

MINUTES OF THE PUBLIC HEARING COMMITTEE MEETING HELD ON 07.06.2002 AT 4.00 P.M. AT DISTRICT DEVELOPMENT COUNCIL HALL, CUDDALORE FOR THE PROPOSED PROJECT OF M/s. CHEMPLAST SANMAR LIMITED (PVC DIVISION), SEMMANKUPPAM VILLAGE, SIPCOT INDUSTRIAL COMPLEX, PHAST-II, CUDDALORE TALUK, CUDDALORE DISTRICT.

PRESENT:

1. Thiru. S. Thangaswami, I.A.S.
District Collector
Cuddalore District. - Chairman
2. Thiru. A. Palaniswamy
District Environmental Engineer
Tamil Nadu Pollution Control Board
Cuddalore - Convenor
3. Thiru S. Arivazhagan
Chairman
Kuringipadi Panchayat Union
Kuringipadi. - Member
4. Thiru R. Rajendran
Chairman
Panruti Panchayat Union
Panruti. - Member
5. Tmt. R. Ambujam
Chairman
Nellikuppam Municipality
Nellikuppam. - Member
6. Thiru V. Rajendran
D.R.O. (Retd.,)
Padupalayam
Cuddalore - Member
7. Thiru. M. Arumugam
Kothattai Post
Thittakudi Taluk
Cuddalore District. - Member

8. Fr. R. Ratchagar
Secretary
St. Joseph's College of Arts and Science
Cuddalore District - Member
9. Dr. K. Thiyageson
Joint Director
Department of Environment
Chennai. - Member
Nominee - Department
of Environment

OBSERVERS FROM CORPORATE OFFICE, TNPCB, CHENNAI

1. Thiru K. Sanjeevi
Member Secretary
Tamil Nadu Pollution Control Board
Chennai.
2. Thiru. Jayakumar Tc Ethiraj
Joint Chief Environmental Engineer
Corporate Office
Tamil Nadu Pollution Control Board
Chennai.
3. Dr. V.N. Rayudu
Deputy Director (ETI)
Tamil Nadu Pollution Control Board
Chennai.
4. Thiru. Rohit Kumar
Assistant Engineer
Corporate Office
Tamil Nadu Pollution Control Board
Chennai.

Representatives from NGO's, Public, Officials from M/s. Chemplast Sanmar Limited (PVC Plant), and consultant for the project were present.

The District Environmental Engineer, Cuddalore welcomed the gathering.

The District Collector, welcomed the new committee members and explained the necessity for conducting Public Hearing. He also requested the project proponent to explain briefly about the proposed project, its impacts on

environment and the precautionary measures to be adopted to protect the environment.

Thiru. P.S. Jayaraman, Managing Director of M/s. Chemplast Sanmar Group, explained the company's activities in various fields such as chemicals, specially chemicals, shipping, engineering. He informed that the proposed project will be implemented by adopting world class technology and funded by international financial agencies such as World Bank, IFC, DAE and IDBI. He emphasized that the technology will ensure clean environment and safety.

Thiru N. Sivakumar, Vice President (Projects) of M/s. Chemplast Sanmar Limited, explained briefly about the process technology, water consumption and methods to be adopted for treatment and disposal of effluent. He explained in detail about the air emissions and Air Pollution Control measures to be adopted. Aspects of noise and its control, solids waste generation and treatment disposal methodologies to be adopted were also covered. He presented the details about the marine terminal facility with island jetty for receiving the raw materials, transportation through pipelines and storage facilities. In addition the details of marine disposal system for the treated effluent was also explained. It was informed that the entire processes will be inter linked with computerized Distribution Control System (DCS).

The District Collector invited opinion from NGOs, Public and others in respect of the new project.

Thiru M. Nizamudeen, General Secretary, DEPORT (District Environmental Protection Organisation for Right Tackling), Cuddalore, stated that they are not against any industry in general but wanted the industries to take adequate care so that the health and safety of the people are not affected. Also he stated that the proposed project involves Marine Terminal Facilities and it is falling under the Coastal Regulation Zone and hence it is necessary to obtain the CRZ clearance before setting up of this project. He cited that the proposed pipeline passes through several villages enrute, SIPCOT and Semmankuppam and expressed apprehension of the effective environmental monitoring and fear of accidents. He also stated that the NEERI and other Government agencies have reported that the quality of ground water sources in and around SIPCOT Industrial Complex were already depleted due to existing industries. He is stated that the Government is objecting the production of PVC on one side, but it is conducting Public Hearing Meeting on the other side to promote the industry and said unjust is being done. He vehemently opposed this project since it will effect the environment and health of the people in the nearby areas.

Thiru. Pazha Thamraikannan, President, Karaikadu Panchayat, expressed deep concern over the existing pollution load and the present project is likely to aggravate the situation. He also expressed that the proponent has to ensure the safety, risk and

environmental protection. He felt that the water consumption indicated is high and wanted to know whether desalination of sea water can be considered without drawing water from the ground.

Thiru. R. Arul, Secretary, Pasumai Thayagam (Green Motherland), Chennai, has objected this project for the following reasons:

- Environment, Water, Air, Land, Ground Water in this area have already been affected due to the existing Chemical Industries. At this juncture adding one more chemical industry in this area will lead to further deterioration of environment in this area.
- He said that as per the Human Rights Commission's recommendations that no chemical industry should be established in this area.
- Tapping of Ground Water in this area leads to further depletion of ground water in that area.
- Fishing activities was already affected in the area.
- No employment opportunity was given by SIPCOT Industries to the people living nearby the estate or in Cuddalore.
- He pointed out that during last year Assembly Session, the Hon'ble Minister of Environment and Forests, has informed that no more chemical industries will be allowed to set up in Cuddalore District to a question raised by Thiru T. Velumurugan, M.L.A., Panruti Constituency.
- He pointed out that while damage control has been explained, post disaster health effects have not been detailed by the proponents.

Thiru. Nityanand Jayaraman, Corp Watch India Bangalore, cited the E.I.A. Report and stated that the Company has not furnished the correct facts and figures in the E.I.A. Report. He has informed that as per the local public version, there is a water shortage in this area where as hydrogeology report furnished by the proponent says that there is no water problem in that area. Also he has stated that the emissions from the drying process alone will be higher than the international standards by 20 times. He informed that the fishing activities were already affected due to contamination of River Uppanar and hence fisherman community are thereby affected. He said that the E.I.A. Report has not covered the health aspects of people living in Kudikadu, Sonanchavadi and Pachayankuppam Villages. He stated that the Poly Vinyl Chloride (PVC) is a toxic material and Vinyl Chloride Monomer (VCM) will cause health hazards like angiosarcoma, liver cancer etc. Also he said that PVC does not exist without dioxin and finally he strongly opposed the establishment of this project. The EIA says that the River Uppanar has no economic significance to the fisherman. This is false as close to 18 villages depend upon Uppanar for their livelihood through fishing etc. As per the NEERI Report the region exceeded the natural resource limit and suggested that no additional load on the environment can be borne by the region.

Thiru. Navroz Mody, Toxic Campaigner, Green Peace India, New Delhi, has requested the unit authorities to explain about the remedial measures to be adopted for

toxic emissions generated from this project. He said that the PVC Plant will emit fugitive emissions from pumps, compressors, pressure releasing devices, Valves, etc. Also he has stated that it is not possible to monitor the leaks of fugitive emissions from various sources without leak detection system. He has informed that the company will discharge 1.98 million liters of treated effluent per day containing 1mg/lit VCM and hence the treated effluent will release 82.5 gms of additional load per hour. Also he has informed that the employees and public living around the plant will be affected due to inadequate monitoring devices at ground level emissions. HE also stated that the effluent containing Vinyl Chloride Monomer (VCM) induces damages to nervous system, immuno system, liver thyroid, eyes and skins besides causing necrosis. It is also responsible for Reynolds Phenomenon which will erode bones, finger tips, nails and blood circulation. He also requested that since the industry claimed that PVC manufacturing can be done in an environmentally sound manner with adequate safeguards, this claim should be verified by inspecting the existing PVC facility of Chemplast at Mettur for presence of dioxins & furans and environmental track record. He strongly objected the establishment of this project.

Thiru. Rajesh Rengarajan, Toxic Link, Chennai, has called for avoiding industries, which will emit POPs. Dioxin is a POP and hence the industry should not be permitted. Similarly, the proposal is in contravention to the Stockholm convention on POPs. Hence he opposed this proposal.

Thiru K. Arasan, President, DEPORT, Cuddalore, has objected to the project coming up in this area, as this area was already polluted due to existing chemical industries.

Thiru. P. Manivannan, Assistant Project Director, DEPORT, Cuddalore, has requested the unit authorities to explain about the direct and indirect job opportunities people living nearby. He also stated that the ground water in this area was already contaminated and requested the unit authorities to explore the possibilities of recycling the waste water generated from the proposed project. However he objected to this project.

Thiru P.R.V. Jagannathan, President, Semmankupam Panchayat, Cuddalore District, has welcomed the industrial growth in Tamil Nadu particularly at Cuddalore District. He has welcomed this project stating that the proposed unit will adopt the world class technology for the process without affecting the environment in this area. Due to this project, the job opportunities and basic infrastructure of the village will be improved.

Thiru D. Balachandar, District Convenor, Tamil Nadu Environment Council, Chidamabaram, Cuddalore District, has informed that the level of ground water table has drastically fallen down due to the activities of M/s. Neyveli Lignite Corporation. The present project will abstract ground water at the rate of 1,20,000 Litres per hr for industrial purpose, which would lead to further fall in ground water table and lead to seas water intrusion. He also said that a few years back a proposal

for tannery park was opposed since it requires huge quantity of water hence, the proposal was given up. However, he welcomed this project and suggested to form a committee comprising of representatives from Public, NGOs and voluntary organisation to monitor the industry.

Thiru K. Thirunavukkarasu, Tamil Nadu Rural Urban Consumer Protection Organisation, Panruti, Cuddalore District, has informed that NABARD bank refused to offer any loan, because of ground water pollution and hence he expressed his objection to the proposed project. The SIPCOT area is already polluted from the current industries installation of the new plant will create further health problems. The company's contention that there is adequate ground water is not correct.

Thiru A. Murugan, Thiyagavalli Village, Cuddalore District, raised objection to the project since the river Uppanar was already contaminated due to existing industries.

Thiru. Balakrishnan, In charge of consumer protection forum and Consumption Eradication organization, Cuddalore, has informed that the people living from Erattai Road (i.e.), Pachayankuppam Village) to B. Mutlur are affected very badly after formation of SIPCOT Industrial Complex. Hence he has expressed his objection against establishing the project in this area. Tamil Nadu Pollution Control Board must ensure that the safety measures explained by the company are properly installed.

Thiru. A. Bhuvaneshwaran, President, Pachayankuppam Panchayat, Cuddalore District has stated that the ground water in this area was polluted by the existing industries. He has informed that the fishes caught are smelling of chemicals due to discharge of trade effluent into river Uppanar. He objected this project, citing the said reasons.

Thiru. P. Shanmugam, Echankadu Village, Cuddalore District, has stated that they are not welcoming any type of industries which are likely to be planned in SIPCOT area. He has informed that the toxic gases emitted and odour nuisance caused by the existing industries is leading to birth defects, immature deliveries and handicapped children. Also he has informed that the people are affected by viral fever and other diseases, but no hospital or ambulance facilities are available in this area and hence he objected to this project.

Thiru T. Ravi, Poliyur, Panruti Taluk, Cuddalore District, has raised objections to this project since this project will lead to the emission of dioxin from the process and cause health hazard to the people living nearby area.

Tmt. Jayanthi Ravichandran, Secretary, Rotary Club, Cuddalore, has welcomed this project because there will be job opportunities to the people directly and indirectly. She requested the project proponent to provide a medical care center for the people living in that area.

Thiru C. Shanmugam, Secretary, Consumer Protection Council, Pennadam, Cuddalore District, has said that if this project is allowed to come up in this area, it will affect the ground water table and lead to sea water intrusion due to withdrawal of ground water at a high rate and hence objected the project.

Thiru. Sankar Prakash, Karaikadu Village, Cuddalore District, has welcomed this project and requested the unit authorities to give job opportunities to the people living nearby.

The District Collector has requested the unit authorities to reply for the doubts and points raised by all.

The company representative, Mr. N. Sivakumar, Vice President (Projects), M/s. Chemplast Sanmar Limited (PVC Division) replied to the four major issues and queries as below:

Ground Water Usage:

One of the key parameters for technology selection has been its water consumption efficiency. Less efficient PVC processes consume 15 to 20 KL of water per MT of PVC. The technology for the proposed PVC plant envisages consumption of only 3.5 to 4 KL water per MT of PVC.

Further, right from inception, a high degree of recycling (to the extent of 30%) is planned. Hence fresh water drawl will be limited.

The recycling of treated effluents for other plant applications will be an ongoing process and will be addressed on priority. A hydro geological study of SIPCOT Phase-II Cuddalore by Geo Services and Kamal Consultants on behalf of SIPCOT in 1997 clearly states that the water that can be tapped from the Cuddalore aquifer is 100,000 m³ per day. The present exploitation of this water is 47,000 m³ per day only out of which the SIPCOT area uses only 9,000 m³ per day with an ultimate requirement of 18,000 m³ per day. This tapping of ground water for industrial purposes will not deplete the basic resource in any manner.

VCM exposure and effects on health:

The health effects of VCM were first recognized by the PVC industry themselves. Immediately, the industry worked out and launched a VCM containment programme to drastically reduce exposure of workers to VCM in the work place.

The proposed plant features the latest state of advancement in technology. Through a combination of clean reactor technology, closed mode operation, efficient VCM recovery, minimization of fugitive emissions through sound engineering practices, destruction of minor streams, stripping of resin/waste water and a host of other technically advanced measures, we are able to guarantee a level of 0.4 ppb (1 micro gram per cubic meter) of VCM at the factory fence.

Occupational Safety and Health Administration (OSHA) of USA specifies a limit of 1ppm in the work place as time weighted average (TWA) exposure. The new plant will be designed for achieving a level which is several hundred times superior to this standard, as mentioned above, a VCM level of 0.4 ppb at the factory fence.

Dioxin:

Dioxins are generally the by products of thermally intensive processes, such as combustion. There is abundant scientific evidence that the formation of dioxins is not dependent on what is incinerated; but on how well the incinerator is designed and operated. The dioxins may be formed in an incineration process only when the following conditions prevail:

- I. Incineration temperatures are inadequate (less than 850 Deg. C)
- II. Adequate residence time not given (less than 2 seconds)
- III. Complete combustion not achieved due to inadequate oxygen and poor turbulence by improper burner design/combustion chamber geometry.
- IV. There are solid impurities like dust, soot, etc., along with the feed.
- V. The products of combustion are allowed to cool slowly dwelling for a considerable time in the temperature zone of 200 to 450 Deg. C.
- VI. Dioxin promoters such as copper, lead, etc. are present in the feed and are carried over with the combustion gases.

As against the above, the proposed incinerator of the new plant is designed with the following operation conditions:

- ❖ Incineration temperature is above 1100 Deg. C. The residence time is more than 2 seconds.
- ❖ Complete combustion is achieved by excess oxygen (5% to 6% is planned) and good turbulence is maintained by properly designing the burner and combustion chamber geometry.
- ❖ The recovered VCM does not contain any solid impurities like dust, soot etc.,
- ❖ The combustion products are not allowed to cool slowly but are quenched rapidly to 60 to 70 Deg. C.
- ❖ Dioxin promoters such as copper and lead are absent in this feed.

Job opportunities:

Responding to queries on this subject, he explained that considering the advanced technology and sophistication of operation, the plant would employ about 100 professionals in various disciplines.

Certain support services like material loading/unloading, security, catering, servicing of certain equipment etc., will be out sourced and these will employ about 200 persons additionally.

Further, certain special engineering services like fabrication, electrical work, etc. will also be required and the out fits providing these services will generate further temporary employment.

The committee members stated that while in general investments should be welcome, they are concerned about the dangerous nature of the industry and the serious irreversible negative environmental consequences and requested Tamil Nadu Pollution Control Board examining all these aspects carefully.

The District Collector, Cuddalore has concluded stating that all the views and opinions of Public, NGOs and Members will be considered for taking the final decision.

Finally the meeting came to an end with vote of thanks.

**District Environmental Engineer
Tamil Nadu Pollution Control Board /
Convenor,
Public Hearing Committee
Cuddalore.**

**District Collector/
Chairman,
Public Hearing Committee,
Cuddalore.**

PUBLIC HEARING COMMITTEE MEMBERS'S VIEWS:

Thiru M. Arumugam, Member, Public Hearing Committee, stated that SIPCOT Industrial Complex has been formed exclusively for hazardous chemical industries in Cuddalore and Tuticorin. More ground water is being tapped for consumption of industrial purposes which will lead to lowering of the ground water table and thereby it will affect the agricultural and drinking water sources in that area. He has suggested the unit authorities to explore the possibilities of converting sea water for the industrial purposes by desalination method. HE requested the company authority to establish a health care facility in this area for the benefit of people living nearby. He has also requested the project authority to give the job opportunities to the people living nearby. He has requested the company authorities to take all safety measures while implementing the project. Finally he welcomed this project.

Thiru V. Rajendran, Member of Public Hearing Committee, referred **Justice Nainer Sundaram** report and pointed out that no more new industries will be established in SIPCOT, Cuddalore. He also pointed out that the problems caused by M/s. South India Viscose during its operations and he referred the NEERI report and stated that the ground water at SIPCOT Industrial Complex was already polluted by the existing industries. He also pointed out the dangers to be involved during transportation of Vinyl Chloride

Monomer (VCM). He welcomes the project only if the unit assures all kinds of safety measures and implements the same.

Thiru S. Arivazhagan, Chairman, Kurinjipadi Panchayat Union, Member, Public Hearing Committee, requested the unit authorities to implement all safety measures while implementing this project so as to avoid further pollution in the SIPCOT industrial area. Also he has informed that the fishing activities should not be affected anyway due to construction of island jetty. He has also requested the unit authorities to give job opportunities to the people of nearby area and finally he welcomed this project.

Tmt. R. Ambujam, Chairman, Nellikuppam Municipality, Member of Public Hearing Committee welcomed this project and requested the unit authorities to give job opportunities to the people and to implement all safety measures while implementing the project.

Fr. R. Ratchagar, Secretary, St. Joseph Arts and Science College, Cuddalore, Member, Public Hearing Committee informed that the industries in SIPCOT Industrial Complex causing air and water pollution for a longer period. He has pointed out that if industries are maintaining the standards prescribed by the concerned authorities, there will not be any objections for welcoming new industries. He has informed that they are very much proud of setting up of new industries at Cuddalore District. While welcoming the project he suggested that an external agency be appointed to monitor the entire operation of the industries.

Thiru R. Rajendran, Chairman, Panruti Panchayat Union, Member, Public Hearing Committee informed that if any industry is violating the pollution control norms and operating the pollution control measures not effectively, then the committee will take suitable action against the unit with the coordination of TNPCB official. He has requested the unit authorities to give job opportunities to the local people and to provide a medical care center in that area for the benefit of people. He welcomes the project.

**District Collector/
Chairman
Public Hearing Committee
Cuddalore.**