

In the High Court of Judicature of Andhra Pradesh at Hyderabad

Mystery Gas Spreads Panic

v.

The Director, A.P. Pollution Control Board, Hyderabad and others.

Writ Petition No. 30006 of 1998 & 20435 of 1999

11.07.2001

Sri. Satyabrata Sinha C.J. & V.V.S. Rao J.

Judgement :

1. Tragedy occurred due to leakage of gas from the Union Carbide and Sriram Fertilizer led to a heavy loss of human life. Such incidents occurred either as a result of negligence on the part of the management and/or by way of accident. We, in these writ petitions are concerned with a situation which is by and large a man made one.

2. Some newspapers reported spreading of panic owing to a mischievous gas with foul smell which engulfed a part of the city continuously for a few days resulting in breathing problem to the residents of Somajiguda, Barkatpura, Jubilee Hills, Begumpet, Khairatabad, Srinagar colony, Sanjivareddy Nagar and Bagh Lingampally. This Court, on the basis of newspaper reports published on 24.10.1998 entertained a suo motu writ petition.

3. Upon preliminary enquiry it was found that the following industries had been mishandling the effluents (overloading liquid incinerators) coupled with the highly objectionable mode of discharge of the effluents by certain transport operators was the primary cause.

1. M/s SMS Pharmaceuticals Ltd., Khazipally.

2. M/s Saracca Laboratories Ltd., Gaddapotharam.

3. M/s Neuland Laboratories Ltd., Pashamylaram.

4. M/s Cheminor Drugs Ltd., Miryalaguda, Nalgonda District.
5. M/s Hyderabad Drug Intermediates Pvt Ltd., Pashamylaram.
6. M/s Aurobindo Pharama Ltd., Bollaram.
7. M/s Vantech Ltd., Khazipally.
8. M/s RAL Chem Ltd., (formerly M/s Voltas Ltd), Patancheru.
9. M/s Bactochem Pvt Ltd., Balanagar.
10. M/s Herbochem Ltd., Balanagar.
11. M/s Bio-Chemical and Synthetic Products Ltd., Balanagar.
12. M/s IDPL., Balanagar (Anaerobic and Settling operations of ETP units).
13. M/s Cheminor Drugs Ltd., Jeedimetla.

4. The A.P. Pollution Control Board (for short 'the Board') took up investigation of the case of such odour nuisance in and around Hyderabad and noticed the following possible causes leading thereto:

1. Release of mercaptan gas from bulk drug industry, which are manufacturing ranitidine and its intermediate called NMSM.
2. Release of mercaptan gases from pesticide (technical) units that are manufacturing phorate.
3. Illegal dumping of effluents having solvents, aromatic compounds, volatile compounds, etc., especially NMSM and ranitidine manufacturing units and other bulk drug effluents into sewage/storm water manholes and on land.
4. Foul odour emanating from liver extraction units.
5. Upon further investigation it was found that the industries which are mishandling effluents containing mercaptan and illegal dumping of spoiled batches as the main source of odour nuisance in and around the twin cities. For the purpose of discharge of industrial effluents the industries used to hire tankers. A dubious mode was adopted by some tankers as they would travel in night in a part of the city and taking recourse to slow release of the effluents on the public streets.
6. A technical committee was also constituted involving Indian Institute of Chemical Technology (IICT), Tarnaka, EPTRI and National Environmental Engineering Research Institute (NEERI) which submitted a report to this Court.

The Board identified following as the most possible cases leading to the odour nuisance during a preliminary investigation between 20.10.1998 and 23.10.1998:

1. Mercaptans from bulk drug industry which are manufacturing ranitidine and its intermediate NMSM.
2. Pesticide units that are manufacturing phorate.
3. Illegal dumping of effluents having solvents, aromatic compounds, volatile compounds, etc., generally bulk drug effluents into sewer.
4. Mishandling of large quantity of effluents at common ETPs or treatment units i.e., storing of effluents for a long period, resulting in putrefication of effluents, etc.,
5. Burning of dead animals, bio-medical waste, plastic waste, etc.
6. Foul odour emanating from liver extraction units.

It identified six bulk drug/pesticide industries which can release mercaptans. The technical committee visited some of the industries during 27.11.1998 and 31.11.1998. The report of the technical committee is as follows:

7. A detailed report has been prepared after visiting the polluting industries, which is enclosed herewith. Major polluting industries are one who are manufacturing ranitidine. The existing shortcomings in waste management has been pointed out factory-wise in the enclosed report. It is my considered opinion that any amount of air monitoring is not sufficient to know the correct status of the pollutants and would not offer appropriate methods for their abatement as the technologies are not correctly being employed. The technologies currently being employed for NMSM, ranitidine have low atom economy, sub-optimal conversion efficiencies and unfavourable selectivity towards the desired intermediates and final product. They need technological intervention to achieve as stated below.

- i. Conversion of unwanted products to commercially useful products.
- ii. Process clean up and in process pollution control (at source).
- iii. Safe disposal/treatment methods for unwanted products.

8. The concerned manufacturing companies have to approach a competent research institution to seek viable solutions to the above problems. End of the pipe treatment approach being adopted by them alone is not adequate to deal effectively with environmental pollution control related to such technologies. Implementation of such programmes requires time not less than 15-18 months. The APPCB is advised to seek their commitment to engage a competent research agency for achieving the said tasks within a reasonable time frame. If necessary, they may be asked to submit half yearly reports on the progress of work in the suggested direction. In the interim period, all care has to be taken by the concerned manufacturer to dispose of unwanted products through the existing incineration facilities in or near their manufacturing sites. The best remedy for the interim period is to scale down the manufacture of the ranitidine based on their

respective performance towards pollution management.

9. Regarding M/s Aravindo Pharma Ltd., we found that noise level is above the permissible limits. It has to be attended by them in order to conform the regulations. Regarding surveillance of M/s Voltas Ltd., was done earlier and in my opinion it is valid even today. Therefore, no further action is recommended. M/s Vantech was closed at the time of our visit. The committee may visit them whenever they are in operation.

The following measures for redressal of public grievances were suggested:

1. A notification to confiscate tankers which are dumping effluents unauthorisedly into open areas/water bodies is under consideration with the Government under relevant laws.
2. Strengthening the surveillance team and intensifying the night patrolling to prevent unauthorised dumping of waste and monitor the working condition of pollution control equipments installed by the industries.
3. Environmental audit and risk analysis will be carried out through competent agencies such as IICT/EPTRI for all the industries mentioned in the Technical Committee report to improve the operable practices.
4. As recommended by the Technical Committee report, APPCB will direct the industries to achieve the said tasks (Technical Committee report) within a time frame of one year.
5. An ambient air quality monitoring station along with a meteorological station will be established at Hi-tech city Madhapur on permanent basis for creating a data base.
6. To gain immediate response on such occurrence of mysterious gases, a mechanism will be established by involving active participating NGOs for quick feed back for immediate intervention of PCB.

With a view to prevent pollution the Board suggested:

1. Establish continuous night patrolling with the help of police and RTA to curb illegal dumping of hazardous waste in sewers, water bodies, open areas, etc.
2. Concentrate vigilance on the industries manufacturing chemical products having linkage with mercaptans, with additional staff and monitoring infrastructure.
3. Establish special monitoring stations at identified places to measure the concentrations of obnoxious gases.
4. The Board will take action against erring industries, which are releasing obnoxious and toxic gases into the atmosphere.

5. Establish a mobile special force to keep 24 hours vigil on industrial areas. This mobile special force will inspect the industrial areas in Patancheru, Pashamylaram, Bollaram, Khazipally, Gaddaphoram, Jeedimetla, Balangar and Sanathnagar areas in odd hours and monitor emissions and action will be initiated against erring industries immediately.

6. As directed by the Hon'ble Supreme Court interim orders in W.P.No.1056/90, commence fining the CETPs whenever they mishandle industrial effluents.

The State also held a meeting with the industries and others concerned whereafter the following further action had been taken:

i. The Board has issued a closure order to a service station., via., M/s Rakesh Water Servicing Centre located near Kukatpally Nallah which is known to be harbouring illegal dumping of effluents in the name of 'servicing' or 'washing' during day time and permitting discharge of effluents through these tankers into the Kukatpally nallah in the night.

ii. A tanker bearing No. AHF 1244, originating from m/s Global Drugs Ltd., moving at odd times was intercepted and after enquiry, it was observed that the industry was indulging in illegal dumping of highly concentrated acidic effluents. The tanker was handed over to the Balanagar Police Station and the industry has been issued with closure orders dt 23.3.2000.

iii. Circular orders were issued to all chemical and allied industries to stop illegal dumping of industrial waste with false claims of low value by-products, material being sent for reprocessing, quoting the incidence of illegal dumping of aluminium chloride by M/s Global Drugs Pvt Ltd.

iv. As a part of preventive measures, the APPCB has identified Shri K.Ananthaiah as a major transporter who is involved in illegal dumping and the same was informed to the police. On information from APPCB, the Jeedimetla Police have brought a lorry tanker bearing No. AP 13 T 619 from his residence at Jeedimetla for knowing its legitimate movements. Similarly, the Rayadurgam Police have brought another lorry tanker bearing No. ATT 4819 which was stationed at residence of Shri K.Ananthaiah, Janwada (v), Shankerpally (M), R.R. district to Rayadurgam police on 15.7.2000. The Board officials have collected the left over effluent samples from the tanker and the analysis report revealed that the standards are far exceeding the standards prescribed by the Board for treating the effluents at CETP and they are meant for illegal dumping. Subsequently, the vehicle owner Sri K.Ananthaiah was directed to furnish the copies of Transport Manifest for proving himself engaged only in authorised discharge of hazardous effluents. Sri K.Ananthaiah has approached the Hon'ble High Court and the Hon'ble High Court has dismissed the case and directed the APPCB to take appropriate action. The RTA authorities have been asked to confiscate the above two vehicles.

v. Night patrolling of areas that are generally affected by odour and possible areas of illegal dumping are being continued since May, 2000. About 1600 lorry tankers suspected of carrying of industrial effluents for illegal dumping have been checked so far.

vi. M/s Cheminor Drugs Ltd., Miryalguda has facility for manufacturing NMSM through MITC route. M/s Cheminor Drugs was purchasing NMSM from M/s Saraca Laboratories Ltd and M/s Hyderabad Drug Intermediates Ltd. produced through Carbon Di-Sulphide (CS₂) route where there is generation of mercaptan gas. M/s Saraca Laboratories Ltd and M/s Hyderabad Drugs Intermediates Ltd have been directed to restrict their production of NMSM for captive consumption of making ranitidine HCl only. Similarly M/s Cheminor Drugs Ltd, Miryalguda has been directed to produce NMSM only through the MITC route only and not to purchase NMSM from M/s Saraca Laboratories Ltd and M/s Hyderabad Drug Intermediates Ltd.

vii. The following industries producing NMSM as intermediate for ranitidine HCl were directed to change the process from carbon di-sulphate route to methyl iso-thio cyanate (MITC) route during June, 2000 to reduce about 60% load of mercaptan generation. The industries were also directed to reduce production capacity of ranitidine by 30%.

a. M/s SMS Pharmaceuticals Ltd., Khazipally.

b. M/s Saraca Laboratories Ltd., Gaddapotgharam.

c. M/s Neuland Laboratories Ltd., Pashamylaram.

d. M/s Hyderabad Drug Intermediates Pvt Ltd., Pashamylaram.

10. Out of the above 4 industries, M/s SMS Pharmaceuticals Ltd., Khazipally has initiated steps to change the process to non-odorous MITC route by June end 2001. The remaining industries have not initiated any action to change NMSM production process. The APPCB has directed the industries to explore the possibility of importing NMSM till the change of process of manufacture from CS₂ route to MITC route. The above industries have been asked to install "continuous electronic monitors" for mercaptan gas incinerators and synchronise the process operation with functioning of incinerator so as to ensure efficient funding of incinerator on continuous basis. Accordingly they have taken necessary measures.

viii. All the mercaptan generating and consuming industries have been directed to install 'continuous wind direction and speed recorders' so as to help investigations.

ix. All the mercaptan generating and consuming industries have been directed to take special precaution while starting and shut down of the plant.

x. During the January, 2001 another lorry tanker bearing No. ADJ 9954 has been handed over to Patancheru police for safe custody of suspected illegal dumping, after

taking legal sample from the left over materials of the tanker. The analysis reports indicate that the left over material is industrial effluent meant for illegal dumping as the parameters are far exceeding the influent standards prescribed for common effluent treatment plants. The vehicle owner was 'directed to furnish copies of transport manifest to prove himself involved only in legitimate disposal at CETPs. The vehicle owner failed to furnish the information within the stipulated time. Hence, this office has addressed a letter to the RTA authorities for confiscation of the vehicle.

11. Before us a counter-affidavit has been filed by the 8th and 12th respondents. In its counter-affidavit it has stated that the committee had to give them a clean chit whereas the 8th respondent stated that it had installed the effluent treatment system viz., gas incinerator, solid incinerator, organic & inorganic liquid incinerator, multiple effect evaporator system. It has been pointed out that the technical committee while observing that the condition is not alarming suggested to approach the research institutes to seek viable solution. But no specific recommendations have been made for meeting the system nor any defect in incinerators and equipments installed by the respondent had been pointed out. It has been stated that no leakage of gas from the pipe has also been detected.

12. It further appears that the State Government had approached the central government for amendment of the rules so as to enable it to confiscate tankers.

A further status report has been filed by the Board. Our attention has also been drawn to a report of the Central Pollution Control Board as regards status in industries located at Patancheru and Bollaram pursuant to the order of the Supreme Court in Writ Petition (C) No.1056 of 1990, dated 10.11.1998 wherein in relation to M/s SMS Pharmaceuticals Ltd it was stated:

13. The industry has comprehensively tried to attain zero discharge with respect to effluent. The CPCB team found that the efforts made by the industry are satisfactory. However, the industry is to develop better storm water drains and demolish the unused solar evaporation pond and biological treatment system, so that no apprehension remains. They have been further advised to take out all temporary pipelines and replace by permanent installations.

With regard to the other industries it was stated:

M/s Aurobindo Chemicals:

Is constructing the effluent treatment plant for its unit no.2 at Bollaram, Hyderabad. It was reported that the construction of the secondary treatment plant of this industry would be completed by March 31, 1999. It was learnt that M/s Aurobindo Chemicals had several units. They had been asked to submit their programme of pollution control for all the units, in detail.

M/s Siris India Ltd:

14. Is a pesticides manufacturing industry located at Gummdidala. The industry is installing a secondary treatment plant. The scheme of their effluent management

comprises two steps. In the first step, they have segregated their high TDS wastewater for evaporation of their effluent in multiple evaporator and in the second step, the organic effluents will be subjected to secondary treatment. The treated effluent from secondary treatment (biological treatment) will be disposed to CETP at Patancheru for further treatment. During inspection, it was found that the construction work for biological treatment plant was in progress. It is expected to be commissioned by March 31, 1999.

15. M/s Voltas Ltd.

Has already commissioned the treatment plant for stripping of both odorous and non-odorous effluent (volatile organic carbon) in the deodorisation plant followed by incineration. They have also commissioned the physico-chemical treatment plant for the stripped effluent. This treatment plant comprises two unit operations, which are performing satisfactorily. The secondary treatment plant comprising activated sludge process with sludge handling is under installation. The secondary treatment plant is expected to be commissioned by April 15, 1999. The industry was advised to install a special treatment plant for high COD effluent to ensure the desired treated effluent quality, including commissioning and stabilisation by May 31, 1999.

16. M/s Standard Organics Ltd.

Is located at Patancheru. They manufacture bulk drugs, such as sulphamethoxazole, salbutamol sulphate, pentoxifylline, cefaclor and trimethoprim. The industry has installed a psychometric evaporator of capacity 25 kld to evaporate high inorganic streams. The organic effluent of around 50 kld is subjected to treatment in a biological treatment plant. During inspection, it was found that the microbial growth in the aeration tank was low. The industry had been advised to improve the microbial population (MLSS) for effective treatment. It was also advised that entire effluent should be collected in a closed conduit system. It is expected that the industry will conform to the standards by March 31, 1999 for disposal of their treated effluent to CETP.

17. M/s Newland Laboratory Ltd.

The industry is located at Parshamlaram. It is basically a bulk drug manufacturing industry. During inspection, it was found that the industry had identified the streams with respect to high TDS and high organic content. The high TDS effluent of 47m³/day is subjected to evaporation in psychometric evaporator and nearly 37 m³ of effluent undergoes forced evaporation and filtration. The remaining 82 m³/day wastewater, which is organic in nature, is required to be treated through a secondary treatment plant. During inspection, it was found that the industry was in the process of finalisation of plans for biological system. The industry informed that they had awarded the work to M/s Praxair India Ltd., Bangalore, for installing the required secondary effluent treatment plant. The plant cannot be commissioned before April 30, 1999.

18. The conclusion of the Central Pollution Control Board is:

In the light of above visits, the ground reality is that more or less the large industries will be able to commission their effluent treatment plants before April 30, 1999. However, it will require at least two months more for stabilization of their systems. Once the large industries treat their effluents to the desired levels before disposal to respective CETPs. The load to CETP will be reduced substantially and the CETPs at Patancheru and Bollaram will be able to work effectively.

The Central Pollution Control Board (CPCB) is of the view that by and large the industries relevant to pollution control have been identified by the State and Central Pollution Control Boards. However, the Andhra Pradesh Pollution Control Board (APPCB) should make an effort to find out if any industry is still left out in the Medak district in Nakkavaagu drainage basin. It is proposed that once the industries commission their ETPs, the performance evaluation of ETPs shall be conducted by APPCB in consultation with CPCB.

19. From what has been noticed hereinbefore it is evident that the Pollution Control Boards had taken certain measures to check the problem.

However, in a situation of this nature, in our opinion, it may be necessary to issue other and further directions so that similar incidents may not occur in future.

The Board should carry on surprise checks of the industries and carry out the requisite tests with a view to find out as to whether leakage of any poisonous gas from those industrial units which had been identified, is taking place or not.

The police authorities as also the officers of the Board would immediately seize and prosecute the tankers which had been carrying the effluents and have been discharging the same on the public streets.

The officers of the motor vehicles department would cause a random check of such tankers with a view to find out as to whether they have adopted any method which would run contrary to the provisions of the Motor Vehicles Act, 1988 and the rules framed thereunder and in the event it is found that any violation of such law has taken place, and also the tankers being used without any registration number or mark as per the Motor Vehicles Act and the rules and containing a discharge pipe, they would immediately seize such tankers.

As certain photographs have been produced before us to show that some tankers even do not have the number plates, we direct the authorities of the motor vehicles department to keep a strict vigil.

Our attention has further been drawn to the fact that certain tankers meant for carrying drinking water are being used for this purpose. The photographs of the tanker bearing No.ADJ 9954 would show that the tanker with an illegal discharge pipe was used for the purpose of dumping effluents though it was marked as a drinking water supplier.

The police authorities, the authorities of the motor vehicles department and the Board shall ensure that no tanker meant for supply of drinking water is used for discharge of effluents. The concerned industry should be notified not to hire such tankers or permit them to be used for the said purpose failing which appropriate penal action may be taken against the persons incharge of the industries under the relevant laws.

We are issuing these directions having regard to the fact that if the same tanker is used for supply of drinking water as also dumping of industrial effluents, chances of health hazard to the general public cannot be ruled out. The Board, police authorities, authorities of the motor vehicles department as also any other person interested in the matter would be entitled to move this Court for any other or further directions.

These writ petitions are disposed of with the aforementioned directions.