

a pipeline distance to disaster



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This report is dedicated to the PEOPLE OF KATHIKUDAM who live at the other end of the pipeline leading to a total disaster, for their enduring resistance and persistent protests against a devastating industrial fiasco.

Contents

- 1. Introduction 5
- 2. NGIL Versus Action Council 8
- 3. What did Jananeethi Team feel, notice and experience 14
- 4. Scientific Analysis of Samples: Results & Interpretations 22
- 5. Observation 32
- 6. Violations of Law, Civil Rights and Ethical Standards 36
- 7 Recomendations 40
- 8. Conclusion 41

Figures - 43

Annexures

Anex - 12

```
Anex - 1
               : Request letter by NGIL to KAU - 51
               : Results of analysis of samples given by NGIL - 53
Anex - 1 (a)
Anex - 1 (b)
               : Analysis report of compost sample given by KAU - 54
               : Order of Munsiff's Court, Irinjalakuda - 55
Anex- 2
               : Show cause notice by Secretary, Kadukutty Panchayat to NGIL - 61
Anex - 2 (a)
Anex - 2 (b)
               : Stop memo notice by Kadukutty Panchayat to NGIL- 63
               : High Court Order in WP (C) No. 20891of 2009 - 64
Anex - 2 (c)
Anex - 2 (d)
               : Notice by Kadukutty Panchayat to NGIL - 67
Anex - 3
               : Reply letter from ministry of Health to Panampilly Jayadevan - 71
Anex- 3 (a)
               : Notice by KSPCB to NGIL - 72
               : Replay letter by 'Niyamasabha' Secretary to Secretary, CPMVS - 74
Anex -4
Anex- 5
               : Replay letter by KSIDC to Adv. Hema of Jananeethi - 77
               : Replay letter by KSIDC to Adv. Hema of Jananeethi - 78
Anex - 5 (a)
Anex - 6
               : Report of Board Analyst, KSPCB - 79
               : Preliminary Report by Expert Commitee - 81
Anex- 7
               : Press Release by NGIL - 86
Anex - 8
               : Letter from MoEF - 87
Anex - 9
Anex -10
               : History of NGIL's Pollution - 88
               : Important Judgements by Supreme Court - 90
Anex - 11
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: Orgnisational profile of Jananeethi - 92

Kathikudam to Kalakudam* a pipeline distance to disaster

"We do not inherit the planet from our ancestors but borrow it from our children" American Proverb

I. Introduction

Jananeethi was approached in 1996 by a group of people from Kathikudam complaining against industrial pollution of Kerala Chemicals and Proteins Limited (KCPL was later christened as Nitta Gelatin India Limited - NGIL) and exploring the chances of a Public Interest Litigation. The matter apparently was serious and calling for urgent legal action. Papers were prepared for a Writ Petition in the High Court of Kerala. However, the *de facto* petitioners did not turn up thereafter; hence petition was not moved. Later, it was informed that the petitioners were influenced by the polluter company and were given berth in the company.

The problems, however, persisted. Physical survival was not possible due to the vicious circumstances. People everywhere were grumbling. Abject social vulnerability and overwhelming fear of the consequences prevented them from making formal complaints against the company. Finally, an Action Council was formed on 23rd March 2008. The devastating pollution and its vicissitudes got to light thereon. No one can ignore the several excruciating issues of fundamental rights, the people raise before any investigating body:

^{*} Kalakudam - most dangerous form of poison in Puranas

- There are colossal attacks on people's right to live, to a clean & safe environment as life with dignity will not be possible without a healthy and human environment.
- The company takes from Chalakkudy river 62, 90,200 liters (as per company, but people allege it is twenty million liters) of water per day, with out any sanction/permission from any one, what-so-ever.
- An equal amount of untreated effluents per day is being discharged to Chalakkudy River endangering survival of thousands of humans, animals and vegetations.
- The local (Kadukutty) panchayat was never approached by NGIL for permission to draw water from Chalakkudy River or to discharge highly polluted effluents to the river.
- Well water in the surrounding areas of NGIL has become unfit for domestic use. Water in streams and open wells cannot be used even for irrigation purposes.
- There is horrendous air pollution forcing people leave their homes and livelihood. There is social exclusion as relatives and friends avoid visiting families here because of air and water pollution; marriages are difficult as parents do not wish to send their daughters to Kathikudam for obvious reasons.
- The sludge transported to different parts of Thrissur and neighbouring districts for land filling has caused enormous harm to those places, polluting the soil and inviting health problems to people and live stock.
- The sludge is sold to farmers and small peasants fraudulently making them believe that it is manure of high quality for agriculture.
- The company claims that their compost has been certified as non-hazardous by Ministry of Environment and Forests, and the Kerala Agricultural University.
- The people living in the premises of the company suffer various kinds of illness like incidence of respiratory problems, asthma, skin diseases, head ache and stomach pain.
- The wells and paddy fields in the surrounding areas of NGIL have become defunct, as in the earlier years of the company, solid waste produced by the company was deposited within the factory compound by digging 15 feet deep trenches, consequently contaminating soil, underground water sources and other water bodies.

The Kerala Chemicals and Proteins Limited, established in April 1975, was renamed as Nitta Gelatin India Limited (NGIL) in June 2008. Why? The management of the company would

answer that it was to catch better attention in the international market. Does it sound sensible? Why should we feel ashamed of our identity? There is nothing that can not be compromised for our rulers. And that, of course, is shameful.

Every instance of environmental catastrophe reminds the callousness, if not corruption, of the ruling government, both at the centre and the state. It also exposes the rampant corruption and criminal conspiracy of the political leadership or bureaucrats in respective departments/ministries. Further it tells upon the insensitivity or blissful ignorance of the civil society. The world's worst ever industrial disaster in Bhopal or the devastating environmental havoc caused by Coca Cola at Plachimada etc. would not have happened, if the democratically elected government had abided by their Constitutional mandate or were accountable to the electorate. If another industrial casuality happens at Kathikudam, we wish it does not, we all should be held responsible for what we have left undone.

In this era of open global market economy, hazardous industries are playing a decisive role in the economic development and in the advancement of the economy, but simultaneously they are causing the problem of risk to human life and environment. The question before us is should we wait for a catastrophe to happen? Does the society at large under a democratic political regime has any role to check and control the unethical practices by the profitoriented corporates? This study undertaken by Jananeethi Institute is justified and has great significance under these circumstances. This is a humble service by a group of volunteers who have no other interest, but for the deep felt concerns for the deteriorating environment by the advent of giant multi-national business houses that are the re-incarnation of those who invaded in the past our legacies and resources.

In matters of public interest and environmental safety Jananeethi Institute has strong views and obviously, clear positions. The assertions and statements in this report, therefore, must be understood in that context. To be honest, Jananeethi does not intend to hurt or defame any body, but would dare to call a spade a spade if it matters for the dissonance of those who pollute earth and its resources for unlawful gains.

A human being is part of the whole, called by us "Universe," a part limited in time and space. He experiences himself, his thoughts and feelings as something separated from the rest - a kind of optical delusion of his consciousness. This delusion is a kind of prison for us, restricting us to our personal desires and to affection for a few persons nearest to us. Our task must be to free ourselves from this prison by widening our circle of compassion to embrace all living creatures and the whole [of] nature in its beauty.

Albert Einstein, 1950

II. NGIL versus Action Council

A. What does the NGIL say?

- The company was set up in 1975 in the joint sector by M/s Kerala State Industrial Development Corporation (KSIDC) and Nitta Gelatin Inc., Japan.
- It started commercial production in 1979. It produces / manufactures Gelatin, Collagen Peptide, Ossein and Di Calcium Phosphate.
- We provide employment to more than 350 people.
- We are exporting our products to Japan and earn foreign exchange to the tune of Rs 100 crores every year.



Diplay board at the entrance of NGIL



The Executive Director and General Manager of NGIL interacting with the Team

- The company is committed to improving the quality of the society.
- Periodically we review our business activities in order to ensure our environmental policies are working properly.
- We continually improve the way we use natural resources and energy as well as look for new ways to reduce waste disposal.
- We ensure a safe and healthy environment in respect of the local community
- There is strict adherence to all environmental laws and policies.
- We conduct in-house educational training to enhance employees' environmental awareness and welcome feedback to further improve our policies.
- Our main raw material is crushed animal bones (of cattle and buffaloes) from North India by 14 dedicated suppliers. Sorry, we can not disclose their names and their sources.
- We have enhanced the capacity of the affluent treatment plant in 1992.
- Our bio-fertilizer has been certified by Dr.Pathiyoor Gopinathan, a senior professor of Kerala Agricultural University and FACT, Kalamasserry.
- We comply with all applicable legal / regulatory and other environment requirements. The Environmental Policy is displayed in our website for the public.
- We develop eco-friendly practices for waste disposal.
- The Ministry of Environment and Forest has categorically declared that our sludge is nonhazardous.
- All court cases against the company were decided in our favour only.
- We are discharging only treated fresh water to the river and we meticulously comply with all parameters specified by Kerala State Pollution Control Board.
- The final discharge point of the company is 500 meters down stream from the pumping point of the irrigation pump house and hence there is no chance of irrigation water getting polluted by discharged water.

- We have a full fledged effluent treatment plant, designed by experts, investing huge amounts and that it undergoes periodical upgradation.
- The sludge from effluents is filtered and converted to compost and is widely used as good manure for cash crops.
- Our compost is marketed through several outlets like *Meenachil* (Joshi Cherian of Meenachil), *Jeevamil*, (Kanjirappilly), *Safe Agro Inputs & Consultancy* (Vazhakkulam), and *Omega*, (Pollcahi).
- There is proper surveillance system prevailing in company to check any abnormality in matter of effluent discharge round the clock.
- We have been following this strict discipline since the inception of the company.
- The Action Council members have criminal backgrounds. Their agitation outside the company is politically motivated.
- The local Panchayat unnecessarily harass the company and its President has hidden agenda.
- B. How does the Action Council look at the problem?
- Company started polluting the air, water and soil of Kathikudam from 1979
- Company employed only 112 persons against the promise of employing one thousand people.
- ❖ There are two motors of 60HP each installed in Chalakkudy River by the company without





Team discusses with Action Council

any sanction of the local panchayat. One of them is working for 24 hours and 7 days a week. Thus, approximately 20 million litres of water per day is being taken from the river and it has been continuously going on for last 31 years. This huge exploitation of our natural resources by the company is a continuous violation of the Panchayati Raj rules since the company has not yet approached the statutory bodies for formal sanction of



Team interacts with local inhabitants

- using such quantity of water. There is also huge financial loss to the panchayat.
- ❖ The company uses per day 130 tons of crushed animal bones, 1,20,000 liters of hydrochloric acid, and 20 tons of lime. It also uses ferric chloride, alum, caustic soda and other unknown chemicals.
- ❖ There is storing capacity of 960 tons of hydrochloric acid without any precautionary measures for disaster management.
- Solid waste (sludge) was heaped in the company compound, and later used for filling up inside the company compound. Consequently the soil, surface water, ground water tables
 all got contaminated.
- Effluents have been discharged to Chalakkudy River without proper treatment.
- Chalakkudy River is the source of water for drinking, domestic use and irrigation of thousands of families in Chalakkudy and Kodungallur municipalities, and Mala, Poyya, Kuzhur, Annamanada, Puthenchira, Vellangallur, Vynthala, Puthenvelikkara and Mambra-Chettikkunnu panchayats.
- ❖ Treatment plants are not properly maintained, are dilapidated and inadequate to meet the requirements.
- ❖ There is large quantity of deposits of chloride in water, hence well water is unfit for domestic use or even for irrigation. More than 40% of wells in the local areas have thus become defunct.
- Water in near-by streams and canals has been grossly polluted, found not good for irrigation; few farmers got compensation from the company for that reason.
- The treatment plant installed in the company premises does not have mechanism for separating chloride from solid and liquid wastes.
- The company has betrayed the farmers by marketing its highly hazardous sludge as compost manure of good quality. The company claims that a senior professor of Kerala Agricultural University has certified its compost. In consideration of this favour, the nephew of the said professor was appointed in the company. The company has also collected certification to its compost from certain private agencies in and around Ernakulam whose credentials are unknown.
- There are 2000 families (around 10,000 people) directly affected by the company.
- ❖ There are several health problems, children being worst affected, meted out to the people living in the surrounding areas. People are forced to spend huge amounts of family income for medication and hospitalization.
- Children are shifted to houses of relatives on the advice of doctors as children can not withstand the foul smell from the company compound. Relatives and friends avoid visiting our houses only because of the disgusting smell in the air and dirty water. Our boys can

- not get brides from other areas as parents do not wish to send their daughters to Kathikudam, only because of pollution by this company.
- There are several cancer patients in and around the company, some of them are still working in the company. However, they were compelled to witness against themselves while doctors from Thrissur medical college made a survey. The one who refused to admit of any illness has been taking treatment for cancer at Amrita Medical College, Ernakulam with the financial support of the company itself.
- ❖ The company used to dump its sludge at Muthalamada in Palakkad district for filling lands. This was done through a contractor of the company and without paying heed to the objections by the local people. And, now there are cases pending against the company at Muthalamada police station.
- ❖ The attempt of the company to transport sludge to Pollachi in Tamilnadu under the guise of manure was foiled at the check post of Kerala border and was returned. It was deposited at Mampra near Koratty. Later, the local residents lodged complaints at the police station and the police have asked the company to remove the sludge forthwith.
- The company resorted to dirty politics in splitting the members of the Action Council from 1996 till date. They exploited the vulnerability of the people, offered jobs to leaders of the peoples' agitations and implicated others in criminal cases, campaigned against the Action Council members as if they were Maoists and created strong mafia within the company staff/workers to 'deal' with members of Action Council.

One of the first laws against air pollution came in 1300 when King Edward I decreed the death penalty for burning of coal. At least one execution for that offense is recorded. But economics triumphed over health considerations, and air pollution became an appalling problem in England.

Glenn T. Seaborg.

III. What did Jananeethi Team feel, notice and experience

As part of this study, Jananeethi team visited Kathikudam on 13.03.2010, and 21.03.2010. The first visit was informed to the NGIL well in advance, and we had obtained permission to visit the company and its installations. However, the company was not aware of our second visit. On both occasions, we had extensive talks with local inhabitants and members of the Action Council.

13.03.2010:

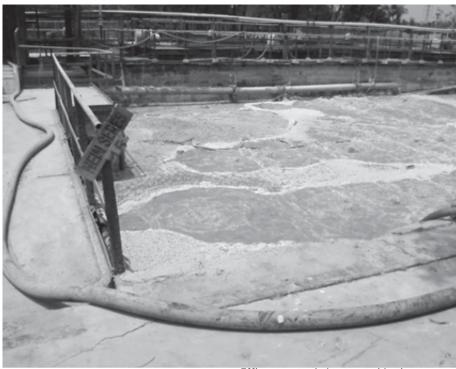
- Reached Kathikudam at 10.30 am and stayed there till 5.30 pm on the same day.
- ❖ A dirty smell welcomed us before any one else while we were reaching the location. However, it was bearable though some of us after a while experienced head ache and chest congestion and rashes at elbows. But, going inside the corridors, work area and the compound of the company was a real test for us. The smell was terrible and repugnant at the plant and storage area of raw materials.
- ❖ The company officials including the Executive Director (HR & GA) and General Manager (Ossein Division) welcomed us gracefully and in profound hospitality.
- ❖ The GM explained with help of power point presentation the process and work arrangement of the company including steps taken after 2008 for waste management.
- The management evaded or was unable to answer to several of our questions (Ex. Permission to draw water from and discharge treated water to Chalakkudy river, permission to lay underground concrete pipeline to the river, certification by Kerala Agricultural University to the manure, the sources of crushed animal bones and the names of its suppliers, copy of directions given by Pollution Control Board for improving the treatment plant, copy of the Environment Impact Assessment (EIA) report etc.) They promised that all required documents would be made available within a week.

- But later, they flatly refused to part with them.
- Photography was not allowed inside the company compound.
- ❖ Except a few previously designated employees, all other workers/employees of the company were reluctant to talk to us, rather the company officials had planned this visit in such a way that we did not meet any one else.
- ❖ There was one worker whose name is Francis. He was specially tutored by the officials to help us by collecting samples of effluents, sludge, soil etc. No one else was allowed to do these services. Finally, in order to impress us that the treated water, being discharged to the river, was really clear and pure, Francis took the water in a mug and drank it. Yes, he did it without any one of us asking for it. He, rather, was trained and was directed to do so at the end of our visit. (We feel sorry for Mr.Francis. It was clear that it was not his choice, but someone's design).
- ❖ The company produces 8.77 MT Ossein, 4.30 MT Limed Ossein, and 41.84 MT Di Calcium Phosphate per day. Process recovery generates dry bone meal 2.4 MT, sniews 2.5 MT, wet bone meal 2.25 MT and animal fat 1000 kg per day.
- Company consumes large volumes of water from Chalakkudy River without permission from any authentic source. There are different interpretations regarding quantity of water being used in the company a day. The company was not able to give a clear answer. People logically arrived at 20 million liters, assuming a motor of 60HP working for 24 hours can draw that much of water from the river.
- There is discharge almost the same volume of effluent into the river. This may be polluting river water and there are thousands of families depending on the river for their drinking, domestic use and irrigation purposes.
- The effluent, emitting fumes, has a strong foul smell. Apparently the workers are not provided with any safety measures to protect them from occupational hazards.
- Company says that the waste is handled scientifically. The floccular overflow pH is monitored. Daily testing of pH of effluents, SS and COD and BOD of effluents are ascertained and analyzed and log sheets maintained by a single engineer. A bacterial intervention is also introduced in treating the waste.



Huge concrete pipe carrying effluents to Chalakkudy River

It is quite evident that the company compound has been raised considerably considerably by filling the land with sludge. (This is one of the main complaint by the local people). This area is now covered with fresh soil from elsewhere. Large slices of carpet



Effluent water being treated in the company

grass are being brought in and are spread over the compound. It will render the compound a cosmetic look and no one knows that heavy quantities of sludge is underneath the greenish surface. We feel there is reason for people complaining about leaking of effluents through cracks on the compound wall of the company. The company compound is presently at a higher plane and the erstwhile paddy fields around the compound wall is laying low. Paddy could not be cultivated any more due to heavy presence of sludge in the land.

- ❖ The sludge, reported to have a pH of 12 (as per FACT analysis) is being converted into compost, with ash, poultry manure and waste from ayurvedic enterprises.
- Since the bone is initially treated with HCl, which is a known source of lead and other heavy metals, there is a possibility of sludge and effluent water containing heavy metals.
- While we were in the company trucks were being dispatched with hazardous effluent sludge. The destination of the trucks was not disclosed to us. As per law, hazardous waste shall not be transported along national highways without proper security arrangements. NGIL does not comply with it. The company has publicly admitted by a display board at the entrance that they produce oil and grease that are admittedly hazardous. However, it does not disclose how and where the oil and grease thus produced are disposed of.
- ❖ The waste material (sludge) is given to private parties like *Meenachil* agencies, where it is mixed with ayurvedic factory waste, coir pith, poultry litter etc. and sold is out at a price of Rs.15 per kg to farmers who dump the hazardous waste assuming that it is an organic manure of high nutritive value
- No proper analysis of sludge or effluent is being done periodically by an approved agency. Certificates of various unknown private agencies/institutions are profusely used to market the 'compost'.

- The damage the company does to the nature and livestock of this land is huge; whereas its contribution to the development of the society is comparatively very low or meager.
- There is no continuous monitoring for the intake quantity and quality of water, incorporated with the plant. Other than few pH digital meter, could not locate any data logger fitted. So also, no means to check the quantity and quality of treated water discharged to the river.



Effluent compost, marketed under trade name of 'MEENACHIL'

❖ In the initial project of the plant, there was no waste water management system effectively implemented. Few up-gradations, however, were found as later improvements, may be due to strong directions from the Pollution Control Board. There is no reliable data available to verify this.

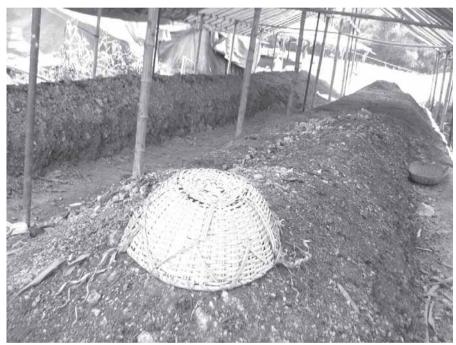


Collagen Peptide - another product of NGIL

The dried and crushed animal bone stored in the storage area develops foul smell in the surroundings, inside and outside factory. This foul odour is very uncomfortable. The company claims that crushed animal bones are made available from north India by 14 "dedicated" and "confidential" suppliers. In north India, there is ban on cow slaughter. Then, how is possible to collect such large quantity of cattle bones every day without a

break?! Since bones are crushed in small pieces, there is no way to check whether they really are of cattle and not of humans or other animals like dogs, pigs or wild animals. The company claims that they search for teeth in the raw materials once in a month or so to ascertain that human cadaver is not included. No methodology is existing here to check the pathogens especially at the wake of Bovine Spongiform Encephalitis, Anthrax, Rabies and other dreadful zoonotic diseases.

- ❖ The plant and machineries were found outdated and apparently no constant up-gradation was effected. The major portion of the machinery was found not energy efficient. The controls and monitoring are inadequate. The advantages/benefits of having a Japanese partner were nowhere visible.
- The Industrial and Occupational safety standards are not complied effectively. Local body (factories & boilers) requirements are barely met.

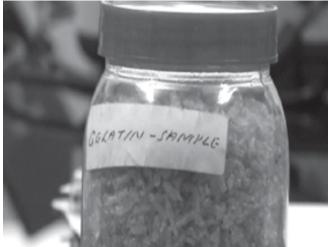


Effluent compost heaped in the company compound

- This Plant was started and commissioned without considering waste management. The life expectancy of the plant is very near, unless regular and constant up-gradation to energy efficient plant and equipments takes place.
- The sludge sold as biofertilizer does not have any scientific, statutory authentification or documentary mandate.
- The labourers in the plant do not have sufficient devices which assure protection which is to be viewed as a gross violation of human rights. The foul smell, dust and acid vapour content if any, must be hazardous and fatal.
- The Action Council or the people whom we met on the day did not raise the need of

closing down the company. They only insisted that there should be full proof of pollution free air, water and soil. If pollution can not be checked completely, then to save the people and environment, unpleasant actions will have to be resorted to.

The streams and canals in the premises were badly affected in appearance. Those who were collecting samples from streams and paddy fields happened to wet their



Gelatin Sample

- hands and fingers. They had itches and burning sensations and body discomfort. There were rashes and colour change on skin at neck, angles and elbows.
- We found a large concrete pipe laid under ground, through private lands and paddy fields, from the company compound to the middle of the Chalakkudy River with a length of nearly 1000 meters. There was an open man hole in the pipe at the bank of the river and it let out nauseating smell. The Google satellite picture (Fig 1) explains spillage from the concrete effluent pipe.
- Why this large concrete effluent pipe was taken to the middle of the river underneath the ground? This raises many questions. In *Chaliayar* (in Calicut) where the effluent pipe from Grasim Industry was disposing effluents openly and it was quite visible. May be, NGIL did not want the public or the concerned officers to see what's been disposed of into the river! Who did authorize the NGIL to let loose large volumes of effluents into the middle of the river in a hidden manner? Obviously, the company had no mandate from any statutory body, nor had they applied for permission to any authority.
- People complained of continuous harassment and frivolous police cases against those involved in the agitations at the behest of the company. They said, the company takes extra efforts to impress government, police and the public that the agitating members of the Action Council are Naxals and Maoists.

21.03.2010:

- Pungent and putrified odour was awful, not only in the company premises. We could feel if from a distance while traveling to the location.
- ❖ There was spilling of sludge into the Chalakkudy River from a crack in the concrete pipe, around 10 meters above the discharge point. The colour of the spilled water was black and irritating pungent smell.

- ❖ Large quantity of sludge was floating on water around the discharge point in the centre of the Chalakkudy River.
- When stirred in the water with a pole, intense foul smell was generated and the water was turned to black.
- ❖ There was huge conglomeration of floating water hyacinth (Eichhomia crassipes Kulavazha in vernacular) around that area. Nowhere else in the river its presence was detected. Visibility of floating sludge is obstructed due to the presence of water hyacinth. The local people said, the company management had deliberately placed this plant in that part of the river. Remember, this floating acquatic plant is known for its ability to absorb heavy metals.
- ❖ Presence of sludge was found at 200 meters and 500 meters down stream from the discharge point.
- The houses on the north of the company compound wall are badly hit by pollution by the company. Their wells are not any more usable. The well water is visibly dirty, disgustingly smelling and sludge film was floating all over well waters.
- The people living in that area are having several health problems, especially asthma and skin diseases. Infant babies wake up from sleep and start screaming wildly and incessantly as they experience
 - breathing troubles.

 Nightmares exist in homes as no one could sleep as the whole family gets disturbed due to child's restlessness.
- It was so sad and distressing that poor people are not allowed to disclose their illness. A person who is still an employee of the company but suffering from cancer for a while persistently refused to accept that he is ill. But records show that he has been taking treatment for cancer. The company that financially supports him has strictly barred him not to disclose the truth to any one.



Team collecting samples at discharge point in Chalakkudy River

- The company has walled around the compound, has filled the compound with sludge. The wall is morethan 8 feet high and therefore operation inside the wall cannot be seen from the outside. during the monsoon, people complain there is leakage of effluents through the wall contaminating water and soil in the adjoining lands.
- The company staff/workers who noticed our presence outside the compound wall (at



Compound wall of the company

- around 4.00pm only) started abusing us and threatening of dire consequences. That scene was not spared by our photographer.
- The last person to be interviewed on the day was Mr.Shaju Joseph Thelakkatt who lives on the south-west of the company compound. Mr.Shaju was the leader of Action Council against pollutions of the company and he together with his late father Joseph had initiated several court cases against the NGIL (KCPL) in the 1990s. Mr.Shaju is presently the employee of the company. Hence an interview with him was essential. While we were entering the house of Shaju, an errant group of around 15 to 20 strong men on several motor bikes rushed in violent mood and started verbally abusing us. Shaju tried to calm them, but they were full of wrath and venom. They created violent scenes for more than 30 minutes. Later, a phone call to the General Manager of the company made it clear that the goons were assigned to the job by himself (perhaps, he was not aware that it was Jananeethi team again.)
- Our information about the unlawful, unethical and manipulative styles of the company management in dealing with critics and dissidents got confirmed when we came to know that the management had in the mean time made thorough field investigations regarding professional and personal engagements and relationships of the Jananeethi team members.
- ❖ The company uses several strategies to suppress the people's agitation. Money power, nexus with mafia and political leadership, undue influence in the police, support from government secretaries etc make them become 'anti-people'.
- ❖ The management has totally failed to establish communication with people. Hostility has been built up on personal egos. No step was initiated by the company for a healthy dialogue with the people.

IV. Scientific Analysis of Samples: Results & Interpretations

The samples from the company premises were collected in sterilized bottles as per scientific protocol in the presence of the company officials including the Executive Director and General Manager. The samples from other locations were collected as per norms in the presence of large number of people who are victims of pollution. The samples were scientifically analyzed at the Radiotracer Laboratory of the Kerala Agricultural University.

Samples for lab tests:

Water samples:

- i) Drinking water samples (well water)
- ii) Water from farmers' field
- iii) Ossein wash
- iv) Tertiary overflow
- v) Effluent
- vi) River water
- vi) Irrigation water sample from Perumthode

Sludge

Compost

Soil

Water and effluent samples were tested for their suitability for drinking and irrigation purposes. Carbonates and bicarbonates were detected. Tests were run for assessing the content of chloride, copper, iron, zinc, magnesium, manganese calcium, sodium, potassium and heavy metals. Sodium adsorption ratio (SAR) and Residual sodium carbonate (RSC) were detected for all samples.

Soil, sludge and compost samples were tested for pH, conductivity, organic C, available P and K, Ca, Mg, S, Cu, Zn, Fe, Mn and heavy metals (cadmium, lead, nickel, chromium).

Results and interpretations:

Water samples

i) Well water:

All the samples recorded acidic pH (5.06 to 5.83). Calcium levels are high in all samples (2.56 to 4.86 me/l), making it unsafe for irrigation. Maximum levels of calcium were recorded in samples from the wells of Mr Lijo Mathew (4.86me/l). The well water samples were safe for irrigation with respect to RSC value, which indicates bicarbonate level. Only one sample from the well of Mr. Xavier recorded moderately unsafe value (1.54 me/l). Two samples were tested for lead and nickel levels. In case of lead, one was safe for irrigation but unsafe for drinking. With respect to nickel, both samples were safe for irrigation, not for drinking. With regard to other parameters tested, all were within the safe limits.

ii) Water from banana and paddy fields:

The water samples collected from banana and paddy fields also recorded a low pH (5.84 to 5.86). The calcium content was high (21.32 and 186.3 me/l), indicating that it is not safe for irrigation. All other parameters were within the permissible limits.

iii) Ossein wash:

The sample was slightly acidic with a pH of 6.01. Calcium level was high (184.9me/l, making it unsafe for irrigation. The most striking feature of ossein wash was the presence of heavy metals like cadmium (0.063mg/l), lead (15.5 mg/l) and nickel (0.216 mg/l). These values indicate the non-suitability of this for drinking purpose. The level of lead is so high that it is not even suitable for irrigation.

iv) Tertiary overflow:

The sample is slightly acidic, with high calcium content (179.7me/l), which indicates that it is unsuitable for irrigation purposes.

v) Effluent:

The calcium level is very high (184.92 to 198.6me/l), indicating that it is unsafe for irrigation. All other values are in the permissible range.

vi) River water:

Samples were collected from 300m upstream, two discharge points and 200m downstream. Analysis revealed that calcium level was high in all samples, including upstream. The heavy metal nickel was observed at the discharge point (0.124%; unsafe for drinking).

vii) Irrigation water:

The irrigation water collected from Perumthanni river is not safe for irrigation because of the high calcium level (19.6me/l).

The pH of the soil or irrigation water is a valuable diagnostic measurement. The normal pH of water should be between a range of 6.5 to 8.5 in surface water and 6 to 8.5 in ground water. All the water samples collected for testing were acidic. When acidification occurs, topsoil is affected first. As the concentration of hydrogen ions in water or in a soil solution increases, hydrogen becomes more active and the soil or water becomes more acidic; conversely, as the concentration of hydrogen ions decreases the soil or water becomes more alkaline. Irrigation water with a high pH indicates the potential for the precipitation of calcium carbonate. Lime is abundantly used in this plant. The Ossein wash and the water from tertiary overflow was slightly acidic, where as the final outlet for effluents, inside the factory compound and the samples from the out let at Chalakkudy River basin were near neutral. The samples of water collected from *Perumthode*, the irrigation canal, and 200m down stream showed near neutral pH (6.27 and 6.58 respectively). All the wells in the near vicinity of the factory had slightly acidic water (5 to 5.12). The pH of water determines the solubility (amount that can be dissolved in the water) and biological availability (amount that can be utilized by aquatic life) of chemical constituents such as nutrients (phosphorus, nitrogen, and carbon) and heavy metals (lead, copper, cadmium, etc.). The drinking water source in the vicinity of the factory has become acidic.

The Banana garden maintained by the factory inside their compound with water in the channels showed higher calcium (186.3me/I) level. The high calcium level from the lime used in the plant, reveals that the water is not safe for irrigation. Water samples with high levels of manganese is not safe for drinking purpose. Manganese toxicity occur mainly in the respiratory tract and in the brains. Symptoms of manganese poisoning are hallucinations, forgetfulness and nerve damage. Manganese can also cause Parkinson, lung embolism and bronchitis. A syndrome that is caused by manganese has symptoms such as schizophrenia, dullness, weak muscles, headaches and insomnia. But the small irrigation channels in banana garden and its water is not used for drinking purpose but can reach the nearby river or can reach the wells. The water sample from the paddy land where the effluent pipe had burst also showed higher levels of calcium making it not suitable for irrigation as per standards. Copper, zinc and Iron

could not be detected in the paddy land sample where as inside the factory compound the samples had copper and zinc (0.001 and 0.006 respectively) but it remained at the safer level. SAR and RSC showed that the water is safe for irrigation.

The "Ossein wash effluent which was slightly acidic, but possessed very high calcium in it and hence it is not safe for irrigation. But the factory is again passing this effluent through a very old system of purification with obsolete and low volume tanks. Probably these systems need urgent remodeling and installations with larger quantity intake and modern methodology and technology. The calcium used in the process leaches into the vicinity and makes the agro zone water, not safe for irrigation; this is an infringement into the rights of the farming community around the hamlet. Interestingly the samples collected by us from inside the factory effluent outlets showed the presence of heavy metals (lead, nickel and cadmium). This is an alarming pollution scenario. Since the effluent is drained out through long pipes which may be dilapidated and over used; leaching and pollution of the area may be suspected. The level of Lead in the water sample (15.5mg/l) makes it unsuitable for irrigation purpose or drinking. While the Jananeethi team was making the site visit we were shocked to see that one worker of NGIL drank the effluent water in order to impress the team that the effluent was safe. Rather than showing the safety of effluent water, the poor worker was enacting a high strung drama orchestrated by the management. This was a shock to the team. The effluent water though appearing clear without much turbidity or colour change; is now found to be a "decoction" of heavy metals. Compelling workers to show allegiance (servitude?) to their 'masters' in times of public controversy may be a crafty and manipulative strategy of the company management to hide its disastrous misdemeanors. We deem it our conscientious duty to record that it is grossly unethical and blatant violation of all norms of legal and ethical standards and further, the NGIL management contradicts its tall claims for environmental concerns as stated in their website.

Ironically, any visitor to the company office will be delighted to read, "Nitta Gelatin strives to conduct environmentally safe manufacturing practices to protect the earth from pollution." and Conduct in-house educational training to enhance employees environmental awareness and welcome feedback to further improve our policies". This huge board remains there as the manifested symbol of corporate hypocrisy and criminal conspiracy of NGIL, and a Himalayan lie, flouting every principle of public accountability and business ethics. Should we take for granted that the top officials of NGIL including senior IAS officers of the State Government are ignorant of WHO's guidelines for quality of drinking water? The Geneva Guidelines of (WHO) 1993 has categorically spelled out that heavy metal pollution in water is a serious and dangerous situation.

Lead can enter (drinking) water through corrosive and dilapidated pipes and through

lackadaisical handling of sludge. Lead contaminating water is likely to happen when the water is slightly acidic which is true at Kathikudam. The water in Kathikudam area is slightly acidic and hence presence of lead becomes a serious issue. Public water treatment systems are now required to carry out pH-adjustments in water that will serve drinking purposes. As far as we know, lead fulfils no essential function in the human body, it can do sheer harm. Scientific studies prove that lead in our body system can disrupt biosynthesis of haemoglobin leading to anaemia. Hypertension, kidney damage, nervous disorders, miscarriages, male-infertility, diminished learning ability in children and many behavioural disorders may happen due to Lead pollution. Lead can enter a foetus through the placenta of the mother. Obviously, this can cause serious damage to the nervous system and the brains of future generations.

In the immediate environment of Kathikudam and on the river sides, lead may accumulate in the bodies of water organisms and soil organisms. This needs the immediate attention of our Government Institutions / Boards dealing with aquatic flora and fauna and environment. Soil functions are disturbed by lead intervention. If this effluent reaches Chalakkudy River, the lead can reach the fishes easily. Body functions of phytoplankton can be disturbed when lead interferes. Phytoplankton is an important source of oxygen production in water bodies. Lead is a particularly dangerous chemical, as it can accumulate in individual organisms, but also in entire food chains.

The water samples from the discharge points in Chalakkudy River had nickel in it which makes it unsafe for drinking. But it can be used for irrigation. The presence of nickel ((0.149mg/ I) in the well water of Mr. Ramesh, residing adjacent to this point makes his well water unsafe for drinking. Nickel is a compound that occurs in the environment only at very low levels. Humans use nickel for many different applications. The most common application of nickel is the use as an ingredient of steel and other metal products. Food stuffs may contain small amounts of nickel. Chocolate and fats are known to contain high quantities. Nickel uptake will boost when people eat large quantities of vegetables from polluted soils and water. Plants are known to accumulate nickel and as a result the nickel uptake from vegetables will be imminent. An uptake of too large quantities of nickel may result in higher chances of development of lung cancer, nose cancer, larynx cancer and prostate cancer, lung embolism, respiratory failure, birth defects, asthma and chronic bronchitis, heart disorders etc. Nickel and certain nickel compounds have been listed by the National Toxicology Program (NTP) as being reasonably anticipated to be carcinogens. The International Agency for Research on Cancer (IARC) has listed nickel compounds within group 1 (there is sufficient evidence for carcinogenicity in humans) and nickel within group 2B (agents which are possibly carcinogenic to humans).

In general the water samples from NGIL area, Kathikudam are acidic. The Chalakudy River



Sludge to be transported to unknown destinations

water at the discharge points of the company was also tested acidic. The physical and chemical properties of the water collected from different locations, were different. The topography, the lackadaisical effluent disposal and, lack of social and environmental ethics maintained by the NGIL is polluting the drinking water in this zone. Presence of Heavy metals (lead, nickel and cadmium) in high quantities in the water samples inside the factory indicates to the fact that either the technology or manufacturing protocol is out dated.

Table1 Analytical result of sludge sample from NGIL plant, Kathikudam, Kerala*

SI No	Parameters	Quantity
1	рН	11.8 (Extremely alkaline)
2	Conductivity	1.0dSm- ¹
3	Organic carbon	19.86%
4	Phosphorous	0.014mg/kg
5	Potassium	910mg/kg
6	Sodium	1830 mg/kg
7	Calcium	1.89%
8	Magnesium	0.009%
9	Nitrogen	0.42%
MICRONUTRIENTS		
10	Copper(Cu)	5mg/kg
11	Zinc(Zn)	20mg/kg
12	Iron(Fe)	1520mg/kg
13	Manganese (Mn)	30.0mg/kg
HEAVY METALS(mg/kg)		
14	Cadmium (Cd)	1.5 mg/kg
15	Lead(Pb)	82.6 mg/kg
16	Nickel(Ni)	400 mg/kg
17	Chromium (Cr)	7 mg/kg

Four samples of sludge were collected from the factory and analyzed-flakes of sludge from the machine, the sludge used as raw material for composting in the company itself and the final sludge sold out to farmers and outside agencies, and the base material for composting. These three samples were extremely alkaline (pH 11.7 to 11.8). Heavy metals were present in all these samples, indicating that it is unsuitable for composting. Lead (82.6 to 92.5mg/kg), nickel (400 to 462 mg/kg) and chromium (1.3 to 14.7mg/kg) were present in all the samples. Cadmium was detected in flakes and also the final sludge sold out (1.5 to 9.1mg/kg).

When the team visited the place the second time (21.03.2010) without intimating the company, we observed that even the sludge was being disposed of along with the effluent in the Chalakkudy River. The sludge that rose to the surface was collected and analyzed. This also contained heavy metals lead (73.6mg/kg), nickel (27.6mg/kg) and chromium (7.5mg/kg), though cadmium was not detectable. This is clear proof that the company disposes of sludge also into the river especially during the night hours, as revealed by the residents of the area. It amounts to criminal offence to pollute/ contaminate water bodies like Chalakudy River, which is the major source for drinking and irrigation to several panchayats and municipalities.

When we visited the company, it was observed that a yard with creamy yellow and chalky white sludge with a pungent and putrid smell was maintained inside the factory. Lorry loads of the sludge were moving while we were inside. We were told that the sludge was purchased by several manufacturers of organic fertilizers, based on a reportedly "KAU certificate". The NGIL is also manufacturing organic compost inside their factory yard. Jananeethi team noted in the compost making yard loads of coir pith brought from the costal districts of Kerala, herbal smelling ayurvedic factory waste, ash from the factory burners and poultry droppings, and litter brought from Tamil Nadu. Aerobic composting was done and the final output was packed as Meenachil Organic compost and was sold to farmers. In effect, it was a deceitful way of disposing the sludge generated in the company. The poor farmers in the state and neighbouring states pay for the waste generated by the NGIL and carry it home having been impressed by the NGIL that it is organic manure of high value. There are also allegations that lorry loads of sludge being taken to Muthalamada Panchayath of Palakkad as landfills. Upon complaints by aggrieved local residents, the Muthalamada police has registered cases against illegal dumping pollutant materials in farm land. The company management has agreed that it was being done for last many years. However, they attributed the liability to the contractors who bid for removing sludge from the company premises, and that the company management need not necessarily be aware of where it is been disposed. It was also interesting to learn that truck loads of the smelly, hazardous sludge were transported through NH 47 to Palakkad and similarly to neighbouring districts in spite of stringent rules and regulations in this regard.

The Brain and the Brawn of the NGIL wreaks havoc on our high ways and pristine agricultural hamlets like Muthalamada.

Table 2. Analytical result of compost from NGIL plant, Kathikudam, Kerala

SI.No	Parameters tested	Quantity	
1	рН	11.72 (Extremely alkaline)	
2	Conductivity	1.0dSm-1	
3	Organic carbon	15.96%	
4	Phosphorous	0.010mg/kg	
5	Potassium	910mg/kg	
6	Sodium	610 mg/kg	
7	Calcium	1.85%	
8	Magnesium	0.009%	
9	Nitrogen	0.49%	
MICRONUTRIENTS			
10	Copper(Cu)	60 mg/kg	
11	Zinc(Zn)	20mg/kg	
12	Iron(Fe)	1133mg/kg	
13	Manganese (Mn)	50.3 mg/kg	
HEAVY METALS(mg/kg)			
14	Cadmium (Cd)	ND	
15	Lead(Pb)	84.9 mg/kg	
16	Nickel(Ni)	462mg/kg	
17	Chromium (Cr)	12.3mg/kg	

A sample of the compost prepared by the company itself was analyzed. It had a pH of 7.9, which was slightly higher than required, nitrogen content was 1.54%, again more than required. Phosphorus and potassium levels were lower than the required levels. As expected, the levels of all heavy metals were also very high. Results showed that it contained lead (1860 mg/kg), cadmium (8mg/kg), nickel (738mg/kg) and chromium (210mg/kg). This was expected because the raw material (sludge) also contained these factors. The misrepresentation of the dangerous waste as ideal fertilizer for cash crops has been in practice for last many years and during the period the company has caused irreparable damage to the soil and cultivation other than polluting the ground water and surface water. NGIL should face prosecution for this criminal offence and the officials should be held personally liable to the loss and damages caused as they have taken conscious efforts to get legitimized by resorting to unethical practices like fake certificates and records in their favour.



Effluent sludge with coir pith and Ayurvedic waste being processed as compost

Table3. Sludge Sold out from NGIL plant, Kathikudam, Kerala

SI No	Parameters tested	Quantity	
1	рН	11.7(Extremely alkaline)	
2	Conductivity	1.0dSm-1	
3	Organic carbon	22.98%	
4	Phosphorous	0.010mg/kg	
5	Potassium	920mg/kg	
6	Sodium	1440mg/kg	
7	Calcium	1.85%	
8	Magnesium	0.009%	
9	Nitrogen	1.75%	
MICRONUTRIENTS(mg/kg)			
10	Copper(Cu)	5(mg/kg)	
11	Zinc(Zn)	10(mg/kg)	
12	Iron(Fe)	973(mg/kg)	
13	Manganese (Mn)	20(mg/kg)	
HEAVY METALS (mg/kg)			
14	Cadmium (Cd)	9.1 (mg/kg)	
15	Lead(Pb)	92.5(mg/kg)	
16	Nickel(Ni)	440(mg/kg)	
17	Chromium (Cr)	13.5(mg/kg)	

The heavy metal contamination in the sludge that is sold out is very high and dangerous. Table 3 shows the result of the analysis of sludge that is sold out. Samples of creamy sludge, floated on the river bed, were collected from the discharge point in the middle of the river. The results are given in Table 4.

Table 4. Effluent from Chalakudy River bed at the discharge point of NGC

SI No	Parameters tested	Quantity	
1	рН	7.89	
2	Conductivity	1.0dSm-1	
3	Organic carbon	16.14%	
4	Phosphorous	0.003 mg/kg	
5	Potassium	900 mg/kg	
6	Sodium	520 mg/kg	
7	Calcium	0.58%	
8	Magnesium	0.008%	
9	Nitrogen	3.85%	
MICR	ONUTRIENTS(mg/kg)		
10	Copper(Cu)	ND	
11	Zinc(Zn)	2.4 mg/kg	
12	Iron(Fe)	2.03 mg/kg	
13	Manganese (Mn)	0.8 mg/kg	
HEAVY METALS (mg/kg)			
14	Cadmium (Cd)	ND	
15	Lead(Pb)	73.6	
16	Nickel(Ni)	27.6	
17	Chromium (Cr)	7.5	

Soil samples

The soil sample collected from the adjacent paddy field outside the factory compound wall had near neutral pH of 6.63. Organic carbon, available phosphorous and potassium were low. The paddy field soil was deficient in copper and sufficient in zinc (1.98mg/kg) and manganese. Iron content was high (>100 mg/kg). Shockingly, the paddy land also contained very high level of the heavy metal lead (203.8 mg/kg).

The soil sample from banana field was slightly acidic with a pH of 6.37. Organic carbon, available phosphorus and sulphur were high and available potassium, medium. The content of lead was high (182.4mg/kg). Cadmium was also detected in this soil.

V. Observations

- 1. The Kerala State Industrial Development Corporation (KSIDC) of Kerala Government, the Nitta Gelatin Inc. of Japan, and the Kerala State Pollution Control Board are equally responsible for making Kathikudam, once a beautiful and serene hamlet, a potential catastrophe. There was total disrespect and disregard for law and ethical, enviornmental considerations.
- 2. Interestingly, the NGIL has admitted in a letter it had written on 18th June 2008 (*Annexure 1*) to the Kerala Agricultural University that the Supreme Court Monitoring Committee in 2006 had included the effluent plant sludge generated in the company in hazardous category. Subsequently, the Committee had directed the NGIL to explain before the Central Pollution Control Board and Union Ministry of Environment and Forests to get exemption from the purview of Hazardous Wastes (Management & Handling) Rules, 1989 and amendments thereof. This letter was a formal request to the Kerala Agricultural University to take up a research in effluent sludge of the company for its manurial value in plants / vegetables. Memorandum of Understanding was signed between KAU and NGIL, and a project was launched accordingly. Sample of a effluent sludge together with other samples of coir pith, ayurvedic factory waste and poultry litter were provided by the company representative to the KAU lab. This anomaly was a violation of scientific standards and statutory norms. Samples should have been colected by the scientists themselves. How does one know that the samples provided were not manipulated? (*Annexure 1(a)*)
- 3. In January 2008, the Union Ministry of Environment & Forests exempted NGIL from hazardous category on condition that its (NGIL) compost shall be restricted to crops other than food crops. Again the question before us is how do we draw a line between food crops and cash crops taking into consideration the composite nature of crops in Kerala environment?

In the letter addressed to the Director of Research, Kerala Agricultural University dated 18th June 2008 NGIL has admitted that despite the strictures imposed on them by the MoEF, the company has been selling its 'compost' to food crops also. This has to be noted very seriously. Disciplinary action should be initiated against the errant officers of NGIL. (*Annexure 1 page* 2)

- 4. While the samples collected by Jananeethi Instituted from the NGIL premises were being analysed at the Radiotracer Laboratory of Kerala Agricultural University, the company itself approached the same laboratory with its compost samples requesting for certification to be used as manure in aggriculture including food crops. The lab analysis proved that the compost produced in NGIL contained very high presence of Lead (2485 ppm.) and Nickel (450 ppm) rendering the compost unsafe (*Annexure 1 b*). Remember, this most dangerous substance has been marketed for last many years in kerala and the neighbouring States through several outlets. The Ministry of Environment & Forest that exempted the sludge from the hazardous category should apologise to hundreds of farmers who have been using the most hazardous compost as good manure. The officials of NGIL who betrayed the innocent farmers are liable to be prosecuted for criminal conspiracy and environmental hazards.
- 5. The claim of NGIL that all court cases against it were disposed on its favour only is wrong. There were cases in the Munsiff's courts at Irinjalakuda and Chalakkudy that have been decided against the company. (*Annexure 2 (a d)*). Again, in WP (C) No 20891 of 2009, and dated 27.07.2009 the Honourable High Court of Kerala has permitted the NGIL to operate only on condition that it should satisfy the conditions laid down by the Board and the Grama Panchayat.(Annexures 2 (a d) will speak for the fact that the company has been violating statutory norms and rules and that it was repeatedly admonished by the Panchayat Authorities.)
- 6. NGIL claims that it was strictly abiding by rules and statutory norms from the very inception of the company. It was not. In a letter addressed to Panampilly Jayadevan of Kathikudam dated 3.4.1998, the Secretary of the Ministry for Family Welfare has confirmed incidence of pollution quoting a report received from the Pollution Control Board. (Annexure 3) The company has initiated some improvements in treatment plant only in 2008 after a strong intervention by the Pollution Control Board on complaints received from public. In a strongly worded notice to the NGIL dated 29.03.2008, the Board has warned the NGIL of dire consequences including closure of the company and such other penal actions like disconnection of electricity, water and such other services. (*Annexure 3 (a)*).
- 7. In a letter addressed to Secretary, *Chalakkudy Puzha Malineekarana Viruddha Samithi*, dated 4.12.2009 (Annexure 4) the Secretary to Kerala State Legislature has confirmed that the State Pollution Control Board had visited the NGIL at Kathikudam on 25.05.2000, 03.06.2002, 19.03.2008 and 02.07.2008 on complaints received from the public with respect to pollution by the company. The letter also mentions that the Board had issued 'Show Cause

Notice' to the NGIL on 29.03.2008 having found that the compost made out of the sludge was unlawful. Again, the letter states that the Board was satisfied on 02.07.2008 with the improvements made by company. If so, the State Pollution Control Board must be held liable for the continuing damage to the environment at Kathikudam and its officers should face criminal prosecution and a social audit.

- 8. As the NGIL top brass refused permission to peruse some of the vital documents, we had to write to KSIDC under the provisions of Right to Information Act, 2005. KSIDC forwarded our letter to NGIL on 19.04.2010 for further action. Later, on 13.05.2010 we received letter from KSIDC refusing the information we wanted. The reason they said was, "NGIL does not come under the purview of RTI Act". (Annexure 5). Ignorance of law is not an excuse. Yet it is not that simple. Does the NGIL really believe that Indian Laws and Ethical Standards are not applicable to it?
- 9. Just before this report was going to the press, we received a letter dated 18.06.2010 from Shri.Alkesh Sharma IAS, Managing Director and Appellate Authority of KSIDC stating, "Nitta Gelatin India Limited is a private company, KSIDC has no *locus standi* to direct M/s Nitta Gelatin to provide information sought by you". This was in response to our appeal under RTI against denial of required information in the first instance. NGIL (formerly, Kerala Chemicals and Proteins Limited) was set up in the joint sector by KSIDC and Nitta Gelatin Inc. of Japan. KSIDC is the major share holder of NGIL. It's Chairman is Mr.T.Balakrishnan IAS, Addl.Chief Secretary, Industries & Commerce, Govt. of Kerala. The Chairman addressed a press conference in Kochi a couple of days ago on the occasion of launching a new product by the company. It's very strange and unfortunate to hear from a responsible, senior government secretary declining mandatory information stating that a quasi-government venture is a 'private company'. (*Annexure 5 a*).
- 10. All these years NGIL has successfully manipulated various testing agencies including the Pollution Control Board and the Kerala Agricultural University. There are two major issues on which people have been agitating from the inception of the company. They are (i) presence of heavy metals in water and (ii) pollution of Chalakkudy river water. NGIL has never, ever dared to conduct a sample testing on these issues. On the other hand it always requested the testing agencies to find out factors that are no way connected with the operations of the company. This was a deliberate, brilliantly orchestrated manipulation wherein the NGIL was able to obtain clean certificates to further carry out its destructive operations more vigorously. (Annexure 6 This exhibit shows that test was conducted on non-issues, that were not challenged).
- 11. An Expert Committee, constituted of representatives of various public interest bodies including Pollution Control Board, visited the company, the people and other stake holders in

2009 and had made its 'preliminary report' (Annexure 7). In the report the Committee has indicted the company for its "failure to operate the ETP properly" despite various notices issued to it by the PCB. The Committee also noticed that there was increased production without upgrading the ETP. The Committee further observed several discrepancies and errors in the versions of the company management; strongly recommended water budgeting by providing water meter at the intake and outlet points; and it also urged the NGIL to initiate and continue dialogue with the Grama Panchayat, Block Panchayat, Action Council and the people living around the company. However, the company seems to have ignored the Committee's report, the message being it doesn't care.

- 12. A press release dated 28th January 2010 from Kochi by Nitta Gelatin India Limited proudly announced that it has received ISO 14001 certificate for Environment Management System. (Annexure 8) Jananeethi Institute would challenge the authority that awarded this certification to NGIL to disclose its rationale for the decision of awarding ISO 14001 status to the company.
- 13. NGIL also claims that its effluent compost has been certified by the Ministry of Environment and Forests. If it is true, then the Ministry owes an explanation to the public how come an effluent that was declared "hazardous" by the Supreme Court Monitoring Committee turned to be a manure? (Annexure 9) (Cross refrence to observation No. 4 of this chapter and annexure 1 b)

Our children may save us if they are taught to care properly for the planet; but if not, it may be back to the Ice Age or the caves from where we first emerged. Then we'll have to view the universe above from a cold, dark place. No more jet skis, nuclear weapons, plastic crap, broken pay phones, drugs, cars, waffle irons, or television. Come to think of it, that might not be a bad idea.

Jimmy Buffet, Mother Earth News, March-April 1990

VI. Violations of Law, Civil Rights and Ethical Standards:

- ❖ The Environment (Protection) Act, 1986: The decline of environmental quality has to be evidenced by increasing pollution, loss of vegetal cover and biological diversity, excessive concentration of harmful chemicals in the ambient atmosphere and in food chains, growing risks of environmental accidents and threats to life support systems.
 - Environment includes water, air and land and the inter-relationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property.
 - Any solid, liquid or gaseous substance present in such concentration as may be, or tend to be, injurious to environment is an environmental pollutant.

Hazardous Wastes (Management and Handling) Rules, 1989:

The company (occupier) generating hazardous wastes shall take all practical steps to ensure that such wastes are properly handled and disposed of without any adverse effects which may result from such wastes and the occupier shall also be responsible for proper collection, reception, treatment, storage and disposal of these wastes either itself or through the operator of facility.

- The Government should publish from time to time and inventory of disposal sites for the disposal of hazardous wastes.
- The occupier generating hazardous waste and operator of a facility for collection, reception, treatment, transport, storage and disposal of hazardous waste shall maintain records of such operations.

The Manufacture, Storage and Import of Hazardous Chemicals Rule, 1989:

- An occupier who has control of an industrial activity should
 - i. identify the major accident hazards,
 - ii. take steps to prevent such major accidents and to limit their consequences to persons and the environment, and
 - iii. provide to persons working on the site with information, training and equipment including antidotes necessary to ensure their safety.
- The occupier shall take appropriate steps to inform persons outside the site either directly or through District Emergency Authority who are likely to be in an area which may be affected by a major accident about
 - i. the name of the major accident hazard, and
 - ii. the safety measures and the "Dos" and "Don'ts" which should be adopted in the event of a major accident.

Chemical Accidents (Emergency Planning, preparedness and Response) Rules, 1996:

The law requires the State Government to constitute District and Local Crisis Groups to deal with chemical accidents and coordinate efforts in planning, preparedness and mitigation of a chemical accident. It should be their duty to educate the population likely to be affected in a chemical accident about the remedies and existing preparedness in the area. The hazard installation in the area should aid, assist and facilitate the functioning of the Local Crisis Group.

The Water (Prevention & Control of Pollution) Act, 1974:

No person shall establish an industry which is likely to discharge sewage or trade effluent into a stream or well or sewer or on land. (S 25). With reference to Section 25 of the Act, the Supreme Court said: "No one has a right to carry on a business so as to cause nuisance to the society. One cannot carry on business in the manner by which the business activity becomes a health hazard to the entire society." (AIR 1988, Guj 57)

The Air (Prevention and Control of Pollution) Act, 1981:

The presence in air of various pollutants discharged through industrial emissions and from certain human activities connected with traffic, heating, use of domestic fuel, refuse incinerations, etc has a detrimental effect on the health of people as a so on animal life, vegetation and property.

Section 22: No person operating any industrial plant, in any air pollution control area shall discharge or cause or permit to be discharged the emission of any air pollutant in excess of

the standards laid down by the State Board.

Section 31A entitles the court to close down, prohibit or regulate any industry that pollutes air. Every citizen has a right to fresh air.

Air pollutants are in the form of smoke, fume, dust, odour, gas etc. It is an admitted case that air pollutants are causing serious health hazards like eye irritation, vegetation damage, further causing respiratory diseases and other harmful effects to human being and vegetation.

Section 133 Code of Criminal Procedure, 1973:

The District Magistrate or appropriate authority should see that any unlawful obstruction or nuisance be removed from any public place or from any way, river or canal which is or may be lawfully used by the public.

The Public Liability Insurance Act, 1991:

The Act enables for compensation / relief to any person (s) affected by accident occurring in an industrial unit of hazardous substances, or for matters connected therewith or incidental thereto.

Constitution of India:

- Article 21: The Supreme Court has declared in several cases that right to safe environment and clean water is part of Right to Life.
- Article 48A reads "the State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country"
- Article 51A provides, "to protect and improve the natural environment including forests, lakes, rivers and wild-life and to have compassion for living creatures".

Polluter pays Principle:

It means that the absolute liability for harm to the environment extends not only to compensate the victims of pollution but also the cost of restoring the environment degradation. Remediation of the damaged environment is part of the process of "sustainable development" and as such polluter is liable to pay the cost to the individual sufferers as well as the cost of reversing the damaged ecology. (AIR 1996 SC 1446)

Hygienic Environment, a human and fundamental right:

In *Virender Gaur v. State of Haryana* (1995 (2) SCC 577) the court has stated, "enjoyment of life and its attainment including their right to life with human dignity encompasses within its ambit, the protection and preservation of environment, ecological balance free

from pollution of air and water, sanitation without which life cannot be enjoyed. Any contra act or action would cause environmental pollution. Environmental, ecological, air, water pollution, etc should be regarded as amounting to violation of Article 21. Therefore, hygienic environment is an integral facet of right of healthy life and it would be impossible to live with human dignity without a human and healthy environment".

Hazardous Industry: Highest Standards of Safety Measures Required:

In Oleum Gas Leak case (1987 (1) SCC 395) the court observed that an enterprise which is engaged in a hazardous or inherently dangerous industry which poses a potential threat to the health and safety to the persons working in the factory and residing in the surrounding areas owes an absolute and non-delegable duty to the community to ensure that no harm results to any one on account of hazardous or inherently dangerous nature of the activity which it has under taken. Highest standards of safety must be ensured and if any harm results on account of such activity, the enterprise bust be absolutely liable to compensate for such harm and it should be no answer to the enterprise to say that it had taken all reasonable care and that the harm occurred without any negligence on its part.

The Precautionary Principle and the New Burden of Proof:

With reference to the development of environmental concepts during the period of Stockholm Conference (1972) and the Rio Conference (1992), the court declared that the Precautionary principle and the Polluter pays Principle are now part of the environmental law of the country. According to the Precautionary Principle, where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for proposing cost-effective measures to prevent environmental degradation.

"Water is gift of nature. Human hand cannot be permitted to convert this bounty into a curse, oppression. The primary use to which water is put being drinking, it would be mocking nature to force the people who live on the bank of a river to remain thirsty. Drinking is the most beneficial use of water and this need is so paramount that it cannot be made subservient to any other use of water like irrigation. So the right to use of water for domestic purpose would prevail over other needs".

(Supreme Court in Delhi Water Supply & Sewage Disposal Undertaking v. State of Haryana)

VII. Recommendations

Without prejudice to any one, we state and declare that NGIL and its operations in the given circumstances pose impending disaster that should not be allowed to happen. If the Government of Kerala and the civil society want to avert another man-made colossal calamity at Kathikudam, stringent actions should be initiated without delay.

We recommend to the Government and whom-so-ever concerned the following corrective measures to be expedited without being soft to wrong doers:

- ❖ Safety norms for NGIL must be updated as per international best practices. There should be time frame for it. An expert committee constituted of scientists and activists must be assigned to monitor. The company must bear the cost of its functioning.
- ❖ Effective public participation in decision making and monitoring must be envisaged with larger scope for being a 'watch dog'. The District and Local Crisis Groups as envisaged in the Chemical Accidents (Emergency Planning, Preparedness and Responses) Rules, 1996 should be activated at the cost of the concerned industrial unit(s).
- ❖ There must be laws providing ground rules for adequate compensation to direct and de-facto victims of any industrial disaster and provisions for stricter punishments to errant officers.
- There must be provisions for disciplinary action against officials of State Pollution Control Board for their failure from time to time in checking and monitoring industrial operations as per safety norms and standards.
- An Ombudsman (with a retired high court judge and two high profiled, non-political public personalities and scientists) must be appointed to look into complaints of environmental pollution by industries, using hazardous materials.
- ❖ A High Power Committee must be appointed to assess the impacts of environmental damages at Kathikudam from inception of the NGIL and to suggest for compensation.
- An expert medical team must be appointed to make a thorough health survey within 2.5 kms radius to study the impacts of the sludge and effluents over a period of 30 years.
- Since the company uses a bacterium for effluent treatment, an investigation by a competent body may be conducted to examine the non-pathogenic/toxic nature of the same.
- ❖ The hazardous/non-hazardous and manurial nature of the sludge has to be evaluated by a competent body on a priority basis, until then its marketing must be suspended.

VIII. Conclusion

"We do not come under the purview of RTI Act, 2005" argues NGIL. "Indian courts have no jurisdiction to try us" says Union Carbide. 25000 innocent people died on 2/3 of December 1984 in Bhopal, in one of the worst industrial disasters in human history. The argument of the company has always been, "Union Carbide and its officials are not subject to the jurisdiction of the Indian court since they did not have any involvement in the operation of the plant, which was owned and operated by UCIL." The same reasoning could be adopted by NGIL if any thing goes wrong at Kathikudam too. They have all the more reasons to say that the KSIDC is also a stake holder in the operations. Huge profit from the company operations goes to the Japanese counterparts of the company, the Nitta Gelatin Inc and Mitsubishi Corporation.

1, 20,000 liters of hydrochloric acid per day is used by the company. The presence of huge tanks storing 30 lakhs liters of hydrochloric acid at the densely populated area of Kathikudam makes the situation potentially catastrophic and renders a nightmare to the local inhabitants. It makes them panicky as and when they read industrial disasters elsewhere in the country or outside.

Disrespect to the law of land, non-compliance of rules and regulations issued by the local governments, blatant denial of abject truths, harassment of Action Council members arresting and implicating them in fake criminal cases, misleading the courts, bribing police and public servants, and manipulating the media are common characteristics of both Coca Cola and NGIL. The cola company did not cooperate with the High Power Committee appointed by the State Government of Kerala for assessment of damages to the people and environment at Plachimada. It declared, the Committee was "illegal" and said, "The decisions of the Committee are not binding on us". The Committee had found that the cola company had violated a number of laws of the land, including Water Act, 1974, Environment Protection

Act, 1986, The Factories' Act, 1948, Hazardous Waste Rules, 1989, SC-ST Act 1989, Land Utilization Order, 1967 and the Kerala Ground Water Act among others. In 2003, the district medical officer had advised the people of Plachimada that their water was polluted and unfit for consumption. The Kerala Agricultural University had found that the fodder, milk, meat and egg samples collected from Plachimada area contained cadmium, lead and chromium was above the level prescribed by the World Health Organization.

The Committee's findings against the cola company are typically applicable to NGIL too. The Committee found that the cola company had caused the pollution of the ground water and that it would take years to mitigate the pollution. Besides the problems created by drawal of huge quantity of water, the solid waste (ETP sludge) from the factory exacerbated the crisis. Part of this material was dumped in landfill sites within the factory compound. Large quantities of it were trucked out and disposed off in the farmlands all around and far off places. The factory had impressed upon the peasants that it was good manure. The sludge had no nitrogen content but dangerous levels of cadmium and high levels of lead makes it a hazardous waste. Too much of cadmium in the soil has lead to the leaching into the wells. The presence of excess cadmium in the farmland has lead to nutrient imbalance in the soil. The farmlands, which had apparently very good soil structure got deteriorated in due course.

In the context, the findings and recommendations of the High Power Committee in the matter of Coco Cola must be taken equally applicable to the case of NGIL. The people living in the vicinity of the company have been the worst affected. The problems were further aggravated by the deterioration of agricultural lands by depositing the hazardous wastes in the farm land at the behest of the company. During the rainy season, these deposits have spread into paddy fields, canals and wells, causing serious health hazards.

The lessons we learned from the Union Carbide case and the Coke controversy are enough to be more vigilant in the matter of foreign investments in our land. Those industrial initiatives, no mater how big they are and how fabulous are their promises, should not be allowed to enter the country if they do not conform themselves to the laws of the land. NGIL should be asked to leave the country forthwith if it still holds the view that the statutory provisions of law of the land are not applicable to it. And we have all the reasons to believe - NGIL in the given circumstances IS AN IMPENDING DISASTER.

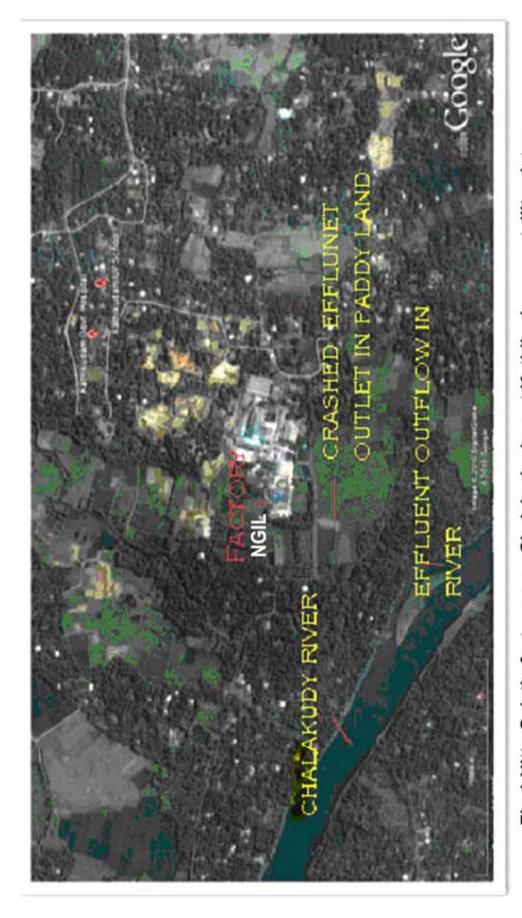


Fig 1 Nitta Gelatin factory near Chalakudy river at Kathikudam- a satellite picture

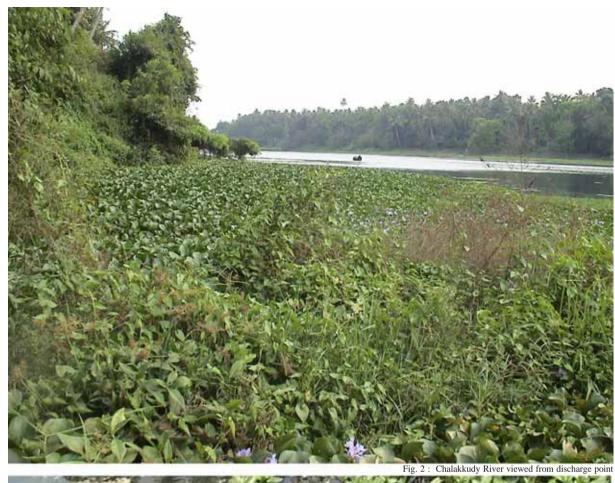




Fig. 3: Effluent sludge floating on river water

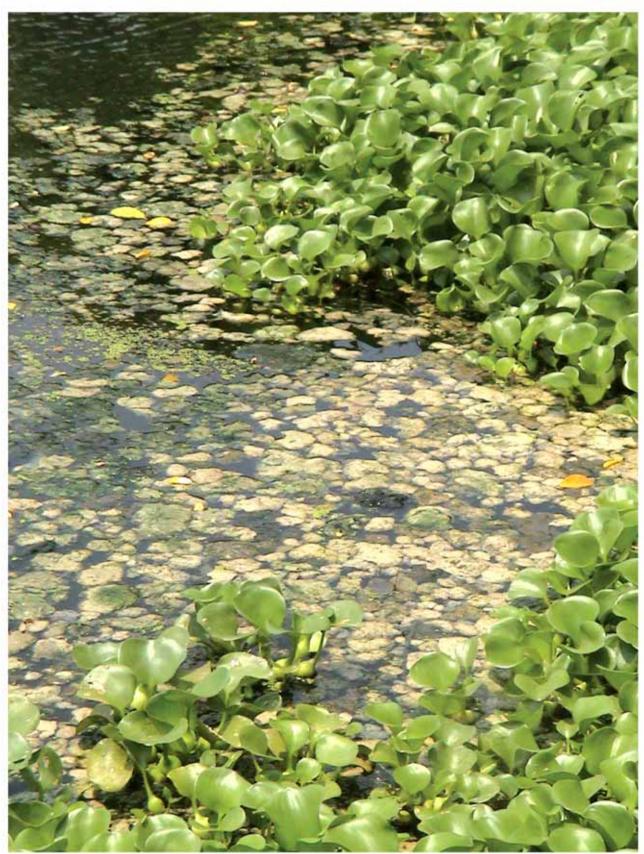


Fig. 4: Effluent sludge hidden among water hyacinth



Fig. 5: Heavy mass of sludge at close view



Fig. 6: Heavy deposits of sludge in the water

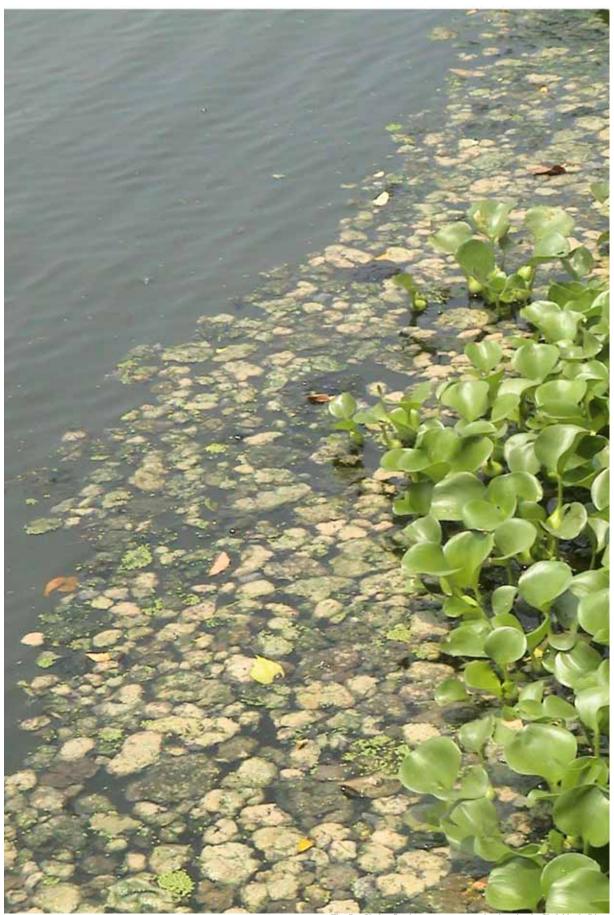


Fig. 7: Sludge floating on water at another location in Chalakkudy River



Fig. 8 : Sludge filled river



Fig. 9: Paddy field contaminated by effluent sludge



Fig. 10: Effluents being treated



Fig. 10: Compost in making



Fig. 11: Effluents being piped out to Chalakkudy River

Nitta Gelatin India Limited

(Formerly Kerala Chemicals and Proteins Limited)
of Kerala State Industrial Development Corporation Ltd. and Nitta Gelatin Inc

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63289

18th June 2008, Kochi.

Dr Alexander, Director of Research, Kerala Agricultural University, Vellanikkara, Trichur

Sir,

This refers to the telephonic conversation we had on 16th June, regarding associating with KAU for Project studies on the application of compost manure made from effluent sludge generated in our Ossein Division, Koratty, Trichur District, Kerala.

Let me briefly explain the background. As per the instruction from Supreme Court Monitoring Committee, in 2006, effluent plant sludge generated from our Ossein Division plant, was included in Hazardous category and we were asked to explain to CPCB and MOEF to get exemption from the purview of Hazardous wastes (Management and Handling) rules 1989 and amendments thereof.

Our company manufacture gelatine (used for pharma, food and photographic applications) from crushed cattle bone as the raw material. The waste items like fat, bonemeal, sinews contained in bone pieces are processed along with the raw effluent liquor and are recovered in the form of thick slurry of 8-9% concentration in our ETPlant, About 20 MT wet sludge are thus generated daily, which at present finds use as manure for various crops, either directly or as compost manure. We have analysed the various raw materials, products, water, compost manure, sludge etc for the hazardous elements and have made a mass balance study also. The safety and usability of the sludge had been proved by earlier studies done by Ms Kerala Agricultural University also. All these data were presented to expert committee comprising CPCB and MOEF members in Delhi in 2007 and in January 2008, we got exemption from hazardous catagory. But at the same time, a condition was included that the use of the compost manure has to be restricted to crops other than

food crops. Since we are supplying the manure to all type of crops and no negative effects have been reported so far, such a conditional qualification will restrict the off take of the manure and generate doubts in the users mind regarding the quality. Results of the earlier study have clearly pointed out that even though some of the elements are present, they are well within the limits prescribed. Most of the major categories of elements are absent also.

In this context, we propose to associate with KAU to conduct further studies on the application part of manure on fruit bearing trees, food crop plantations and prove that the fruits / crops do not cause any harmful effect and are safe to use. We request you to concentrate the studies initially on paddy, banana, and vegetables, being short term crops. Later we can consider other crops like coconut, cardamom etc. Please consider our request and send us suitable techno commercial proposal with schedule and details.

Thanking you,

For Nitta Gelatin India Limited

C.Srikumar

Head (Special Projects)

Results of analysis of products from M/S Kerala Chemicals & Proteins, Kochi

The following are the analytical data of the different materials supplied. It seems from data that the compost is good with respect to major and micronutrients. With respect to neavy metals, lead and chromium content are a little bit to the higher side the source for hare found to be coir pith as well as poultry waste. Cadmium and arsenic contents are to one of about 1 ppm. The physical nature of compost was found to be good and free ring. The CN ratio is around 9:1. The composition of coir pith may vary depending on the ce but heavy metal content of poultry wastes are common. Hence it is better to avoid ition of higher amounts of poultry waste in the compost. Under the above circumstances, product manure may be tried in the trials to be conducted with constant monitoring.

nber of samples analyzed

: Five Samples (3 replications)

- 1. Coir pith
- 2. Ayurvedic waste
- 3. Sludge cake
- 4. Poultry waste
- 5. Compost manure

7	Parameters	Coir pith	Ayurvedic waste	Sludge cake	Poultry waste	Compost
-	Moisture (%)	82.4	67	52.78	7.95	30.7
	pH	3.91	7.88	7.99	7.98	8.53
- 17	Organic carbon (%)	77.66	40.78	14.92	6.56	18.69
	Total Nitrogen (%)	1.6	1.16	3.6	0.11	1.67
_	Total Potassium (%)	0.114	0.339	0.05	1.5	2.75
7	Total Sodium (%)	0.438	0.066	0.183	0.27	0.318
-	Total Phosphorous (%)	0.105	0.079	3.84	2.58	4.29
	Total Sulphur (%)	2.71	0.43	0.98	1.11	1.24
	Micronutrients					
	Copper (Cu) ppm	65.3	18.48	24.2	66.7	58.6
)	Zinc(Zn) ppm	1-	24.85	157	187.1	102.8
	Iron(Fe) ppm	6079	915.15	2308.5	2736	3473
	Manganese(Mn) ppm	354.5	146.96	192.1	251.8	378.9
	Calcium (%)	0.71	1.99	31.67	13.19	35.42
	Magnesium (Mg) ppm	2840	1363	4414	95815	12681
	Boron (ppm)	35.65	16.13	4.25	ND	21.12
	Nickel (ppm)	72.4	45.45	15.2	8.6	ND
	Heavy metals					
	Chromium (ppm)	42.6	5.3	9.5	665.75	4.35
3	Lead (ppm)	245.7	38.63	11.7	115.49	25.36
)	Cadmium (ppm)	ND	1.36	0.05	ND	1.45
)	Aluminium (ppm)	426.13	227.27	ND	ND	ND
	Arsenic (ppm)	-	-	-	-	1.09

Dr. P. Sureshkumar Professor and PI RTL.COH

Vellanikkara 4.01.2009 1216

KERALA AGRICULTURAL UNIVERSITY

Radiotracer Laboratory, College of Horticulture, Kerala Agricultural University - 680 656, Thrissur, Kerala, India Phone: 0487-2371695

Name: Nitta gelatin

Number of samples analyzed: One compost Sample

Sl.No	Parameters	Sample I		
		Quantity	Remarks	
i	Nitrogen	0.91%	Above the requirement(0.5%)	
2	Phosphorous	3.66%	Above the requirement(0.5%)	
3	Potassium	0.8%	Below the normal(1%)	
4	Organic Carbon	18.5%	Above the requirement(16%)	
5	C:N Ratio	20.32%	Just above the optimum(20:1or less)	
	Micronutrients		8 9	
5	Copper (Cu)	14.8mg/kg	Nirmal	
6	Zinc(Zn)	97.4 mg/kg	Normal	
7	Iron(Fe)	3295 mg/kg	High	
8	Manganese(Mn)	443.6mg/kg	High	
	Heavy Metals			
9	Cadmium(Cd)	1.4ppm	Safe	
10	Chromium(Cr)	22.3ppm	Safe	
11	Lead(Pb)	2485ppm	Very High(unsafe)	
12	Nickel(Ni)	450ppm	High(Unsafe)	

The results show that the minimum requirements are not met with respect to C:N ratio and heavy metal like lead and Nickel

Dr. P. Sureshkumar Professor and Pl

RTL,COH

Vellanikkara 14-05-2010 IN THE COURT OF THE ADDITIONAL MUNSIFF, IRINJALAKUDA, Present; Smt. C. S. Sudha, B.A., LL.B., Additional Munsiff. Saturday, the 21st day of December, 1996/30th Agrahayana, 1918.

O. S. 76/1996.

 Kochudevassy, 82 years, S/o. Thelakkadan Kunjipailo, Kadukutty Desam, Kallur Vadakkumury Village, Mukundapuram Taluk.

: Plaintiffs.

2. George, 35 years, S/o. do. do. do.

By Adv. K. R. Thampan & Rajesh Thampan.

Kerala Chemicals and Protins Limites, Kallur Vadakkummury Village, Mukundapuram Taluk. Represented by Managing Director, Kathikudam P. O.

: Defendan

By Adv. E. I Devassy.

This suit having come up for final hearing before me on 17-12-96 in the presence of the counsel for both sides, and having stood over for consideration till this day the court delivered the following:-

JUDGMENT

Suit for money.

- 2. Plaintiffs residential house is situated at the distance of about 1/2 K. M from the defendant's company. The defendant company is situated at a higher level than the property of the plaintiffs. Two years after the starting of the company, is started creating pollution problems in the locality. The company started letting out polluted water in to the thodu situated near by and this resulted in contamination of the water in the surrounding areas. As a result of this the water which percolates in the wells situated near by became contaminated. The water in the plaintiff's wells also became contaminated. The plaintiffs and the people of the locality complained to the Kerala State Pollution Board regarding the pollution caused by the defendant company. When the report of the pollution Board came it was agreed by the defendant to pay an amount of Rs. 10/- per day for making alternate arrangements for bringing water to the plaintiffs residence as well as to the other residents of the locality. It was also agreed that one sack of lime will be provided every month for purifying the well water for the purpose of using it for other purposes than for drinking purpose. The 1st plaintiff's son has filed a suit as O. S.178/95 before the Sub Court, Irinjalakuda for abatement of the public nuisance being caused by the defendant company, when this was done the defendant stopped paying the compensation that was agreed to be paid to them. The plaintiffs contend that there is no change in the raw materials being used by the company and there is also no charge in the functioning of the company. Therefore the pollution still continues. Hence they contend that they are entitled to the amount agreed to be paid by the defendant company. Since the defendant company stopped the payments of the above side compensation the present suit has been filed for realising the said amount from the defendant.
- 3. The defendant company on the other hand contends that there was no bilateral contract between the parties and therefore there is no enforceable contract as such. The company also contends that no pollution is being caused as a result of the functioning of the company. After the company started functioning modernisation of the plaint was brought about which has resulted in the situation improving and now there is no pollution what so ever as alleged by the plaintiff:

117

The defendant admits that certain amounts were being paid to the plaintiffs but it was not paid for the reason alleged by the plaintiffs. The plaintiffs demanded employment in the company. This demand was not acceded to by the defendant and hence they started creating problems for the company and it was because of this the defendant agreed to pay the amounts as mentioned by the plaintiff. The payments were stopped when the pollution stopped. The defendant also admits that one sack of lime was being supplied but this was also stopped when the problems of pollution stopped. Hence the contention of the defendant is that they are not liable to pay any amounts as claimed by the plaintiffs.

4. The following issues were raised for consideration :-

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- 1. Whether the plaintiff is entitled to the amount as prayed for ?
- · 2. Reliefs and costs?
- Pw.1 and 2 and Dw.1 were examined. Exts. A1 to A6 B1 and X1 to X6 were marked.
- 6. Issue No. 1 :- The plaintiffs contend that as a result of the functioning of the defendant company pollution is being caused. The allegation of the plaintiffs is that contaminated water is let out by the company into the thodu situated near by and this results in contamination of the water in the near by areas. The contaminated water which is let out by the company percolates into the wells near by which results in contamination of the drinking water in the well situated near by. The water in the well in the plaintiff's property has also been contaminated as a result of the functioning of the company. The plaintiffs and the people of the locality complained to the Kerala State Pollution Board and when the report of the board came the defendant started paying an amount of Rs. 10/- per day for the purpose of enabling the plaintiffs and certain other persons of the locality in making alternate arrangements for providing drinking water. It is also alleged that one sack of lime was being provided to the plaintiffs for the purpose of purifying the well water which could be utilised for other purposes other than for human consumption. The 1st plaintiff's son filed a suit as O. S. 178/95 before the Irinjalakuda Sub Court for the purpose of abatement the public nuisance being caused by the company and when this was done the defendant stopped payments of the above said amount. Pollution according to the plaintiffs still continues and therefore they are entitled to the amounts agreed to be paid by the defendant. The defendant on the other hand contends that no pollution is being caused as a result of the functioning of the factory. They contend that their effluent plaint has been mechanised and after this mechanisation and modernisation no contamination of pollution is being caused. They admit that certain amounts were paid as alleged by the plaintiff. But the explanation is that the amount was given not because of pollution as alleged by the plaintiff but the plaintiffs had become a nuisance to the company and therefore the amounts were paid to them. The defendant contends that the 1st plaintiff demanded employment for his son in the company which was refused by the defendant. Because of this the plaintiffs started creating problems for the company and therefore it was in the circumstances the amount as mentioned by the plaintiffs were paid to them. They also contend that there is no bilateral contract which can be enforced by the plaintiffs.
- 7. The first contention of the defendant is that there is no bilateral contract between the parties to be enforced. The plaintiffs contend that there was an agreement by the company to pay an amount of Rs. 10/- per day for the purpose of making alternate arrangements for providing drinking water. It was also agreed that one sack of lime will be provided every month for the purpose of purifying the well water. When the 2nd plaintiff was examined as PW.1 he deposed that a resolution was passed by the company relating to the payment of compensation.

According to the defendant no contract or agreement was entered into between the parties. The General Manager (Personnel and Administration) who was examined as Dw.1 deposes that no resolution as alleged by the plaintiff was passed by the company. He deposes that the decision to pay compensation was taken by the works Manager of the company. This amount was paid because the plaintiffs were causing problems to the company. The 1st plaintiff has demanded employment of his son in the company which was refused by the company and hence they started creating problems for the company. The plaintiffs developed into a nuisance and several pressure tactics were adopted by the plaintiffs and because of this the amount as referred to above was paid. The plaintiffs herein had taken steps for directing the defendant for production of the documents relating to the payment of compensation to the plaintiffs. The defendant instead of producing these documents filed an affidavit stating that the documents asked for by the plaintiffs are every volumnious and therefore not possible of production. But I do not think that is a reason for not producing the said documents. In my opinion the defendant ought to have produced the documents relating to the payment of compensation to the plaintiff. The explanation that is given by the defendant for payment of compensation to the plaintiffs is difficult to believe. I understand why a Public Limited Company like the defendant company she and succumb to the pressure tactics if any adopted by the plaintiffs and even if the said tactics were adopted by the plaintiffs why the company should pay the compensation if there was no basis for the complaints being made by the plaintiffs. The deposition of Dw.1 that the amount was paid as per that decision taken by the Works Manager is also difficult to believe. I do not think the Works Manager alone can take such a decision without approval from the higherups in the company. Admittedly the defendant company is a Public Limited Company and therefore what ever amounts out going and in coming will have to be credited and proper accounts maintained. The counsel for the defendant was unable to answer to the query of the court as to under what head the amount paid to the plaintiffs was accounted for. Since the company is a Public Limited Company there will be definitely records to show the payments of the amounts. If the relevant documents were produced it would have been easy to ascertain as to under what head the payments were made. There will definitely be also documents in the company which shows the division taken by the company for the payments of the amount. I do not think the Works Manager of a public company alone can take a decision for payment of amounts to third parties. Hence I find that there must be some sort of agreement between the parties. The plaintiffs had taken the necessary steps for the production of the necessary documents. It is the defendant who is reluctant to produce the same. The production of the documents would have make clear the position. Hence in these circumstance I find that there must have been an agreement between the parties for the payment of the amount as alleged by the plaintiff.

8. The plaintiff contends that pollution still continues and the fact that pollution still continues is very clear from the evidence of Dw.1. Dw.1 admits that the company is still paying compensation to some people. He deposed that the payment of compensation can be stopped only when the final report from the Centre for Earth and Science (CESS) and Kerala Agricultural University who are conducting a study relating to pollution is obtained. Therefore it is very clear that the defendant still continues to pay the compensation to certain people. As I said earlier the payments of amounts can be only because of the pollution that is being caused by the functioning of the company because whyelse should the company make such payments if there is absolutely no basis for the complaints regarding

pollution. Moreover Dw.1 also deposed that the effluent plaint was mechanised and it was also changed. He deposes that the plaint was charged in 1988 also and after that no pollution is being caused. But inspite of that even after 1988 there is evidence to show that compensation is still being paid by the defendant to the plaintiffs. Therefore the reason for payments must only be that the pollution as alleged by the plaintiffs continued. In this context I refer to the documents produced in this case. Ext.A1 is the receipt obtained by the plaintiff from the Kerala State Board for Prevention and Control of water pollution. Ext.A2 series are the reports regarding the water of the plaintiff's well. Ext.A3 is the advocate notice Ext.A4 is the acknowledgment for the same. Ext.A5 is the reply notice. Ext.A6 is the letter given by the defendant to the plaintiffs which makes it very clear that the payment of amount of Rs. 10/- per day was being paid as alleged by the plaintiff. Exts. X1 series are the documents which shows the action taken by the Kadukutty Panchayat on the basis of the complaints received regarding pollution as a result of the functioning of the defendant company. The counsel for the plaintiff referred to Ext. A2 series which shows the percentage of Hydregen (PH Value) of water in the plaintiff's well. The PH value is reported to be 4.7. This according to the counsel is below the normal standard and hence it is clear that the water is contaminated. The contamination of the well water is only because of the functioning of the company and because of the activities of the company in discharging contaminated water. The counsel for the defendant argued that Ext.A2 series are of the year 1980 and after that much water has flowed under the bridge and several modernisations were brought about in the company as a result of which pollution has completely stopped. He pointed out to the deposition of the Pw.1 who said he has reports of recent origin which will show that the pollution still continues. The counsel argued that if that is true the plaintiff could have very well produced these reports to prove their case of pollution. He also referred to Ext.B1 which is the commission report filed by the Adv. Commissioner Chakkunni is O. S. 178/95 filed by the 1st plaintiff's son before the Irinjalakuda Sub Court. The Commissioner has reported that the PH value is 4.9. According to the Dw.1 the PH value of water varies from 5 to 7. Therefore the counsel pointed out that 4.9 is the PH value of the plaintiffs well water and therefore there is only a negligible difference between the accepted value of 5 to 7 PH value. The counsel for the plaintiffs pointed out that Dw.1 himself has deposed that if the PH value comes below 5 the water became acidic. Therefore the counsel argued that this shows that the water is not fit for human consumption. In this context I refer to Ext.B1 in which the commissioner says that he is not in a position to say definitely as to the extent of pollution being caused as a result of the functioning of the company. In my opinion the opinion of an expert has to be obtained relating to the extent of pollution being caused by the company. There is no concrete evidence or the opinion of a person who is well versed in this field to say as to the correct PH value or relating to the PH value of water which can be used for human consumption. But inspite of that from the available evidence it can still to be concluded that the pollution is being caused. Ext.B1 supports the case of the plaintiff. (A reading of Ext.B1 gives an impression that as a result of pollution water as well as vegetation in the immediate locality is being damaged. n addition to that Dw.1 has deposed that payments can be stopped only after the eceipt of the reports from CESS and Kerala Agricultural University. He also admitted that if pollution is being caused the company is liable to make the payments. As I referred to earlier it has also come out in evidence that the company s still paying compensation to the some of the owners of the paddy fields who and to stop cultivation because of the pollution being caused. The evidence in

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this case shows that pollution still continues and if that is so even according to Dw.1 the company is liable for paying compensation.)

The plaintiffs have also contended that one sack of lime was being provided by the company every month. The defendant admits that this was being supplied. Their contention is that the supply of this was also stopped because pollution stopped. I have already expreby opinion as to the reasons why I concluded lime as provided by the defendant. The plaintiffs have claimed that the value of lime for the relevant period. They claim that one sack of lime that is 50 Kg of lime costs Rs. 200/-. This fact is di-puted by the defendant. They contend that the price will only come Rs. 65/-. In the present case there is no concrete evidence as to the exact price of 50 Kg of lime. It is true that lime was provided by the defendant. But if the amounts or value of the same has to be realised it cannot be done without ascertaining the exact value or price of lime that was to be supplied by the defendant. From the available evidence it is not possible for this court to ascertain the exact value of one sack of lime. Hence in these circumstances I decline the prayer for grant of the price of lime at the rate of Rs. 200/-. As regards the payment of amount of Rs. 10/- I have already found that the plaintiff's are entitled to the same. Hence I find that the plaintiff is entitled to realise the amount of Rs. 2950/- which is the amount claimed as compensation for making alternate arrangements for providing drinking water. Issue answered accordingly.

9. <u>Issue No.2</u>:- The plaintiffs have been successful in showing that they are entitled to the payment of Rs. 10/- per day by the defendant as alleged by them. Hence the suit is partly decreed and the plaintiffs are allowed to realise the amount of Rs. 2950/- with interest at the rate of 6% per annum from the date of suit till decree from the defendant and his assets.

Dictated to the Confidential Assistant, transcribed by her corrected by me and pronounced in open court, on this the 21st day of December, 1996.

Sd/-C. S. Sudha, Additional Munsiff. 20

APPENDIX

Plaintiff's Exhibits

A1 -19-3-80	: Certified copy of Receipt No. 1144 - for Rs. 20/- in O. S178/95 on the file of Sub Court, Irinjalakuda issued by Chief Analyst
	Kerala State Board For Prevention And Control of Water
	Pollution Cochin to T. P. Kochudevassy.
A2 -19-3-80	: Certified copy of Analysis Report in O. S. 178/95 on the file of
	Sub Court, Irinjalakuda issued by do. to do.
A2(a)19-3-81	: Certified copy of Analysis Report in O. S. 178/95 on the file of
	do. issued by do. to do.
A3 -16-6-95	:Copy of Lawyer notice sent by Advocate Sri.M.V. Sathianarayaran
	to the Managing Director, Kerala Chemicals and Proteins (LTD)
	Kudikkadam
14-16-6-95	: Postal acknowledgment card.
A5 -21-6-95	: Registered Reply notice sent by Adv. Sri. E. I. Devassy to Adv.
	Sri. M. V. Sathyanarayanan.

A6 - 25-7-92 : Certified copy of letter in O. S. 178/95 on the file of Sub Court, Irinjalakuda issued by the Works Manager, Kerala Chemicals and Proteins LTD to M. R. T.P. Devassy.

Defence Exhibit

B1 -24-3-95 : Certified copy of commission report in O. S 178/95 on the file of Sub Court, Irinjalakuda.

Witness Exhibits

X1 -29-11-94: Copy of Minutes No. 369 of Meeting held on 29-11-94.

X2 -30-11-94: Copy of letter No. C-145/94 sent by the Secretary, Kadukutty Grama Panchayath to the General Manager, KCPL, Kathikudam.

X3 -18-1-95 : Copy of Application submitted by the secretary, Kadukutty Grama Panchayth before to the Pollution Controller Board.

X3(a)10-7-92 : Copy of letter No. D.343/92 issued from the Executive Officer, Kadukutty Panchayath to do. do.

X4 -24-5-96 : Copy of Minutes held on 24-5-96.

X5 -27-5-96 : Copy of letter No. C 145/96 issued by the Secretary, Kadukutty Grama Panchayat of the Director CESS, Thiruvananthapuram.

X6-12-9-96 : Copy of letter No. C. 264/96 issued from do. to do. water Analyst, Regional Analytical Laboratory, Kochi -30.

Witnesses

Plaintiffs' Witnesses

Pw.1 : O. K. Sreedharan.

Pw.2 : George.

Defence Witnesses

Dw.1 : Joy Kutty.

Dw.2 : U. A. Chakkunny, Commission Advocate.

Id/Additional Munsiff.

" True Copy "





കാടുകുറ്റി ഗ്രാന പഞ്ചാം ത

(സ്പോഷ്യട്രീ യുത്രം 🖰)

കാടുകുറ്റി പി.പേ, ചാലങ്ങൂടി വലി, തൃശൂർ ജില്ല - ഒര 3:5

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പ്പഷിതൻ

പ്രസിഡന്റ് / സെക്രട്ടറി,

മാരനുളർ നിറ്റ മുലാറ്റിൻ ക്യാരാഗ് ഹെസവറെ അറ്റ് റിക്കേത് താരുളുടെ കമ്പതിയിൽ നിന്നും പുറെ തുടുട്ടുന്ന വരമവം താരുളുടെ ക്യവരിൽ നിന്നും പുറെ തുടുട്ടുന്ന വരമവം

രാസവ<u>ന്റ</u> കോളം വെ പ്രവർത്തനവും കൂർഗസാവും മൂലാ ചെന്നിച്ചു വരാത്തിരിക്ക പരിസരത്തു താമസിക്കന്നവർക്ക് മാറാ ഭരാഗങ്ങൾ പിടിച്ചു വരാത്തിരിക്ക യാത്തെന്ന് പരിസരവാസിക്ക് പത്തായത്തിൽ പരാതിച്ചെട്ടിടിക്ക് അ

പരമ്പായ ത്തിന് നിന്മുള്ള അബ്ലേക്ക് അവ് മാൻ മറിന്റെ പരായി പരിയുടെ സ്വാപിച്ച കുളിൽകൂടി വലിന്റെ അക് പുറാ നുള്ള നാണ് പുര്യിൽ നിന്നും കെടിന്റെ വെട്ടോ പന്റെ വള്ള നാണ് കരിന്റെ കെടിന്റെ വെട്ടോ പന്റെ വള്ള താന്റെ കെടിന്റെ ക്രിവര് ക്രുത്ത് ക്രിവര് ക്ര



കാടുകുറ്റി ഗ്രാമ പഞ്ചായത്ത്

(സ്പെഷ്യൽ ഗ്രേഡ്)

കാടുകുറ്റി പി.ഒ., ചാലക്കൂടി വഴി, തൃശ്ശൂർ ജില്ല - 680 315

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പ്രഷിതൻ

പ്രസിഡന്റ് / സെക്രട്ടറി,

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THOTTATHIL B. RADHAKRISHNAN, J

WP(C).NO. 20891 OF 2009

DATED THIS THE 27th DAY OF JULY, 2009

ORDER

The petitioner is an establishment which has a consent to operate, issued by the Kerala State Pollution Control Board. Ext.P4 is issued by the respondent panchayat requiring it to stop its activities for 15 days from 20.7.2009 on the ground that a pipeline carrying the discharge from the establishment is broken resulting in hazardous materials being moved to a water stift. Since Ext.P4 recites of inspection by the RDO, Tahsildar, Pollution Control Board and health authorities, on 24.7.2009, it was ordered that copies of this writ petition be given to the learned Government Pleader and learned Standing counsel for Pollution Control Board, Learned Government Pleader has obtained instructions of the RDO and the Tahsildar and states that they had inspected the site and it appears that the problem arising out of the situation referred to in Ext.P4 appears to have been abated, though recurrence may be likely. The learned standing counsel for the Pollution Control Board states, on instructions, that there

was some overflow resulting out of a preakage of one of the examination holes(manhole) of the outlet and that the petitioner establishment has the complaint that there could be certain anti social activities leading to the debris and sludge. Whatever that be, having issued the consent to operate, it is the bounden duty of the Pollution Control Board officials to ensure that the establishment operates only in terms of the consent. It is the Pollution Control Board which is the expertise to ensure that the norms are followed and the materials are maintained within permissible limits.

- 2. In the light of the aforesaid, this writ petition is admitted and notice is ordered to the respondent. The Kerala State Pollution Control Board, represented by its member secretary and the RDO, Thrissur are impleaded as additional respondents. Learned standing counsel for Pollution Control Board and the learned Government pleader takes notice on behalf of those additional respondents.
- 3. Having regard to the aforesaid facts, it is ordered that the petitioner will be entitled to operate the unit and Ext.P4 will stand suspended to enable such operation, however that such

Wpc 20891/2009(order)

operation shall not be commenced or carried on without the clearance of the competent authority in the Pollution Control Board. Learned counsel for Pollution Control Board states that the petitioner can commence operations provided they abide by the directions contained in Ext.P4 regarding management of the sludge, to the satisfaction of the Environmental Engineer, District Office, Thrissur.

Hand over.

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THOTTATHIL B. RADHAKRISHNAM,

lgk/28/7

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Assistant Registear.

V.K. MOHANAN
President
Kadukutty Grama Panchayat
KADUKUTTY
Ph: 2719628 (Off)



Vallathuparambil House Kakkad, Kathikudam P.O. KORATTY - 680 308 Ph: 2731717 (Resi) Mob: 9447466494

Date: 30-7-09

മ്പായു ത്യായ്യായുന്ന് ഇപ്പം പ്രിച്ചുന്നു ക്യായുന്നു ഇപ്പം പ്രിച്ചുന്നു

> വിഷയം: NGIL കുമ്പനിച്ചുടെ വലിനിക്കാര തനം സംബന്ധിച്ചു

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President

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Mob: 9447466494

Date: 30-7-09

നളിച്ചിന്ദന്നം. അത്തുക്കാരം പ്രവാക്ക കുമ്പപ്പെ പയാപ്രത്യാൻ പ്രാദ്രവാ പ്രാധാന്യമുട്ടവാ തുള്ളത്ത 28-07.2009 രാതിമതൽവുന്നതാ എ 101000 2 mon and along (Books) ത്രാക്കയുടെ താന്തിൽ എന്നു പരിച്ചാരുക്കു of the contraction for the the course resident of the contract of Boy com Brown on my cos and for mondan ! Barren 00000 Capus 27-7-09 -00 1 Mapos Carea con com con to the little case to some of Element of the Company in the company was in 1 ore som 39 Mod (P4) wood on Brogramus on 21 % rolling on 1 m Salis faction Certificate Brown on moral Baragare (Stranger & moderne con commoderne con control con control contr 30-60-4-4 poly 300 gmb at -4-09-06 ബഹ് : മുമ്പായം വരുത്തി എന്നു വേഷം Brum Debo, 2 framo roman o mondro o and rot

> President Kadukully Grama Panchayata

V.K. MOHANAN
President
Kadukutty Grama Panchayat
KADUKUTTY
Ph : 2719628 (Off)



Vallathuparambil House Kakkad, Kathikudam P.O. KORATTY - 680 308 Ph: 2731717 (Resi) Mob: 9447466494

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President Kadukulty Grama Panchayan

.K. MOHANAN President Kadukutty Grama Panchayat KADUKUTTY Ph: 2719628 (Off)



Vallathuparambil House Kakkad, Kathikudam P.O. KORATTY - 680 308 Ph: 2731717 (Resi)

Mob: 9447466494

Date: 30-7-09

now also and esting of row of all only somily nula 800, When Satisfaction Certificate or of Edin Dayo Muranago on som & Blavold Som Brown Be con Con con on son of son on all son on all 202 mo-

ഭക്ഷി: യെട്ടറി Sold Sold Stranger Company

Kadukulty Grama Panchayath



Sectt. 37 GPM. 3/460/95. 14 Lakhs.



GOVERNMENT OF KERALA

ഡ്രെടറി

നം: 5927/ജി3/97/ജാ.കം. വം ജാരോഗ്യ കുടുംബക ഷ്മ (ജി)വകുപ്, തിരുവനന്തുപുരം, തിയതി: 30.4. 98

കാനികുടം പി.ഒ, കൊനടി, തൂശൂർം

wy.

വിഷ**ം: - കേരള മൈികർസ് അൻറ് പ്രോടിൻസ് ഹാ**ക്ടറി മൂലമുള്ള മലിനികരണം **സ്റ്റെസ്**വിച്ച്.

സുചന: - താങ്കൾ 10.1. 96-ൽ ജാരോഗ്യ വകുപ്;് മന്ത്രിക്യ് നൽകിയ നിവേദനം.

സൂചന പ്രകാരം ലഭിച്ച നിവേദനം സംസ്ഥാന മലിനികമനെ നിയന്ത്ര നോർഡു മുഖന് അനേഷിച്ചു. പരാതിയിൽ പറഞ്ഞിരിക്കുന്നതുപോലെ ജലമലിനികരണത്താൽ ഭൂഗർഭ ജലമലിനികരണം ഉണ്ടാകൃത്താനയി തെളിഞ്ഞികുണ്ട്. പ്രസ്ത്യത മലിനികരണം തടക്കൻ ജാവശ്യമായ നടപടിക്ക് സ്വീകരിക്കാൻ കംപനികയാട് കർശനമായും നിർദ്ദേ ശിച്ചിടുണ്ട്. ജാ വശ്യമായ -മലിനികരന്ന നിയന്ത്ര നടപടികൾ സ്വീകരികാൻ കം പനി സമ്മതികുകയും ചെയ്തിടുണ്ട്. ഇകാര്യത്തിൽ കംപതി സ്വീകരിക്കു ത നടപടികൾ മോർഡു് തിരീകയിക്കുകയും മലിനികരണം ഉലിലാതാകാൻ നടപടികൾ

വിശാസ്തതയോടെ. ഒപ്/— ജി.മൃത്തയെക്ഷ്മി. അത്ടർ സെകാടരി. സെകാടരിഷം വേണ്ടി.

അംഗി കാരത്തോടെ.

നെക്ഷൻ ഓഫിനർ.



Telephonu & Far : 19487 - 23841689 E-mail : ksp-bts// e-diffmail.com கேல் இரு (106(1929) பி. பூசியிக்கை மிய(மில் லில்ப் மிருமை) செய்யிக்கை மிய(மில் லில்ப் மிருமை) செய்யிக்கை மி. க. முழுக் - 600 002 Kerala State Pollution Control Board

District Office: Poonkunnam PO. Thrissur - 680 002

in raply please refer to :

Registered with A/D.

)ate

PCB/TSR/CA/8/97

29.03.08

Notice

WHEREAS M/s. Kerala Chemical & Protiens Pvt. Ltd. situated in survey nos. 1292, 1301, 1302,1303,1304,1307,1308 of Kallur Vadakkummury Village, Mukundapuram Taluk, Thrissur District comes under the purview of Water(Prevention and Control of Pollution) Act and is bound to comply with the conditions of the Consent issued there under;

WHEREAS the establishment comes under the purview of Environment (Protection) Act and is bound to comply with the effluent standards prescribed in the Environment (Protection) Rules:

WHEREAS the Board have issued consent under the Water Act valid up to 30.06.2009 to operating the factory at Kathikundam to produce 1865 t/month of ossein and dicalcium phosphaie;

WHEREAS the maximum quantity of effluent discharged from your factory into chalak udy River after achieving the quality specified in the consent order shall be 62,50,000 litre/day;

WHEREAS during inspection to the unit from this office on 19.03.08 it was noticed that the production capacity of the unit has been increased to 80 t/day without intimating the Board or without Board's permission;

WHEREAS it was also noted that the effluent treatment plant is not operating properly;

WHEREAS the existing effluent treatment plant is adversely affected due to the increase in the quantity of enfluent consequent to the enhancement in production rate;

WHEREAS during inspection the industry is seen engaged in the manufacture of bio-fertilizer

utilizing the sludge without Board's permission;

WHEREAS you have not produced the clearance from the MOEF that your ETP sludge is non-

hazardous;

WHEREAS adequate precautionary measures are not provided in the bio-fertilizer plant for

preventing the odour nuisance and contamination of land;

WHEREAS you have not complied with the consent condition. No. 2.4 and violated the

provisions of the Water (Prevention & Control of Pollution) Act and Environment Protection

Act:

NOW THEREFORE you are hereby given notice that the Board proposes to issue a direction

under Section 33A of the Water Act which includes direction for the closure, prohibition or

regulation of the unit or to direct the appropriate authority to disconnect the supply of electricity,

water or any other service to your establishment.

You may file with the undersigned, objection if any, regarding the said directions within

15 days of the service of this notice with copy to the Member Secretary, Kerala State Pollution

Control Board, Plamoodu, Pattom P.O. Thiruvananthapuram - 695 004.

Dated this the twenty nineth day of March 2008.

For and on behalf of the Kerala State Pollution Control Board

Environmental Engineer

To

The Managing Director Kerala Chemicals & Protiens Pvt. Ltd, Kathikudam, Koratty

Copy to:

1. The Member Secretary, Thiruvananthapuram.

2. Secretary, Kaltur-Vedekkumnius/Panchayah



കേരള നിയമസഭാ സെക്രട്ടേറിയറ്റ്

സെക്രട്ടറി, നിയമസഭ.

四十次3分。 のかいあらり あいいある。 あいいある。 あいである。 からのるな。 のあいまう のあいまう のあって、 のまって、 のまで、

താങ്കൾ സമിതിക്ക് സമർപ്പിച്ച നിവേദനം സംബന്ധിച്ച് ഗവൺമെന്റിൽ നിന്നും ലഭിച്ച റിപ്പോർട്ട് സമിതി പരിഗണിച്ചു. റിപ്പോർട്ടുവിവരം താങ്കളുടെ അറിവിലേക്കായി ഇതോടൊപ്പം ചേർക്കുന്നു.

ഗവൺമെന്റ് റിപ്പോർട്ട് സംബന്ധിച്ച താങ്കളുടെ പ്രതികരണം ഒരു മാസത്തിനകം ഈ സെക്രട്ടേറിയറ്റിൽ അറിയിക്കുവാൻ താല്പര്യപ്പെടുന്നു.

വിശ്വസ്തതയോടെ,

किन्ति कारकार मुक्तान मारकार .

അണ്ടർ സെക്രട്ടറി, സെക്രട്ടറിക്കുവേണ്ടി.

KNPP. 572/2009(1).

പരിസ്ഥിതി വകുപ്പിൽ നിന്നും ലഭിച്ച റിപ്പോർട്ട് ചുവടെ ചേർക്കും പ്രകാരമാണ്.

"തൃശ്ശുരിലെ കൊരട്ടിയിൽ സ്ഥാപിച്ചിട്ടുള്ള കേരള കെമിക്കൽസ് ആന്റ് പോട്ടീൻസ് ലിമിറ്റഡ് എന്ന സ്ഥാപനം 25.95.2000 ലും 03.06.2002 ലും കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡുദ്യോഗസ്ഥർ സന്ദർശിച്ച് മലിനീകരണ നിയന്ത്രണ നടപടികൾ സംബന്ധിച്ച് ആവശ്യമായ നിർദ്ദേശങ്ങൾ നൽകുകയും ആയത് നടപ്പിലാക്കുന്നതിന്റെ പുരോഗതി നിരീക്ഷിച്ചു വരികയും ചെയ്തിരുന്നു.

പ്രസ്തുത കമ്പനി ഇപ്പോൾ പ്രതിമാസം 400 ടൺ ഓസീൻ, 250 ടൺ ലൈമ്ഡ് ഓസീൻ, 1215 ടൺ ഡൈ കാൽസ്യം ഫോസ്ഫേറ്റ് എന്നിവയുടെ ഉൽപാദനത്തിൽ ഏർപ്പെട്ടിരിക്കുന്നു. ഉൽപാദന പ്രക്രിയയിൽ പ്രതിദിനം ഉണ്ടാകുന്ന 62.50 ലക്ഷം ലിറ്റർ പാഴ്ജലം ശുദ്ധീകരിക്കാൻ കെമിക്കൽ ട്രീറ്റ്മെന്റും ബയോളജിക്കൽ ട്രീറ്റ്മെന്റും നടത്തുന്നു. ഈ കമ്പനിക്ക് കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡിന്റെ 30.06.2009 വരെ സാധുതയുള്ള ജല, വായു, പരിസ്ഥിതി നിയമങ്ങൾ പ്രകാരമുള്ള പ്രവർത്തനാനുമതിയുണ്ട്.

കമ്പനിക്കെതിരെ മലിനീകരണ നിയന്ത്രണ ബോർഡിൽ ലഭിച്ച പരാതിയുടെ അടി സ്ഥാനത്തിൽ 19.03.2008-ൽ മലിനീകരണ നിയന്ത്രണ ബോർഡുദ്യോഗസ്ഥർ കമ്പനിയിൽ പരിശോധന നടത്തി. തത്സമയം കമ്പനിയുടെ ഉൽപാദനശേഷി പ്രതിദിനം 85 ടൺ ആയി ഉയർത്തിയതായി അധികൃതർ അറിയിച്ചു. എന്നാൽ മലിനീകരണ നിയ ന്ത്രണ ബോർഡിന്റെ അനുമരി കൂടാതെ മലിനജല സംസ്ക്കരണ പ്ലാന്റിൽ നിന്നുള്ള ന്യൂഡ്ജ് ഉപയോഗിച്ച് കാപോസ്റ്റ് ഉണ്ടാക്കുന്നതായി കണ്ടു. പരിശോധനാ സമയത്ത് സംസ്ക്കരിച്ച മലിന ജലത്തിന്റെ സാമ്പിൾ ശേഖരിച്ചു. പരിശോധിച്ചതിൽ അതിലെ ഘട കങ്ങൾ മലിനീകരണ നിയന്ത്രണ ബോർഡ് അനുവദിച്ചതിലും കൂടുതലായാണ് കണ്ടത്. തുടർന്ന് മലിനീകരണ നിയന്ത്രണ ബോർഡ് 29.03.2008-ൽ കമ്പനിക്ക് കാരണം കാണി ക്കൽ നോട്ടീസ് നൽകി.

നോട്ടീസിനു മറുപടിയിൽ ഉൽപാദന പ്രക്രിയയിൽ തന്നെ മലിനജലം പുന:രുപയോഗിക്കാനും മലിനജലത്തിൽ നിന്ന് ഡൈ കാൽസ്യം ഫോസ്ഫേറ്റ് വേർതിരിച്ചെടു ക്കാനും നടപടിയെടുക്കുന്നതായി കമ്പനി അറിയിച്ചു. മലിനജല ഗുണനിലവാരം തൃപ്തികരമാക്കാൻ 3 കൊഴുപ്പ് സെപ്പറേറ്ററുകളും കൂടുതലായി 2 ഏറേഷൻ ടാങ്കുകളും എല്ലിന്റെയും മറ്റും പൊടികൾ വേർതിരിക്കാനായി റോട്ടറി സ്ക്രീനുകളും ഏർപ്പെടുത്തി യെന്നും, ഇവിടുന്നു ലഭിക്കുന്ന സ്ലഡ്ജ് വളമായി ഉപയോഗിക്കുന്നുവെന്നും എല്ലു പൊടി ബോൺമീൽ സംപിൽ നിന്ന് പുന:രൂപയോഗത്തിനായി എടുക്കുന്നുവെന്നും കമ്പനി അറിയിക്കുകയുണ്ടായി.

02.07.2008-ൽ വീണ്ടും മലിനീകരണ നിയന്ത്രണ ബോർഡുദ്യോഗസ്ഥർ കമ്പനി പരിശോധിച്ചു. പരിശോധനാ സമയത്ത് ശേഖരിച്ച ശുദ്ധീകരിച്ച പാഴ്ജലത്തിന്റെ പരി ശോധാനാ ഫലത്തിൽ ക്ലോറൈഡ് (chloride) ഒഴിച്ചുള്ള എല്ലാ ഘടകങ്ങളും പരിധിക്കു ഉളിലാണെന്ന് കണ്ടു.

വെള്ളത്തിൽ നിന്ന് ക്ലോറൈഡ് വേർതിരിക്കുന്നത് വളരെ പ്രയാസകരമാണ്. കമ്പനിയോട് ക്ലോറൈഡ് മാറ്റാൻ പാഴ്ജലം കോൺസൻട്രേറ്റ് ചെയ്യാനോ ബാഷ്പീകരി ക്കാനോ നിർദ്ദേശം നൽകിയിട്ടുണ്ട്. ഇക്കാര്യത്തിലുള്ള പുരോഗതി മലിനീകരണ നിയ ന്ത്രണ ബോർഡ് നിരീക്ഷിച്ചു വരികയാണ് എന്ന് മെമ്പർ സെക്രട്ടറി അറിയിച്ചിട്ടുണ്ട്."

H/(03-12-09)

Kerala State Industrial Development Corporation Limited



Keston Road, Kowdiar Thiruvananthapuram 695 003, Kerala, India Phone: 91-471-2318922 Fax: 91-471-2315893 E-mail: ksidc@vsnl.com Website: www.ksidc.org

Ref: KSIDC/TVM/RTIA/2009-10/442_

13..05..2010

Ms.Hema K. Sreedharan, Law Officer, Jananeethi P.B.No. 8, Mannuthy P.O., Thrissur 680 651.

Madam,

Sub: Information under Sec.6 of the Right to Information Act, 2005.

In continuation to our letter No.KSIDC/TVM/RTIA/2009-10/170 dtd. 19.04.2010, we have to inform you that we have received reply from M/s. Nitta Gelatin India Ltd. [NGIL] that they do not come under the purview of the RTI Act 2005 and therefore are not able to provide the information as sought by you.

Yours faithfully, for KERALA STATE INDUSTRIAL DEVELOPMENT CORPORATION LTD.

RANJITH J J

ASST. GENERAL MANAGER & PUBLIC INFORMATION OFFICER



Kerala State Industrial Development Corporation Ltd.

Keston Road, Kowdiar, Trivandrum 695 003, India

Phone: 91-471-2318922 Fax: 91-471-2727269, 2315893 e-mail: ksidc@vsnl.com

KSIDC/TVM/RTI/10-11/12 / 886

18-06-2010

Ms. Hema . K. Sreedharan Law Officer Jananeethi PB No: 8 Mannuthy .P.O Thrissur – 680 651

Madam,

Sub: Information on M/s Nitta Gelatin India Ltd .

Ref: Your appeal dated 21/05/2010

We are in receipt of your appeal to the Appellate Authority regarding information on M/s Nitta Gelatin India Ltd. As M/s Nitta Gelatin India Ltd is a private company, KSIDC has no locus standi to direct M/s.Nitta Gelatin to provide information sought by you.

Alkesh Sharma IAS

Maraging Director & Appellate Authority
under the RTI Act.

ALKESH SHARMA IAS
MANAGING DIRECTOR
KERALA STATE INDUSTRIAL
DEVELOPMENT CORPORATION LTD
THIRUVANANTHAPURAM 695 003

KERALA STATE POLLUTION CONTROL BOARD CENTRAL LABORATORY, KOCHI-682020. FORM II REPORT OF THE BOARD ANALYST

(See rule 27)

Report No PCB/CL/CKS/LS-3/2009

Date: 15th April 2009

I hereby certify that I ,Shaji C.K., Board Analyst duly appointed under subsection (3) of section 53 of the water (Prevention and control of pollution) Act, 1974 (Act 6 of 1974) received at 11.00 AM on 28-03-2009 from Sri.M.N.Krishnan, Assistant Engineer, Kerala State Pollution Control Board, District Office, Thrissur, 1) a sample of river water (Bottle No. S1) collected at 4.30 PM from Chalakkudy River near discharge point of trade effluent from M/s Nitta Gelatin 2) a sample of Sludge (Bottle No.W1) collected at 4.30 PM from Chalakkudy River near discharge point of trade effluent from M/s Nitta Gelatin 3) a sample of Trade effluent (Bottle No. S3) collected at 5.30 PM from authorised outlet of M/s Nitta Gelatin and 4) a sample of ETP sludge (Bottle No.R1) collected at 5.30 PM from Rotary vacuum filter of M/s Nitta Gelatin ,by him on 27-03- 2009 ,for analysis. The same were in a condition fit for analysis as reported below:

I further certify that I have analysed the aforementioned samples on 28-03-2009 to 15-04-2009 and declare the result of the analysis to be as follows:

Water& Effluent Sample

SI.No	Parameter	Unit	Sample Nos.		Method of
			Bottle No. S1	Bottle No. 53	Analysis
1	рН	-	6.1	6.6	As per IS:3025
2	B.O.D (5 days at 20° c)	mg/l	0.8	18.0	*
3	Chemical Oxygen Demand	**	3.2	48.0	As per IS:3025
4	Suspended Solids	"	8.0	93.0	el.
5	Chloride(as Cl)	"	40.0	4,000.0	
6	Phosphate (as PO ₄)	"	0.12	2.81	"
7	Ammoniacal Nitrogen (as N)	"	0.12	50.0	и
8	Oil & Grease	и	BDL	BDL	u

Sludge Samples

SI.No	Parameter	Unit	Sample Nos.		Method of
			Bottle No. W1	Bottle No. R1	Analysis
1	Oil & Grease	mg/kg	100.0	31,800.0	**
2	Phosphates (as PO ₄)	"	3,664.0	BDL	**
3	Calcium Compounds (as Ca)	. "	90,000.0	2,60,000.0	**

Note: BDLmeans below detection limit

*As per Standard Methods for the Examination of Water & Waste Water 20th Edition jointly published by MAX AWWA and WPCF.

** As per Laborator Manual for Analysis of Solid Waste (Sludge) by CPCB, AARI

THRISOUR

O. CHITHRA KUMPARI Engine P.T.O

O. CHITHRA KUMPARI Engine P.T.O

ENVIRONMENTAL CONTROL THRISOUR.

The condition of seals, fastening and container on receipt was as follows

The effluent samples were contained in 2.5 litre brown coloured glass bottles and sludge samples in plastic bottles, securely sealed with sealing wax. There was no leak. The impressions both on the seal and on the attached tags were representative of the Kerala State Pollution Control Board and of Sri. Shaji Mohan, General Manager, M/s Nitta Gelatin India Ltd, Kathikudam, Chalakkudy and Sri. V.K.Mohanan, President, Kadukuthy Grama Panchayat, Kadukuthy, Thrissur. The impressions of each party on the seal and the tag were identical. The tag contained the signature of

- 1. Sri.M.N.Krishnan, Assistant Engineer, Kerala State Pollution Control Board, District Office, Thrissur.
- 2. Sri. Shaji Mohan, General Manager, M/s Nitta Gelatin India Ltd, Kathikudam, Chalakkudy.
- 3. Sri. V.K.Mohanan, President, Kadukuthy Grama Panchayat, Kadukuthy, Thrissur

The seals were opened by me just before analysis

Signed this the 15th day of April 2009

GENTRAL LABORATORY COCHIN-20 SA

Signature

Address

Shaji C.K.,
Asst. Environmental Scientist (H.G)
Kerala State Pollution Control Board,
Central Laboratory,
Gandhi Nagar, Kochi-20.

(Board Analyst)

C. K. SHAJI

Asst. Environmental Scientist (H.G)

Kerala State Pollution Control Board

Central Laboratory

Gandhi Nagar, Kochi-20

To 11:11:11

The Member Secretary,
Kerala State Pollution Control Board
Pattom Palace P.O,
Thiruvananthapuram-695004

Copy to:

Sri.M.N.Krishnan, Assistant Engineer, Kerala State Pollution Control Board, District Office, Thrissur.



D. CHITMRA KUMARI

PRELIMINARY REPORT OF THE EXPERT COMMITTEE VISIT TO NITTA GELATIN LIMITED

10th August 2009

Background of the Expert Committee Visit to Nitta Gelatin Company

M/s. NITTA GELATIN INDIA LIMITED established in 1979, located at Kathikudam, Kadukutty grama panchayath near Chalakkudy is a company engaged in manufacturing Ossein and Limed Ossein and Dicalcium Phosphate (DCP), as the main products. Meat Meal, Sterilized Bone Meal and Compost from sludge are byproducts from the company. The raw materials for the manufacture of the products as per the company version are Crushed Bone, Hydro Chloric Acid, Lime and Water. The company operates with shares from Nitta Gelatin, Kerala State Industrial Development Corporation (KSIDC) and the public.

The residents have been complaining air pollution and water pollution in the Chalakkudy River against this Company apart from health hazards. Though sporadic agitation against the company has been erupting since many years, there have been no consistent efforts so far. Protests and litigations had taken place earlier too. Since 2006, people's resistance to pollution has regained momentum and there has been consistent agitation to stop discharging the effluents into the Chalakudy River and abate the air and water pollution. A recent survey conducted by social work students has revealed the incidence of respiratory troubles, skin disorders, cancer and thyroid in the company impacted panchayath ward.

The trade union leaders of the company had requested many persons/organizations supporting the struggle, to visit the company for a first hand assessment of the pollution control arrangements made and to suggest further measures if necessary. The Chalakudy Block Panchayath President also supported a fact finding visit.

It is against this background, the environmental activists formed a panel of experts consisting of members representing industry, environmental activists, human rights activists, scientists and representatives of the Pollution Control Board. The panel so constituted comprises of the following members.

- Dr.N.Chandra Mohan Kumar, Head of the Department, Chemical Oceanography, Marine science. CUSAT
- Smt. D.Chitra Kumari, EE, KSPCB.
- Purushan Eloor, PMVS & Former Member LAEC.
- Jacob .V Lazer, PUCL & Former Member LAEC.
- 5. Dr.A.Latha, Chalakudy Puzha Samrakshana Samithy
- 6. S.P.Ravi, Chalakudy Puzha Samrakshana Samithy
- M. Asokan, Industrialist & Former Member LAEC

The Visit and Main Observations

The expert committee made a detailed visit to the company on 10th August 2009 from 12 noon to 5 pm including discussion with the management, staff and the union.

The Industry is located nearly at a distance of 1km from Chalakkudy River on the left bank. However, the company has provided an out let into the River by laying a pipe underground for discharge of treated effluents.

The industry secures it raw material namely crushed bone from authorized agencies and Hydro Chloric Acid from TCC Ltd. at Eloor. As per the company the daily requirement of Crushed bone is 80 tons and that of HCl is 80 tons (4% HCl is used). They also purchase Rock Lime from Rajasthan for the production of limed ossein and DCP precipitation.

The production process mainly involves the following as observed;

- Pre treatment of received crush bone and conveying the same to Rotary Washer the dry sinew is passed on into a meat meal plant
- 2. Washing the raw material with hot water
- Acidulation with 4 % HCl at less than 1.5 pH. Acidulation of the crushed bone would take 5-6 days and the acid is again reused
- 4. The Mono Calcium Phosphate produced from acidulation is passed on to the DCP plant for production of DCP
- 5. The Ossein is passed into washing and acid neutralization paddles where fresh water to the tune of 500-600 cum is used for the washing here again effluent pumped back into sinew recovery plant and the wet Ossein pumped into the drying bed
- Limed Ossein prepared separately with saturated lime solution of pH more than 12.5 for 40-50 days
- 7. Limed Ossein is transported to Gelatin unit at Kakkanadu in Cochin
- 8. The dried up Ossein is separately packed and exported via shipment
- 9. The DCP is also packed and sold to poultry feed companies
- 10. Oil and grease generated during the cleaning process are sold to the soap industry.
- 11. Recently the company has started a meat meal plant to utilize the bone sinew.

The recovery from production equals 19 tons of Ossein and 40 tons of DCP for every 80 tons of Crushed bone raw material.

The Effluent treatment process as per the Industry records and observation involves the use of Alum, Lime, NaOCI, Activated Carbon, Poly Electrolyte and Hydrogen peroxide. Presently raw effluent from the Ossein plant (acidic pH), the Limed Ossein plant (High pH) and the DCP Plant (neutral pH) are brought together to the flash mixer. The effluent treatment process utilizes flocculator, primary clarifiers, aeration tanks, secondary clarifier, tertiary clarifier, sand filter, collection pit and polishing pond before letting out the treated water back into the Chalakudy River. Some amount of the sludge generated is composted (20-25%) within the company premises and the rest is transported via road to a Bio Manure Company based at Meenachil. According to the management, the main source of pollution is the Chloride content generated

during the acidulation process in the form of Calcium Chloride and the CI content is diluted from 20,000 ppm to 4000 ppm by the time the water is let out into the Chalakudy River. The company claims they have installed several new infrastructures within the last two years namely an additional Aeration tank, a flash mixer and sand filter and a plate and frame filter press to improve the effluent treatment.

The company claims to using at least 5400 cum freshwater/ day (54, 00,000 liters) directly from the Chalakudy River using 60 HP motor and releases back into the river 5100 cum of water after the production process. The tariff paid for water comes to 50 ps / kilo litre. Nitta Gelatin holds permission under The Water (Prevention and Control of Pollution) Act 1974, The Air (Prevention and Control of Pollution) Act 1981, Environment (Protection) Act 1986 up to 30/6/2012. The consent order specifies effluent characteristics of certain pollutants and its tolerance limits. The following are the parameters in the Consent order.

pH	-	5.5 - 9.0
BOD, 5 Days at 20° C	-	30 mg/1
COD	_	250
Suspended solids	_	100
Dissolved phosphates		5
Oil and grease —	10	
Ammonic nitrogen	_	50

The company was not able to give a clear picture on the composition of the effluents and the sludge that is generated after production. Hence there is a need to assess the same for a better understanding of the nature of pollutants released into the Chalakudy River and transported from the company site to Meenachil. This is in the light of the fact that the people have been raising complaints on the foul odor emanating from the sludge spills when it is transported.

Recommendations of the Expert Committee

On the date of inspection that is on 10-8-09, the unit was found to be running in full swing. The house keeping was in order. The effluent treatment plant was working. However there was foul odor in the raw material handling areas. Considering the nature of the industry, and the general standards stipulated for units of this nature, the team make the following recommendations to content pollution to a tolerable limit, minimizing the complaints of water and Air pollution.

1. A Committee, as provided under section 26 of the Water Act, involving local people, representatives of the local body, NGIL Action Council and officials of the Pollution Control Board be constituted by the Kerala State Pollution Control Board and a notification to this effect be issued by the Board. This committee so formed shall assist the company in addressing Pollution related complaints and health hazards, ensure the implementation of the recommendations of the expert committee, monitor regularly the operations and effluents generated and ensure compliance of the conditions in the 'consent order' and to the satisfaction of the public. This will help to improve the public relations and will build public trust in the company.

- 2. Provide integrated scrubbing system in the entire raw material handling and processing areas to contain the foul odor. Further the green belt should be strengthened and diversified around the factory premises to provide fresh air and contain dust.
- 3. Improve ETP system by replacing the old clarifier, introducing filter press and such other means to contain water pollution.
- 4. Install multiple evaporation / RO system to eliminate chloride contents in the effluents under expert advice, so that the water can be reused and consumption can be brought down considerably. The company shall endeavor to achieve zero discharge by 2011.
- 5. Provide delay pond intermittently, one near fish pond, the 2nd one at paddy field and the 3rd at the river bank for effective monitoring by the Regulatory body and to regulate the discharge character.
- 6. The Company should go for water budgeting. Provide water meter at the in intake and outlet $\sqrt{}$ points in each section of the plant.
- 7. The people living in the surrounding areas and depending on the river have been complaining about health problems, fish kills in rivers etc. over the last 15 years. It is the responsibility of the Company to pay attention to to the genuine concern of the people. Hence the company under the leadership and guidance of the local committee constituted as above shall undertake a comprehensive health study by experts / Community medicine team and take necessary steps to alleviate the concerns based on the survey. The health survey shall be completed within six months.
- 8. Effluent from DCP plant and from ossein washing shall be treated separately. Rest of the effluent shall be treated and put into re-use as soon as possible.
- 9. The management shall go for extensive rainwater harvesting. As a first step, arrangement for collecting rainwater from at least 50% of roof area shall be made before the onset of 2010 monsoon.

It is observed from examining various notices issued by the Board that, the company has failed to operate the ETP properly and even increased its production without upgrading the ETP. Such complaints shall be avoided in future.



In the larger public interest, it is suggested that the company shall hold discussions with the Grama Panchayath, the Block Panchayath, the NGIL Action Council and the people living in the surroundings on the recommendations in order to enable participation, cooperation and smooth implementation of the above. The Company also needs to take efforts to maintain and nurture the good will of the public in all its future activities.



There seems to be lot of discrepancies and errors in the version of the company. Hence further clarifications would be required in due course. The company shall cooperate in providing the necessary data and clarifications as and when requested.



is report duly signed and submitted by the expert committee members on Ol-lO-QC

Dr.N.Chandra Mohan Kumar

Smt. D.Chitra Kumari

Purushan Eloor

Jacob .V Lazer

Dr.A.Latha

S.P.Ravi

M .Asokan

Press Release

Nitta Gelatin receives ISO 14001 certification for Environmental Management System



Nitta Gelatin with ISO 14001 certificate

[From Left to Right: Mr. Alkesh Kumar Sharma (MD, KSIDC & Director, NGIL), Mr. T. Balakrishnan (Addl Chief Secretary, Industries & Commerce & Chairman, NGIL), Mr. G. Suseelan (MD, NGIL), Mr. Norimichi Soga (President Nitta Gelatin Inc, Japan), Prof. Y. R. Rao, (NVT-QC)

Kochi, 28th January, 2010: Nitta Gelatin India Ltd. [NGIL], a leading global manufacturer of Gelatin and related products, today announced that it received ISO 14001:2004 certification. The audit was done by NVT-QC, an authorized agency of International Organization for Standardization [ISO]. ISO 14001, an internationally accepted standard, certifies an effective Environmental Management System to reduce environmental impact on water, air, land etc. The Certificate was received by Mr. T. Balakrishnan (IAS), Chairman, NGIL from Prof. Y. R. Rao, NVT-QC at Kochi.

Commenting on the certification, Mr. G. Suseelan, Managing Director, Nitta Gelatin India Ltd. said, "This is a great moment for us as the certification demonstrates our commitment for a sustainable environment. More than endorsing our adherence to legislations, the certification signifies the commitment of our entire organization in reducing environmental impact while maintaining profitability. NGIL has always been a pioneer in adopting best practices from across the world and the certification is yet another milestone for us."

DEAL MI

No.23-24/2007-HSMD

Government of India
Ministry of Environment and Forests

(H.S.M. Division)

Paryavaran Bhawan, CGO Complex, Lodi Road, New Delhi – 110 003. 3rd January, 2008

To:

M/s Kerala Chemicals and Proteins Limited, Post Box 4262 50/1002 SBT Avenue Panampilly Nagar Cochin 682 036.

Subject: Exclusion of ETP sludge generated from Ossein Division of M/s Kerala Chemicals and Proteins, Cochin as non-hazardous waste regarding.

Sir,

The undersigned is directed to refer to your letter dated 20th April, 2007 regarding your proposal on the subject mentioned above. Your request in this regard was examined by the Central Pollution Control Board and the ETP sludge of your plant has been found to be non-hazardous in nature. The use of composed mixed with sludge to be restricted to crops other than food crops. The Hazardous Substances Management Draft Rules have been published and necessary action is to be taken for disposal of the objection. Further, necessary action with regard to Hazardous Waste Rules in this connection would be taken in this Ministry in due course of time.

Yours faithfully,

(DB. SAROJ) Additional Director

Telefax:24364067

E-mail:sarojmoef@yahoo.com

Copy for information to:

- 1. The Member Secretary, Kerala State Pollution Control Board, Pattom P.O., Thiruvananthapuram 695 004.
- The Member Secretary, Central Poliution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi-32.

History of NGIL's Pollution

Nitta Gelatin India Limited (KCPL) has long history of environmental pollution from early 1990s.

The effluent water discharged by the company in huge quantities has caused colossal damage to the underground water as well as surface water in the area. The local streams like *Perunthode* and *Chathanchal* are today completely polluted and water flowing through these rivulets has turned to be unfit for drinking, domestic use or even for irrigation. During summer, death of fishes is a common occurrence in *Perunthode*.

Aggrieved by the environmental havoc caused by the company, several local inhabitants had taken recourse to judicial process in various courts of law as also before administrative offices for legal reparation.

- (i) Government of Kerala Department of Health and Family Welfare:
 No 5927/G3/'97; Dated 30.04.1998
 The Secretary, Ministry of Health has officially informed Mr. Panampilly Jayadevan,
 Kathikudam Post, Koratty that the complaint against industrial pollution was
 investigated through the Kerala Pollution Control Board and it was found that
 underground water was badly contaminated due to water pollution by KCPL.
- (ii) Resolution (No 110) passed by Kadukutty Panchayat on 17.04.1996
 It has been found that water from wells on both sides of *Perumthode* that flows through VII and VIII Wards of the this Panchayat was polluted due to air and water pollution caused by the KCPL that functions in Ward VIII.
 In the circumstances the Panchayat directs the pollutant company (KCPL) to provide drinking water to the local residents of the affected area.
- (iii) OS 76/1996, Munsiiff's Court, Irinjalakuda.
 Order dated 21.12.1996
 In a petition filed by Kochudevassy and his son George, Thelakkat House, Kathikudam against the KCPL, the court ordered the respondent company to pay
 Rs 10 and one sack of alkaline per day each in compensation to the damage caused to the petitioner by the respondent company.
- (iv) L.Dis 7561/97/C1, dated 6.2.1998.
 The District Collector of Thrissur ordered the Managing Director of KCPL to take urgent precautionary measures for safe disposal of sludge, preventing any seepage of effluents.

- (v) Kerala Pollution Control Board on 10.6.1996 and 15.11.1996 made investigation and made its statutory report to the RDO of Thrissur District.
 - Again, on 15.7.1997 and 28.8.1997 the Board made another series of investigations and filed its report to the RDO.
 - In both reports, the Board had confirmed pollution of air, water and soil caused by KCPL.
- (vi) The Secretary of Kadukutty Panchayat, on 15.3.1997 wrote to the DMO of Thrissur vide No D.104/1997 -Request urgent intervention for appropriate action on drinking water being contaminated in wells of Wards VII and VIII of Kadukutty Panchayat, fishes of Perumthode and its vicinities die rampantly and urgent measures to be taken for early supply of drinking water.
- (vii) In December 2005, The Chalakkudy Munisiff court appointed a commissioner to collect and examine samples of water and soil from the area, followed by a complaint against the company by a farmer who lost his cucumber cultivation after he had pumped water from the Kakkad pump house, situated very close to the effluent discharge point in Chalakkudy River.
- (viii) In May 2006, large quantity of fishes was found dead in Chalakkudy River at Pulikkadadavu and Appinikkadavu. On complaints from local people, the Annamanada panchayat authorities visited the area and took up the matter to the District Collector. Water samples were tested in Regional Analytical Laboratory and were found containing acidic elements. Water from this pump house was supplied as drinking water to thousands of people belonging to Kodungallur Municipality, and Mala, Poyya, Kuzhur, Annamanada, Puthanchira, Vellangallur panchayats.
- (ix) In 2007, two employees of the company who entered the tank storing the crushed bones fainted. They had been rushed to hospital where they were administered artificial respiration for more than eight hours.
- In 2009 there was crack in the large pipeline carrying effluents from company to the nearby Chalakkudy River. Consequently the effluent was abounded in the paddy fields causing enormous harm to the soil and vegetations. Political leaders, revenue officials, engineers from PCB and several media groups visited the area. In the result, the Kadukutty panchayat cancelled the license to the company. The company was forced to engage dozens of workers to remove the toxic substance from the affected areas.

Important judgments by Supreme Court

(It is well settled that it is the duty of the Government to prevent hazardous and inherently dangerous activities causing health hazards and creating pollution. It is therefore obligatory for the Government to protect that people from such activities. In the case of NGIL, Government of Kerala vide its unit KIDC is a party to the environmental havoc created at Kathikudam).

In *Indian Council for Enviro-Legal Action V. Union of India* (AIR 1996 SC 1446), the court observed that the 'polluter pays principle' means that the absolute liability for harm to the environment extends not only to compensate the victims of pollution but also the cost of restoring the environment degradation. Remediation of the damaged environment is part to the process of "sustainable development" and as such polluter is liable to pay the cost to the individual suffers as well as the cost of reversing the damaged ecology. Even if the company is closed, if the consequences of its action remain - the sludge, the long lasting damage to earth, to underground water, to human beings, to cattle and the village economy - the liability of the polluter remains, the court observed.

In *Vellore Citizens Welfare Forum V. Union of India*, (1996, 5 SCC 647), the apex court ordered the tanneries to pay compensation to the damage caused by discharging untreated effluent into agricultural fields, road sides, water ways and open lands. The untreated effluent was finally discharged into Palar River which was the main source of water supply to the residents of the area. In case of non-compliance, the court said, the industries shall be closed down.

In MC Metha V. Union of India, (1997, 2 SCC 411), the court ordered the unconditional closure of the tanneries for discharging untreated poisonous effluents into the river Ganges and payment of compensation by them for reversing the damage and for rights and benefits to be made available by them to their workmen.

In *Om Prakash Bhatt V. State of UP*, (AIR 1997, All 259), the court ruled that 'once the activity carried on is hazardous or inherently dangerous, the person carrying on such activity is liable to make good the loss caused to any other person by his activity irrespective of the fact whether he took reasonable case while carrying on his activity. The polluting industries are "absolutely liable to compensate for the harm caused by them to villagers in the affected area, to the soil and to the underground water and hence, they are bound to take all necessary measures to remove sludge and other pollutants lying in the affected areas.

In *Delhi Water Supply and Sewage Disposal Undertaking v. State of Haryana* (AIR 1996 SC 2991) the said, "Water is gift of nature. Human hand cannot be permitted to convert this bounty into a curse, an oppression. The primary use to which water is put being drinking, it would be mocking nature to force the people who live on the bank of a river to remain thirsty". "Drinking is the

most beneficial use of water and this need is so paramount that it cannot be made subservient to any other use of water like irrigation. So the right to use of water for domestic purpose would prevail over other needs.

In *Charanlal Sahu v. Union of India* (AIR 1990 SC 1480) the court held that State should not play a passive role when assaults on environment caused by adverse socio-economic policies, pose a thereat to the ecology, courts can not sit with their eyes closed...environmental protection is a constitutional mandate.

In Virender Gaur v. State of Haryana (1995 (2) SCC 577) the court observed: Article 48 A in Part IV (Directive Principles) brought by the Constitution 42nd Amendment Act, 1976, enjoins that 'the State will endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country'. Article 47 further imposes the duty on State to improve public health as its primary duty. Article 51-A (g) imposes 'a fundamental duty' on every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creatures. The Sate, in particular has duty in that behalf and to shed its extravagant unbridled sovereign power and to forge in its policy to maintain ecological balance and hygienic environment. Article 21 of the Constitution protects right to life as a fundamental right. Enjoyment of life and its attainment including their right to life with human dignity encompasses within its ambit, the protection and preservation of environment, ecological balance free from pollution of air and water, sanitation without which life cannot be enjoyed. Any contra acts or actions would cause environmental pollution. Environmental, ecological, air, water pollution, etc. should be regarded as amounting to violation of Article 21.

In *M.C.Metha v. Union of India* (1987(1) SCC 395) the Supreme Court observed :- An enterprise which is engaged in a hazardous or inherently dangerous industry which poses a potential threat to the health and safety to the persons working in the factory and residing in the surrounding areas owes an absolute and non delegable duty to the community to ensure that no harm results to anyone on account of hazardous or inherently enterprise must be held to be under an obligation to provide that the hazardous or inherently dangerous activity in which it is engaged must be conducted with the highest standards of safety and if any harm results on account of such activity, the enterprise must be absolutely liable to compensate for such harm and it should be no answer to the enterprise to say that it had taken all reasonable care and that the harm occurred without any negligence on its part.

In Subhash Kumar v. State of Bihar (AIR 1991 SC 420) the court stated that "right to live is a fundamental right under Article 21 of the Constitution and it includes the right of enjoyment of pollution free water and air for full enjoyment of life".

In *Vurrabazar Fireworks Dealers Association v. Commissioner of police, Calcutta* (AIR 1998 All 41 & 42) the apex court held that under the Constitution the people have a right to sleep and leisure. Disruption or disturbance in sleeps creates mental stress, deficient in working, efficiency and other things.

Organizational Profile of Jananeethi

Introduction: A brief history

Jananeethi was initiated by its Executive Director, Advocate George Pulikuthiyil in the year 1991 as service centre providing free legal aid and consultation to poor and marginalized communities to have access to justice and equity. This was registered as a Charity under the Charitable Societies Act in the year 1992 and got developed as a movement by involving many eminent people who had profound service records as jurists, social scientists, academia, thinkers, writers, human rights defenders and social critics. Among the many achievements of Jananeethi during its 19 years' existence, the most spectacular contribution it has made for the social harmonising of the civil society could be its psycho-legal therapeutic services. Jananeethi uses law and legal system as therapeutic agents. Justice is the entry point. This is a right based, victim-centered approach for total healing of the physical, psychological, emotional, social and legal injuries inflicted on them.

Jananeethi started Public Interest Litigations (common cause) as effective means to attend issues of public relevance and wider application. Several such cases had earned popularity and social image to Jananeethi as Voice of the voice-less. In 1995 it started addressing rural women, particularly women of low-income families and marginalized communities, who often are silent sufferers of widespread discriminations, sexual atrocities, domestic violence etc. A special team of lawyers and para-legal activists and social workers were formed in Jananeethi and they were given proper direction and training to effectively address women and girl children who were targets of violence at home and in society.

Jananeethi organized nature lovers, environmental activists, youth clubs and farmers' associations to fight—the encroachments on nature and pollution of air, soil and water, unauthorized sand mining, deforestation, conversion of agricultural land to industrial basement etc. This group campaigned in schools, educational institutions, public offices, and centres of public activity against environmental degradation focusing on the use of plastics, chemicals and pesticides. The Research and Social Survey team of Jananeethi has taken up several studies on matters of public concern like Study of coco cola, Vagamon, Dowry System, Family suicides etc. The reports of Jananeethi were taken as authentic documents even in Parliament, Supreme Court and State Legislative Assembly.

Jananeethi took leading role in organizing Public Hearing (Open Court / People's Court) in several

instances like Kadalundy Train Accident; Environmental havoc created by Gracim industries at Mavoor, Kozhikode; Bio-medical waste disposal plant at Thodupuzha, Communal riot at Marad, Political killings in Kannur, Shooting at the tribal population at Muthanga in Wayanad district etc

Jananeethi had campaigned for the idea of a LITIGATION FREE village since 1994 in the State of Kerala. In 2000 Jananeethi with the help and co-operation of community leaders, law students, district bar association and under guidance of district legal services authority did the pioneering work in creating the FIRST EVER LITIGATION FREE VILLAGE in India, at Thichoor in Thrissur district. The whole village was involved in the process. The Government of Kerala later adopted it as a model and urged all district judges to declare at least two villages in a year as litigation free zones as was manifested in Jananeethi experiment. Jananeethi continued this innovative experiment in other parts of the district of Thrissur. Later it made another attempt in the Mullakkara village to change it to a CRIME FREE ZONE. In the process he could change the village as the FIRST 'LEGALLY LITERATE AND LITIGATION FREE' zone in the State of Kerala. This was officially declared by the Chief Justice of Kerala together with several of his brother judges on 14th August 2004. The village was again declared HEALTH LITERATE on the 30th of December of the same year.

From the year 1993, Jananeethi has been regularly publishing a monthly journal, and has published several books and handouts, all in relation with protection and promotion of human rights. The message of equity and justice has gone to many thousands both in Kerala and else where through the publications. The monthly publication in vernacular language has influenced the thinking process of many people.

Jananeethi has developed a good network of committed activists in other parts of the State. Wayanad and Palakkad are the two districts where large number of tribal families and indigenous groups exist. These two districts are far behind in development and the people are mostly engaged in farming. Jananeethi has extended its presence in these districts as well. Jananeethi has opened its service even on the internet so as people who live in foreign land can also make use of its services. There are several individuals and corporate bodies abroad that regularly seek help of Jananeethi through Internet. Jananeethi has also introduced special training for young men and women who have graduated in social science and social work. The aim is to sharpen their views and convictions in relation with hard social realities of poverty, insecurity, communal disharmony, gender violence, corruption, politics of hate etc.

In connection with the 60th anniversary of India as a Parliamentary Democracy, Jananeethi organised series of discourses on CHALLENGES TO DEMOCRACY continuously for 20 week-ends in 2007-08. Each session was addressed by eminent scholars on various aspects of Democracy.

Jananeethi is being considered to be accredited by the ECOSOC at the UN with consultative status. It has been accredited by Credibility Alliance in India. Credibility Alliance has accredited Jananeethi under its Desired Norms. The National Legal Services Authority and State Social Welfare Department have accredited Jananeethi as service provider. World Organization against Torture (OMCT), based in Geneva, has formally approved Jananeethi as their Net-Work partner in 2008 for the protection of human rights. The May 18th Memorial Foundation in South Korea also has accepted Jananeethi as their network partner for the promotion of Democracy, in 2007.

Vision:

Jananeethi aims at radical changes in society, enabling the individuals and societies become aware of their inherent human rights and civil liberties, so that people may live in dignity and freedom, in consonance with the true dictates of humanity in its widest scope and dimension.

Few Interventions made on Environment related issues:

■ Coco Cola was first 'exposed' by Jananeethi web site:

The toxicity of the soft drink coco cola and the hazardous nature of its residue (slurry) were first exposed by a study conducted by Jananeethi in February 2002, in the early days of the agitation by the local people. The illegality of the land utilization of the plant, the water and soil pollution caused by the multinational giant company, the epidemics unleashed by the factory were all scientifically and logically proved by Jananeethi study. It was the first scientific document on coco cola at Plachimada which was subsequently used by BBC at length in its study. Jananeethi made a sequel to its first study to counter the wrong propaganda of the factory, in 2003.

Defending the defenceless at Muthanga:

Jananeethi was actively present in Wayanad district when the tribal community was brutally attacked by the state police and forest mafia at Muthanga and elsewhere. Jananeethi could bring the matter to the notice of national and international bodies for urgent action and support for the favour of the tribal people. The publication wing of Jananeethi played very significant role in sensitizing the matter to wider public.

■ A pioneering study of Vagamon and the invaders of its eco-system:

The exotic beauty and bio diversity of Vagamon was made for an in-depth study of Jananeethi in the wake of massive encroachments by invaders who did exploit the environment and ecosystem for unlawful monetary gains. The study report was discussed at government / semi-

government for a and a special leave petition is pending in the Supreme Court of India based on the study of Jananeethi.

Unethical attempt for a bio-medical waste disposal plant at Thudanganad village averted by Jananeethi report:

Flouting the provisions of Water Act, Air Act and other environmental laws, a bio-medical incinerator plant was being contemplated by certain business magnets for unlawful gains. The alertness of the people against the atrocious attempt invited Jananeethi to take up the leadership of the stir. The report prepared by the Jananeethi team effectively exposed the potential hazards of the project.

"Sreeramanchira' regained and revamped:

The people of three panchayats solely depended on the water sources from Sreeramanchira for their sustenance. However, due to corruption and anarchy in the local bodies, it was not maintained and people could not use it for more than two decades. All attempts by the people to renovate the Chira were proved futile. At this stage Jananeethi took up the matter and approached the Ombudsman of local government. An order was passed in favour of the people and the legacy of the Chira was restored in festivity.

Save Canoli Canal Campaign:

Protection of Canoli Canal was a public concern of the people of Thanniam Panchayat in Thrissur district for more than four decades. Their efforts were proved futile due overwhelming political manipulations. Finally, the people's council approached Jananeethi for the purpose. Jananeethi with people's active participation organized massive campaign and road shows and lastly filed writ petition in the High Court. The court disposed the matter in favour of the petitioners.

■ Public Hearing on Kadalundy Train Accident:

Following the train accident at Kadalundy, Jananeethi had initiated a facts finding mission by organizing a people's court at the venue of the accident. A shadow report was prepared at the end and was submitted to appropriate authorities. The proposals of Jananeethi were taken in due seriousness and adequate compensation was granted to the victims/survivors.

Save Farmers Campaign, Wayanad:

Jananeethi in association with its local counter part, Neethivedi, organized psycho-social therapeutic programmes in all 25 panchayats and Kalpetta Municipality of Wayanad District in wake of increasing suicides among the farming community.

I think the environment should be put in the category of our national security. Defense of our resources is just as important as defense abroad. Otherwise what is there to defend?

> Robert Redford, Yosemite National Park dedication, 1985

When you defile the pleasant streams

And the wild bird's abiding place,

You massacre a million dreams

And cast your spittle in God's face.

~John Drinkwater

Our children may save us if they are taught to care properly for the planet; but if not, it may be back to the Ice Age or the caves from where we first emerged. Then we'll have to view the universe above from a cold, dark place. No more jet skis, nuclear weapons, plastic crap, broken pay phones, drugs, cars, waffle irons, or television. Come to think of it, that might not be a bad idea.

~Jimmy Buffet, Mother Earth News, March-April 1990

Participants in our study

The team interviewed and had extensive discussions with the following:

Representing NGIL:

1. Mr.D.Raveendranath,

Executive Director (HR & GA), Panampilly Nagar, Kochi 682036.

2. Mr.B.Shaji Mohan,

General Manager (Ossein Division), Kathikudam, Thrissur, Kerala 680308.

3. Mr.C.Srikumar

Head, Special Project, NGIL, Kathikudam, Thrissur, Kerala.

4. Mr.T.Vijayakrishanan,

Asst. General Manager, NGIL, Kathikudam, Thrissur, Kerala.

Representatives of the public:

- 1. Mr.Achuthan farmer; has been active against pollution from 1994.
- 2. **Mr.George**, S/o Devassy, Thelakkatt, Head master, H.S.Thirumudikkunnu. Resides close to the factory premises.
- 3. Mr. Prabhakaran, Employee, shipping line, Ernakulam, local resident
- 4. Mr.Appu Kuttikkatt, Secretary, Action Council; local resident
- 5. Mr.Sunilkumar, Daily labourer, local resident
- 6. Mr. Anilkumar, Convenor, Acton Council, local resident
- 7. Mr.K.K.Chandrasekharan, Action Council
- 8. Mr.Thomas, Farmer, local resident
- 9. Mr.P.C.Gopi, neighbour of the company; active in agitation from 1994
- 10. Mrs. Mary, w/o Xavier Thelakkatt, local resident, agriculturist
- 11. Mrs. Rosy, w/o Ouseph Thelakkatt, local resident
- 12. Mr. Pallichathan, retired from KCPL, local resident
- 13. Mr. Udayan, local resident, employee of the NGIL
- 14. Mr. & Mrs. Ayyappan, local residents
- 15. Mr. Palli, Mrs. Palli (Meenakshi), residing next to the wall of the factory
- 16. Mrs. Anitha, w/o Ajayan, local resident
- 17. Mr. Jofy Thelakkatt, s/o Ouseph, local resident
- 18. Mr.K.N.Narayanan, Kasamkottath Mana, resident of the river side.

And a host of people who are residing very close to the NGIL factory and were present at the time of enquiry.

