BEFORE THE NATIONAL GREEN TRIBUNAL,
PRINCIPAL BENCH, NEW DELHI

Appeal No. 57 of 2013 [Appeal No. 22 of 2013 (SZ)]
And
Appeal No. 58 of 2013 [Appeal No. 23 of 2013 (SZ)]

In the matter of

M/s Sterlite Industries (India) Ltd.
SIPCOT Industrial Complex,
Madurai Bypass Road, T.V. Puram P.O.,
Thoothukudi-628002

..... Appellant

Versus

1. Tamil Nadu Pollution Control Board,
   Rep by: its Chairman,
   76, Mount Salai,
   Chennai-600032.

2. District Collector,
   Thoothukudi District,
   Thoothukudi-628101

3. Superintending Engineer,
   Tamil Nadu Electricity Board
   [Presently: Tamil Nadu Generation &
   Distribution Company (TANGEDCO)]

4. Fatima Babu D/o M.G. Rodriguez,
   No.77, Periakadai Street,
   Tuticorin-628001

5. Mr. Vaiko,
   General Secretary,
   Marumalarchi Dravida Munnetra Kazhagam Thayagam,
   No. 12, Rukmani Lakshmipathi Salai, Egmore,
   Chennai-600008

6. National Trust for Clean Environment
   Rep. by its Secretary,
   No.149, IV Floor,C.J.Complex,Thambu Chetty Street,
   Chennai-600001

.....Respondents

Counsel for Appellant:

Mr. Pinaki Misra, Sr. Advocate, Ms. Rohini Musa and
Mr. Prashanto Sen, Advocates.

Counsel for Respondents:

Mr. Raju Ramachandran, Sr. Advocate and Mr. Yogesh Kanna,
Mr. Subramonium Prasad, Mr. M.K. Subramanium, Mr. Varun Tandon, Mr. Yogesh Kanna, Advocates, for Respondents No.1 to 3
Mr. Vaiko, present in person Respondent No.5
Mr. Raj Panjwani, Sr. Advocate along with
Ms. Srilekha Sridhar, Advocate for Respondent No.6

JUDGMENT

PRESENT :

Hon'ble Mr. Justice Swatanter Kumar (Chairperson)
Hon'ble Dr. D.K. Agrawal (Expert Member)
Hon'ble Dr. G.K. Pandey (Expert Member)
Hon'ble Dr. R.C.Trivedi (Expert Member)

Dated : August 8, 2013

JUSTICE SWATANTER KUMAR, (CHAIRPERSON):

1. Vide order dated 29th March, 2013, the Tamil Nadu Pollution Control Board (for short 'the Respondent Board'), in exercise of its powers under Section 31-A of the Air (Prevention and Control of Pollution) Act, 1981, (for short the 'Air Act'), directed closure of M/s. Sterlite Industries (India) Ltd. (for short the 'appellant-company') with immediate effect. On that very day, it also, by a separate communication, again in exercise of its powers under Section 31-A of the Air Act, directed the Superintending Engineer, Tamil Nadu Electricity Board, Thoothukudi, to disconnect the electricity supply to the appellant company. The correctness and legality of this order have been challenged by the appellant-company, primarily on the ground that it is arbitrary, discriminatory and has been passed in an

undue haste without proper application of mind, non-grant of appropriate opportunity and by taking into consideration irrelevant materials, while ignoring the substantive and relevant considerations. It is also stated that the order is based upon no scientific study or data. The respondents, besides refuting the above contentions, have raised a preliminary objection with regard to the maintainability of the present appeal on the ground that the Government of Tamil Nadu constituted an appellate authority, vide notification dated 8th May, 2013, which is functional, and hence the present appeal, in terms of the provisions of the Air Act, would lie before that appellate authority. Therefore, the present appeal is not maintainable.

2. In order to examine the merits or otherwise of the contentions raised above, we have to notice the facts that have resulted in filing of the present appeal.

FACTS:

3. The appellant-company is a public listed company, registered under the Companies Act, 1956. The appellant-company has been operating a copper smelter plant (for short 'the plant') since 1996 at SIPCOT Industrial Complex, Thoothukudi, Tamil Nadu. The plant has been operating with requisite approvals and consents issued by the regulatory authorities during all this period. The appellant-company is engaged in the manufacture of copper cathodes and copper rods. These are manufactured by a process – smelting copper

concentrate – which is the main raw material (copper ore), containing approximately 30% copper, 30% sulphur, 30% iron and balance 10% as other impurities. The copper concentrate along with other raw materials is fed into the smelter to produce copper anode, which is copper of 98.6% purity, which then is refined to produce copper cathode i.e. copper of 99.9% purity. From this copper cathode, copper rods are manufactured. During the smelting process, the sulphur contained in the copper concentrate is converted into sulphur dioxide (SO_2), which is collected and sent to sulphuric acid plants through a closed duct system. Thereafter, the SO_2 gas is cleaned in the gas cleaning plant comprising gas cooling tower, scrubber system and wet electrostatic precipitators. The cleaned SO_2 gas is then oxidized using vanadium pentoxide catalyst to form sulphur tri-oxide (SO_3) gas which is absorbed in water and converted to sulphuric acid. The residual gas from the sulphuric acid plant is further treated in the tail gas scrubber to meet the prescribed environmental standards and then routed through the stack. Emissions of SO_2 from the stacks are being monitored by online SO_2 analysers. Furthermore, it is stated that an analyser is connected to the stack to analyse the extent of SO_2 that is released into the atmosphere. The data collected by the analyser is then sent to both the Distributed Control System (DCS) within the plant and to the CARE Air Centre at the premises of Respondent No.1 in Chennai. The software that is to be used along with the analyser has been the one recommended by the

Respondent Board and is a tamper-proof system. The prescribed emission standard of SO_2 is 477.53 ppm at the tip of the stack and 80 μg/m^3 (micro grams per cubic meter) for the ambient air. The analyser installed at the end of the appellant-company can be run in two different modes i.e. 'Actual Mode' and 'Maintenance Mode'. It is the case of the appellant-company that in order to ensure accuracy of SO_2 emission, it undertakes calibration checks of the analyser. Such calibration checks are carried out periodically as also before restarting the smelting plant where such plant has been shut down either for scheduled maintenance or due to unscheduled breakdowns. For calibration, typically a gas having a known concentration is fed into the analyser directly to remove the drift errors spotting the higher (unrealistic) emissions and to test whether the analyser is capable of reading accurate values. After being tested/analysed, such gas having excess SO_2 concentration is not directed to the stack and is not released in to the atmosphere; rather it is released within the caustic absorber analyser-room by trained personnel, wearing necessary safety equipment. When the calibration checks of the analyser are being performed, it is run on 'maintenance mode' and is depicted by the letter 'M' alongside the relevant data. The appellant-company claims to be very particular about adhering to the highest standards of environment, health and safety practices in its operations, adding that the unit has been continuously upgraded in terms of environmental performance from time to time based on

international best practices. Considering adherence to maintain quality in its processes and its compliance to international practices, the appellant-company claims to have been awarded ISO 9001 for quality management systems and the same has been renewed periodically and it has also been conferred with ISO 14001 for environment management systems, which continues till date. In addition, the appellant-company also possesses an OHSAS 18001 certificate in respect of safety management systems apart from an ISO 50001 certificate for energy management systems.

4. The National Environmental Engineering Research Institute (for short the 'NEERI') had submitted a report in the year 2005 showing that the emission levels of the plant of the appellant-company were within the stipulated limits while some emissions did not conform to the standards prescribed. It had also made some recommendations. Regarding the solid waste released out of slag in the plant site, the Central Pollution Control Board had taken a view in its communication dated 17th November, 2003 to the Respondent-Board that the slag was non-hazardous. The NEERI, in its report had indicated as many as 30 deficiencies and had pointed out what the appellant-company was required to do to rectify the deficiencies. On these recommendations, the Respondent Board had given 30 directions out of which, according to the appellant-company, it had completed all the 30 improvements/measures. However, in the judgment of the Supreme Court in the case of *Sterlite Industries (India) Limited v.*

Union of India & Ors.[(2013) 5 SCALE 202], it has been noticed that the appellant-company had complied with 29 of the 30 directions. Thus, according to the appellant-company, its plant was running without any violations and with the approval and sanction of the competent authorities.

5. On the morning of 23rd March, 2013, the appellant-company was informed that certain complaints of eye irritation and throat suffocation were received from the people of New Colony, Keela Shanmuga Puram and other areas of Thoothukudi town. The appellant-company's plant was, therefore, inspected by the District Environmental Engineer, Thoothukudi (for short the 'DEE') of Respondent-Board at 8.00 a.m. on that date. Some other officials including the SDM, and the Deputy Chief Inspector of Factories, Thoothukudi, were present. They probably came to inspect the premises and check the environmental parameters of the plant. They were informed that the plant was taken for maintenance shut down at around 3.20 a.m. on 21st March, 2013 to attend to certain repairs and was taken for start up at around 2.00-2.45 p.m. on 23rd March, 2013. It was also informed to the Inspecting Team that the system was taken up for calibration of the analyser during the start up process. At that time and as per the directions of the DEE, the calibration process was again carried out. The observed values during such requested calibration were in the range of 675 ppm to 1123 ppm, which was found to be normal and it was assessed that the analyser was working normally and that the emission levels were

within the prescribed norms. According to the appellant-company, the DEE, Thoothukudi, also submitted a report to the Collector of that District mentioning that the plant was functioning normally and the environmental parameters were within the limits. In fact, the Collector issued a press release to the effect that the emissions of SO_2 were found within overall limits and that it was not the case that the public had been affected by it.

6. After having taken all these steps, suddenly and to the surprise of the appellant-company, it received a notice dated 24th March, 2013 wherein it was alleged that the appellant-company had contravened the provisions of Section 21 of the Air Act while referring to eye irritation and throat suffocation complaints received from various residents. It was also stated that SO_2 trend graph of ambient air quality indicated that the value shot up suddenly from 20 $\mu g/m^3$ to 62 $\mu g/m^3$ and that the SO_2 emission monitor was not connected with the CARE Air Centre of Respondent Board. On these allegations, the appellant-company was required to submit a reply to the show cause notice within 3 days as to why action, including closure of the unit, stoppage of power supply, water supply, etc. might not be taken against it. At this stage, it may be useful to reproduce below the notice dated 24th March, 2013, served upon the appellant-company, by the Joint Chief Environmental Engineer (M), Respondent Board, Madurai:

"……Tamil Nadu Pollution Control Board serves this notice on you as the occupier of M/s Sterlite Industries (I) Ltd., (Copper Smelter Division), SIPCOT Industrial Complex, Meelavittan, Thoothukudi Taluka, Thoothukudi District (hereinafter referred to as the 'unit') for contravening the conditions imposed in the consent issued under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981, as amended in 1987 (hereinafter referred to as the 'Act') vide reference 1st cited above.

During inspection of your unit on 23.03.2013 by the officials of Tamil Nadu Pollution Control Board, Thoothukudi, the unit official reported that on 21.03.2013 around 3:20 A.M. the smelter was shut down to attend a puncture in furnace roof cooling jacket tube and the smelter was again put into service from 23.03.2013 at 3.30 A.M. During this time, Sulphuric acid plant bed was maintained at required temperature using Furnace oil and the emission was routed through Tail Gas Scrubber. Around 4:40 A.M. copper concentrate at the rate of 26.77 t/hr was fed as a trial for few minutes.

On 23.03.2013 public complaints were received around 7.00 A.M. about eye irritation, throat suffocation in New Colony, Keela Shanmugapuram and other areas of Thoothukudi Town.

It was noticed from SO_2 trend graphs of Ambient Air Quality, the value was shot up suddenly from 20 $\mu g/m^3$ to 62 $\mu g/m^3$ in the Sterlite Industries (I) Ltd., Thoothukudi Colony located in the East direction around 6:00 A.M. The value was immediately reduced to 10 $\mu g/m^3$ around 6:35 am. At that time the wind direction was from NW to SE i.e. towards Thoothukudi Town and the wind speed at that time was 1.224km/hour as per the records maintained by the unit.

Further it was noticed from the data of the on line monitoring system connected with the CARE Air Center of the TNPC Board, Chennai the SO_2 emission monitor was not connected with the CARE Air Centre of TNPC Board, Chennai during that time.

Hence it reveals that the APC measures were not properly operated and also the SO_2 emission monitor was not connected with the CARE Air Centre of the TNPC Board, Chennai.

Thereby you are violating the conditions issued to the unit under the provisions of Section 21 of the 'Act' which is an offence punishable under Section 37 of the Act read with Section 31A of the Act with imprisonment for a term which shall not be less than one year and six months, but which may extend to six years and with fine and in case the failure continues with an additional fine which may extend to five thousand rupees for every day during which such failure continues after the conviction for the first such failure.

Hence, you are directed to show-cause within 3 days from the date of receipt of this notice as to why penal action for offences punishable under Section 37 read with Section 31A of the 'Act' should not be initiated against you as occupier of the unit and also to show-cause as to why directions under Section 31A of the 'Act' shall not be issued for closure of the unit, stoppage of power supply, water supply etc. to the unit.

It is informed that non-receipt of any reply within the prescribed period will be construed that you have no satisfactory explanation to offer for the above said contravention and action will be taken on the merits in accordance with law...."

7. The appellant-company claims that the period of three days for filing of the reply was extremely short but still it submitted a reply dated 27th March, 2013 supplemented by another reply dated 28th March, 2013. In these two replies, the appellant-company pointed out, *inter alia,* that the smelting plant had been shut down from 3.20 a.m. on 21st March, 2013 till the early hours of 23rd March, 2013 for repairing of a puncture in the

furnace roof cooling jacket tube. The process of start-up of the smelting plant was restarted on 23rd March, 2013 and that before and during the start-up process, as per the Standard Operating Procedure (SOP), calibration of the Analyser had been performed. As per the SOP, the gas used for calibration was not released into the atmosphere and the values of SO_2 concentration during calibration done at 2.00 a.m. were virtually equal to the values of such concentration during the calibration done as per the request of the officials of the Respondent Board at 9.00 a.m. It was also stated that the Analyser had always been connected to the appellant Company's DCS as also to the Respondent Board CARE Air Centre and though the appellant-company had inadvertently not switched the Analyser from the 'Maintenance Mode' back to the 'Actual Mode' after the calibration at 2.00 a.m. was concluded, the entire data would be available with the CARE Air Centre provided the option to view both the 'Maintenance Mode' data and the 'Actual Mode' data was chosen. It was also specifically emphasised that Analyser readings during the calibration process, i.e. the analyser readings with 'M' tag are not a true representation of the actual emission during operation of the smelting plant since it denoted only the calibration gas values fed to the Analyser. The appellant-company also submitted that on earlier occasions the CARE Air Centre data confirmed that during the calibration process (software in maintenance mode) the values of SO_2 had gone up to 1000 ppm range. The appellant-company reiterated the above submissions

and also craved leave to adopt the entire replies dated 27th March, 2013 and 28th March, 2013 as part and parcel of this appeal. There was no evidence of the fact that the alleged throat irritations were caused by gas emitted from the appellant company's plant. In fact, the notice dated 24th March, 2013 issued by the Collector had categorically stated that the report in regard to gas emitted from the appellant company's plant was being examined. If that be so, then the question of holding the appellant-company responsible for alleged complaints of throat irritation etc. did not arise. Moreover, not a single case was reported in any of the hospitals and that is the best proof of the fact that the allegations lacked verisimilitude.

8. In terms of the show cause notice, complaints had been received from New Colony and Keela Shunmuga Puram at around 7.00 a.m. which are around 7 kms and 8.1 kms respectively from the plant. It is averred by the appellant-company that the average wind speed during the complaint period was 0.79 km/hr and even on hypothetical basis of assuming that 1000 ppm was emitted from the stack at 0.79 km/hour the approximate time taken by the pollutant to reach the complainant area could be 9.22 and 10.23 hours respectively. This would show that the high emission should have been emitted 9-10 hours before the complaint-time, i.e. 7.00 a.m. During the said period there was no operation at the appellant-company's factory as the plant was under start-up

process and the analyzers had recorded that all the emissions were within the regulatory standards.

9. Not only this, the appellant-company had also informed that the officials of the Respondent Board were at the plant premises during the whole day of 23rd March, 2013 (Saturday) till late in the evening and even on 24th March, 2013 when various officials of the government visited the site. Furthermore, according to the appellant-company, no written guidelines/SOP were issued by Respondent Board for CARE Air Centre explaining the procedure to be followed during the maintenance including information during calibration of analyzers. Based upon the complaints that had been received, the officials of Respondent Board inspected the unit within 15 minutes and found that all the parameters were in normal condition and reported the same to the District Collector on 23rd March, 2013. It is also the case of the appellant-company that keeping in view the contents of the complaints and particularly the complaints with regard to the throat and eye irritation, it had sought information under the RTI Act from Tuticorin General Hospital, if there were cases of in-patient/out-patient reported in the hospital with such complaints and were treated by that hospital. The answer received, which has been placed on record, is in the negative. Despite the above, Respondent Board vide its order dated 29th March, 2013 directed closure of the unit and also required the Tamil Nadu Electricity Board to disconnect the power supply to the unit with immediate effect, as already noticed.

10. At this stage, we may also notice that under Section 31(1) of the Air Act "Any person aggrieved by an order made by the State Board under this Act may, within thirty days from the date on which the order is communicated to him, prefer an appeal to such authority (hereinafter referred to as the Appellate Authority) as the State Government may think fit to constitute…." The State Government issued notification to constitute an authority of three persons in terms of Section 31(2) of the Air Act. However, at the relevant time, there was only one Member of the said authority in position and according to the appellant-company, it could not have filed an appeal which could be effectively heard by the appellate authority, keeping in view the law stated by a Bench of this Tribunal in the case of *Gurdial Singh and Another v. State of Punjab and Ors.*, [Application No. 4/2013, (T_{HC})] decided by Principal Bench at New Delhi on 30th April, 2013. In terms of Section 31B of the Air Act, an order passed under Section 31 by the appellate authority is appealable to this Tribunal. In the normal course, under Section 31 of the Air Act, the appellant-company should have preferred an appeal before the said appellate authority. Since the State Government had not constituted the complete State Appellate Authority for want of quorum, the appellant-company could not prefer the appeal before that authority particularly keeping in view the urgency of the case. Thus, it filed an appeal before this Tribunal.

11. Before we refer to the stands of the respective respondents in relation to the case put forward by the appellant company, we

must refer to one more significant event. The environmental clearance (for short "the EC") granted by the Government of India and the consent orders passed by the Board under the Air Act and the Water (Prevention and Control of Pollution) Act, 1974, (for short the 'Water Act') respectively, permitting the appellant-company to establish and commence its plants, were challenged by the National Trust for Clean Environment by way of a writ petition in the Madras High Court. The Division Bench of the High Court of Madras vide its judgment dated 29th September, 2010 allowed and disposed of the writ petition with the direction to the appellant-company to close down its plants at Tuticorin. By the writ petitions filed before it, the High Court also settled certain industrial disputes between the appellant-company and the workmen. Against this judgment special leave petitions were preferred before the Supreme Court of India which came to be registered as Appeal Nos. 2776-2783/2013, *M/s. Sterlite Industries India Ltd. v. Union of India and Ors.* and were finally decided on 2nd April, 2013. The Supreme Court accepted the appeals while setting aside the judgment of the High Court and permitted the appellant-company to carry on its business. It specifically left certain contentions of the parties open in relation to compensation and other matters. It will be useful to refer to the relevant part of the judgment at this stage: -

> "38. The conclusion in the joint inspection report of CPCB and TNPCB is extracted hereinbelow:

"Out of the 30 Directions issued by the Tamil Nadu Pollution Control Board, the industry has complied with 29 Directions. The remaining Direction No.1(3) under the Air Act on installation of bag filter to converter is at the final stage of erection, which will require further 15 working days to fully comply as per the industry's revised schedule."

From the aforesaid conclusion of the joint inspection report, it is clear that out of the 30 directions issued by the TNPCB, the appellant-company has complied with 29 directions and only one more direction under the Air Act was to be complied with. As the deficiencies in the plant of the appellants which affected the environment as pointed out by NEERI have now been removed, the impugned order of the High Court directing closure of the plant of the appellants is liable to be set aside.

39. We may now consider the contention on behalf of the interveners that the appellants were liable to pay compensation for the damage caused by the plant to the environment. The NEERI reports of 1998, 1999, 2003 and 2005 show that the plant of the appellant-company did pollute the environment through emissions which did not conform to the standards laid down by the TNPCB under the Air Act and through discharge of effluent which did not conform to the standards laid down by the TNPCB under the Water Act. As pointed out by Mr. V. Gopalsamy and Mr. Prakash, on account of some of these deficiencies, TNPCB also did not renew the consent to operate for some periods and yet the appellants continued to operate its plant without such renewal. This is evident from the following extracts from the NEERI report of 2011:

"Further, renewal of the Consent to Operate was issued vide the following Proceedings Nos. and validity period:

TNPCB Proceeding	**Validity Upto**
No.T7/TNPCB/F.22276/RL/TTN/W/2007 dated 07.05.2007 No.T7/TNPCB/F.22276/RL/TTN/A/2006 dated 07.05.2007	30-09-2007
No.T7/TNPCB/F.22276/URL/TTN/W/20	31-03-2009

08 dated 19.01.2009 No.T7/TNPCB/F.22276/URL/TTN/A/2008 dated 19.01.2009	
No.T7/TNPCB/F.22276/URL/TTN/W/2009 dated 14.08.2009 No.T7/TNPCB/F.22276/URL/TTN/A/2009 dated 14.08.2009	31-12-2009

Thereafter, the TNPCB did not renew the Consents due to non-compliance of the following conditions:

Under Water Act, 1974

i. The unit shall take expedite action to achieve the time bound target for disposal of slag, submitted to the Board, including BIS clearance before arriving at disposal to cement industries, marine impact study before arriving at disposal for landfill in abandoned quarries.

ii. The unit shall take/expedite action to dispose the entire stock of the solid waste of gypsum.

Under Air Act, 1981

i. The unit shall improve the fugitive control measure to ensure that no secondary fugitive emission is discharged at any stage, including at the points of material handling and vehicle movement area."

For such damages caused to the environment from 1997 to 2012 and for operating the plant without a valid renewal for a fairly long period, the appellant-company obviously is liable to compensate by paying damages. In M.C. Mehta and Another vs. Union of India and Others [(1987) 1 SCC 395], a Constitution Bench of this Court held:

> "The 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."

The Constitution Bench in the aforesaid case further observed that the quantum of compensation must be co-related to the magnitude and capacity of the enterprise because such compensation must have a deterrent effect and the larger and more prosperous the enterprise, the greater must be the amount of compensation payable by it. In the Annual Report 2011 of the appellant-company, at pages 20 and 21, the performance of its copper project is given. We extract hereinbelow the paragraph titled Financial Performance:

> "PBDIT for the financial year 2010-11 was Rs.1,043 Crore, 40% higher than the PBDIT of Rs.744 Crore for the financial year 2009-10. This was primarily due to higher LME prices and lower unit costs at Copper India and with the improved by-product realization."

Considering the magnitude, capacity and prosperity of the appellant- company, we are of the view that the appellant-company should be held liable for a compensation of Rs. 100 crores for having polluted the environment in the vicinity of its plant and for having operated the plant without a renewal of the consents by the TNPCB for a fairly long period and according to us, any less amount, would not have the desired deterrent effect on the appellant-company. The aforesaid amount will be deposited with the Collector of Thoothukudi District, who will invest it in a Fixed Deposit with a Nationalized Bank for a period of five years. The interest therefrom will be spent for improving the environment, including water and soil, of the vicinity of the plant after consultation with TNPCB and approval of the Secretary, Environment, Government of Tamil Nadu.

40. We now come to the submission of Mr. Prakash that we should not grant relief to the appellants because of misrepresentation and suppression of material facts made in the special leave petition that the appellants have always been running their plant with statutory consents and approvals and misrepresentation and suppression of material facts made in the special leave petition that the plant was closed at the time the special leave petition was moved and a stay

order was obtained from this Court on 01.10.2010. There is no doubt that there has been misrepresentation and suppression of material facts made in the special leave petition but to decline relief to the appellants in this case would mean closure of the plant of the appellants. The plant of the appellants contributes substantially to the copper production in India and copper is used in defence, electricity, automobile, construction and infrastructure etc. The plant of the appellants has about 1300 employees and it also provides employment to large number of people through contractors. A number of ancillary industries are also dependent on the plant. Through its various transactions, the plant generates a huge revenue to Central and State Governments in terms of excise, custom duties, income tax and VAT. It also contributes to 10% of the total cargo volume of Tuticorin port. For these considerations of public interest, we do not think it will be a proper exercise of our discretion under Article 136 of the Constitution to refuse relief on the grounds of misrepresentation and suppression of material facts in the special leave petition.

41. Before we part with this case, we would like to put on record our appreciation for the writ petitioners before the High Court and the intervener before this Court for having taken up the cause of the environment both before the High Court and this Court and for having assisted this Court on all dates of hearing with utmost sincerity and hard work. In Indian Council for Enviro-Legal Action and Others vs. Union of India and Others [(1996) 3 SCC 211], this Court observed that voluntary bodies deserve encouragement wherever their actions are found to be in furtherance of public interest. Very few would venture to litigate for the cause of environment, particularly against the mighty and the resourceful, but the writ petitioners before the High Court and the intervener before this Court not only ventured but also put in their best for the cause of the general public.

42. In the result, the appeals are allowed and the impugned common judgment of the High Court is set aside. The appellants, however, are directed to deposit within three months from today a compensation of Rs.100 crores with the Collector of Thoothukudi District, which will be kept in a fixed deposit in a Nationalized Bank for

> a minimum of five years, renewable as and when it expires, and the interest therefrom will be spent on suitable measures for improvement of the environment, including water and soil, of the vicinity of the plant of the appellants after consultation with TNPCB and approval of the Secretary, Environment, Government of Tamil Nadu. In case the Collector of Thoothukudi District, after consultation with TNPCB, finds the interest amount inadequate, he may also utilize the principal amount or part thereof for the aforesaid purpose after approval from the Secretary, Environment, Government of Tamil Nadu. By this judgment, we have only set aside the directions of the High Court in the impugned common judgment and we make it clear that this judgment will not stand in the way of the TNPCB issuing directions to the appellant-company, including a direction for closure of the plant, for the protection of environment in accordance with law.
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> 43. We also make it clear that the award of damages of Rs. 100 Crores by this judgment against the appellant-Company for the period from 1997 to 2012 will not stand in the way of any claim for damages for the aforesaid period or any other period in a civil court or any other forum in accordance with law."

12. It is commonly conceded position before us that the incident of 23rd March, 2013 was mentioned and brought to the notice of the Hon'ble Supreme Court of India, a day prior to pronouncement of judgment, on behalf of the Respondent Board. However, the Supreme Court of India while setting aside the judgment of the High Court and permitting the appellant-company to carry on its production, made it clear that the judgment of the Supreme Court will not stand in the way of the Respondent Board to issue appropriate directions to the appellant-company, including directions for closure of the plant for the protection of environment, in accordance with law.

13. The appellant-company submits that the Tribunal has jurisdiction to entertain the present appeal inasmuch as at the relevant time, the appellate authority of requisite quorum under the law did not exist in the State of Tamil Nadu and keeping in view the urgency of the matter and the fact that the appellant had no effective remedy available to it, the appeal had been filed before this Tribunal. There was no urgency or emergency existing as the alleged leakage or emission took place on 23rd March, 2013 while the impugned order was passed on 29th March, 2013. The respondents have exercised their authority in an arbitrary and unfair manner. In fact, the use of expressions like "'unidentified gas' or 'undefined gas' emitted from some source, probably M/s Sterlite", gives sufficient indication that it was an ambiguous and uncertain allegation that was made the basis for taking the action against the appellant-company. The symptoms suffered by the alleged 12 individuals were non-specific and could be attributable to leakage of any other gas including ammonia, chlorine, nitrogen oxide, etc. which are also the gases found in the ambient air, and not merely to sulphur dioxide. The appellant-company has been denied the opportunity to a free, fair and unbiased inquiry into the veracity of the complaints to find out whether there was actually any emission from its plant or not. On 23rd March, 2013, the DEE of the Respondent Board had visited the plant and submitted his inspection report confirming that the sulphuric acid plant's stack emissions and ambient air quality were within the prescribed

limits of 1250 mg/m^3 and 80 µg/Nm^3. The appellant-company is fully aware of the welfare of the public and had taken all the measures to ensure that there was no pollution. The press release made on 24th March, 2013, was not merely to bring out the preliminary details of the accident and, in fact, after due consideration of the ground realities, it did not put any blame on the appellant-company. According to the appellant-company, the action taken against it was only at the behest of a handful of people with vested interests and political association, mobilised from the districts around Thoothukudi and who had participated in the alleged protest. The order of closure is based on surmises and assumptions. There are a large number of other units carrying on their manufacturing activities in and around the unit of the appellant-company. One M/s Ramesh Flowers, which were carrying on the business of dyeing and bleaching could have caused the problem and even the Committee appointed by the Govt. of Tamil Nadu, after a detailed investigation, concluded that the SO_2 emission from the appellant-company's unit in and around the area in question was well within the prescribed limits. There is heavy vehicular traffic owing to diesel run vehicles and such vehicles also emit SO_2, nitrogen oxide etc. In addition, other gases such as ammonia, chlorine etc. may also emanate from the industries around Tuticorin, which have similar effects on the environment. None of the inspection reports have fixed any direct responsibility on the appellant-company's unit.

14. On this factual premise, the appellant-company submits that the impugned orders are in violation of the principles of natural justice as adequate opportunity of showing cause to the proposed action of closure was not provided to it. This has led to an action being taken by the respondents in undue haste and without proper application of mind. The unit of the appellant-company has never caused any pollution. It was only in the normal process of calibration that the higher values of SO_2 had been noticed and its emission from the plant of the appellant-company had never exceeded the prescribed parameters. The data collected from the Analyser as well as the Ambient Air Quality monitoring stations clearly demonstrates that the appellant-company has never caused any pollution, much less any health hazard to the residents in the vicinity. The complaints against the company are engineered and motivated. It was not possible that persons staying 8 kms away would have eye and throat irritation as a result of alleged discharge of SO_2 from the appellant-company's unit while no complaints were received from the residents of the areas near and even adjacent to the premises of the appellant-company. Further, it is the case of the appellant-company that the Chairman of the respondent-Board was not competent to pass the impugned order and in any case, it is an arbitrary exercise of power. The present appeal is maintainable and the appellant-company is entitled to carry on its manufacturing activities in accordance with law.

15. We may now notice the stand taken by the Respondent Board. Two affidavits dated 8th April, 2013 and 20th May, 2013 were filed on behalf of this respondent. According to the Respondent Board, the appellant-company had obtained its consent to operate on 15th October, 1996 and had actually commissioned the manufacturing activity on 1st January, 1997. Subsequently, it expanded the copper manufacturing capacity in the years of 2005 and 2006 and installed diesel based power plant in 2002. Again, the consent and the EC had been obtained from the Respondent Board and the Ministry of Environment & Forests, Government of India respectively. The consents granted under the Air Act and the Water Act were challenged before the Madras High Court. Subsequently, the plant of the appellant-company was ordered to be closed. Operation of that judgment was stayed by the Hon'ble Supreme Court vide an interim order dated 28th September, 2010 and the final judgment passed by the Supreme Court has already been referred to. On 23rd March, 2013 at 7.00 a.m., according to the Respondent Board, several complaints of eye irritation, continuous cough, throat constriction and breathing difficulties, due to presence and inhalation of obnoxious gas in the atmosphere, were received from the people of New Colony, Keela Shamuga Puram, which is situated at a distance of 5 kms away from the appellant-company's unit. Based on the complaints, the DEE had immediately inspected the appellant company's plant and had made certain observations. It was stated that the unit had been

shut down on 21st March, 2013 to attend to the puncture in the furnace roof cooling jacket tube. The smelter was again put into operation from 23rd March, 2013. According to the Respondent Board, no such intimation in advance was sent to it and its permission was not sought. The Respondent Board CARE Air Centre at Guindy, Chennai, logged in data pertaining to sulphuric acid plant-I (SAP-1) of appellant-company from 2.15 a.m. to 2.45 a.m. on 23rd March, 2013 which showed that the Sulphur Dioxide (SO_2) in the stack emission was in the range of 2103.23 mg/Nm^3 to 2939.33 mg/Nm^3 (803.5 ppm to 1123.6 ppm) as against the emission standards of 1250 mg/Nm^3 (477.53 ppm) prescribed by the Ministry of Environment & Forests in the Notification published in the gazette. Thereafter, the inspection was carried out on 24th March, 2013 which also confirmed accident of SO_2 emissions at the online continuous monitoring system in the SAP-1 of the unit. Keeping in view the gravity of the situation, a show cause notice dated 24th March, 2013 was issued to the appellant-company. It is specifically mentioned that the appellant-company had submitted its reply on 27th-28th of March, 2013 informing that during the period of calibration between 9.00 a.m. to 11.15 a.m. on 23rd March, 2013, higher values had been recorded which were similar to the values experienced during the earlier calibration period, which in turn shows that it was not operational. It is submitted that the Ambient Air Quality Monitor available at the factory site, not having recorded higher values cannot be adduced as a reason for

the 80 μg/Nm^3 upper limit being not breached, as the monitor in the factory which is located 500 metres away within the factory, is not in the line of stack emission. The fact that eye irritations and throat suffocation were felt by the people at a distance of 5 kms away, once again leads to the irrevocable conclusion that there was emission of obnoxious gas at higher parameters than those laid down. SO_2 is a toxic gas and can not only cause the problems complained of but may also damage vegetation, soil and water content in the locality. According to this affidavit, the plant had been operated without observing the due precautions and safety norms leading to dangerously high levels of SO_2, which could not be controlled by the existing Air Pollution Control measures provided in the plant.

16. In paragraph 24, the said respondent has referred to a table showing emissions in excess of the standard parameters and there are stated to be 84 such instances. The copper smelters are infamous for their extensive public health and environmental impacts both in Western countries and in countries where the environmental standards are much less rigorous.

17. In view of the excessive emissions, it is contended that the appellant-company is only looking after its own economic interests and not the public interest. Merely providing employment to 3000 people is not a justifiable cause for such emissions. The prevention of deterioration of environment has to be of paramount consideration. Permitting the appellant-

company to commence its operations will cause irreparable injury and hardship to the public as there is an imminent threat and danger of a chemical disaster.

18. In its affidavit dated 20th May, 2013, the Board has primarily reiterated the above averments but has also further attempted to counter the contentions/documents that have been placed on record by the appellant-company. To such reply-affidavit, even a rejoinder was filed by the appellant-company placing further documents on record.

19. The District Collector, Thoothukudi, had informed the DEE of the complaints received and upon receiving such complaints, the DEE had inspected the appellant-company's unit. The report, thereafter, has been placed as Annexure 'A'. It is further submitted that the appellant-company is situated in SIPCOT Industrial Complex Thoothukudi, and there are about 64 industries in the campus, out of which only 54 are functioning and only the appellant Company emits toxic gases which are injurious to health. It is averred that the contention of the appellant-company that excessive emissions were during calibration process is false. The analyser is connected to stack and it shows the measure of SO_2 gas emitted at the stack level. Calibration exercise is to ascertain whether the analyser is working properly and recording the emissions correctly or not. As per experts of the Respondent Board, the readings recorded by the analyser are not due to calibration exercise but in fact are

actual emissions. Calibration approximately takes 20 minutes while excessive gases have been recorded in excess thereto as well as on different times. The emissions recorded on 23rd March, 2013 at 0145 hours to 0245 hours show a gradual increase, from 0146 hours to 0201 hours, of about 16 minutes. Emission levels reached a maximum readable range of the analyser of 1123 ppm, from 0202 hours to 0240 hours i.e. for 39 minutes. Later there was a gradual decrease of emission levels in five minutes from 0241 hours to 0245 hours. Had this been due to calibration then the reading would have demonstrated a sudden spurt of 30 seconds in the graph. This exceedence indicates that this spurt in the value of SO_2 is not due to calibration process but due to the emissions with high concentration levels of SO_2 from the process. Similarly, from October 2012 till March 2013, 84 such occurrences of exceedence were reported for every 15 minutes of recorded values. It is submitted on behalf of the Respondent Board that even if concentration of SO_2 in the stack is at any level beyond 1123 ppm, the analyser would show concentration at only 1123 ppm as the analyser cannot record any figure which is beyond the readable figure. The Ambient Air Quality Monitor is not always correctly reflective of the fact as to whether there were excessive emissions or not. It is contended that the data submitted by the appellant-company is an average of 24 hours of the Ambient Air Quality recorded in the seven stations. This

data cannot and will not reflect any sudden spurt in the emission during the period of the said emissions.

20. It is also averred by the Respondent Board that the appellant-company's plant was connected to CARE Air Centre, Respondent Board for two stack parameters, i.e. SAP 1 and 2 for SO_2 only from 12th March, 2012. Three more stacks, i.e. ISA Furnace Stack, SGS (Secondary Gas Scrubber) 1 & 2 stacks were connected only from 1st March, 2013. No Continuous Ambient Air Quality Monitoring Stations (CAAQM) of the appellant-company is connected by the CARE Air Centre, Respondent Board. There are seven CAAQM stations available at the appellant-company and the same data is not connected to the CARE Air Centre of the Respondent Board. According to this respondent, the appellant-company is guilty of *suprressio veri suggestio falsi* and therefore, not entitled to any relief.

21. Thus, according to the respondent-Board, the issuance of a show cause notice on 24th March, 2013 and the order of closure dated 29th March, 2013 was correctly passed.

22. Respondent No.2, at the very outset, has taken an objection with regard to the maintainability of the present appeal on the ground that the appellant-company has a statutory remedy under Section 31 of the Air Act of filing an appeal before the duly constituted Appellate Authority. As such entertaining the present appeal would allow the appellant-company to jump the statutory appeal, which is not permissible in law. It was required

of the appellant-company to exhaust all the remedies available to it in law before filing an appeal before the National Green Tribunal (for short the "NGT"). It is averred by this respondent that complaints were received over the phone from the public of Thoothukudi town and nearby areas stating that an unidentified gas was emitted from some source, probably M/s Sterlite Industry, Thoothukudi, around 6.30 a.m. on 23rd March, 2013 which led to various health problems like eye irritation, throat infection, severe cough, breathing problem and nausea to the people of Thoothukudi town and particularly in the areas of Anna Nagar, Toovipuram, Bryant Nagar and George Road. An urgent meeting was called by the District Collector at 11.00 a.m. on that day and a number of officers of the government participated in that meeting including the police authorities. It was decided by the District Administration to proceed against the appellant-company for causing public nuisance under Section 133 of the Code of Criminal Procedure, 1973 (for short 'Cr.P.C.') and a notice dated 24th March, 2013 in Form 20 was issued to the appellant-company. Demonstrations were held by various bodies, including the General Secretary, MDMK, along with a large number of workers against the appellant-company. Nearly 70% of the shops in Thoothukudi town were closed. Finally, the orders for closure in terms of Section 31A of the Air Act were issued on 29th March, 2013 for violation of rules and standards. Thereafter, even the electricity supply to the premises was disconnected on 30th March, 2013. The appellant-company is

stated to have operated its unit without observing all due precautions and safety norms leading to dangerously high rise in levels of Sulphur Dioxide emissions which could not be controlled by the existing air pollution control measures. Moreover, the SO_2 exposure threatened the public with both short-term and chronic effects on its health. The sub-Divisional Magistrate and Revenue Divisional Officer, Thoothukudi, had conducted a detailed enquiry under Section 133 Cr.P.C. On 24th March, 2013, a press release was issued by the District Administration to bring out the preliminary details of the incident and its effects on the people and in this release, it was mentioned that as per the inspection report of the DEE, the SO_2 emission from the appellant-company were in high quantity. At the same time, it is stated that the press release had not given any clean chit to the appellant-company and they cannot take any shelter under the said submission. A number of persons had taken medical treatment in AVM Hospital. Though there were no in-patients in the hospital but the fact is that a number of persons were affected as a result of the emission of pungent gases on 23rd March, 2013. Lastly, it is submitted that in view of the past experience, it will not be in the public interest to permit the appellant-company to operate its plant.

23. Respondents No.4 and 5, who were subsequently ordered to be impleaded as respondents have also filed separate replies. Besides taking up an objection with regard to the maintainability of the appeal, the respondents have contended that the

jurisdiction, which has been conferred upon the Appellate Authority under the Air Act, cannot be exercised by this Tribunal and thus, the appeal is not maintainable for want of jurisdiction. Referring to the process adopted by the appellant-company in its plant, it is stated that the SO_2 is a by-product of the copper smelting process. SO_2 gas is run through the catalytic converter for conversion into Sulphur Trioxide (SO_3) and Sulphuric Acid (H_2SO_4). The SO_2 levels in the off gases during start-up and shut down modes are usually lean and the conditions are not stable enough to provide a safe flow of SO_2 rich gases. Thus, the concentration of SO_2 in the gas is not high enough to warrant running the gases through the catalytic converter for conversion into SO_3 and H_2SO_4. The standard operating procedure is that during the start-up and shut down the tail gas scrubbers should necessarily and compulsorily be operated. Gases should not bypass the scrubber. Only after the plant reaches a steady-state and conditions stabilise, a steady stream of SO_2 gas will emerge from the furnaces with percentage of SO_2 that is high enough to make it viable to operate the converter. At this stage, the gas is cooled, scrubbed and fed to the catalytic converter. Here it undergoes conversion from SO_2 to SO_3. It is mandatory for the gases to be sent to tail end gas scrubber to reduce the concentration of SO_2 to permissible levels.

24. Inhalation of Sulphur Dioxide is associated with symptoms of increased respiratory ailments, difficulty in breathing and premature death. In 2008, American Conference of

Governmental Industrial Hygienists reduced the short-term exposure limit from 5 ppm to 0.25 ppm.

25. The respondents specifically denied that the identical mechanism readings of 1123.6 ppm were there because of calibration events. On the contrary, there was variable high emissions discharge of Sulphur Dioxide from the appellant-company's unit as a result of manufacturing process rather than calibration. According to these respondents, there is an overwhelming evidence that there was a serious incident on 23rd March, 2013 and there was a gas leakage, which itself was not an isolated incident but there were repeated similar incidences. It is also denied that the unit of the appellant-company was running and operating with requisite approvals and consents issued by the regulatory authorities. The appellant-company is importing copper concentrate from its two Australian mines and this imported copper concentrate is said to contain not only copper but also toxic and radioactive substances such as Arsenic, Bismuth, Flouride and Uranium. Thus, the appellant-company is only making profit while exposing people to a great risk.

26. It is contended by these respondents that the emissions on 23rd March, 2013 at 6.00 a.m. were not within the permissible limits. The concentration of sulphur dioxide graph of Ambient Air Quality on that day shows abnormal increases. Even after the lapse of 15 years, the appellant-company has not complied

with the requirements as indicated by NEERI and the Respondent-Board. The appellant-company cannot be allowed to pollute the atmosphere repeatedly under the garb of providing employment to people and claiming compliance with the defects pointed out by NEERI and the Respondent-Board.

27. Therefore, all the respondents while oppugning the contentions raised on behalf of the appellant-company have contended that the incident of 23rd March, 2013 was a clear case of emission of SO_2 in violation of the prescribed standards and not calibration. The data reflected in the graph shows that the increase and decrease in emission of SO_2, is gradual and not sudden. A gradual increase or decrease is opposed to the very concept of calibration. There has to be a rapid fall in case of calibration. Further, it is contended that it was in the public interest and public health to meet the environmental exigencies that the impugned orders were passed directing closure of the appellant-company's plant. It was a punitive measure. There were large number of defects noticed in the functioning of the appellant-company's plant and persistence of excessive emission of SO_2 for considerable period compelled the authorities to pass the order in question. The Respondent Board has provided adequate opportunity to the appellant-company to reply to the show cause notice dated 24th March, 2013 while the order of closure was passed on 29th March, 2013. Thus, there is no violation of the principles of natural justice. Moreover, the consent granted to the appellant-company had come to an end

on 31st March, 2013 and as such the industry in any case cannot operate.

28. Emission of SO_2, in violation of the prescribed standards, resulted in health hazards to the residents in furtherance to which the complaints were received. Owing merely to the fact that there are economic stakes of the appellant-company, it is neither desirable nor permissible to let the appellant-company operate. The impugned orders have not been passed in an arbitrary or unjust manner. The orders have been passed by the Chairman who is competent, has been delegated with the requisite authority and has passed such orders in bona fide exercise of such authority. The orders do not suffer from the vice of arbitrariness or otherwise.

29. In any case, the present appeal is not even maintainable and thus, the appeal should be dismissed.

30. Rejoinders to the reply of the respective respondents have been filed by the appellant-company mainly reiterating the averments made in its appeal. Further, it is stated that the show cause notice did not mention any exceedance of SO_2 emission from the appellant company's unit. The impugned order and the show cause notice are contradictory in terms.

31. The appellant-company has also averred in its rejoinder that Mr. Vaiko, Respondent No.5, is closely associated with one Mr. Nityanand, who is intentionally working against the appellant-company for personal vendetta. The recommendations

given by NEERI and the Board were only further improvements suggested in the environmental protection as the appellant-company's unit was already having the necessary plant, machinery and technology to comply with the prescribed limits and in fact, all monitoring reports during the said period confirmed the same with respect to air, water and land environment. It is also specifically denied that at any point of time, there was any emission of sulphur dioxide above the prescribed limits. The alleged stack emission figures in the range of 2103.23 mg/Nm^3 to 2939.33 mg/Nm^3 are based on imagination of Respondent No.5.

32. In the joint inspection report conducted by the Central Pollution Control Board and the Respondent Board before the Supreme Court such emissions were not mentioned. *A contrario*, it was stated by the Respondent Board that considering the compliance made by the appellant-company, the Respondent Board had issued renewal consent orders for copper smelting project, copper rod plant and power division vide its proceeding dated 5th October, 2012 with validity upto 31st March, 2013. The Respondent Board also specifically stated that as per the performance report, the ambient air quality inside the plant and outside its premises met the national ambient air quality standards. The impugned order, thus, has been passed on mere assumptions. NEERI, in its report of May 2011, had also confirmed that the appellant-company's unit was meeting the environmental standards and there was nothing in the report

stating that the operation of the appellant-company's unit was a threat or concern to the environment. Moreover, an email of the Respondent Board was received from CARE Air Centre, Chennai, beyond its normal working hours at about 2042 hours on 23rd March, 2013 informing that SAP-1, Sulphur Dioxide parameters were showing the values in excess of the standards provided, and the same should be checked and its reason informed. The appellant-company had informed that the value of 1080.5 ppm - 1123.4 ppm at 9.15 a.m. was recorded on account of calibration carried out at the request of the DEE. The DEE had visited the unit of the appellant-company at 0800 hours on 23rd March, 2013, had taken the field trends from the commencement of shutdown till that time as also the details from the tail gas scrubber. The appellant-company had informed this to the Respondent-Board on various occasions, including on 23rd March, 2013 and 24th March, 2013 when the officers of the Board had come for inspection, and had also written in their reply dated 25th March, 2013 and thereafter in the explanation dated 27th – 28th March, 2013. Thus, it was not all of a sudden that the appellant-company had taken the stand that there was excessive emission as a result of calibration. All the suggestions and directions made by the Central Pollution Control Board, the Respondent-Board and NEERI including providing of Flue Gas Desulphurisation System along with bag filters in primary smelter and bag filter alone in the secondary smelter for handling the fugitive emissions and particulate emissions were

implemented by the appellant-company at a cost of more than Rs.100 crores. Thus, it is stated that the industry is working with all necessary precautions and within the prescribed parameters.

33. The present appeal was initially instituted before the Southern Bench of the National Green Tribunal at Chennai and was heard by that Bench. Vide its order dated 12th April, 2013, that Bench had appointed an Expert Committee to visit the plant of the appellant-company at Thoothukudi and submit its report to the Tribunal. The Committee was expected to file its report by 29th April, 2013. However, before the said report could be filed on record, the Southern Bench of NGT, Chennai, recused itself from hearing the matter any further and that is how, the matter came up for hearing before the Principal Bench of NGT.

34. The Expert Committee appointed by that Bench consisted of Prof. P.S.T. Sai, Department of Chemical Engineering, I.I.T., Madras, as Chairman and Prof. Ligy Philip, Department of Civil Engineering, I.I.T., Madras, as a Member of the Committee. This Committee had visited the plant of the appellant-company at Thoothukudi district on 23rd April, 2013. Before the visit, the Committee had directed the Respondent Board to resume power and water supply from 9.00 a.m. on 21st April, 2013 to 9.00 a.m. on 4th May, 2013. This was done to attain the normal working conditions of the plant as it needed five working days for that purpose. The schedule of operations was given by the appellant-

company in advance to the Expert Committee and to the Respondent Board officials. The Committee visited the unit of the appellant-company in the presence of the representatives of the Respondent Board and the appellant-company. The Committee, upon due examination of the analysers, found that instruments were calibrated properly and were working well. The Committee also visited the ambient air quality monitoring stations, maintained both by the appellant-company and the Respondent Board, on 23rd April, 2013 itself. The Committee instructed the appellant-company to start the feed to the smelter on Friday, 26th April, 2013 at 8.28 p.m. so that the process attained steady state by Saturday morning. The Committee revisited the premises on 27th April, 2013 at 9.00 a.m. and the process attained steady state at 7.30 a.m. on the same day with a feed rate of 152 Tons per hour. The Committee inspected the readings of all the online SO_2 monitors from 5 different stacks (SAP1, SAP2, SGS1, SGS2, ISA1). The Committee also conducted manual stack monitoring for all the 5 stacks to cross check the on-line results. The manually measured data and online data were compared and it was found that the SO_2 emissions from all the stacks were well within the permissible limits. The Committee also examined the routing of gas from the stack to the analysers, flow rate, leakage in the sampling tubes and sensitivity of the sensors. The ambient air quality was monitored in 13 stations maintained by the appellant-company and 3 NAAQMS maintained by the Respondent Board.

35. All the sampling and analyses were independently carried by both the appellant-company and the Respondent Board. The analyses results by both the parties were almost similar and were well within the permissible limit of 80µg/m^3. The Committee's report filed before the Tribunal concluded as under:

> "In summary, all the online SO_2 analysers for stack gas in SIL (Sterlite Industries Limited) are in working condition. The emissions from all the stacks were well within the permissible limit prescribed by Central Pollution Control Board (CPCB), when the plant was in normal operation. In addition to this, the ambient SO_2 concentrations in all the 16 monitoring stations were within the permissible limit, when the plant was in normal operation."

36. The above report of the Expert Committee dated 28th April, 2013 was filed before the Tribunal and received by the Registry of the Principal Bench of the Tribunal on 29th April, 2013 and was placed before the Tribunal on 8th May, 2013. Thereafter and with reference to the above factual matrix of the report on record, lengthy arguments were advanced over a long period. The arguments were concluded on 31st May, 2013 on which date the Tribunal, while reserving the matter for judgment, passed an interim order and also appointed another Expert committee, in whose presence the appellant-company was permitted to carry on its business and which was to submit its report before the Tribunal by 10th July, 2013. The Tribunal passed the following interim order on 31st May, 2013:

> "At the outset, we may notice that all the learned counsel appearing for various parties specifically

agreed not to raise any objection to the constitution of this Bench and proceeded to argue the matter.

This is an Appeal filed against the Order dated 29th March, 2013 passed by Tamil Nadu Pollution Control Board.

Initially, the Appeal was instituted before the Chennai Bench of the National Green Tribunal. The Bench dealing with the matter did not grant any interim relief at the initial stage. However, the Bench directed that the Appeal be heard on merits. Vide order dated 12th April, 2013 the Bench appointed an Expert Committee to visit the plant of the Appellant at Tuticorin and took up the matter for final hearing. The Committee so appointed was directed to file its Report by 29th April 2013. However, the Bench dealing with the matter recused itself that is how the matter came to be listed before the Principal Bench for hearing. The Principal Bench also did not grant any interim order but continued with the final hearing in the matter from 14th May, 2013 to 31st May, 2013. The matter has been argued by the learned counsel appearing for the respective parties at 8 effective hearings. Various contentions have been raised before us including the very maintainability of the present appeal. The lengthy arguments and voluminous records have been referred during the prolonged hearings before the Tribunal. While reserving the case for judgment and as prayed, we have also to decide the question of interim orders. Thus, we will be passing a detailed judgment in due course and primarily because of the intervening vacations, we consider it appropriate to pass interim order in the peculiar facts and circumstances of the case.

At the outset, we hold that the appeal is maintainable in terms of the provisions of the Air (Prevention and Control of Pollution) Act, 1981, particularly because when the appeal was instituted before the Chennai Bench of the Tribunal, admittedly, the appellate authority under the Air Act had neither been constituted nor was it functional. In fact during the course of arguments before us, it was argued that the Govt. of Tamil Nadu has constituted the appellate authority and is functional on 8th May, 2013, when the appeal has been instituted. The appeal thus, is substantially progressed before the Tribunal. In any case, it is the time of the institution of the appeal that would be determinative. Another aspect in this regard which deserves to be noticed is

that the order of the said appellate authority is appealable before this Tribunal. The matter has been pending before the Tribunal and has been heard for quite some time. Thus, it would not even be in the interest of justice to reject the memorandum of appeal requiring the appellant to file the appeal before the said appellate authority. Thus, we hold that the present appeal in the facts of the case is maintainable.

In order to examine whether or not we should pass some interim directions, it is necessary for us to record the reasons which have weighed with us for permitting the appellant to carry on its manufacturing activity. The reasons are the following:-

(i) The judgment of the Supreme Court in the case of Sterlite Industries & Ors. Vs. Union of India & Ors. [*(2013)5 SCALE 202]* puts quietus to a number of contentions raised before us in this petition. It is not disputed that the incident of 23rd March, 2013 was mentioned by the State Pollution Control Board, Tamil Nadu, before the Supreme Court prior to pronouncement of the judgment. However, Supreme Court still permitted the appellant industry to carry on its manufacturing activity subject to the conditions stated in the judgment. However, the Supreme Court had granted leave to the Pollution Control Board to proceed in accordance with the law. Thus, the judgment of the Supreme Court, besides being a binding precedent has raised a number of contentions raised on behalf of the respondents.

(ii) The main controversy between the parties revolves around whether on 23rd March, 2013, the higher values reflected in the analyser's data of the appellant-industry was a result of calibration or excess emission as a result of leakage of SO_2. Before passing the impugned order, it was obligatory upon the Board to satisfy itself as to the fact that it was a case of actual leakage of gas and it was imperative to shut down the industry. Such opinion ought to have been backed by scientific data and analysis report. In our opinion, the Board has failed to discharge such onus and has passed the impugned order on an apprehension which was not supported by any scientific data.

(iii) The closure of an industry is in fact a 'civil death' of a company and has very serious consequences. Thus, application of mind, existence of actual scientific data and actual nexus between

the leakage of gases and activity of the industry is a *sine qua non*. We are afraid that these ingredients have not been satisfied by the Board. The industry was inspected by the Board just before 23rd March, 2013 as well as on 23rd and 24th March, 2013. In another inspection report, neither anything significant or any wrong in the functioning of the plant was noticed nor was any stack or ambient air quality samples collected from and around the premises of the industry, thus, erring to provide any scientific support to the apprehension of the Board that the gas had leaked from the plant of the industry.

(iv) We may notice that in the inspection carried out by the officers of the Pollution Control Board on 24th March, 2013 at 4.30 pm, it was noticed "presently all remains normal and the plant is operating at its full capacity".

(v) The team of experts appointed by the Tribunal vide its order dated 12th April, 2013 in its report made no adverse comments in relation to the functioning of the plant and in fact, found that largely the functioning of the plant is in consonance with the scientific requirements and notified parameters.

(vi) It is undisputed that the area in question is an industrial cluster and a number of other industries which deal with different gases like sulphur dioxide (SO_2), ammonia and chlorine are carrying on their activities. There are even power units located at a short distance from that area which are bound to release SO_2. The Board has not placed on record any determinative scientific evidence by way of analysis, its reports or reading of analyser or continuous ambient air quality mechanism to show that it is the appellant-industry alone responsible for the alleged excessive emission of SO_2.

(vii) Another aspect which must be noticed is that the complaints with regard to injury to public health that were being received were from a village nearly 8 km away from the unit of the appellant. In normal case, if it was a case of excessive emission from stack of the appellant industry and it contained impermissible emissions of SO_2, then the persons living near the village would get more affected by release of such gas as by the time it reaches 8 km away from the industry, its impact and consequences adverse to human health would stand diluted considerably. This certainly cannot be stated to be

the determinative factor but can be an indicator of the possibility of no offence being committed by the appellant industry. We may also notice that from the records before us, the timing of complaints of the public against the excessive release of emissions from the industry of the appellant are not compatible to draw the conclusion that the industry in question was an offending industry.

(viii) It is not disputed before us that the emission standards during calibration of the Analyser of the industrial plant of the appellant under supervision or otherwise was maintained at 1113 ppm as against the limit of 477 ppm.

(ix) The Board has exercised its power with a primary reference to the 'precautionary principles'. According to the Board, the industry was shut down as a precautionary measure following the incident of 23rd March, 2013. In the facts and circumstances of the case, it is difficult for us to accept this contention. Admittedly, the incident had taken place on 23rd March, 2013 and for a continuous period of six days, the industry was permitted to function. It was only on 29th March, 2013 that an order was passed directing closure of the industry. No scientific data or analytical report either from the records of the Board or that of the appellant has been placed before us to show that either the emissions continued during this period or they were in excess of the prescribed parameters.

(x) Incidentally, on 25th March, 2013 itself, the District Collector had constituted a sub-committee to examine the complaints of the public in relation to the release of gases from the area in question. Strangely, this report has still to see the light of the day. Thus, this Committee was to inspect not only the appellant-industry but all the industries located in that area. If no report of this committee has so far been submitted, we fail to understand what weighed with the Board in passing the impugned order. In our considered view, this was not a precautionary step but was *per se* a 'punitive' order. The action of the Board would suffer from the vice of arbitrariness if it collected no data whatsoever during the period of 23rd to 29th March, 2013 and passed the impugned order in an abrupt manner. This appears to be correct from the records before us.

(xi) Another aspect which has weighed with the Board is that the impugned order dated 29th March, 2013 has been passed by the Chairperson of the

Tamil Nadu Pollution Control Board. In terms of Section 15 read with Section 31A of the Air (Prevention and Control of Pollution) Act, it is the Board which is vested with the power to pass such orders and directions. However, the Board could have delegated its functions and powers to the Chairperson of the Board for which a resolution is stated to have been passed. The Board had passed a resolution on 24th February, 1994. In terms of this resolution, the power was supposed to be vested with the Chairperson as a measure of emergency and inasmuch as the Board was not likely to meet for some time. The resolution was further restricted to a polluting industry contravening the provisions of the Air (Prevention and Control of Pollution) Act, 1981, in short the Air Act, and Water (Prevention and Control of Pollution) Act, 1974 in short the Water Act, particularly Section 31A and Section 33A of the respective Acts, thus, liable to closure. It was in these circumstances that the power was delegated to the Chairperson. The delegation of powers contemplated satisfaction of certain conditions i.e. existence of emergency as well as satisfaction of the Chairperson in regard to the industry being a polluting industry and the necessity for passing the directions, as contemplated under Section 33A of the Water Act and Section 31A of the Air Act. Further, it has to satisfy that the offence was likely to continue. As evident from the TNPCB's inspection report, which showed as everything was normal and the plant was working to its capacity. The bare analysis of the above would show that it is nobody's case that the offence in relation to the industry was likely to continue. Secondly, what was the emergency and lastly why the matter has not been placed before the Board till today. Besides all this, what is of greater significance is that in the impugned order, it has been noticed as follows:

"The Board after deep consideration of the above facts and your reply to the show cause notice has taken a serious view of the matter. It is the statutory duty of the Board to prevent any incident as narrated above."

The matter was expected to be dealt with by the Board objectively while it is an admitted case that till today, the matter has not been placed even for rectification before the Board.

(xii) At best, it was the apprehension of the Board that SO_2 has been emanated from the industry of the

appellant and has caused prejudice to the public health. This apprehension would in normal course be not sufficient to pass such a drastic order unless there was definite and scientific evidence available to the Board that the emission from the unit of the appellant was in excess of the prescribed norm and this in turn has a direct nexus to the adverse effects on human health of the persons living in the vicinity of the industry. During the course of hearings, it was pointed out before us that the continuous ambient air quality monitor belonging to the Board, which is in the vicinity of this industrial area, is not functional for the last more than two years. It is anticipated that adequate data would be collected by the monitoring station provided by the Pollution Control Board as well as by the appellant-company for measuring accurately the excessive emission of SO_2 or any other gases. Another relevant factor is that gases like ammonia, chlorine can have serious physical effect on the human beings like SO_2. Furthermore, large number of units in and around the industrial area are releasing all these three gases and therefore, it ought to be pointed out as to which industry was responsible for excessive release of the prescribed parameters. Thus, a mere apprehension would not be sufficient for passing of such a drastic order. Keeping in view the large public interest, which in fact was noticed by the Supreme Court in paragraph 40 of the judgment in the case of Sterlite Industries, needs to be referred to by us even at the cost of repetition.

(xiii) It is not disputed that the appellant-company before us is one of the largest manufacturers of copper in the country. Obviously, it is also the case of the appellant that before it came into production, a huge quantity of copper was being imported by India. Thus, they play a significant role in the economy not only at the national level but even at the international level. They are employing a large number of persons and are contributing towards economic growth and industrial development, particularly in the field of manufacture of copper. The value of copper in the country is largely dependent upon the manufacture of copper by the appellant industry. It is the contention of the appellant that they are manufacturing 55% of the total production of copper in the country. It was expected of the Board to examine adverse effects of their order on the economy and pricing of copper in comparison to the pollution that the industry was alleged to be causing.

It was also contended before us and remains undisputed that the copper manufactured by the appellant is also used in the defence services of the country. These are not determinative considerations but certainly relevant considerations. Considering the role the industry plays, a balance has to be attained between environmental interest and the principle of sustained development. Even if we apply the principle of comparative hardship and balance between the requirements of environment and sustained development, the Tribunal must strike balance which would protect the environment on the one hand beyond any reasonable threat as well as to ensure production of an essential product like copper. The Board essentially should have considered options available to it unless the Board came to a conclusion that no other solution could be found to the problem except closure and it was not possible to take recourse to certain methodology like providing appropriate checks and balances including early warning system while permitting the industry to function. It is always expected of a statutory public authority to consider all these balancing factors before it comes to the conclusion of passing such a drastic order.

For these reasons, we pass the following order:

(i) We permit the appellant-industry to commence its production and operate its industry subject to certain condition hereunder.

(ii) We hereby constitute a committee consisting of (a) the Member Secretary, Central Pollution Control Board, New Delhi and the Member Secretary and the Environmental Engineer of the Tamil Nadu Pollution Control Board and two members from the IIT, Madras, who had been members of the Committee constituted by the Tribunal, vide its order dated 18th April, 2013.

(iii) The appellant-industry shall start its production only in the presence of this Committee.

(iv) Before commencement of production, if the unit requires calibration, it will be done only in the presence of the above committee. No calibration of the plant shall be permitted to take place except on weekly basis unless otherwise specifically permitted by the above Committee.

(v) The Committee shall visit the industry at least three times in a month and prepare its report in regard to the functioning of the plant, functioning of anti-pollution control equipments and more particularly

the analysers. The Committee shall submit its report to this Tribunal by 10th July, 2013.

(vi) It shall be the responsibility of the appellant-industry to ensure that all its monitoring stations as well as analysers are functioning properly and are not to be put into maintenance mode without the leave of the Committee.

(vii) The Committee shall inspect the unit while it is operating to its optimum capacity and shall collect stacks and ambient samples and prepare a comparative data report during all its visits.

(viii) The Committee shall co-relate the ambient air quality data with on-line SO_2 analyser data using appropriate models. It will also co-relate the raw material data with excessive emission data. It will collect on-line available SO_2 data from the thermal power plant of the area.

(ix) The Committee shall, before the industry is permitted to operate, take ambient air quality samples around and at a distance of 7-8 km point of the industry.

(x) The Committee shall also examine the emergency action plan in and outside the industry in question and its efficacy.

(xi) In its report to the Tribunal, the Committee may suggest whether the appellant industry requires to improve its system for better maintenance and ensuring that it strictly operates within the specified parameters which do not infringe environmental interest of the town and people living therein.

(xii) The Committee shall also consider that SAP I is brought in line with SAP II in terms of monitoring system.

(xiii) The first meeting of the Committee shall take place at the site within one week from today.

We also direct the Tamil Nadu Pollution control Board to immediately put in order its ambient air quality automatic system and ensure that the requisite data is collected from such system. The Board shall carry out a study relating to the causes of ill-health of the people who are living around the industrial pockets and the various thermal power plants which are running in the town of Tuticorin and submit a report to the Tribunal. If the appellant-industry has applied for consent, the Board shall deal with the same expeditiously.

For the reasons afore-stated, we pass this order which shall remain in force until vacated or altered by the Tribunal. We direct that the Committee shall submit its report by 10th July, 2013 and the matter

would be placed for consideration of the report before the Tribunal on 10th July, 2013 itself."

37. In terms of our order dated 31st May, 2013, the Unit of the appellant-company was permitted to operate under the strict control and supervision of the Special Expert Committee appointed by the Tribunal as per that order. The Special Expert Committee was further directed to submit its report by 10th July, 2013 on which date the case was directed to be listed for that limited purpose. When the matter came up for hearing on 10th July, 2013, the report on behalf of the Committee was filed before the Tribunal by the Counsel appearing for the Respondent Board. As the report had been filed in the Court and copies thereof had not been furnished to the counsel appearing for the respective respondents, the Tribunal listed the matter on 15th July, 2013 making it clear that the arguments already concluded will not be reopened and the matter would be heard limited to the submissions in relation to the report of the Committee dated 10th July, 2013 itself. On 15th July, 2013 we had heard the learned counsel appearing for the respective parties in relation to the submissions with regard to the report of the Special Expert Committee and its effect on the running of the Unit by the appellant-company in future.

38. We will deal with this aspect in some detail in the later part of the judgment but at this stage, we must notice the contents of the report dated 10th July, 2013.

39. Under the control and supervision of the Special Committee, the industry could start its operation only on 23rd June, 2013 when the third meeting was held. As per this report, the Air quality data was collected over a period of eight days. There were 13 automatic and 13 mobile ambient air quality monitoring systems and the stack emissions were also continuously kept under check. No excessive emission of SO_2 or any other pollutant problem was noticed by the Expert Committee. The ambient air quality remained between 4 to 46μg/m^3 as against the permissible limit of 80μg/m^3. As far as the stack samples were concerned, the reading was found to be around 129.5 mg/NM^3 as against 1250 mg/NM^3 or 49 ppm as against the permissible limit of 477 ppm were observed. It may be noticed that these were the highest values recorded during the operation of the industry, right from 23rd June, 2011 to the date of preparation of the report. The mass emission of sulphuric acid was 0.79 kg/tonne of sulphuric acid as against the permissible limit of one kilogram sulphuric acid per tonne of sulphuric acid.

40. Various parameters collected during the inspection of the Special Expert Committee do not indicate that any pollution, much less a health hazard, is likely to result from the activity of the appellant-company. However, the Committee has, in its report, made certain observations/recommendations in relation to safety measures, emergency preparedness and disaster

management plan. Observations have also been made in regard to:

a. Monitoring

b. Stack Monitoring

c. Inter-locking system

41. Even a draft report has been submitted with regard to the direction pertaining to co-relate Ambient Air Quality with online analyser data using models apart from co-relating data to the raw material feed data of industry and emission data from other thermal power plants. In relation to the environmental control measures adopted by the industry under the head "Air, Water and Solid Waste", no adverse comments were made by the Committee. On the contrary, it noticed, with approval, the functioning of the Unit as well as additional improved environmental measures that had been taken by the appellant-company. The cumulative effect of the report is that the appellant-company's unit has been found non-polluting and non-health hazardous during the considerably long period of operation over which the Special Expert Committee controlled and supervised the operation.

42. It is even relevant to mention here that in this Committee, the Member Secretary of the Respondent Board was a Member along with the DEE of the Respondent Board who, except with regard to the pendency of the petition before this Tribunal and

the Supreme Court of India, expressed no reservation with regard to the findings and recommendations made in the said report.

TRUSTWORTHINESS AND RELIABILITY OF THE INCIDENT OF 23RD MARCH, 2013 :

43. The very foundation of the order dated 29th March, 2013 is the alleged incident of 23rd March, 2013. It is stated that certain complaints were received from the residents of Therku Veerapandi Puram, Vadakusilikanpatti Sourispuram, Korampallam etc. in regard to burning of eyes, irritation in the throat and heaviness in breathing. All these complaints are dated 23rd March, 2013 and had been made in somewhat identical language and content. According to these complaints, between 5.45 a.m and 7.30 a.m., smoke came from the appellant-company causing breathing difficulty. Requests were made in these reports to inspect the appellant company's site and take necessary steps. In one of the complaints it was stated that when the complainant reached the Bryant Nagar main road, there was sudden smoke, which resulted in eye irritation. Another complainant claims to have reached Annanagar main road when he suddenly realized that there was some obnoxious gas in the air which caused irritation. Another complaint was made by one Mr. M.Thomas. According to him while he was going to church, he suddenly experienced suffocation, eye irritation and giddiness, which happened due to mixing of poisonous gas in the air. He specifically states that there are no

other factories which can emit smoke in the area and the smoke must have come from the appellant company.

44. It was the case of the appellant-company before the Tribunal that no one suffered such eye irritation, suffocation and throat irritation as none went to the hospital or the doctors for getting treated for the same. The appellant-company also claims to have filed an RTI application for seeking information from the Government Medical Hospital, Thoothukudi on 25th March, 2013. This was responded to by the authorities at the college on 28th March, 2013 wherein they stated that on 23rd March, 2013 no patient was admitted in the Medical College hospital as 'in-patient' or 'out-patient', who was affected by leakage of gas, none was admitted and given treatment to as per records of the hospital. The respondents had relied upon the two affidavits filed by Dr. Dorus and Dr. Pethukkani. They, in their affidavits, have stated that they had reliably learnt that Sterlite Industries had contended before the Tribunal that no complaints were made by the people alleging to be suffering from eye, throat irritation etc. In these affidavits it was also stated that the deponents had no way of ascertaining whether or not the gas leak happened from Sterlite Industries but there was a marked increase in the number of patients coming in with the complaints of breathing difficulty on 23rd March, 2013. According to one of the doctors, he sees 60-70 patients in a day. He is not a general practitioner but specializes in antenatal cases and he has got regular patients. On 23rd March, 2013, he had noticed

disproportionately high number of patients who came complaining of breathing difficulties. The other doctor is an Obstetrician and Gynaecologist and stated that many newly married couples had come to him in the last six years and many pregnancies had ended up in abortion, sometimes reasons for the same remained unexplained. By implication, the doctor intends to connect it to the gas leak.

45. In the case of a past event that is alleged to have happened, normally it is legally impermissible to rely upon a mere suspicion. There should be cogent evidence to support such a serious occurrence. May be not by the standards of 'beyond reasonable doubt' under the criminal jurisprudence but it should be of such evidentiary value which in the normal course would be sufficient to hold the appellant-company responsible for tortuous liability or violation of the law and its consequences. These are matters of serious consequences and cannot be founded on surmises and conjectures. The various complaints or the affidavits filed do not state in definite terms that the gas leak was from appellant-company. In fact, the doctor stated and probably rightly so, that he did not have any means of ascertaining as to whether the gas leaked from the appellant company. Admittedly, SIPCOT is an industrial cluster within which the appellant-company's plant is also located. It is also now clear from the records before us that there are a large number of industries, including ones categorized as 'red industries' which emit different types of gases. It is further

undisputable that different kinds of gases can cause eye and throat irritation and can lead to suffocation as well. The severity of such health hazards can even be of a much higher grade by release of other gases in the air.

46. As we have already noticed, the District Collector, Thoothukudi had constituted a Committee to examine the matter, in the proceedings dated 25th March, 2013 and for conducting everyday audit/inspection at the industries such as SPIC, TAC, Sterlite, Kilburn Chemicals, Madura Coats, Ramesh Flowers, Nila Sea Food, DCW, IND Bharath Coastal Energen and Loyal Textiles, amongst others. This obviously means that all these industries were suspected of having emitted gaseous substances into air, in excess of the prescribed limits. It was expected of the Committee and the Respondent Board to place on record before the Tribunal as to whether after the inspection or collecting evidence, the finger pointed towards none else but the appellant company. That certainly is not the case herein. Any of the industries located at SIPCOT and surrounding areas could be responsible for emission of obnoxious gases in the process of its manufacturing activity. Thus, the only question which the authorities/Board was expected to answer and establish before the Tribunal by cogent evidence was as to which one of these large numbers of industries had emitted what gas and in violation of the prescribed standards on the fateful day. It can be usefully noticed at this stage that even the Special Expert Committee, appointed by the Tribunal, in its report dated 10th

July, 2013 has stated that besides the appellant company there are large and medium scale industries located in and around the SIPCOT area and has named the said industries, which were also mentioned in the order of the District Magistrate. It noticed the major industries in the red category, the emission sources and the pollution load in terms of SO_2 emission per tonne per day in Annexure 'E' to the Report. Thus, there is no evidence, much less cogent and reliable evidence, which could persuade this Tribunal to accept the allegations of the Respondent Board as a fact rendering the appellant-company solely liable for consequential actions, much less its closure.

47. There are no medical records to show that the people had actually suffered eye irritation, throat irritation and suffocation on 23rd March, 2013 in the morning hours, as a result of release of SO_2. It is a mere assumption on the part of the doctors. Even if we assume for the sake of arguments that people had suffered as a result of release of obnoxious gases in the air, then also, there has to be a definite link between the plant of the appellant company at that relevant time and emission of excessive gases from the said plant during that hour. This had to be established by ocular, documentary and scientific data by collecting samples of the stack and Ambient Air Quality at the relevant time, which again has not been done in the present case. In fact, the Special Expert Committee has observed in its report 'the cross wind levels having an impact on ambient SO_2 levels contributed by nearby industries.'

48. Another aspect of this issue is that the wind direction at the relevant time was found to be towards the villages. If the release of excessive emission was from the appellant-company's plant then after the release of excessive emission, it would have affected the people living in the nearby areas as well. The villages from where the complaints have been received are stated to be six to eight kilometres away from the plant of the appellant-company. This is somewhat strange. One patent improbability in regard to these complaints is that the impact of excessive emissions because of higher mixture concentration would have been much more serious in the surrounding areas than the far flung areas located more than 6-8 kms away. Admittedly, no complaints from the vicinity, adjacent or within six kilometres of appellant-company's premises, had been received. Even this reasoning creates a little doubt in the story put up by the Respondent Board for closing the unit, particularly in face of the allegation made by the appellant-company that the complaints are engineered and motivated ones.

49. On the cumulative analysis of the above facts, circumstances and evidence, we are of the considered view that the alleged incident of leak or excessive emission of SO_2 from the premises of the appellant-company's plant is founded on a mere suspicion and the allegation that it resulted in a health hazard is based upon a mere apprehension or unfounded suspicion and is certainly not supported by any cogent evidence. The Respondent Board has certainly not placed before the Tribunal any study in

consonance with the scientific methodologies for the entire period from 23rd March, 2013 to 29th March, 2013 to substantiate their plea of excessive emission released by the appellant-company resulting in serious health hazards to the residents.

50. Having noticed the factual matrix of the case, pleadings of the parties and the Expert Committee reports, we shall now proceed to discuss the merits or otherwise of the various contentions raised before us in this matter.

EFFECT OF THE JUDGMENT OF SUPREME COURT DATED 2ND APRIL, 2013 IN THE CASE OF THE APPELLANT-COMPANY ITSELF

51. As already noticed, the grant of consent to the appellant-company by the Respondent Board under the provisions of the Air Act and the Water Act was challenged before the Madras High Court and even the EC granted by the Ministry of Environment and Forests was questioned in different Writ Petitions filed before that Court. The Division Bench of the Madras High Court, by a common judgment dated 28th September, 2010, had allowed and disposed of the writ petition with the direction to the appellant-company to close down its plant at Thoothukudi. This judgment of the High Court was challenged in an appeal before the Supreme Court by filing a Special Leave Petition. The Supreme Court granted leave and all the related matters were heard by the Supreme Court as Civil Appeal. One of the main grounds raised against the appellant-company was that the unit was not located 25 km or more away from the ecological sensitive areas and this

was not in consonance with the guidelines issued. Thus, the consent granted was not in accordance with the law. The EC had not been granted to the appellant-company in accordance with the provisions of the notification. The public hearing was made mandatory vide the notification dated 10th April, 1997 while the appellant-company had been granted EC on 16th January, 1995 in terms of the notification dated 7th January, 1994. The area of the appellant-company was located in an industrial complex, SIPCOT, and it was at a similar distance from any ecologically sensitive area as the other chemical and other industries in the same area. In terms of environmental management of the plant, it was contemplated that the industries will develop a green belt of 250 metre width around the factory limits. In terms of the guidelines issued by the Ministry of Environment and Forests, the green belt could be of 25% of the plant area which the appellant-company had provided. The last contention against the appellant-company was that the plant of the appellant-company had caused severe pollution in the area and it was recorded in NEERI's report of 2005, submitted to the High Court and that the ground water samples taken indicated heavy metals therein. According to the appellant-company, it had corrected the deficiencies in accordance with the reports of NEERI of 2005 and 2011.

52. Thus, various contentions in regard to the activities of the appellant-company were taken up before the Supreme Court, including that it was causing air, water and environmental

pollution. The Supreme Court, as is evident from the referred paragraphs of the judgment, clearly noticed that out of the 30 directions issued by the Respondent Board and the deficiencies pointed out by NEERI and as was evident from the joint inspection report, 29 directions had been complied with by the appellant-company, and therefore, the order of the High Court directing closure of the appellant-company's plant was liable to be, and was in fact, set aside by the Supreme Court. The consent, for some time, had not been renewed by the Respondent Board, yet the appellant-company had continued with its manufacturing activities. Considering the magnitude, capacity and the prosperity of the appellant-company, the Supreme Court, after considering various facets, more importantly the possible pollution resulting from carrying on of its manufacturing activities, while permitting it to carry on its commercial and manufacturing activities, directed the appellant-company to pay a compensation of Rs.100 crores for having polluted the environment in the vicinity of the plant.

53. The Supreme Court, while granting this relief to the appellant, had clearly noticed that it was only setting aside the direction of the High Court in its judgment under appeal and made it clear that the judgment would not stand in the way of the Respondent Board issuing any direction to the appellant-company including the direction for closure of the plant in the interest of protection of environment in accordance with law.

54. As is evident from the above, the Supreme Court had taken note of the respective contentions raised on behalf of the parties in relation to environmental pollution, grant of consent and environmental clearance given to the appellant-company. The Supreme Court then proceeded to discuss and answer all the issues, which findings of the Supreme Court attained finality, except the specific leave granted therein. The doctrine of finality has two purposes to serve – it should decide finally the rights and obligations between the parties to a *lis* and, more importantly, a public purpose i.e. to avoid multiplicity of litigation. There should be an end to litigation by attaching finality to the judgment of the courts which itself has attained finality. Some issues cannot be permitted to be agitated or re-agitated time and again. Such an approach would frustrate the very basic rule of law and would encourage endless litigation. Thus, the issues to the exclusion of the specific leave granted by the Supreme Court itself must operate as quietus to its conclusions and they ought not be re-agitated or re-argued before any other forum after its adjudication by the highest court of the land.

55. It is also unambiguously clear and is an admitted position that the incident of 23rd March, 2013 was mentioned to the Supreme Court one day prior to the pronouncement of the judgment of 2nd April, 2013. Despite such mentioning, the Supreme Court proceeded to pronounce its judgment on all the issues and did not pass any other order in regard to the events of

23rd March, 2013. For that purpose, it granted specific leave to the Respondent Board to act in accordance with the law even while giving it freedom to direct closure of the appellant company's unit. To that extent, these specific issues have neither been argued, discussed nor adjudicated upon by the Supreme Court in its judgment dated 2nd April, 2013. The matters relating to all facets of environmental pollution and grant of environmental clearance, as contended before the Supreme Court, thus, would stand finally concluded by the judgment of the Supreme Court and cannot be permitted to be re-agitated before this Tribunal in the present appeal. The findings recorded by the Supreme Court in its judgment dated 2nd April, 2013 are binding on this Tribunal, and therefore, have to be followed and would stare the parties in their face in relation to the conclusions of facts and law both. The very material finding that has been returned by the Supreme Court in the judgment of 2nd April, 2013 is that subject to deposit of Rs.100 crores, the appellant-company has been permitted to continue its manufacturing activities. This dictum of the Supreme Court would have to be given due weightage by the Tribunal while determining the present controversy within the limited jurisdiction carved out by the judgment itself.

OBJECTIONS TO THE MAINTAINABILITY OF THE PRESENT APPEAL:

56. A 'statutory right to appeal' is a right which is provided under a specific statute. Such statutory right to appeal is

controlled by the limitations imposed under that statute. Neither expansion nor contraction of such a right is permissible. The appeal has to be filed and dealt with in accordance with the provisions of the statute providing for such right to appeal. This is a known principle, but being a part of the procedural law, is not free of exceptions. Exceptions could arise as a result of the 'doctrine of necessity' or the principle that 'none can be rendered remediless'. The right to appeal has to be effective and purposeful, though within the framework of the law governing such right.

57. The objection to the maintainability of the present appeal is on the ground that an order passed under Section 31A of the Air Act by the Respondent Board is appealable to the appellate authority constituted by the State Government under Section 31 of the Air Act. Thus, a direct appeal against the order passed by the Respondent Board in exercise of its powers under Section 31A of the Air Act to the National Green Tribunal is not contemplated. Reliance in this regard is also placed upon the provisions of Section 31B of the Air Act. In terms of Section 31A of the Air Act, a Board may, in exercise of its powers and performance of its functions under the Act, issue any directions in writing to any person, officer or authority. Such person, officer or authority shall be bound to comply with such directions under the mandate of this provision. In the present case, vide its order dated 29th March, 2013, the Respondent Board had issued directions with regard to the closure of the appellant-company. It

further directed disconnection of water and electricity supplies to the appellant-company's unit. Section 31 of the Air Act empowers any person aggrieved by an order made by the State Board to prefer an appeal to such authority (the appellate authority) as the State Government may think fit to constitute, within 30 days from the date of communication of the order. Section 31 of the Air Act not only provides for an appeal against an order passed by the Board, obviously including an order passed under Section 31A of the Air Act, but also specifies that the appellate authority shall consist of a single person or three persons, as the State Government may think fit to appoint in terms of Section 31(2) of the Air Act. It is not in dispute before us that the State Government of Tamil Nadu had issued a gazette notification specifying that the appellate authority, in terms of Section 31 of the Air Act, shall consist of three persons. This notification was issued on 15th September, 2000 and the second notification was issued on 24th January, 2012. Under this second notification, the appellate authority was to consist of three persons out of which only a single person had been appointed. The appellate authority remained presided by a single Member, particularly during the period of February, 2013 to May, 2013. During the pendency of the present appeal, a notification (dated 8th May, 2013) had been issued by the State Government of Tamil Nadu constituting an appellate authority of three Members and it had started functioning as such. In other words, right from February, 2013 till 8th May, 2013, the appellate authority contemplated under

Section 31 of the Air Act, had not been constituted in accordance with law and was not functional. At this stage, it could be useful to notice that in terms of Section 31 of the Air, it is the option of the State Government whether to constitute the appellate authority consisting of one Member or three Members but once it exercises such an option and issues a notification, then the appellate authority has to consist essentially of three Members, as has been decided by the State Government, which should dispose of the appeal in accordance with law. Of course the appeal could not be filed before, heard and disposed of by the appellate authority consisting of one Member, in face of the notification of the State Government to constitute an appellate authority consisting of three Members. This issue need not detain us any further as it has been squarely answered by a judgment of this Tribunal in the case of *Gurdial Singh v. State of Punjab* [Application No.4 of 2013 (T_{HC})] decided on 30th April, 2013, where a 4-Member Bench of this Tribunal answered this question as follows:

> "18. The Sub-clause (2) of Section 31 of the Air Act and Sub- clause (2) of Section 28 of the Water Act make it explicit that the Appellate Authority shall consist of a single Member or three Members appointed by the State Government. It does not mention a two Member Authority to function as Appellate Authority. The intention of legislature appears that the decision can be taken either by a single Member or by three Members. If a decision is taken by single member authority, then it becomes final decision of the authority. If it is the decision of a three member authority, there is inherent provision to mitigate any difficulty arising due to difference of opinion, i.e. if one of the members disagrees the opinion of the rest of the two Members will prevail

> and can be treated as a majority decision of the Appellate Authority. This is not possible if only two members are appointed because if there is a divergence of opinion among them, there is no third member to overcome the difficulty. Under the above circumstances, the meeting of the authority attended by two members is one more reason as to why the impugned order is liable to be quashed."

58. Similar issue was also dealt with by the Supreme Court in the case of *A.P. Pollution Control Board v. Prof. M.V. Nayadu (Retd.) & Others*, (1999) 2 SCC 718, where it impressed upon the Government to appoint expert and professional judges to hear such matters together. The Court held, "In other words, this Court not only contemplated a combination of a judge and technical experts but also an appeal to the Supreme Court from the Environmental Court." Similarly in another case, the Supreme Court directed that the Central Government should constitute an authority under Section 3(3) of the Environment (Protection) Act, 1986, headed by a retired Judge of High Court and it may have other Members – preferably with expertise in the field of pollution control and environmental protection – to be appointed by the Central Government. In the light of the above judgment, it is clear that the appellate authority, once constituted of judicial and expert Members, has to hear the cases collectively and the strength of the notified appellate authority cannot be altered contrary to the notification issued by the State Government. The relevant question that calls for consideration of the Tribunal is as to whether at the relevant point of time the appellate authority had been constituted by the State

Government of Tamil Nadu; whether it was functional thereof; and if it provided an effective, efficacious and purposeful right to appeal to an aggrieved person from the order of the Respondent Board. The order, in the present case, was passed on 29th March, 2013 and admittedly, it was communicated to the appellant-company immediately thereupon. Thus, the limitation of 30 days, as prescribed under the provisions of Section 31 of the Air Act, expired on 29th April, 2013. The appellate authority was not consisting of three Members and admittedly was not functional in the prescribed manner, right from February, 2013 to 8th May, 2013 when the notification was issued. The appellant-company could not have availed of the right of statutory appeal in terms of Section 31 of the Air Act effectively, efficaciously and purposefully. The very purpose of filing of appeal before the appellate authority would have stood frustrated as the same could neither be heard nor decided by a single Member of the appellate authority, constituted by the State Government. In order to avail of its right in accordance with the law, the appellant-company filed an appeal with the aid of Section 31B of the Air Act before the Southern Bench of the NGT, Chennai, on 1st April, 2013 within the period of limitation. Thus, it can hardly be stated that institution of the appeal as on 1st April, 2013 was barred in law.

59. The relevant date for considering such objection is the date on which the right to file an appeal arises and the date on which

the appeal is actually filed. The maintainability of the appeal has to be essentially examined as on the date of filing the same.

60. The Supreme Court, in the cases of *Rajahmundry Electric Supply Company Ltd. v. A. Nageswara Rao & Ors. [*AIR 1956 SC 213] and *Zonal Manager, Central Bank of India v. Devi Ispat Ltd. & Ors.* [(2010) 11 SCC 186] has taken the view that the date of presentation of the petition is the relevant date for examining the maintainability of the petition as well as the scope of cause of action. Subsequent events to the date of institution of the appeal are not material considerations for adjudicating upon the maintainability of the petition as well as to the cause of action that had arisen in favour of the appellant. The law applicable as on the date of institution of the application is the relevant law for determining the question of maintainability. Certain events subsequent thereto cannot alter the framework of such petition, particularly in relation to the procedural law.

61. Cause of action is one of the factors which requires to be examined by the Tribunal while dealing with such question. The expression 'cause of action' has acquired a judicially settled meaning. In the restricted sense, cause of action means the circumstances forming infraction of the right or the intermediate occasion for action. In wider sense, it means the necessary conditions for maintenance of the suit, including not only the infraction of the right, but the infraction coupled with the right itself. The invocation of the right or the objection in regard to

maintainability of the appeal would hardly be of any consequence. Herein, the notification, on the strength of which objection in regard to maintainability is being raised, was issued on 8th May, 2013 which itself indicates that a proper appellate authority in accordance with the notification of the State Government was not in existence when the cause of action in favour of the appellant company arose or even on the date when the appellant company was expected to avail or actually availed of its right to file an appeal.

62. Another aspect that would support the view that we are taking is the doctrine of necessity. Wherever in the facts and circumstances of the case, it is absolutely inevitable for a person to exercise another right available to it under the statute and where it is unable to exercise the preliminary right of appeal because of non-existence or non-proper constitution of the appellate authority and for its effective and efficacious exercise of right, it becomes necessary for the appellant-company to invoke another remedy, then the same would be permitted unless it was so specifically barred by law governing the subject and the rights of the parties. It was upon the appellant-company, particularly keeping in view the emergent situation created by issuance of the order dated 29th March, 2013, to avail of its right to appeal without any undue delay and as was rightly done by it within two days of the passing of the order. The unit of the appellant-company had been directed to be shut down and the appellant-company obviously could not have taken recourse to the remedy

under Section 31 of the Air Act as the authority itself was not properly constituted and was not functional. Besides the aid of the doctrine of necessity, the appellant-company has also placed its reliance on Section 31B of the Air Act. An appeal against the order passed by the appellate authority in exercise of its powers under Section 31 of the Air Act lies to the NGT in terms of Section 31B of the Air Act. In other words, the appellate order passed by the proper authority under Section 31 of the Air Act is appealable to the NGT in terms of Section 31B. Thus, the NGT is the appellate authority of the appellate authority constituted under Section 31 of the Air Act by the State Government. The appellant-company has itself given up its right of first appeal before the appellate authority in view of the peculiar facts and circumstances of the case. The respondents have placed reliance upon the judgment of the Supreme Court in *Manohar Lal v. Union of India* 2010 (11) SCC 557 where the Court had taken the view that no higher authority in the hierarchy or an appellate or revisional authority can exercise the power of the statutory authority nor the superior authority can mortgage its wisdom and direct the statutory authority to act in a particular manner. Firstly this judgment on facts and law has no application to the present case. Secondly, the non-constitution of the authority itself would bring the present case outside the application of the judgment of the Supreme Court in the case of *Manohar Lal* (supra).

63. We are unable to contribute ourselves to the contention raised that a direction passed under Section 31A of the Air Act is not covered under the expression 'order' used in Section 31 of the Air Act. Any direction essentially would contain an element of order as it requires and calls upon the parties to comply with the same. 'Direction' itself means an order; an instruction how to proceed, like the judge's direction to the jury, while 'Order' is defined as a command, direction or instruction. This is how the Black's Law Dictionary, 9th Edition, refers to these two expressions. In other words, they can be used as synonyms. They are not conflicting terms and one can be read into the other. Thus, we find no substance in this contention raised on behalf of the respondents.

64. An appellate authority, which is constituted under the statute, is completely distinct and different from an administrative authority constituted otherwise even to deal with adjudicatory proceedings. In the case of an appellate authority, it must satisfy the existence *de facto* and must function *de jure,* in accordance with law. If the appellate authority itself was not in conformity with the notification, it cannot be said that it could function in accordance with law without constitution of the three Member appellate authority. The cumulative effect of this discussion is that the objection in regard to maintainability is without any substance and is liable to be rejected. In view of this finding, it is not necessary for us to examine whether this could be treated as a petition under Section 14 of the National Green

Tribunal Act (for short 'the NGT Act') even if it was not maintainable in view of the objection taken by the respondent in regard to maintainability of the present appeal.

OBJECTIONS IN REGARD TO THE TERMS OF REFERENCE IN TERMS OF THE COURT ORDER DATED 12TH APRIL, 2013:

65. During the course of the arguments, an objection was also raised on behalf of the respondents to the terms of reference (for short the "TOR"), as contained in the order of the Court dated 12th April, 2013 and its impact on the report dated 28th April, 2013 submitted by the Expert Committee. Vide order dated 9th April, 2013, the Southern Bench of the Tribunal had noticed that Shri Vaiko, a senior politician and also the General Secretary of the Marumalarchi Dravida Munnetra Kazhagam (MDMK) Party had been actively campaigning for the closure of the unit of the appellant-company and had effectively participated in the proceedings against it before the Madras High Court. Treating him to be an aggrieved person within the meaning of Section 16 of the NGT Act, it impleaded the said Shri Vaiko as Respondent No.5. Even the Secretary of the National Trust for Clean Environment was also impleaded as Respondent No.6. Thus, the matter was hotly contested by all the respondents before the Tribunal when it came up for hearing before the Bench on 12th April, 2013 when the Tribunal passed the following order:

> "When the matter is taken up for enquiry this day, the counsel led by the learned Senior counsel for the appellant/company, also the counsel for all the respondents are present. Shri Vaiko, newly impleaded respondent R-4 and R-5 in the Appeal Nos. 23 and 22

of 2013(SZ), respectively, is present in person. The counsel for the newly impleaded respondent No.4 in Appeal No. 22 of 2013(SZ) is present. The junior counsel for the newly impleaded R5 and R-6 in Appeal Nos. 22 and 23 of 2013 (SZ) is also present. The junior counsel for R-5 and R-6 in Appeal Nos. 22 and 23 of 2013 (SZ), respectively would submit that his senior could not be present due to some inconvenience and would file the counter in the next hearing.

The counters for the respondents have been filed except the newly impleaded Trust in the Appeal Nos. 22 and 23 of 2013 (SZ). Shri Vaiko, 4th and 5th respondent in the respective appeals files press clippings and photographs after serving copies to the other side. The appellant-company has filed rejoinder to the counters filed by the respondents.

The Tribunal heard the arguments advanced by all the counsel. From the submissions made, it could be seen that the 1st respondent/Tamil Nadu Pollution Control Board, issued a show cause notice to the appellant/ Sterlite Industries (India) Limited, on 24.03.2013 alleging that an incident of emission of SO_2 exceeding the permissible limit had taken place in the plant and in violation of section 21 of the Air (Prevention and Control of Pollution) Act, 1981 and the appellant/company was called upon to tender its explanation within three days. Accordingly, a reply was sent on 27.03.2013 and a supplemental reply was also sent on 29.03.2013 by the appellant/company. Not satisfied with the explanation tendered, the first respondent/Board passed two orders, (1) with directions to the appellant/company to close the unit forthwith and (2) directing the Tamil Nadu Electricity Board, Thoothukudi to disconnect the power supply. While the matter stood thus, the appellant-company preferred the appeals and all the respondents entered appearance and filed counters except the newly impleaded National Trust for Clean Environment. Heard the representing counsel except the newly impleaded Trust.

From the time of admission of the appeals, the appellant/company is pressing for an interim relief for stay of operations for the first respondent's order under challenge. The matter was adjourned for filing of counters by the respondents this day. The arguments advanced by the learned counsel for the respondents and also the appellant-company are part heard. At this juncture, it is pertinent to point out

that while the first respondent/Board, issued show cause notice to the appellant/company alleging that there was an incident of emission of SO_2 in excess of the prescribed limit in the early morning hours of 23.03.2013, the said allegation was flatly denied by the appellant/company and hence a question would arise whether there was an incidence of SO_2 emission in excess of permissible limit on 23.03.2013 as alleged by the first respondent/Board and if so what were the consequences brought about? In so far as the question is concerned, the counsel for the appellant-company and also for the respondents except for 6th respondent have adduced their contentions and they also relied on the documents filed by them in support of their contentions and hence, it remains to be decided. Next, it is contended by the respondent's side that the machines and also the instruments that are attached to the plant are not working properly and this led to the emission of SO_2 and caused all health hazards. In answer to his, it is submitted by the senior counsel for the appellant-company that all the machinery and instruments are in perfect working condition. Hence, the Tribunal is of the considered opinion that it is fit and proper and the circumstances also warrant the appointment of an Expert Committee:

(1) To assess and appraise the actual working condition of SO_2 analyser, its current status, the routing of gas and the current actual emission values, when the plant is in operation during the study.

(2) To measure the emission of SO_2 from all applicable stacks in SIL.

(3) To oversee the process of calibration of the analyser.

(4) To find out the location, the working condition and data record system of monitoring stations under the National Ambient Air Quality Monitoring Programme.

(5) The Expert Committee shall consist of a Chairman and a Member.

(6) The names of the members who constitute the Committee will be made known on the adjourned date.

(7) The Committee shall be assisted by two representatives, one from respondent-1/Tamil Nadu Pollution Control Board, and the other from the Appellant/company.

(8) Both the first respondent and the Appellant/Company are directed to furnish the names of their nominees who will assist the Expert Committee on the adjourned date.

At the time of the inspection and study by the Expert Committee, the Appellant/company is permitted to operate the unit precisely for inspection and study as per the Standard Operating Practice. The duration of this exercise shall be as per the requirement of the Committee.

The remuneration for the Chairman and Expert Member of the Committee is fixed at Rs.25,000/- (Rupees twenty five thousand) only each payable by the Appellant/company. The experts are required to issue notice of inspection to the appellant-company and also the respondents.

The Appellant/company is directed to make arrangements for the transport, accommodation and local hospitality to the Expert Committee.

The Committee shall submit a report to the Tribunal on or before 29.04.2013. The matter is posted to 18.04.2013 for filing counter of the newly added respondent National Trust for Clean Environment in both the appeals."

66. From the bare reading of the above order, it is clear that the issue in regard to the closure and/or functioning of the plant of the appellant-company was specifically raised. In fact, it was contended on behalf of the respondents that the machines and instruments that had been attached to the plant were not working properly and this led to emission of SO_2 and caused health hazards. After noticing these rival contentions, the Southern Bench of the Tribunal decided that the circumstances of the case warranted appointment of an expert committee and thus, made specific TOR in its order. The TOR were so wide as to cover the working condition of the analyser, to measure the emission of SO_2, to oversee the calibration of the analyser and to

find out the location, working condition and data record system of the monitoring stations under the NAAQMS. These TOR were specific but still wide enough to cover the necessary facets of the working of the plant and thus, to bring on record the possibility of any pollution resulting from the operation of the plant of the appellant-company. The Expert Committee was to be duly assisted by the representatives of the Respondent-Board as well as that of the appellant-company. The report of the Committee was filed in furtherance to this order, which we have already discussed. The main contention raised is that the TOR did not make a specific reference to the incident of 23rd March, 2013 and as such the report of the Committee cannot be taken into consideration and cannot form the basis of the decision of the Tribunal. This argument is without any basis and, in fact, is merely an after-thought on the part of the respondents. The order was passed in the presence of the respondents, who were vehemently contesting the application. It was for the respondents to request the Southern Bench of the Tribunal to incorporate in the order/TOR the incident of 23rd March, 2013 and its effects, if any. For reasons best known to the respondents, this contention was not raised. Thus, the respondents cannot be permitted to take advantage of their own wrong and omission.

67. We have also noticed that the TOR were general in nature, and therefore, would cover the entire functioning of the plant of the appellant-company. It would bring before the Tribunal the defects in the functioning of the machinery, tools, analysers, air

monitoring stations and the general impact of emissions on the health of the public. The general TOR, as directed by the Southern Bench of the Tribunal, do not leave any scope for any restriction or inability on the part of the Expert Committee to bring out any deficiency in the appellant-company's unit on record. The report submitted before the Tribunal is comprehensive and deals with all the specific issues that are germane to the matter requiring adjudication in the present application. Therefore, the objection raised by the respondent is more of an after-thought and cannot, in any way, be a ground for non-consideration of the Expert Committee's report by the Tribunal.

WHETHER THE CHAIRMAN OF THE RESPONDENT BOARD IS VESTED WITH THE POWER TO DIRECT CLOSURE OF AN INDUSTRY? IF SO, WHETHER THE EXERCISE OF SUCH POWER BY THE CHAIRMAN WAS PROPER IN THE FACTS AND CIRCUMSTANCES OF THE PRESENT CASE?

68. In terms of Section 5 of the Environment (Protection) Act and Section 31A of the Air Act, a Board is vested with the power to issue any directions in writing to any person, officer or authority and such person, officer or authority shall be bound to comply with such directions. Section 5 of the Air Act concerns itself with regard to constitution of the State Board. The State Government is obliged to constitute a State Pollution Control Board under the provisions of this Act. Section 17 of the Air Act states as to what functions a State Board is required to perform. In terms of this Section, subject to the provisions of the Air Act

and without prejudice to the performance of its functions, if any, under the Water Act, the functions of the Board have been stated under clauses (a) to (j) of Sub-section (1). The Board has to perform functions which include such functions, as may be prescribed or entrusted to the Board by the Central Government or the State Government, as the case may be. A general power is vested in the Board to do such other things and to perform such other acts, as it may think necessary for the proper discharge of its functions and generally for the purpose of carrying into effect the purposes of the Air Act. In other words, the functions of the Board always aim at achieving the purposes of the Air Act and giving effect to its provisions. Every State Board constituted under the Air Act is a body corporate with the name as specified by the State Government in the notification.

69. A State Board constituted under the Air Act shall consist of a Chairman and the Members, as specified in the Air Act. Section 15 of the Air Act contemplates that the Chairman of the Board, being the head of the institution, has to perform such functions as the State Board may, by a general or special order, delegate to the Chairman or the Member-Secretary or any other officer of the Board, subject to such conditions and limitations, if any, as may be specified in that order. There is no provision in the Air Act to state as to what are the specific functions which are to be performed by the Chairman of the Board. The Act does not specify any powers which can be exercised by the Chairman but he has to exercise only such powers as are delegated to him by

the Board. The Board in turn can only delegate such powers and functions as it is required to perform in terms of Section 17 of the Air Act. Section 15 of the Air Act is a composite repository of powers and functions of the Chairman of a Board.

70. The Chairman has, thus, to be only a delegatee in regard to the performance and powers that can be exercised by him. The Board in turn can only delegate such powers and functions as the Board itself is competent to perform in terms of Section 17 of the Air Act.

71. The Respondent Board on 24th February, 1994, passed a resolution, being Resolution No.134-32. In this Resolution, the Respondent Board referred to its powers to issue directions under Section 33A of the Water Act and Section 31A of the Air Act. These powers to issue directions include the power to direct closure, prohibition or regulation of any industry, operation or process. The Respondent Board can also direct the stoppage or regulation of supply of electricity, water or any other service to the industry under the provisions of the Air Act and Water Act. This power of the Board was delegated to the Chairman in terms of Section 33A and 31A of the respective Acts where the situation arises all of a sudden and in the case of polluting industries contravening the provisions of the Acts and where in the event of urgency it is necessary to pass such directions. Thus, the Respondent-Board after careful examination, decided to delegate such powers to the Chairman under Section 12(3B) of the Water

Act and Section 15 of the Air Act. In order to appreciate the intent of such resolution, it is important to refer to the Resolution dated 11th March, 1994, which is reproduced below:

> "As per the Section 33-A of the Water (Prevention and Control of Pollution) Act 1974 as amended in 1988 and Section 31-A of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987, the Board in the exercise of the powers and performance of its functions under the said Act or not withstanding anything contained in any other law but subject to the provisions of these Acts, and to any direction that the Central Government may give in this behalf, may issue any directions in writing to any person, Officer or authority and such person, Officer or authority shall be bound to comply with such directions.
>
> The Power to issue directions under Section 33-A of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 and Section 31-A of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 includes the Power to direct.
>
> (a) The closure, Prohibition or regulation, of any industry operation or process
>
> (OR)
>
> (b) The stoppage or regulation of supply of electricity, Water or any other service. In the event of a person, Officer or authority or industry contravening the provisions of the Water (Prevention Control of Pollution) Act, 1974 or the Air (Prevention and Control of Pollution) Act, 1981 as amended, and liable for closure, prohibition or regulation or stoppage of electricity water or any other service as the case may be, the matter will have to be referred to Board for its approval to issue the directions.
>
> As per rule 3 of the Tamil Nadu Water (Prevention and Control of Pollution) Rules, 1983 "Seven clear days' notice of an ordinary meeting and three clear days' notice of a special meeting along with the notes, if any shall be given by the Member Secretary to the members".
>
> The Board meets once a month where as a urgency and the necessary for issue or directions under Section 33-A of the Water (Prevention and Control of

Pollution) Act, 1974 as amended in 1988 or under Section 31-A of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 arises all of a sudden.

Hence, in the case of a polluting industry contravening the provisions of the Water (Prevention and Control of Pollution) Act, 1974 and / or Air (Prevention and Control of Pollution) Act, 1981 and liable for closure, prohibition or regulation or stoppage of electricity, Water of the industry, operation or process, or other services, under Section 33A of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 or Section 31-A of the Air (Prevention and Control of Pollution) act, 1981 as amended in 1987 action gets delayed and till such time the offence continues.

By virtue of the provisions of Section 12 (3B) of the Water (Prevention and Control of Pollution) Act, 1974 as amended and Section 15 of the Air (Prevention and Control of Pollution) Act, 1981 as amended, the Board may delegate to any Officer of the Board such of its powers and functions under the said as it may deem necessary.

Hence necessary proposal was placed before the Board as its 134th meeting held on 24.02.94, to delegate its powers to the Chairman, Tamil Nadu Pollution Control Board for issue of necessary Show Cause Notices and directions for closure prohibition, regulation of any industry, operation or process, or stoppage of electricity, Water or any other services, so as to ensure that prompt action could be taken to tackle any emergency.

The Board after careful examination vide its Resolution No.134-32 (Part-I) dt.24.2.94, decided to delegate powers to the Chairman under Sub-Section (3B) of Section 12 of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 and to issue direction under Section 33(A) of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 and under Section 15 of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 to issue direction under Section 31-A of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987."

72. The bare reading of the above resolution shows that the Respondent Board meets once a month. It was, in order to meet

an emergency or environmental exigency that may arise all of a sudden requiring passing of appropriate directions within the ambit and scope of Section 33A or Section 31A of the Water Act and the Air Act respectively that delegation of powers to the Chairman was made. In the preamble to the resolution, it has been specifically stated that where urgency is necessary, and such directions are required to be issued in the case of a polluting industry contravening the provisions of the Acts, there in order to avoid delay in taking appropriate action that the powers and functions of the Respondent Board to issue directions, as contemplated under Section 33A or Section 31A of the respective Acts have been delegated to the Chairman of the Respondent Board. In other words, the following are the essential features which must exist before the Chairman can exercise the power to issue directions of closure, etc.:-

(a) There should be urgency and necessity to issue such directions;

(b) The polluting industry must be contravening the provisions of either of or both the Acts; and lastly

(c) Delay in taking action would frustrate the very object of the Acts and would be prejudicial to the environment.

73. These appear to be the in-built limitations of delegation of powers to the Chairman to issue directions. When powers of such wide magnitude and of serious consequences are delegated, then the delegatee is expected to act with greater caution. Higher

the element of authority delegated, greater is the degree of caution required from such authority while exercising such powers. The delegatee can exercise the powers within the framework of the limitations to which such powers are subjected. The delegatee would exercise the powers as if being exercised by the delegator but the onus of responsibility, caution and objectivity is, to a great extent, upon the former. Essentially the authority delegated with the powers must eliminate the element of arbitrariness in its process and directions. It is not only that specifically prescribed limitations have relevant consideration but also the object and spirit of delegation is a relevant factor. Such delegation would squarely fall in the category of conditional delegation. Conditional delegation of such functional powers would depend upon the satisfaction of the delegator. It also depends upon the objective facts that are to be reached before the powers can be exercised. There is fine distinction between the absolute power provided by legislation and the conditional delegation of power in furtherance to a subordinate legislation. Exercise of such powers is dependent upon the fulfilment of certain conditions and the delegatee has to exercise such powers within the authority, conditional or otherwise, as delegated. The power of the Chairman to pass such directions like the impugned order, can hardly be questioned. In terms of the provisions of Section 12(3B) of the Water Act and Section 15 of the Air Act, the Respondent Board, as a matter of fact, has delegated its power to pass directions, as contemplated under Section 31A of the Air

Act and Section 33A of the Water Act. This delegation was in the discretion of the Respondent Board and once such power of delegation is exercised by the Respondent Board, the correctness of vesting such powers in the Chairman of the Respondent Board can hardly be open to question. The resolution of the Respondent Board dated 24th February, 1994 and as circulated vide letter dated 11th March, 1994, thus, is a complete delegation of powers in regard to the relevant provisions of the respective Acts.

74. Still the question that remains to be answered is whether exercise of the power by the Chairman of the Respondent Board was proper, free of vice of arbitrariness and rightly called for in the facts and circumstances of the case. As already noticed, the alleged incident of 23rd March, 2013 when SO_2, in excess of the prescribed parameters, is stated to have emanated from the industrial plant of the appellant-company resulting in health hazards to the residents of the villages located at 6-8 kms. from the industrial premises of the appellant-company does not aspire credence. We have discussed, in greater detail, the occurrence and reliability of the allegations made against the appellant-company separately in the later part of the judgment. We are unable to contribute to the view of the respondents that undoubtedly SO_2 gas emanated in violation of the prescribed parameters from the stacks of the unit of the appellant-company. The various allegations made against the appellant-company have not been substantiated by any scientific data. During the

course of hearings, it was even conceded before us that there were no 84 instances of leakage of gas in violation of the prescribed standards and the table shown in the reply filed by the respondents only related to the period of calibration.

75. In light of these circumstances and the fact that the complaints were uncertain in terms and based on mere suspicion that gases might have leaked from the premises of the appellant-company, their (complaints) reliability is doubtful. It is to be seen whether these complaints provide a definite basis to the Respondent-Board to pass such a serious direction ordering closure of the industrial unit. The expression in the resolution clearly points out that the industry should be a polluting industry contravening the provisions of the Act. No data, much less scientific data, has been placed on record to support this aspect of the matter. Even if the complaints are read in their entirety, they still mention that the gas "could have" leaked from the industrial plant of the appellant-company. Still the apprehension indicated in these complaints is required to be supported by proper scientific data or analytical report which ought to have been taken immediately on the date of occurrence or immediately thereafter. Firstly, neither any supporting documents whatsoever were filed on record nor any samples, either from stack or of the Ambient Air Quality (AAQ) were collected, to show that on 23rd/24th March, 2013 there were excessive emissions from the plant of the appellant-company. Secondly, it must have been shown that some urgency existed

which necessitated passing of such a direction. From the records before us, it does not appear that even the Respondent Board itself considered it a case of such an extreme urgency or necessity. The incident is alleged to have occurred on 23rd March, 2013 but the appellant-company's plant was permitted to continue its manufacturing activities till 29th March, 2013. The Respondent Board was not expected to compromise with the health of the public at large and wait for a week before it could pass the order of closure in relation to the appellant-company. It is nobody's case before us that the appellant-company carried on its manufacturing activities in violation to the prescribed parameters on 23rd of March 2013 or any subsequent day thereto and the same is not supported by any analysis report**.** The incident of 23rd March, 2013 has not been established by any cogent evidence before the Tribunal. Moreover, neither the order of the Respondent Board nor any record produced before us showed that any emergency existed right from 23rd March to 29th March, 2013.

76. The impugned order dated 29th March, 2013 that has been passed by the Respondent Board did not refer to any independent data or analytical report that would substantiate the plea that the industry was leading to environmental pollution. The technical part of the impugned order, we have discussed separately, does not support the case of the Board any further.

77. Another aspect which we must notice in relation to the impugned order dated 29th March, 2013 is that the order specifically states, "The Board after deep consideration of the above factors and your reply to show cause notice, has taken a serious view of the matter". This undoubtedly is a factually incorrect statement of facts. It is undisputed before us that the matter was never placed before the Respondent-Board pre or post-passing of the order dated 29th March, 2013. Months have gone by and there is no explanation on record before us as to why the matter has not been placed before the Board for its appropriate consideration. This by itself may not vitiate the order but certainly is an indicator of callousness and undue haste with which the order in question has been passed. An order of such serious consequences does deserve better attention and forethought at the hands of the authority vested with such powers particularly where the authority decided to close any industry while framing a trajectory for achieving the object of preventing and controlling environmental pollution.

78. Any of the reports, whether before or immediately subsequent to the event of 23rd March, 2013 do not attribute causing of air pollution to the plant of the appellant-company.

79. The cumulative effect of the above circumstances and particularly the fact that the authority has mis-construed the data, has acted on an unfounded suspicion and has considered irrelevant matters, does to some extent, introduce an element of

arbitrariness in the process of passing of the impugned order dated 29th March, 2013 itself. Thus, we are of the considered view that the Chairman of the Board has not exercised his power in an emergent situation where a necessity existed and recourse to any regulatory mechanism was not possible, leaving no option but to close the appellant company's unit. The order does suffer from the vice of arbitrariness and thus, cannot be sustained.

SCIENTIFIC ANALYSIS, TECHNICAL ASPECTS OF THE CASE WITH PARTICULAR REFERENCE TO CALIBRATION, EPISODIC INCIDENTS OF EMISSION FROM STACK AND AMBIENT AIR QUALITY:

80. In the very opening part of the judgment, we have explained that one of the principle questions that require determination by the Tribunal in the facts of the present case is whether the alleged incident of 23rd March, 2013 was a consequence of calibration or leakage of gas in excess of the prescribed parameters. To examine this aspect in its broader perspective, it would be necessary to examine the manufacturing process of the appellant-company along with the cause of the alleged incidents of emission and what was its effect on the ambient air quality in and around the premises of the appellant-company. The parties to these proceedings have filed voluminous data, supporting documents and reports to substantiate their respective pleas. The Tribunal has analysed these records with reference to the pleadings of the parties, more particularly in regard to the incident of 23rd March, 2013 as a lot turns on that issue. The

Tribunal has also minutely and critically examined the episodic incidences of emission and health hazards complained of by the respondents.

Manufacturing Process and Sources of Sulphur Dioxide (SO_2)

81. The appellant company, as already noticed, is engaged in manufacturing of copper cathodes and copper rods. These are manufactured by smelting copper concentrate (copper ore) containing 30% copper, 30% sulphur, 30% iron and balance of other impurities. Copper concentrate with moisture along with quartz and limestone is fed into smelter where pure oxygen is injected. As a result of the reactions, the copper concentrate gets mainly split into Matte (a mixture of sulphide having copper and iron), Slag (containing iron silicate) and SO_2 gas. The Matte is transferred to Holding Furnace from where it is tapped periodically from the bottom through a water cooled tap hole and the Slag gets further separated out owing to differential density. The Matte is further processed into Blister Copper and Ferro Sand (0.7 to 1% copper) in two stages in a Convertor where in the first stage 98.5% blister copper is obtained by removal of iron slag and small quantity of trapped Sulphur. In the second stage, remaining Sulphur is removed by oxidation. The Cleaning Furnace further recovers the Copper left in the Ferro Sand and subsequently Anode Furnace further refines Blister Copper by oxidizing remaining Sulphur to produce Copper Anode (i.e. copper of 99.7% purity). Finally Electro Refinery produces Copper Cathode (copper of 99.9%) purity). In this entire

manufacturing process of Copper, the Sulphur contained in the copper concentrate is converted into SO_2 primarily during the Smelter operation followed by comparatively limited quantities of SO_2 during operation of Holding Furnace and Convertor.

82. Entire SO_2 gas produced in Smelter, Convertor and other Furnaces is collected and carried through ducts to two Sulphuric Acid Plants (SAP-1 and SAP-2). The SO_2 is then cleaned and oxidized to sulphur-tri-oxide (SO_3) using Vanadium Pentaoxide catalyst. The SO_3 is then absorbed in water to convert it into sulphuric acid. The Sulphuric Acid Plants SAP-1 and SAP-2 are of identical capacity and use same technology for conversion of SO_2 to sulphuric acid. The residual gas from the SAP Plant is further treated in the Tail Gas Scrubber to meet the prescribed norms and then emitted through the stacks into the atmosphere.

83. From the understanding of the entire manufacturing process, it is evident that the possible sources of emission of SO_2 are i) Stack emissions from Smelter, Convertor and other Furnaces, ii) Stack emissions from SAP-1 and SAP-2, ii) Fugitive emissions opening of all furnaces mouth and transfer of material from one furnace to another, iii) Leakages from Ducts, and iv) Effluent from Secondary Gas Scrubbers (SGS). To further understand likely sources of excessive emission, it is placed on record that of the total sulphur contents in the raw material; almost 95.75% sulphur is fixed in SAP-1 and SAP-2 whereas 1.92% sulphur is fixed in Slag of Smelter and another 2.08% sulphur is fixed in the cakes of Effluent Treatment Plant; thereby

fixing almost 99.7% of total sulphur contents. Remaining sulphur amounting to 0.24 to 0.29% is released to the atmosphere through the five stacks i.e., Smelter, SAP-1, SAP-2, SGS-1 and SGS-2.

84. All the above sources of emission from the stacks have been installed with online SO_2 analyzers to continuously monitor the concentration of SO_2 in the Stack emissions. Each stack is connected with one online analyzer to continuously monitor the extent of SO_2 being released into the atmosphere. The appellant company uses three different types of online SO_2 analyzers for stack monitoring, which are: i). ABB make model AO2020 (LIMAS11) extraction type analyzer working on principle of UV absorption integrated by Emersion Process Management installed at the stack of SAP-1; ii). Rosemount make model MLT1 extraction type analyzer working on IR absorption principle installed at Smelter and furnaces (ISA HVS); and iii) OPSIS make model AR600 in *situ* type analyzer working on principle of open path technology at the stack of SAP-2, SGS-1 and SGS-2.

85. The data collected by all the 5 online analyzers is transferred to DCS within plant and a direct line from the online analyzers of SAP-1 and SAP-2 to the CARE AIR Centre located in the office of Respondent Board at Chennai. The software used is as per the specifications of Respondent Board and is temper-proof. The Respondent Board has prescribed consent limit for SO_2 emission in stacks as 477.53 PPM (equivalent to 1175 mg/m^3) at tip of stacks and 80$\mu g/m^3$ for the ambient air. It is

important to note here that the online analyzers installed are of 3 types and each type of analyzer has different range of measurement. The range of measurement of online analyzers is 0 to 500 ppm for analyzer at the stack of smelter, 0 to 1000 ppm for the analyzer at the stack of SAP-1, 0 to 700 ppm for the analyzer at the stack of SAP-2 and 0 to 5000 ppm for the analyzers at the stack of SGS-1 and SGS-2. It is equally important to note that OPSIS make online analyzers installed at SAP-2, SGS-1 and SGS-2 stack requires calibration normally once in a year whereas the other 2 online analyzers at SAP-1 and ISA stacks require regular calibration in order to ensure the quality of data collected by them. Such calibration checks are also needed before restarting the smelter plant, when the plant has been shut down either on account of scheduled maintenance or minor unscheduled break-down.

Calibration v/s Emission of SO_2

86. In order to understand the complexity of the problem, it is essential to go into the finer details of calibration process. Calibration is a comparison between measurements – one of known magnitude or correctness made or set with one device and another measurement made in as similar a way as possible with a second device. The device with the known or assigned correctness is called the standard. The second device is the unit under test, test instrument, or any of the several other names for the device being calibrated.

87. Instrument calibration is one of the primary processes used to maintain instrument accuracy. Calibration is the process of configuring an instrument to provide a value within an acceptable range. Eliminating or minimizing factors that may cause inaccurate measurements is a fundamental aspect of instrumentation design. In the case on hand, the calibration process generally involves using known concentration of the SO_2 of one or more known values. The results are used to establish a relationship between the observed values in the instrument and the known values. The process in essence “teaches” the instrument to produce results that are more accurate than those that would occur otherwise. The instrument after calibration can then provide more accurate results.

88. Here it is important to understand as to why the instrument needs calibration on regular basis when it generally makes sense that calibration is required for a new instrument in order to ensure that the instrument is providing accurate indication or output signal when it is installed. Therefore, the obvious question is as to why it can’t continue to provide indication accurately as long as the instrument is operated properly. It is known that instrument error can occur due to a variety of factors: drift, environment, electrical supply, addition of components to the output loop, process changes, etc. Since calibration is performed by comparing or applying a known signal to the instrument under test, errors can be detected by performing a calibration. An error is the algebraic difference

between the indication and the actual value of the measured variable. Typical errors that occur include: Zero and Span errors and these can be corrected by performing a calibration. The zero adjustment is used to produce a parallel shift of the input-output curve. The span adjustment is used to change the slope of the input-output curve. Linearization error may be corrected, if the instrument has a linearization adjustment. If the magnitude of the nonlinear error is unacceptable and it cannot be adjusted, the instrument must be replaced. To detect and correct the instrument error, periodic calibrations are essential. Even if a periodic calibration reveals the instrument is perfect and no adjustment is required, one would not know the same unless calibration is performed. Even if adjustments are not required for several consecutive calibrations, one still needs to perform the calibration check at the next scheduled due date to over-rule the possibility of erroneous data. Periodic calibrations at scheduled intervals as provided by the manufacturer to specific tolerances using approved procedures are an important element of any quality control system.

89. Calibration of an instrument may be called for at the time of i) installation of a new instrument; ii) after an instrument has been repaired or modified; iii) when a specified time period has elapsed; iv) when a specified usage (operating hours) has elapsed; v) before and/or after a critical measurement; vi) after an event, for example after smelter has been stopped for scheduled or unscheduled maintenance or an instrument has had a

shock, vibration, or has been exposed to an adverse condition which potentially may have put it out of calibration or damaged it; v) sudden changes in weather; and vi) whenever observations appear questionable or instrument indications do not match the output of surrogate instruments. In general, calibration is often regarded as including the process of adjusting the output or indication on a measurement instrument to agree with value of the applied standard, within a specified accuracy.

90. From the records before us, it is seen that the industry carries out calibration for SAP-1 and ISA online analyzer on regular basis, whereas SAP-2, SGS-1 and SGS-2 online analyzers are calibrated on yearly basis as per the Manufacturer's recommendations. Apart from the regular schedule, the online analyzers of ISA and SAP-I are also calibrated pursuant to any process shutdown/restart as a result of any break-down. For calibration, typically a gas having a higher known concentration is fed into analyzer directly, without routing such gas through stack and it is tested whether the analyzer is capable of reading accurate value as per the known concentration. In the instant case, the online analyzers are calibrated using SO_2 cylinders of concentrations of 490 ppm, 1000 ppm or 4000 ppm depending on availability of cylinders at appellant company and the duration of calibration varies from 30 minutes to 4-5 hours or more depending upon other preventive maintenance activities taken up along with the calibration. There are also occasions when multiple calibrations in a day are carried out owing to

maintenance problem because the online analyzer needs calibration every time the plant is shut down for maintenance.

91. The Expert Committee appointed by NGT Southern Zonal Bench oversaw the calibration exercise of online analyzers on 23rd April, 2013. According to appellant company, three types of processes are adopted for calibration i.e. (i) single point calibration; (ii) two point calibration; and (iii) multi-point calibration. In all the above calibration procedures zero is checked using zero-grade Nitrogen gas into analyzer and in single point calibration 490 ±10 ppm SO_2 is used whereas in two point calibration, 490 ±10 ppm and 1000 ±10 ppm SO_2 is used while in multi-point calibration, 4000 ±10 ppm, SO_2 is used for full range of calibration. Calibration of all the three types of online analyzers was carried out in presence of the committee members. The entire calibration time for SAP-1 was 19 minutes and 64 minutes for online analyzer to check for maximum measurement. Thus, the time required for one calibration is around 83 minutes. If the plant has to be shut down again for maintenance, the next calibration is required, which may take more time and thus, time required for calibration could significantly vary.

92. Another important aspect pertains to the fact that although, the online analyzer for SAP-1 has a maximum range of recording upto 1000 ppm; however, the data presented in various reports is shown upto 1123 ppm. It was brought on record that although the online analyzer for SAP-1, has a maximum measurement range of 1000 ppm, however, the instrument has small leverage

and the maximum which this analyzer can record is 1123 ppm. It was pointed out that SAP-1 online analyzer calibration for 1000 ppm based on 20 mA output and 1125 ppm based on 22 mA output is carried out using linearity check-up.

93. In the present matter, as per stand of Respondent Board, in the early morning of 23rd March, 2013, there were complaints of eye irritation and throat suffocation from the New Colony, Keela Shanmugapuram and other areas of Thoothukudi town. In response to the complaints, District Environmental Engineer, Respondent Board, Thoothukudi and other officials namely Deputy Chief Inspector of Factories, Thoothukudi and Sub-Divisional Magistrate and Revenue Division Officer, Thoothukudi inspected the Appellant-company's plant premises to check the pollution status. Finally on 29th March, 2013, Respondent Board issued closure order to the appellant company wherein the main reason is stated to be values of excessive emission that were reflected from the online analyzer on 23rd March, 2013 between 2.15 a.m. to 2.45 a.m. ranging from 2103.23 mg/m^3 to 2939.55 mg/m^3 (803.5 ppm to 1123.6 ppm) and 1767.65 mg/m^3 to 2941.12 mg/m^3 (675.3 PPM to 1123.6 PPM) between 9.15 a.m. and 11.15 a.m. on the same day, as against the stipulated emission standards of 1250 mg/m^3 (477.53 ppm) prescribed by the MoEF Gazette Notification No 248 dated 07th May, 2008.

94. The appellant company contended that the plant was taken for maintenance shut down around 3.20 a.m. on March 21, 2013 to attend certain repairs and was taken for start-up at around

2.00-2.45 a.m. on March 23, 2013 and during start up process, the online analyzer for SAP-1 was taken up for calibration as required in the standard prescribed procedure of the instrument. It is further contended that on the same day between 9.15 a.m. and 11.15 a.m., calibration exercise was repeated before the inspecting team of officials to demonstrate the abnormal values observed in the online analyzer of SAP-1. The higher values as recorded in the online analyzer of SAP-1, were due to calibration process and was a spam gas and not due to excessive emission as the emission source was dis-connected from the Analyzer during calibration. The observed values during such repeated calibration exercise were in the range of 675 ppm (equivalent to 1767 mg/m^3) to 1123 ppm (equivalent to 2940 mg/m^3).

95. From the further averment made by the Respondent Board it is evident that the entire premise on which they arrived at the conclusion that the appellant company is releasing excessive emission relates to the online analyzer data in respect of stack of SAP-1. The SAP-1 is alleged to have emitted high SO_2 on 23rd March, 2013 on two occasions as mentioned earlier. The appellant company contended that the two sulphuric acid plants are designed in such a way that SAP-1 and SAP-2 are getting entire SO_2 from copper smelter from a common duct and is then divided equally into two sulphuric acid plants of similar capacity and technology. From the corresponding data of both the online analyzers of SAP-1 and SAP-2, it is argued that the recorded data of emission from both the online analyzers is almost at the same

level except the time period when calibration of the online analyzer of SAP-1 is carried out and it is also argued that the same data is also sent online to CARE AIR Centre of Respondent Board at Chennai.

96. Thus, it is clear that the higher values recorded by the SAP-1 analyzer is due to calibration and not due to excessive emission.

Episodic Incidences of Emission

97. During the course of arguments, Respondent Board submitted that the excess emission was not only on two occasions on 23rd March, 2013 but in fact, based on past available data of online analyzer of SAP-1, 84 such incidences were reported based on analysis of data for every 15 minutes interval between the period from October, 2012 to March, 2013 on 7 occasions. These are: on 17th October, 2012, between 13.30 and 14.00 hrs and 18.15 and 20.45 hrs, for about 3 hrs 30, 14 incidences with reported values of SO_2 between 694.5 and 1123.5 ppm, on 26th October, 2012 to 27th October, 2012, between 20.15 hrs and 01.00 hr, for 5 hrs, 20 incidences with reported values of SO_2 between 527.0 and 1123.4 ppm, on 24th November, 2012, between 14.15 to 17.00, for 3 hrs, 12 incidences with reported values of SO_2 between 554.8 and 1123.5 ppm, on 1st December, 2012 to 2nd December, 2012, between 21.45 to 01.15 hrs, for 3 hrs 45 minutes, 15 incidences with reported values of SO_2 between 598.4 and 1123.1 ppm, on 21st December, 2012 between 16.45 to 19.30, for 2 hrs, 8 incidences

with reported values of SO_2 between 504.5 and 1122.3 ppm, on 16th January, 2013, between 08.15 and 8.45, for 45 minutes, 3 incidences with reported values of SO_2 between 583.0 and 1082.7 ppm, on 23rd March, 2013, between 02.15 and 02.45 and 09.15 and 11.15 hrs, for 3 hrs, 12 incidences with reported values of SO_2 between 675.3 and 1123.6 ppm.

98. However, the appellant company again relied on the emission data recorded in respect of online analyzers of SAP-1 and SAP-2 to make the point that only during calibration in respect of SAP-1 online analyzer, higher emission is recorded whereas for the same time period, reading of online analyzer for SAP-2, which has the same supply source for gases, indicated values in permissible range. Since the SAP-2 emission values as recorded at CARE AIR Centre, Chennai on all the said 84 occasions is normal, there is no reason why emissions from SAP-1 should be different from SAP-2 on the alleged calibration days.

In this context, Respondent Board also placed reliance on analysis of graphical data representation of the above reported 84 incidences at 15 minutes interval. The contention of Respondent Board pertained to the fact that calibration normally takes approximately 20 minutes whereas in all these incidences, the duration of the event runs into few hours. The Respondent Board contested that during calibration, the online analyzer is fed with very high known concentration of SO_2 and this leads to sudden spurt in the graphical presentation of emission data at shorter intervals and thus, the graph should reflect sudden

higher concentration of SO_2 that was fed into the online analyzer. These graphs were prepared during examination by the Expert Committee appointed by NGT, Southern Bench. The appellant company contended that during calibration there would be gradual increase in SO_2 release as only very small quantity is fed into the analyzer at the ground level and it takes a while for the gases to reach the online analyzer at the top of the stack and therefore, would be reflected as gradual increase in the graphs and hence contention of Respondent Board that all the values exceeding the limits are due to emission and not calibration is incorrect. As further contended by the appellant company, the calibration may continue for longer time due to maintenance and hence cannot be taken as firm evidence to establish that all the events when the higher values recorded from SAP-1 at CARE AIR Centre were due to emission and not due to calibration. It is pertinent to note that not a single incidence of excessive emission of SO_2 is reported from the historical data of SAP-2 stack online analyser. Even assuming that excessive emission took place in SAP-1 owing to malfunctioning in this plant, the question that arises for consideration is why malfunctioning only took place in SAP-1 as against SAP-2. Equally important is the fact that even if such excessive emission episodes were occurring, not a single point data of ambient air quality from any of the stations have shown exceedence in permissible levels of SO_2.

99. From the discussion made above, it is clear that the episodic incidences of emission from SAP-1 in view of the

corresponding data of emission recorded at SAP-2 and also the fact that source of supply to both SAP-1 and SAP-2 online analyzer is connected to the same duct, no merit is observed in the contention of Respondent Board. The contention of the Respondent Board regarding graphical interpretation of episodic incidences of emission from SAP-1 online analyzer also does not satisfy on merits in view of the discussion made above.

Ambient Air Quality Monitoring

100. Air pollutants are added in the atmosphere from variety of sources that change the composition of atmosphere and affect the biotic environment. The concentration of air pollutants depend not only on the quantities that are emitted from air pollution sources but also on the ability of the atmosphere to either absorb or disperse these emissions. The air pollution concentration vary spatially and temporarily causing the air pollution pattern to change with different locations and time due to changes in meteorological and topographical condition. The sources of air pollutants include vehicles, industries, domestic sources and natural sources. In order to ensure the air quality within stipulated standards, ambient air quality monitoring is made mandatory for the polluting industries around their plants. Ambient air quality monitoring programmes are needed to determine the existing quality of air and evaluation of the effectiveness of pollution control programmes.

101. Any air quality monitoring network thus, involves selection of pollutants to be monitored, selection of locations, frequency,

duration of sampling, sampling techniques, infrastructural facilities, man power and operation and maintenance. The network design also depends upon the type of pollutants in the atmosphere through various common sources, called common air pollutants, such as Respirable Suspended Particulate Matter (RSPM), Sulphur dioxide (SO_2), Oxides of Nitrogen (NOx), and Carbon Monoxide (CO) etc. Air pollutants show short term, seasonal and long term variations. Atmospheric conditions determine the fate of the air pollutants after their release into the atmosphere. The mean transport wind velocity, turbulence and mass diffusion are three important and dominant mechanisms in the dispersal of air pollutants. Meteorological conditions play a major role in monitoring ambient air quality. The wind speed and direction play a major role in dispersion of air pollutants. The wind direction is the measurement of direction from which the wind is blowing, measured in points of compass viz. North, South, East, West or in Azimuth degrees. Wind direction has an important role in distributing and dispersing pollutants from stationary and mobile sources in horizontally long downwind areas. The wind speed is the measure of horizontal motion of wind relative to the surface of earth per unit time. The effect of wind speed on air pollution is two-fold. It determines the travel time from a source to a given receptor while on the other causes dilution of pollutants in downwind direction. The stronger the wind, the greater will be the dissipation and dilution of pollutants emitted. Knowledge of the frequency distribution of

wind direction as well as wind speed is essential for accurate estimation of the dispersion of pollutants in the atmosphere. The frequency distribution of wind speed and direction varies considerably from month to month. Air pollutants show diurnal variations in their levels. During the daytime, solar heating causes maximum turbulence and strongest vertical motions. This causes the maximum amount of momentum exchange between the various levels in the atmosphere. On clear nights with light winds, heat is radiated from the Earth's surface resulting in cooling of the ground and air adjacent to it. This results in extreme stability of the atmosphere near the Earth's surface. Under these conditions turbulence is at a minimum and thus, air pollution dispersion is also minimal. More calm the conditions during winter, higher are levels of air pollution. The concentration of pollutants is maximum in winter months and is low during summer and monsoon months. A plausible explanation for these results may be found by examining meteorological conditions. The general meteorology during the winter is dominated by high pressure causing increased atmospheric stability, which in turn allows for less general circulation and thus, more stagnant air masses. Stagnant air masses allow more accumulation of pollutants in any given area. During the winter, average mixing height is lower as compared to other seasons and atmospheric dispersion is typically at a minimum and therefore, the pollutants will not be as widely dispersed. During the summer months, the average mixing

height is typically at its highest resulting in increased mixing through a greater volume of the troposphere, and hence lower pollutant concentrations. The monsoons result in large amount of precipitation, high wind velocities and changes in general wind direction. The large amounts of precipitation reduce atmospheric pollution via associated wet deposition processes. Further wind velocities will allow for pollutant transport away from sources, increase mixing processes and the winds coming from the marine environment will have less background concentrations than that of continental air masses. The strong and medium wind in the coastal areas during summer and monsoon season creates turbulent conditions and local disturbances in the environment which causes fast dispersion of air pollutants. Therefore, Tuticorin area, where the appellant-company is located, being a coastal area will experience fast dispersion of air pollutants in the nearby areas and by the time the same reaches too far off areas, its impact will become negligible. During monsoon, frequent rains washes down the air borne particulates and other pollutants generated and dispersed from the sources in the environment, therefore, the period from July to September is cleaner period in the year.

Number and Distribution of Air Quality Monitoring Locations

102. SIPCOT industrial area, where the appellant-company is located has got large number of large, medium and small scale industries. The major industries being M/s Spic India Ltd, Sterlite Power Plant, Tuticorin Thermal Power Plant, M/s Ind

Bharat Power Gen Co. Pvt Ltd, M/s TEC Ltd and M/s DCWD Ltd. In addition to large industries, there are several small scale industries in the area and some of these industries are maintaining ambient air quality stations. There are 13 monitoring stations (7 being continuous) being maintained by appellant company in addition to 3 being operated by the Respondent Board under National Ambient Air Quality Monitoring Programme of CPCB. These stations are regularly recording the ambient air quality data on Respirable Suspended Particulate Matter (RSPM), Sulphur dioxide (SO_2) and Oxides of Nitrogen (NO_X).

Emission v/s Ambient Air Quality

103. The appellant company has contended that the ambient air concentration of SO_2 should be in the order of 5 ppm, which is equivalent to 13000 µg/m^3, to cause symptoms (such as mucosal irritation, eye irritation and throat suffocation, etc.) experienced by local population that formed the basis for closure of the appellant-company and also that such high levels of emission is far in excess of the stipulated National Ambient Air Quality Standards of 80 µg/m^3. Moreover, such values of high emission shall obviously get reflected in any of the monitoring stations being operated either by them or by the Respondent Board.

104. The 24 hourly basis values of SO_2 reported during episodic days of excessive emission would provide the clues.

105. Ambient air quality with respect to levels of SO_2 at 13 stations being operated in the surroundings of appellant company has been tabulated below:

Date	1	2	3	4	5	6	7	8	9	10	11	12	13
17.10.12	6		9 (25)	6 (19)	9 (14)	11(17)	5(5)						
26.10.12			6 (25)	6 (19)	7(14)	9(17)	5(5)						
27.10.12			7 (25)	6 (19)	6(14)	11(17)	4(5)	17(19)	16(18)	24(29)	21(27)	19(25)	6(6)
24.11.12	6(6)	15(42)	5(40)	6(14)	2(6)	12(16)	-						
01.12.12	6(16)	34(34)	4(7)	5(6)	7(7)	14(14)	3(6)	17(18)	14(17)	27(29)	24(29)	23(25)	6(7)
02.12.12	6(16)	15(34)	7(7)	5(6)	7(7)	12(14)	3(6)	18(18)	14(17)	26(29)	23(29)	21(25)	6(7)
21.12.12	6(16)	26(34)	4(7)	4(6)	6(7)	-	5(6)	16(18)	15(17)	29(29)	26(29)	25(25)	6(7)
16.01.13	8(10)	17(35)	6(12)	4(6)	4(7)	-	3(4)	14(17)	16(19)	25(28)	25(27)	23(26)	5(8)
23.03.13	5(7)	7(14)	-	13(16)	6(6)	8(22)	8(8)	14(17)	12(16)	26(30)	27(27)	20(23)	7(7)

Continuous: 1 = SIIL Entrance, 2 = AIR Station, 3 = Gypsum Pond East, 4 = SIIL Colony, 5 = SIPCOT Office, 6 = Gypsum Pond West, 7 = TV Puram Village

Manual: 8 = SIIL Entrance, 9 = SIIL Colony, 10 = AIR Station, 11 = Rock Silo Area, 12 = SLF Area, 13 = Millavittan Agri Bank

Note: The values in the columns are in $\mu g/m^3$ reported against the dates recorded in the first column and the values in the brackets are the highest values recorded during the whole month.

106. It is also the contention of Respondent Board that such high levels of SO_2 damages vegetation, soil and water in the locality, however, no such evidence was produced before us.

107. The argument of Respondent Board that emission values reported at the Continuous Ambient Air Quality Monitoring (CAAQM) stations in the M/s Sterlite Colony situated in East Direction had shot up suddenly from 20 $\mu g/m^3$ to 62 $\mu g/m^3$ at around 6.00 a.m. on the day of incidence and that this immediately reduced to 10$\mu g/m^3$ around 6.35 a.m. Here it is pertinent to observe that the SO_2 emission can cause eye irritation or other symptoms, as reported in the complaints of the residents around the industry, only when the emission values are in the range of 13,000$\mu g/m^3$. A perusal of the ambient air

quality data for various stations provides no such trend and rather on all occasions, the values are well within the permissible limits. This data of ambient air quality for the disputed days of excessive emissions when compared with air quality data recorded for preceding or successive days also provides no such inference that the values are varying significantly. To this, the contention put forward on behalf of the Respondent Board that since these values are on 24-hour basis and, therefore, the incidences of excessive emission have been averaged out and to draw any such inference, air quality data recorded at shorter interval would be relevant. In this context, ambient air quality at three locations under National Ambient Air Quality Monitoring Programme was looked at. It is observed that the ambient air quality data of 4-hourly interval for the three monitoring stations maintained under National Ambient Air Quality Monitoring Programme indicates that corresponding SO_2 values were as follows:

Ambient air quality with respect to SO_2 as recorded by Respondent Board at three continuous monitoring stations.

Date	Station	4 hourly Max SO_2 value in $\mu g/m^3$ Recorded	Date on which highest value of SO_2 in $\mu g/m^3$ recorded during the whole month
17.10.12	AVM Jewelry	26.3	52.5 (26.10.12)
26.10.12		52.5	52.5 (26.10.12)
27.10.12			
24.11.12			30.6 (20.11.12 and 10.11.12)
01.12.12			
02.12.12			
21.12.12		17.5	35.0 (04.12.12)
16.01.13		-	25.1 (08.01.13)

23.03.13		-	28.4 (22.03.13)
17.10.12	SIPCOT Industrial		
26.10.12			
27.10.12			
24.11.12			39.4 (05.11.12)
01.12.12			43.7 (06.12.12)
02.12.12		39.3 (03.12.12)	
21.12.12			
16.01.13		25.0	33.9 (24.01.12)
23.03.13		-	26.0 (25.03.12)
17.10.12	Raja Agency	21.9	30.6 (13.10.12)
26.10.12			
27.10.12			
24.11.12		20.7	29.5 (03.11.12)
01.12.12		20.7	37.1 (12.12.12)
02.12.12			
21.12.12		29.5 (22.12.12)	37.1 (12.12.12)
16.01.13		-	24.5 (09.01.12)
23.03.13		17.7	22.1 (13.03.13)

108. Therefore, the possibility of such high values of emission that could lead to such SO_2 level in the ambient air quality to cause symptoms reported in the complaints in the surrounding areas is extremely doubtful.

109. Source pollutants play a key role in ambient air quality apart from meteorological and topographical factors and hence if emission has gone manifolds up during alleged incidences of emission, then there has to be some change in the ambient air quality. At no time such high value was recorded during the ambient air quality monitoring. This does not reflect in the data gathered from any of the monitoring stations. From the above, it

is clear that the values on disputed 84 incidences of excessive emission, on none of the days, the values of ambient air quality with respect to SO_2 at any of the station were found higher. In fact, the highest values were reported on other days of the month as presented in the Tables (in bracket in the table at page 106 and in the last column in the table at page 107) above except on 26th October 2012. Therefore, if disputed incidences of emissions for 1 to 3 hours duration had occurred, there would have been at least some impact on ambient air quality in the surrounding areas where ambient air quality is being monitored. No such higher values above the prescribed standard were recorded by any of the monitoring stations. In fact, the ambient levels of SO_2 (4-6μg/m^3) as recorded by the monitoring stations close to the human settlements, from where the complaints were received on 23rd March, 2013, were also well below the prescribed standards of 80μg/m^3 for SO_2. In fact, at such low levels of SO_2 (4-6 mg/m^3), there cannot be any possibility of experiencing eye irritation or throat irritation or any respiratory discomforts or ailments.

110. In view of the above facts, following conclusions can be drawn:

1. There is no correlation between alleged high emissions (to the extent of 20 times higher than normal emission rates) on 23rd March, 2013 or earlier 84 incidences reported with ambient air quality.

2. Two sulphuric acid plants drawing SO_2 from the same source having exactly same source of raw material, process technology, capacity cannot have drastically different emissions as they were continuously giving comparable values all the time except during calibration as evident from the recorded data of last 6 months.
3. The symptoms reported by the residents in their complaints can only be possible at very high levels of SO_2. Such levels are not possible even at a nearest point from the industry with the alleged levels of emissions.
4. Calibration could continue for longer than stipulated time for testing and maintenance.

111. Expert Committee constituted vide order dated 31st May, 2013 submitted its report on 10th July 2013. The Expert Committee deserves appreciation for the efforts made and valuable insights provided in the report within a short period of operation of the unit. Main points are:

a) Based on various improvements suggested from time to time in past 19 years, the appellant-company has in place
   i) various updated emission control measures apart from provisions for trips and interlocks to trip process in case of deviations in emission standards;
   ii) "Zero Discharge" of water/waste water;
   iii) Adequate facilities for solid waste handling especially hazardous waste;

iv) Additional environment improvement measures for dust reduction, waste heat recovery, etc.

b) Mass balancing of copper smelter for various ingredients of raw material has been carried out for 28th June 2013 operation of the smelter, which suggests that the sulphur that is fixed in the process is 99.93% which is equivalent to 1108.92 MT.

c) Safety measures, emergency preparedness and Disaster management plan has been reviewed at length and few important suggestions have been made for further improvement.

d) Entire air quality monitoring network comprising of 13 existing stations (out of which 7 are continuous whereas remaining 6 are manual) were inspected and after calibration, air quality data for entire month of June has been analyzed critically especially with respect to air quality parameters, with and without operation, of the appellant-company. This has been further analyzed with regard to prevalent meteorological conditions especially wind velocity and wind direction. Additional air quality monitoring was carried out at 13 more stations within a radius of 8km on 8 days using mobile monitoring van. The interpretation of data suggests that air quality parameters are well within limits with or without operation of the appellant-company, both in windward and cross-wind directions. Of course, enhanced ambient SO_2 levels, within permissible limits are

observed when the appellant-company is in operation apart from the fact that contribution of other industries in the vicinity is also observed at a few air quality monitoring stations on both occasions i.e. with or without operation of the appellant-company.

e) Manual Emission monitoring was carried out on 29th June 2013 and this data was looked with data recorded in 3 online analyzers and it is reported that emission was well within prescribed limit.

f) Certain observations have been made with regard to Air Quality Monitoring, Stack Monitoring, Interlocking system, Emergency Preparedness & Response Plan and Disaster Management Plan.

g) 25 recommendations have been made for which timeline needs to be provided.

DOCTRINE OF PRECAUTIONARY PRINCIPLE *VIS-À-VIS* PUNITIVE MEASURES WITH REFERENCE TO THE FACTS OF THE CASE

112. In the year 1974, the Indian Parliament enacted the Water Act, with an object to provide prevention and control of water pollution and the maintaining or restoring of wholesomeness of water besides constitution of Boards under that Act. Similarly, the Air Act was enacted in the year 1981 by the Parliament to provide for the prevention, control and abatement of air pollution and for establishment of the Boards for that purpose. The very preamble of the Air Act refers to the decisions that were taken at

the United Nations Conference on Human Environment held at Stockholm June, 1972. Then came the Environment (Protection) Act, 1986 – an Act to provide for protection and improvement of the environment. This Act in turn also refers to the Stockholm Conference of 1972. Thus, the three Acts clearly impose various restrictions/obligations and control measures that are expected to be performed by each stakeholder to ensure that the environment remains pollution-free and cleaner and so that wholesome environment is available to the citizenry of the country. Today, environment is no longer merely a domestic issue but is a global one. The environment law in India has developed immensely with the passage of time. Furthermore, the judicial interpretation of the Constitutional law and the environmental law has provided new dimensions to the environmental jurisprudence in India.

113. Article 21 of the Constitution of India which provides that no person shall be deprived of his right to life or personal liberty, except according to the procedure established by law, is interpreted by the Indian courts to include in this right to life, the right to clean and decent environment. Right to decent environment, as envisaged under Article 21 of the Constitution of India also gives, by necessary implication, the right against environmental degradation. It is in the form of right to protect the environment, as by protecting environment alone can we provide a decent and clean environment to the citizenry. Right to clean environment is a guaranteed fundamental right. Various

courts, particularly the superior courts in India are vested with wide powers, especially in terms of Articles 32 and 226 of the Constitution of India to deal with issues relating to the fundamental rights of the persons. The courts, in fact, can even impose exemplary damages against the polluter. Proper and healthy environment enables people to enjoy a quality life which is the essence of the right guaranteed under Article 21. The State and the citizens are under a fundamental obligation to protect and improve the environment including forests, lakes, rivers, wild life and to have compassion for living creatures. Right to have living atmosphere congenial to human existence is a right to life. The State has a 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. The power to issue directions and other powers should be exercised by the State to effectuate and further the goals of approved scheme, zonal plans, etc. The hazards to health and environment of not only the persons residing in illegal colonisations but of the entire town as well as the provisions and schemes of the relevant Acts have to be taken into consideration. The most vital necessities, namely air, water and soil having regard to the right to life under Article 21 cannot be permitted to be misused or polluted so as to reduce the quality of life of others. Risk of harm to the environment or to human health is to be decided in public interest, according to a "reasonable person's" test. Life, public health and ecology have priority over unemployment and loss of

revenue. It is often said that development and protection of environment are not enemies but are two sides of the same coin. If without degrading the environment or by minimising the adverse effects thereupon by applying stringent safeguards, it is possible to carry on developmental activities applying the principle of sustainable development, in that eventuality, development has to go on because one cannot lose sight of the need for development of industry, irrigation resources, power projects, etc. including the need to improve employment opportunities and the generation of revenue. A balance has to be struck. Courts have exercised the power of imposing exemplary damages against the pollutants in order to protect the environment and to restore the damage done to the environment as well. In fact, even the disturbance in the environment by undesirable sound of various kinds, amounts to noise pollution. It is a shadowy public enemy whose growing public menace has increased in the modern age of industrialisation and technological advancement. Noise has become one of the major pollutants and has serious effects on human health. Consistent judicial opinion in India has recognised the right to live in freedom from noise pollution as a fundamental right also, protected under Article 21 of the Constitution. If anybody increases the volume of speech and that too with the assistance of artificial devices so as to compulsorily expose unwilling persons to hear a noise raised to unpleasant or obnoxious levels, then the person speaking is violating the right of others to a

peaceful, comfortable and pollution-free life guaranteed under Article 21. Courts have even held that Article 19(1)(a) cannot be pressed into service for defeating the fundamental right guaranteed under Article 21 of the Constitution. Thus, the right of an individual to healthy and clean environment including air, water, soil and noise-free environment is of paramount consideration and it is impermissible to cause environmental pollution and particularly in violation of the prescribed standards. Since the different facets of environment are relatable to life and human rights and concern a person's liberty, it is necessary that resources are utilised in a planned manner. Wherever industrialisation has an impact on utilisation of essential resources like air, water and soil and results in irreversible damage to environment, then it may be impermissible to utilise these resources in that fashion. In the recent times, there has been accelerated degradation of the environment, primarily on account of lack of effective enforcement of laws and non-compliance with the statutory norms. Concentrated industrialisation in some pockets has been the other reason for enhanced damage to the environment. It emerges from the desire of the people to operate from the areas where the industry presently exists. [References: *Subhash Kumar v. State of Bihar* (1991) 1 SCC 598; *Virendra Gaur v. State of Haryana* (1995) 2 SCC 577; *A.P. Pollution Control Board v. Prof. M.V. Nayudu* (1999) 2 SCC 718; *M.C. Mehta v. Kamal Nath* (2000) 6 SCC 213; *Narmada Bachao Andolan v. Union of India* (2000) 10

SCC 664; *Hinch Lal Tiwari v. Kamla Devi* (2001) 6 SCC 496; *T.N. Godavarman Thirumulpad v. Union of India* (2002) 10 SCC 606; *M.C. Mehta v. Union of India* (2004) 6 SCC 588; M.C. *Mehta v. Union of India* (2004) 12 SCC 118; *In Re: Noise Pollution* (2005) 5 SC 733; *Milkmen Colony Vikas Samiti v. State of Rajasthan* (2007) 2 SCC 413].

114. The right to development itself cannot be treated as a mere right to economic betterment or cannot be limited as a misnomer to simple construction activities. It encompasses much more than economic well-being and includes within its definition the guarantee of fundamental human rights. It includes the whole spectrum of civil, cultural, economic, political and social process, for the improvement of people's well-being and realisation of their full potential. It is an integral part of human rights. Of course, development is the essence of any pragmatic and progressive society. But essentially, development besides being inter-generational, must be balanced to its ecology and environment. Sustainable development means that the richness of the earth's bio-diversity would be conserved for future generations by greatly slowing or if possible halting extinctions, habitat and ecosystem destruction, and also by not risking significant alterations of the global environment that might – by an increase in sea level or changing rainfall and vegetation patterns or increasing ultraviolet radiation – alter the opportunities available for future generations. Sustainable development has been defined in many

ways but the most frequently quoted definition is from the Brundtland Report which states as follows:

> "*Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:*
>
> - *The concept of **needs**, in particular the essential needs of the world's poor, to which overriding priority should be given; and*
> - *The idea of **limitations** imposed by the state of technology and social organisation on the environment's ability to meet present and future needs."*

115. The earlier school of thought was that development and ecology are opposed to each other but with the passage of time and development of law, this concept has undergone tremendous change and is no longer acceptable. Now operates the principle of sustainable development. It takes within its ambit the application of 'principle of proportionality' and the 'precautionary principle'. In other words, one must, while promoting development, not only ensure that no substantial damage is caused to the environment but also take such preventive measures which would ensure that no irretrievable damage to the environment, even in future, is caused. All these principles have to be examined and applied on the touch stone of "reasonable person's test", as afore-stated. Where the principle of proportionality introduces prudent mind's reasonableness in relation to development vis-a-vis environment, there the precautionary principle can be explained to say that it contemplates that an activity which poses danger and threat to

the environment is to be prevented since prevention is better than cure.

116. While applying the concept of sustainable development, one has to keep in mind the "principle of proportionality" based on the concept of balance. It is an exercise in which courts or tribunals have to balance the priorities of development on the one hand and environmental protection on the other. So sustainable development should also mean the type or extent of development that can take place and which can be sustained by nature/ecology with or without mitigation. In these matters, the required standard now is that the risk of harm to the environment or to human health is to be decided in public interest, according to a 'reasonable person's test'. [Refer: *Research Foundation for Science and Technology and Natural Resource Policy v. Union of India* (2007) 9 SCR 906; *Narmada Bachao Andolan v. Union of India* supra; *Chairman Barton: The Status of the Precautionary Principle in Australia (Vol.22) (1998) (Harv. Envtt. Law Review, p. 509 at p.549-A) as in A.P. Pollution Control Board v. Prof. M.V. Nayudu* supra; *and M.C. Mehta v. Union of India,* supra.] At this stage, we may usefully refer to a very recent judgment of the Supreme Court in the case of *G. Sundarrjan v. Union of India & Ors*. (2013) 6 SCC 620 where the Court, while referring to the principles of balance inbuilt in the concept of sustainable development, elaborated the principles as follows:

> "228. I have referred to the aforesaid pronouncements only to highlight that this Court has emphasized on striking a balance between the ecology and environment on one hand and the projects of public utility on the other. The trend of authorities is that a delicate balance has to be struck between the ecological impact and development. The other principle that has been ingrained is that if a project is beneficial for the larger public, inconvenience to smaller number of people is to be accepted. It has to be respectfully accepted as a proposition of law that individual interest or, for that matter, smaller public interest must yield to the larger public interest. Inconvenience of some should be bypassed for a larger interest or cause of the society. But, a pregnant one, the present case really does not fall within the four corners of that principle. It is not a case of the land oustees. It is not a case of "some inconvenience". It is not comparable to the loss caused to property. I have already emphasized upon the concept of living with the borrowed time of the future generation which essentially means not to ignore the inter-generational interests. Needless to emphasize, the dire need of the present society has to be treated with urgency, but, the said urgency cannot be conferred with absolute supremacy over life. Ouster from land or deprivation of some benefit of different nature relatively would come within the compartment of smaller public interest or certain inconveniences. But when it touches the very atom of life, which is the dearest and noblest possession of every person, it becomes the obligation of the constitutional courts to see how the delicate balance has been struck and can remain in a continuum in a sustained position. To elaborate, unless adequate care, caution and monitoring at every stage is done and there is constant vigil, life of "some" can be in danger. That will be totally shattering of the constitutional guarantee enshrined under Article 21 of the Constitution."

117. Sustainable Development primarily finds its origin from the Rio Declaration, 1992 on Environment and Development. Certain principles were stated for achieving sustainable development. The element of integration of environmental and developmental

aspects was spelt out in the following principles of that Declaration:

> "*Principle 3:*
>
> The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations.
>
> *Principle 4:*
>
> In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it."

118. In fact, in *Karnataka Industrial Areas Development Board v. C. Kenchappa & Ors.* (2006) 6 SCC 383-84, the Apex Court held as follows:

> "63. 'The World Conservation Union' and 'the Worldwide Fund for Nature' prepared jointly by UNEP described that 'sustainable development, therefore, depends upon accepting a duty to seek harmony with other people and with nature' according to *Caring for the Earth, A Strategy for Sustainable Living.* The guiding rules are:
>
> (i) People must share with each other and care for the earth;
> (ii) Humanity must take no more from nature than man can replenish; and
> (iii) People must adopt lifestyles and development paths that respect and work within nature's limits."

119. The development should be such as can be sustained by ecology. Sustainable development would be the development which can be maintained indefinitely in proportion to environment and ecology. Thus, there should not be development at the cost of causing irretrievable or irreversible damage to the

ecology or the environment. They must find a common path and objectivity in achieving the goal of sustainable development.

120. Precautionary principle is one of the most important concepts of sustainable development. This principle essentially has the element of prevention as well as prohibition. In order to protect the environment, it may become necessary to take some preventive measures as well as to prohibit certain activities. These decisions should be based on best possible scientific information and analysis of risks. Precautionary measures may still have to be taken where there is uncertainty but potential risk exists. Ecological impact should be given paramount consideration, particularly when the end result would be irreversible. The decision making authority should assess the records and conclude whether it was a case of directing precautionary and preventive measures to be taken or that the information on which it has to reach a determination is inadequate. Informed decision is the essence of a preventive or a prohibitory decision. The principle of direction thereunder involves the anticipation of environmental harm and taking measures to avoid it or to choose the least environmentally harmful activity which is based on scientific certainty. Environmental protection should not only aim at protecting health, property and economic interest but also the environment for its own sake. It is said that inadequacies of science is the basis that has led to change from an 'assimilating impact principle' to 'precautionary principle'. Availability of scientific

data is one of the most essential features of environmental adjudication. The precautionary principle was stated in Article 7 of the Bergen Ministerial Declaration on Sustainable Development in the ECE Region, May, 1990, as incorporated in an article of Professor Ben Boer, which reads as follows:

> "Environmental measures must anticipate, prevent and attack the causes of environment degradation. Where there are threats of serious or irreversible damage, lack of scientific certainty should not be used as reason for postponing measures to prevent environmental degradation."

121. The Indian Supreme Court, in the case of *Vellore Citizens' Welfare Forum v. Union of India* (AIR 1996 SC 2715) recognised the precautionary principle and explained it as follows:

> "11.(i) Environmental measures – by the State Government and the statutory authorities – must anticipate, prevent and attack the causes of environmental degradation.
>
> (ii) Where there are threats of serious and irreversible damage, lack of scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.
>
> (iii) The 'onus of proof' is on the actor or the developer/industrialist to show that his action is environmentally benign."

122. On the analysis of the above, one could state the essentials of invocation of precautionary principle as under:

(a) There should be an imminent environmental or ecological threat in regard to carrying out of an activity or development;

(b) Such threat should be supported by reasonable scientific data; and

(c) Taking precautionary, preventive or prohibitory steps would serve the larger public and environmental interest.

123. With reference to these ingredients, the decision making authority, upon taking an objective approach, could take recourse to and pass directives under the precautionary and preventive principles. These are the tools available to the authorities concerned to adopt a balanced and pragmatic approach to ensure environmental protection while permitting sustainable development.

124. It will not only be expected of but shall be an obligation on the decision making authority to identify sources of pollution as well as their impact on public health or environment. It must be understood that every direction under the precautionary principle is not a punitive action in its content and effect. These are two different legal connotations which operate in their own respective fields. Precaution in contradistinction to punitive action is an anticipated action and is futuristic.

125. 'Precaution' is a measure taken in advance to prevent something dangerous, unpleasant or inconvenient from happening. To put it simply, it is a prudent foresight, while a 'punitive' action is one involving or inflicting punishment. It has an element of something that has already occurred.

126. Environmental pollution was controlled rigidly in the ancient times. It was an affair limited to individuals but the society as a whole accepted as its duty to protect environment. It was to sustain and ensure progress of all. Thus, it was acceded

as a positive duty with regard to protecting the environment on the one hand and the fear of punishment on the other. Apart from the motivation, efforts were not only to punish the culprits who damage the trees or other environment but also to balance the ecosystem [*T.N. Godavarman Thirumulpad v. Union of India (*supra)].

127. Punitive action, which would include punishment in one form or the other, would normally be for the damage or the wrong done to environment and for its restoration thereto. Therefore, there must be a nexus between befalling of an event, or its likelihood thereof, and its pollution source and the injury apprehended or caused. All these ingredients must be supported by reasonable scientific data, especially in the case of precautionary principle.

128. This brings us to discuss the onus of proof in matters relating to environment.

129. We must, at the very threshold of discussion on this topic refer to the judgment of the Supreme Court in *A.P. Pollution Control Board v. Prof. M.V. Nayudu* supra, where the Hon'ble Court, while discussing the onus in environmental matters, held as under:

> "31. The Vellore judgment has referred to these principles briefly but, in our view, it is necessary to explain their meaning in more detail, so that Courts and tribunals or environmental authorities can properly apply the said principles in the matters which come before them.

The precautionary Principle replaces the Assimilative Capacity principle:

32. A basic shift in the approach to environmental protection occurred initially between 1972 and 1982. Earlier the concept was based on the 'assimilative capacity rule as revealed from Principle 6 of the Stockholm Declaration of the U.N. Conference on Human Environment, 1972. The said principle assumed that science could provide policy-makers with the information and means necessary to avoid encroaching upon the capacity of the environment to assimilate impacts and it presumed that relevant technical expertise would be available when environmental harm was predicted and there would be sufficient time to act in order to avoid such harm. But in the 11th principle of the U.N. General Assembly Resolution on World Charter for Nature, 1982, the emphasis shifted to the 'precautionary Principle', and this was reiterated in the Rio Conference of 1992 in its Principle 15 which reads as follows:

Principle 15: In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. 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.

33. In regard to the cause for the emergence of this principle, Chairman Barton, in the article earlier referred to in Vol. 22, Harv. Envtt. L. Rev. (1998) P. 509 at (p. 547) says:

There is nothing to prevent decision makers from assessing the record and concluding there is inadequate information on which to reach a determination. If it is not possible to make a decision with "some" confidence, then it makes sense to err on the side of caution and prevent activities that may cause serious or irreversible harm. An informed decision can be made at a later stage when additional data is available or resources permit further research. To ensure that greater caution is taken in environmental management, implementation of the principle through Judicial and legislative means is necessary.

In other words, inadequacies of science is the real basis that has led to the precautionary principle of

1982. It is based on the theory that it is better to err on the side of caution and prevent environmental harm which may indeed become irreversible.

34. The principle of precaution involves the anticipation of environmental harm and taking measures to avoid it or to choose the least environmentally harmful activity. It is based on scientific uncertainty. Environmental protection should not only aim at protecting health, property and economic interest but also protect the environment for its own sake. Precautionary duties must not only be triggered by the suspicion of concrete danger but also by (Justified) concern or risk potential. The precautionary principle was recommended by the UNEP Governing Council (1989). The Bomako Convention also lowered the threshold at which scientific evidence might require action by not referring to "serious" or "irreversible" as adjectives qualifying harm. However, summing up the legal status of the precautionary principle, one commentator characterised the principle as still "evolving" for though it is accepted as part of the international customary law, "the consequences of its application in any potential situation will be influenced by the circumstances of each case". (See First Report of Dr. Sreenivasa Rao Pemmaraju, Special - Rapporteur, International Law Commission dated 3.4.1998 paras 61 to 72).

The Special Burden of Proof in Environmental cases:

35. We shall next elaborate the new concept of burden of proof referred to in the Vellore case AIR1996SC2715 . In that case, Kuldip Singh, J. stated as follows:

The 'onus of proof is on the actor or the developer/industrialist to show that his action is environmentally benign.

36. It is to be noticed that while the inadequacies of science have led to the 'precautionary principle', the said 'precautionary principle' in its turn, has led to the special principle of burden of proof in environmental cases where burden as to the absence of injurious effect of the actions proposed, is placed on those who want to change the status quo (Wynne, Uncertainty and Environmental Learning, 2 Global Envtl. Change 111 (1992) at p. 123). This is often termed as a reversal of the burden of proof, because otherwise in environmental cases, those opposing the

changes would be compelled to shoulder the evidentiary burden, a procedure which is not fair. Therefore, it is necessary that the party attempting to preserve the status quo by maintaining a less-polluted state should not carry the burden of proof and the party who wants to alter it, must bear this burden. (See James M. Olson, Shifting the Burden of Proof, 20 Envtl. Law p.891 at 898 (1990). (Quoted in Vol. 22 (1998) Harv. Env. Law Review p. 509 at 519, 550).

37. The precautionary principle suggests that where there is an identifiable risk of serious or irreversible harm, including, for example, extinction of species, widespread toxic pollution in major threats to essential ecological processes, it may be appropriate to place the burden of proof on the person or entity proposing the activity that is potentially harmful to the environment. (See Report of Dr. Sreenivasa Rao Pemmaraju, Special Rapporteur, International Law Commission, dated 3.4,1998, para 61).

38. It is also explained that if the environmental risks being run by regulatory inaction are in some way "ascertain but non-negligible", then regulatory action is justified.. This will lead to the question as to what is the non-negligible risk'. In such a situation, the burden of proof is to be placed on those attempting to alter the status quo. They are to discharge this burden by showing the absence of a 'reasonable ecological or medical concern. That is the required standard of proof. The result would be that if insufficient evidence is presented by them to alleviate concern about the level of uncertainty, then the presumption should operate in favour of environmental protection. Such a presumption has been applied in Ashburton Acclimatisation Society v. Federated Fanners of New Zealand [1988] 1 NZLR 78. The required standard now is that the risk of harm to the environment or to human health is to be decided in public interest, according to a 'reasonable persons' test. (See Precautionary Principle in Australia by Charmian Barton) (Vol. 22) (1988) Harv. Env. L. Rev. 509 at 549).”

130. The normal rule of evidence is that one who pleads must prove before the Court or the Tribunal i.e. the onus of proving, while claiming relief, is on the person who approaches the

Court/Tribunal. However, this rule may not be applicable to this Tribunal *stricto sensu*.

131. This Tribunal has been established both with original and appellate jurisdiction relating to environmental laws. The NGT Act, 2010 was enacted for effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources including enforcement of any legal rights relating to environment. In relation to NGT, the legislature, in its wisdom, has specifically excluded the application of the procedure under the Code of Civil Procedure, 1908 and the Indian Evidence Act, 1872 (for short 'the Evidence Act') in terms of Section 19(1) and 19(3) of the NGT Act. On the contrary, Section 19(2) of the NGT Act empowers the Tribunal to have the power to regulate its own procedure. In terms of its Section 19(5), NGT is a judicial Tribunal.

132. Section 20 of the NGT Act further recognises the application of the principles of sustainable development, precautionary principle and polluter pays principle by the Tribunal while adjudicating upon disputes on environment.

133. Once the applicability of specific rules of evidence, as prescribed under the Evidence Act, is excluded, the Tribunal has to state its own procedure, including recording of evidence, but the same essentially has to be in consonance with the principles of natural justice. It will have to be examined on a case to case basis as to when the onus will shift from the

applicant to non-applicant. In environmental cases, normally the damage to environment or public health is evident by itself, *res ipsa loquitur.* The cases of environmental degradation, damage and health hazards are obvious by themselves as a result of some industrial activity or development. In that event and keeping in view the very object of the NGT Act, it will be unacceptable to require the applicant to discharge his primary onus by strict number of events and their details.

134. In *Ravi Kapur v. State of Rajasthan* (2012) 9 SCC 284, it was held that the doctrine of *res ipsa loquitur* serves two purposes. Firstly, that an accident may by its nature be more consistent with being caused by negligence for which the opposite party is responsible than by any other cause and that in such a case, the mere fact of the accident is *prima facie* evidence of such negligence. Secondly, it is to avoid hardship in cases where the claimant is able to prove the accident but cannot prove how the accident occurred. Recourse to this principle is also permissible where there is no direct evidence brought on record. These stated principles apply more often than not to motor accident cases and can squarely be applied to cases of environmental pollution resulting from industrial activities or development.

135. Under the provisions of the NGT Act, any aggrieved person can approach the Tribunal for redressal of his grievances in relation to environment within the ambit and scope of Sections 14, 16 and 18 of the NGT Act. The legislative object appears to

be to catalyse the access to environmental justice, which need not be circumscribed by strict rule of *locus standi* in legal prescriptions.

136. Once an applicant approaches the Tribunal with a complaint of environmental injury or environmental degradation or health hazards resulting from negligence, or incidental occurrence of emission or discharge of gases or effluents in violation of the prescribed standards, then such an applicant discharges the primary onus by instituting a petition in the prescribed form, supported by an affidavit, which then shifts upon the industrial unit, developer or the person carrying out the activity complained of, to establish by cogent and reliable evidence that it has not caused pollution or health hazards by carrying out its activities; all the expected norms of discharge have been strictly adhered to by that unit; and any harm, if caused, was neither the result of any negligence nor violation of prescribed standards. Upon discharge of such onus, which is certainly much heavier, by the developer/industrial unit, it will then again be for the applicant to establish to the contrary. In other words, heavy onus lies upon the industrial unit or the developer to show by cogent and reliable evidence that it is non-polluting and non-hazardous or is not likely to have caused the accident complained of.

137. The view we are taking finds strength from the observations stated by the Supreme Court in its judgment in the case of

Narmada Bachao Andolan v. Union of India (supra) where the Court, while referring to the case of *Vellore Citizens' Welfare Forum* supra and the report of the International Law Commission, held as under:

> "119. It is this decision which was the subject-matter of challenge in this Court. After referring to the different concepts in relation to environmental cases like the 'precautionary principle' and the 'polluter-pays principle', this Court relied upon the earlier decision of this Court in Vellore Citizens' Welfare Forum v. Union of India (AIR1996SC2715) and observed that there was a new concept which places the burden of proof on the developer or industrialist who is proposing to alter the status quo and has become part of our environmental law. It was noticed that inadequacies of science had led to the precautionary principle and the said 'precautionary principle' in its turn had led to the special principle of burden of proof in environmental cases where burden as to the absence of injurious effect of the actions proposed is placed on those who want to change the status quo. At page 735, this Court, while relying upon a report of the International Law Commission, observed as follows:
>
> 'The precautionary principle suggests that where there is an identifiable risk of serious or irreversible harm, including, for example, extinction of species, widespread toxic pollution is major threats to essential ecological processes, it may be appropriate to place the burden of proof on the person or entity proposing the activity that is potentially harmful to the environment.'
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> 120. It appears to us that the 'precautionary principle' and the corresponding burden of proof on the person who wants to change the status quo will ordinarily apply in a case of polluting or other project or industry where the extent of damage likely to be inflicted is not known. When there is a state of uncertainty due to lack of data or material about the extent of damage or pollution likely to be caused then, in order to maintain the ecology balance, the burden of proof that the said balance will be maintained must necessarily be on the industry or the unit which is likely to cause pollution. On the other hand where the effect on ecology or environment of setting up of an industry is known,

> what has to be seen is that if the environment is likely to suffer, then what imitative steps can be taken to offset the same. Merely because there will be a change is no reason to presume that there will be ecological disaster. It is when the effect of the project is known then the principle of sustainable development would come into play which will ensure that imitative steps are and can be taken to preserve the ecological balance. Sustainable development means what type or extent of development can take place which can be sustained by nature/ ecology with or without mitigation."

138. Therefore, the stated principle could be a valid dictum for environmental adjudicatory process.

139. In the backdrop of these legal principles, now we must revert to the facts of the case in hand. We have already held that the incident, as projected by the Board, was not reliable, trust-worthy and in any case, could not be the foundation for passing such a punitive direction. Further, we have also held that it was a case of calibration and not actual emission at the relevant point of time. The reports – pre and post date of the alleged incident – fully tilt the case in favour of the appellant-company rather than the case advanced by the Respondent-Board. The Chairman of the Respondent-Board has also not exercised the delegated power subject to the limitations placed upon him and in fact did so in a somewhat arbitrary manner.

140. Shutting down an industry amounts to 'civil death' of the company. A direction of closure in relation to a running unit not only results in stoppage of production but has far reaching economic, social, and labour consequences. Before directing the

civil death of a company, the decision making authority is expected to have before it some reliable and cogent evidence. An inquiry into the incident or accident of breach by the industrial company should be relatable to some reasonable scientific data. There should be a direct nexus between the leakage of gas, the source of leakage and its effect/impact on ambient air quality and public health. These are the *sine qua non* and not conditions to be satisfied post-order.

141. We have also held above that there is no direct or even indirect evidence to show that there was no possibility of leakage of gas or excessive emission from any other industry except the appellant-company. The Respondent-Board in fact has not even brought its case with reasonable probability in contradistinction to the above beyond reasonable doubt.

142. The action taken by the Board on 29th March, 2013 directing closure of the appellant-company's unit was not as much of a preventive direction with reference to precautionary principle as it was a punitive measure, recourse to which was taken on the premise that there was excessive emission on 23rd March, 2013 and it had caused health hazards to the people residing 6-8 kms. away from the appellant-company's unit. It could not be prevented as according to the Respondent-Board itself, the event had already happened and it was not an anticipated action. At best, it was partially preventive and primarily punitive so that firstly, the people do not suffer eye irritation, throat irritation or suffocation in future and secondly,

because complaints in that regard had already been received. The parameters for taking punitive action are entirely different to the ones that may be required for passing directions as per precautionary principle. Since there was no reasonable scientific data and the Respondent-Board itself did not even care to collect stack and ambient air quality samples post-23rd March, 2013, we fail to understand as to how such an order could be passed, particularly in view of the admitted position that there are large number of industries in SIPCOT and out of which quite a few industries are heavy and 'red' category industries in relation to causing pollution. They were admittedly discharging gases. It is also equally true that the alleged health problems could result from discharge of other gases besides SO_2. The order passed by the Respondent-Board is not based on precautionary principle but is a punitive direction in terms of Section 5 of the Environment (Protection) Act, 1986. As a condition precedent to punitive action, it ought to have been established that there had been excessive emission from the stack of the appellant-company's unit and that the ambient air quality analysis showed presence of SO_2 primarily attributable to the appellant-company's plant and then it had travelled to the villages 6-8 kms away and had affected the health of its' residents. Once this was established as a ground for punitive action, that itself could form a valid basis for passing the preventive order in relation to future**.** In the case of punitive action, it should be tested on the touch-stone of validly proved action while in a preventive order, it

could be done as per a reasonable apprehension of a prudent person. Stringent proof and specific scientific data is the very crux for passing such direction and absence thereof would vitiate the action taken.

143. Furthermore, the scope of 'merit review' by the Tribunal is not confined to the Wednesbury's principle. Besides this, other considerations like no evidence, no specific and scientific data or abuse of authority can be additional grounds that can be considered by the Tribunal while determining such a controversy. In view of the detailed discussion, we have no hesitation in coming to the conclusion that the punitive order dated 29th March, 2013 passed by the Respondent-Board is not sustainable in law.

144. Having dealt with the various facets of this case, another ancillary point of some public importance needs to be addressed by us before we part with this file. It has come in evidence by way of affidavits of the respondents as well as of the doctors that there are serious health problems persisting in the area of the villages afore-indicated. All these villages are within a distance of 6-8 kms. from SIPCOT Industrial Complex established by the State Government. The doctors have, by necessary implication of their affidavits, attributed the cause of termination of pregnancies of young women to the release of some gases from different industries in that area. Furthermore, the people, more often than not, complained of eye burning, throat irritation and suffocation resulting in problems relating to breathing. Despite

filing of complaints at various quarters of the State Government, including the Respondent-Board, no effort had been made by the authorities to carry out any study or collect proper data so that the residents of these villages are able to get a clean and decent environment, more particularly with reference to air. It is not only a statutory but also a Constitutional right of all the persons living in the vicinity of this industrial cluster and other industries located in that area to have clean, healthy and pollution-free environment. It was expected of the State Government and the Respondent-Board to carry out its statutory obligation and consequently deal with the legal rights under the environmental laws of the affected persons to redress their grievance against polluted environment.

145. The respondents and even the interveners have placed material on record to show that prior to and post the alleged date of occurrence, i.e. 23rd March, 2013, the complaints of similar kind have persisted over a passage of time. According to the affidavit of one of the doctors, young women had to terminate their pregnancies, probably, as a result of inhalation of obnoxious gases. Continuous health hazards, particularly in regard to the termination of pregnancies with young ladies, is a matter of very serious concern and one would have expected these authorities not only to have undertaken due study in that regard, but also taken both corrective and preventive measures in relation to pollution arising from these industrial clusters and affecting the villages afore-referred. There is no explanation

whatsoever, much less, a reasonable case advanced on behalf of these official respondents for their failure to advert themselves to such a serious human health problem totally relatable to environment. The provisions of NGT Act declare that a direct violation of specific statutory environmental obligations by a person by which the community at large is affected or is likely to be affected by the environmental consequences, will be a substantial question relating to environment; which show the intent of the legislature that environmental violations affecting the community have to be treated with all rigours of law and thus, this Tribunal cannot overlook such specific instances. Thus, the present would be a fit case which requires issuance of specific directions by the Tribunal to protect the environment of these villages and health of the people residing therein.

Conclusion and Directions :

146. The Legislature has mandated that the Tribunal while deciding cases must apply the principle of sustainable development, precautionary principle and polluter-pays principle. We have discussed above the first two principles, in some detail. The principle of sustainable development requires us to take a balanced view between industrial development and protection of environment. The cumulative view of the facts and circumstances of the present case shows that the case at hand is not a case of promoting development at the cost of the environment. It has not been established that the industrial

activity carried on by the appellant-company prejudicially and in any way compromises either the environment or the interests of the future generations. Furthermore, the alleged incident of 23rd March, 2013 is not attributable to the activity of the appellant-company. There is no cogent or reliable evidence or reasonable scientific data, even by necessary implication, to contribute the leakage of SO_2 in excess of the prescribed parameters to the plant of the appellant-company. Nothing on record justifies the invocation of precautionary principle. In fact, it is a punitive action in the garb of a preventive measure. As far as the third principle of polluter-pays is concerned, this does not require any deliberation by this Tribunal in face of the judgment of the Supreme Court in the case of *M/s. Sterlite* (appellant-company) itself. It was brought to the notice of the Supreme Court that for some period, the industry had operated without consent of the Board. Taking it to be a case of environmental pollution, the Supreme Court, on the basis of the polluter pays principle directed the industry to pay a sum of Rs.100 crores. Thus, there is no occasion for the Tribunal to examine that aspect subsequent thereto which in any case is a matter of days and particularly when the industry has to operate its industrial activity with the consent of the Respondent-Board. We also have, in clear terms, held that exercise of delegated powers by the Chairman was beyond the prescribed limitation and it also suffered from the vice of arbitrariness.

147. The economic factors and their consequences are relevant considerations for the Tribunal when it is determining the substantial questions of environment and allied disputes raised by the parties. Of course, such relevancy has a limited role and irretrievable degradation of environment only for economic reasons is not permissible as per the settled canons of environmental jurisprudence. SO_2, a raw material for manufacture of various final products, for instance, pharmaceutical products, pesticides, sulphur phosphate, fertilizers and even used by the pickling plants etc., is a by-product in the manufacturing process of the Appellant-Company. Thus, it would always be the effort on the part of the appellant-company to minimize the emission of SO_2 to ensure least economic loss. As a business person of common prudence, efforts would be made to maximise the use of gas and not minimise the profits. It is of some significance to notice that the emission of SO_2 would mean, on the one hand economic loss to the appellant company and a complete waste for it, on the other.

148. The environmental restrictions must operate with all their rigour but no action should be suspicion-based which itself is not well-founded. Precautionary principle should be invoked when the reasonable scientific data suggests that without taking appropriate preventive measures there is a plausible indication of some environmental injury or health hazard. The Tribunal, in exercise of its power of merit-review and being an expert body itself has to examine all aspects of such cases whether they are

factual, technical or legal. Having comprehensively examined all these three aspects, we are of the considered view that the passing of the following order is necessitated in the facts and circumstances of the present case:

(i) Subject to the directions contained hereinafter, the interim order dated 31st May, 2013 is made absolute.

(ii) The recommendations and suggestions made in the report of Special Expert Committee constituted by this Tribunal vide its order dated 31st May, 2013 shall be binding upon the appellant-company. It shall ensure compliance of the directions, recommendations and suggestions as spelt out in that report within a time bound programme and expeditiously and in no case later than eight weeks from the date of pronouncement of this judgment.

(iii) The above recommendations and directions are for the better functioning of the plant of the appellant-company, which the appellant-company, as per the statement made at the Bar, has agreed to comply with, without any hesitation and in a time-bound manner. The appellant company shall abide by the above undertaking. In addition, the Respondent-Board is directed to commission "Source Apportionment study" in and around SIPCOT Industrial Area within a period of one year and take appropriate measures based on the findings of the said study under intimation to the NGT.

(iv) The report of the Special Expert Committee shall be deemed to be an integral part of this order and all its conditions, directions, suggestions and recommendations would *mutatis mutandi* apply to the appellant-company.

(v) Besides and in addition to the above, the appellant-company shall place its data of stack and ambient air quality in 'public domain', i.e. online dissemination of data.

(vi) The application for renewal of or obtaining consent of the appellant-company is presently pending with the Respondent-Board. The Respondent-Board shall consider and pass appropriate orders in relation to the said application in accordance with law, expeditiously.

(vii) We direct the Respondent-Board to take due notice of the report submitted by the Special Expert Committee dated 10th July, 2013 while dealing with the consent application of the appellant company.

(viii) The Special Expert Committee constituted vide order dated 31st May, 2013 by the Tribunal shall supervise and oversee the manufacturing process and industrial activity including pollution related issues of the appellant-company and shall submit a report to the Tribunal as well as to the respondent-Board bimonthly (once in two months). The Board shall give due regard and take into consideration the

report(s) of the 'Special Committee' while passing any orders in future in accordance with law.

(ix) We hereby constitute a Special Committee of the Secretary (Health), Government of Tamil Nadu, Member Secretary-Pollution Control Board, Tamil Nadu, Director General of Health Services of Tamil Nadu, Respondent No.5-Vaiko and two independent experts, one from the field of environment and the other from public health, to be nominated by the MoEF. This Committee shall conduct a study and place on record the causes for the health hazards that are resulting in and around the industries and the industrial clusters, like SIPCOT. It will give the reasons why the young ladies in those villages in the State of Tamil Nadu are suffering from termination of pregnancies and why the people are suffering from various ailments like throat and eye irritation and suffocation in breathing. This Committee shall further place on record the recommendations for remedying such environmental injury and health hazards. These recommendations shall be placed before the Tribunal within a period of six months from today.

(x) The report prepared in relation to health hazards by the Committee constituted under this order shall file the same within the stipulated period whereupon this report shall be placed before the appropriate Bench of the Tribunal for such further directions as may be deemed necessary by the

Tribunal. All authorities concerned shall ensure compliance of the above directions without demur and default. We grant liberty to either of the parties to approach this Tribunal in the event of violation of directions issued by this Tribunal, by any of the party to the *lis* or any authority or person for that matter.

149. Before we part with this file, we would like to place on record our deep appreciation for the work done by the Members of the Expert Committee constituted vide order dated 12th April, 2013 and the Special Expert Committee constituted by order dated 31st May, 2013.

150. The application is allowed partly in the above terms. The industry would be permitted to carry on its activity subject to the above directions. No orders as to costs.

Justice Swatanter Kumar
Chairperson

Dr. D.K. Agrawal
Expert Member

Dr. G.K. Pandey
Expert Member

Dr. R.C. Trivedi
Expert Member

New Delhi;
August 8, 2013