved in contract manufacturing for leading multinational companies and technology transfer is done by the R&D department. The department is equipped to carry out all types of reactions. There is a fully fledged pilot plant to scale up process. The Research and development activity is supported by analytical laboratory which has sophisticated state of the art equipments including LC-MS and GC-MS.

The R&D laboratory of NACL is recognized by the Department of Science & Technology, Government of India. NACL's reputation for excellent manufacturing facilities and proven process development skills has attracted several multinational companies for Contract Manufacturing. NACL is doing Custom Synthesis and Contract Manufacturing for leading MNC to meet their global requirements.

Disaster held in Srikakulam NACL plant:-

A fire accident held in the NACL at 9.12 a.m. on Saturday June 30, 2012, a fiery explosion released toxic gases in BLOCK 5. It threatened to turn into a catastrophe but the damage was confined to injuries to 17 factory workers. On that bright, sunny day, there was no wind to carry the thick black smoke and gases in the direction of human habitations.

The seriously injured were rushed to a corporate hospital in Visakhapatnam. The blast occurred on the fifth floor of the building at about 9 a.m. when 300 workers on duty left their workplace during tea break. It would have been major catastrophe had all the workers been inside at the time when fire engulfed the third, fourth and fifth floors. Thick, black smoke, visible from miles away, continued to billow out of the plant till evening.

“The reactor could not absorb the pressure while preparing a chemical formulation Myco butanil for making a pesticide. There was a backfire leading to a massive explosion and fire,” reported by the management. The explosion was so deafening that villagers in the vicinity ran for their lives. Panic-stricken villagers nearby from Alinagaram, Chilakalapalem, Akkivalasa and Ravupalli complained of dizziness and nausea.

The deafening blast created panic with workers as well as people of Akkivalasa running away to Ranasthalam and other areas for safety. All the educational institutions in the area were given a holiday. Tension gripped the area as the management was tight-lipped about the cause of the accident. Agitated villagers squatted in front of the main gate and tried to lock the plant but were chased away by the police who cordoned off the area. The fire department personnel battled for

hours with two engines, but could not extinguish the fire. Later, more fire tenders were requisitioned from Visakhapatnam and other places, and by late evening, the fire could be brought under control.

Tension gripped the area as news of the fire spread through the TV channels and many in the neighboring villages moved to safer places. The authorities also evacuated some people in the morning and asked people within a radius of 10 km to be on the alert. Attempts to extinguish the fire were hampered by lack of proper equipment. Fire engines with hydraulic platform and foam arrived from Visakhapatnam only at 1.30 p.m.

Reaction of the village people:-

On Sunday, when the first shift workers came to the factory, people from the 15 villages in the vicinity gathered at the gates and stopped them from going in. They staged a demonstration and asked the district authorities to close down the factory immediately, as it posed a great danger to their lives. The agitating public also stopped traffic on NH 5 in the vicinity of the factory for hours.

Several villagers with the support of opposition parties, including the CPI (M) and the BJP, organized a protest against the blast on the busy Srikakulam-Visakhapatnam highway leading to a traffic jam between Etcherla and Ranasthalam. The 'Rasta roko' between Chilakapalem and Rajam continued till 3 p.m. Heavy police force was deployed to avert untoward incidents. The villagers, firm on staging the protest till evening, had a heated argument with the revenue and the police officials. The agitators contended that if the fire had spread to the other reactors in the factory the consequences would have been even more disastrous and, therefore, the factory should be shut

down immediately. They alleged that the management was not taking proper safety measures.

In response to the agitation, the district administration served a show-cause notice on the management on Sunday afternoon, instructing it to stop operations for a fortnight, and offer an explanation on July 15 on the accident and the related issues. The district authorities assured the public in the nearby villages that all steps would be taken to ensure their safety and that requisite steps would be taken against the management.

A massive public meeting was held on Sunday near Chilakapalem to step up pressure on the government for complete shutdown of operations in the pesticide plant where an accident took place, causing tension among the people with the release of toxic gases after the accident. Many leaders from different opposition parties attended to extend their support to the movement against the plant. They stated that the company had completely ignored people's representations to reduce the pollution that made their lives miserable. The TDP leaders alleged that Vizianagaram MP Botcha Jhansi did not respond to the accident though the Etcherla Assembly constituency was under jurisdiction.

Many villagers have been fighting against the company for the last 18 years as it is polluting air and groundwater. The soil has got contaminated due to the runoff of chemicals, raw materials and products into the lakes. They are also not able to take up agricultural activity near the factory as the soil is contaminated.

Reaction of the Andhra Pradesh pollution control board (PCB) after the disaster:-

The AP Pollution Control Board (PCB) on Monday ordered closure of the Nagarjuna Agrichem Limited (NACL) unit citing violation of pollution norms and lack of safety standards. A task force headed by senior environmental engineer K Ramesh handed over the closure notice of the plant issued by PCB member-secretary M Ravichandra to the factory officials at Chilakapalem village in Etcherla Mandal. PCB officials also issued the order copy to the EPDCL authorities to stop power supply to the plant till further orders. Sources said the PCB ordered the plant management that the unit would be closed till further orders. The district collector had issued temporary closure orders of the plant on Sunday based on a report from the joint chief inspector of factories. PCB officials imposed a cut in the production of the plant following frequent complaints about rising pollution levels.

The NACL management deposited Rs 25 lakhs with the PCB for high levels of pollution in the surrounding villages. Sources said the PCB authorities had warned NACL after the plant started releasing effluents and polluted water to the nearby areas. During their inspections, the PCB officials found the water used to douse the fire in the recent mishap was itself hazardous as there were chemical substances in it. Ramesh said that they found that one agricultural bore well near the plant was polluted with the effluents from the plant in the past. Ironically, pollution control equipment was gutted in the fire and it would take nearly one year to erect the equipment.

Notice ignored by NACL management

Inquiries revealed that the company was continuing production without possessing a Valid Consent for Operation from the Pollution Control Board (PCB).

The then District Collector K. Sreekanth had expressed concern over the risk of the release of effluents into the air causing respiratory and skin diseases to people living within a 25-km radius. Mr. Sreekanth sent letters to the PCB on March 10, 2010, and January 12, 2011, asking it to stop the factory's operations until the management installed effective pollution control equipment. But the PCB officials took his advice lightly. The A.P. Pollution Control Board and the Inspectorate of Factories were found wanting in discharging their mandate of conducting periodic and thorough inspections of polluting industries.

Reaction of the NACL management after the disaster:-

NACL management told that there are no casualties in the unfortunate accident which occurred in the plant at 9.12 a.m. of June 30th. It is now under control. The damage was confined to injuries to 17 factory workers. Nagarjuna Agrichem Limited sought permission from the government for 'safe shutdown' of various units in the plant. The company feared that complete closure of the plant at this juncture might lead to pollution and release of gases from effluent treatment plant (EFT) and other units.

The company officials could not enter the premises after the blast and gas leak from the plant on Saturday, with the widespread agitations by locals for the complete closure of all the operations. Management told to Bombay Stock Exchange that they were assessing the loss in last Saturday's fire. It said only 17 workers were injured and ruled out death of any worker. It also said that production had been temporarily stopped.

How the NACL unit Re-opened:-

NACL management went to collector for permission “NACL was providing employment to nearly 2,000 people” Nagarjuna Agrichem executives and staff on Wednesday urged Srikakulam Collector Saurabh Gaur to take stern action against the people who were conspiring against the company which was providing employment to around 2,000 people.

They met the Collector in his camp office and said that there was no major accident in the last 18 years except the mishap that occurred on July 30 in the plant in which a few workers escaped with minor injuries. NACL management invested around Rs.50 crores for the upgradation of technology and safety measures and minimizes the release of toxic gases from the plant. “Permanent closure of the plant would take away our source of income. Our future will be bleak,” said B.Ramanamurthy and D.V.V. Suryanarayana Murthy.

Permission obtained:-

NACL obtained permission to restart work from the AP Pollution Control Board and the inspector of factories after submitting a detailed plan on safety measures. However, it could not start operations due to opposition from locals. The boiler was re-lit, in the presence of NACL Vice-President K.G Vadivelu, DGM P. Kanaka Rao and other officials. There was heavy deployment of police in 12 villages in the vicinity to prevent any incidents. Production is planned to begin from the next day evening as the company is yet to complete overhaul of the machinery. It will take a couple of weeks for

the company to resume operations on a full scale, according to sources. NACL Vyatireka Porata Samiti deplored the heavy presence of police force despite the locals agitating peacefully. The agitation of 2,000 NACL workers to reopen the factory has forced the district administration to give its assent for restarting production despite stiff resistance from the locals.

It has become a major issue to the political parties to encash the situation for which all opposition parties are sympathetic towards the villagers. Government has been successful in bouncing back with some developed measurements to be taken by NACL. Villagers are in such a condition that they have been regarded and considered neither by NACL nor by political parties on the other side the employees of NACL

There are many issues to go in depth while pragmatic approach is found by any group. A few of the challenges for the researchers could be

1. How to change the revolutionary attitude developed in the minds of the villagers by the political parties?
2. What would be the expectations of the political parties from NACL and outcomes of this commotion? And
3. What kind of decision would be acceptable to either the villagers or the employees and would the involvement of the Government show the path to both parties.
4. What kind of comparisons with steel plant blast at Visakhapatnam would result into the positive solution to the company?