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BEFORE THE NATIONAL GREEN TRIBUNAL,  
NEW DELHI

(PRINCIPAL BENCH)

Tuesday the 20<sup>th</sup> day of September 2011

Appeal No. 7 of 2011 (T)

**Quorum:**

1. Hon'ble Justice Shri C.V. Ramulu  
(Judicial Member)
2. Hon'ble Dr. Davendera Kumar Agrawal,  
(Expert Member)

**Between:**

1. Krishi Vigyan Arogya Sanstha,  
Dhanwate Ashram, Shani Mandir Road,  
Sitabuldi, Nagpur, through  
Authorized Representative Shri Om Jajodia, President.
2. Hirwai,  
176, Dharampeth Extension, Nagpur-440010,  
Through its authorized Representative,  
Shri P.S.Ahuja.
3. Vidarbha Nature and Human Science Centre,

35/B, Hindustan Colony, Amraoti Road, Nagpur-440033.

Through its Authorized Representative,  
Shri Pradyumna Sahasrabhojane, Honorary Secretary.

4. Shri Sukhdeo Sadashiv Bhoyar,  
Village Khapri, Tehsil - Kamptee, District - Nagpur.
  5. Dyaneshwar Ambula,  
Village - Khapri, Tehsil - Kamptee, District - Nagpur.
  6. Anand Jajodia  
Village - Khapri, Tehsil - Kamptee, District - Nagpur.
  7. Govind Das Maloo,  
55, Vidya Vihar Colony,  
Rana Pratap Nagar, Nagpur
- .... Appellants.

*Versus:*

1. The Ministry of Environment & Forests,  
Government of India  
Through its Secretary  
Paryavaran Bhawan, CGO Complex  
Lodhi Road, New Delhi 110 003.
2. The Maharashtra State Pollution Control Board,  
Regional Office, 5<sup>th</sup> Floor, Udyog Bhawan, Civil Lines,  
Nagpur.
3. The Maharashtra State Power Generation Co. Ltd.,

Prakashgad, 3<sup>rd</sup> Floor, Plot No. G-9,  
Bandra (E), BOMBAY - 400051.

.... Respondents

(Advocates appeared: Mr. Ritwick Dutta, Ms. Shibani Ghosh, and Ms. Parul Gupta, For Appellants, Ms. Neelam Rathore for Respondent No. 1, Shri Aftab Alam, Shri Mukesh Verma for Respondent No. 2, Shri Ajit Bhawme and Shri Pankaj Mishra for Respondent No. 3).

## J U D G M E N T

(Judgment delivered by the Bench)

1. This appeal is filed being aggrieved by the Environment Clearance granted, by the Respondent No. 1 vide its letter no. J-13012/87/2007-IA.II(T) dated 04.01.2010 in favour of the Respondent No. 3, for the proposed 3X660 MW expansion of coal based thermal power unit at Koradi Thermal Power Project in Nagpur district of Maharashtra.
2. It appears that the Appellants 1 to 3 are social and environmental groups working for the welfare of the local communities and creating awareness on social and environmental issues and the Appellants 4 to 7 are directly affected by the expansion of the said project. Some of the appellants seem to have participated in the public hearing and also made several representations to the concerned authorities seeking their intervention to protect the environment and



ecology in the area. It is their case that Environmental Impact Assessment report failed to take into account the cumulative impact of various existing and proposed power plants within the area. The Environmental Impact Assessment report submitted by the project proponent has misrepresented the facts as to the distance of the thermal power plant project from Nagpur city as 11 kms which is not correct. The distance was calculated from Koradi village and not from the project site. This has been deliberately done to reduce the impact of the project on human habitation. The existing power plant itself emits pollution beyond permissible limits and no efforts were made to control it. Now the proposed unit is far far bigger one that means the plant will continue to pollute the environment. Kolar river is just within one km from the project site and if the expansion is allowed, the river would get polluted totally. Though the project proponent claimed to have planted 4.60 lakh trees since 1985, so many trees are not in existence. The Environmental Impact Assessment report has failed to provide the details of alternative sites. The present site is neither technically nor commercially feasible, since coal has to be transported from about 1000 kms (from Orissa) and power generated has to be transmitted more than 1000 kms. The impact of nuclear radiation due to thermal power plant was neither studied nor mentioned in the Environmental Impact Assessment report. Further, the project will adversely affect the ground water level. The proponent got the Environmental Clearance published in the newspapers with a delay of more than two weeks, thus prevented the public from acting upon.

Apart from the above, the Public Hearing was not conducted as required under the Law. Public Hearing was

conducted in the office building of Maharashtra State Pollution Control Board which is very far from the project site. Even the minutes of the Public Hearing were fabricated and did not reflect the actual concern of the people who participated in the Public Hearing. The Compact Disk of the Public Hearing recorded itself is the evidence in this regard.

3. All the respondents have filed their replies and the appellants have filed their rejoinder to the replies of the respondents. It is their common reply that the present project is only an expansion of the old one. Neither, there is any change in the land use nor any land is being acquired separately. The Environmental Impact Assessment report does not lack any information which resulted in misrepresentation. The Public Hearing was conducted as per the norms fixed by the authorities of the Maharashtra State Pollution Control Board. There is no danger for environment and human life in establishing the present expanded project. There is no wastage of water. The municipal waste water is proposed to be recycled and used. Thus there is no additional requirement of fresh water from the other source. The Koradi river is 1 km away from the project site. All the precautions as to controlling the fly ash and the utility of the bottom ash have been taken care of. The project itself has no nuclear radiation effect. Therefore, there was no necessity of examining the nuclear radiation aspect either by the proponent or by the authorities concerned.

In so far as, Public Hearing was concerned, it was conducted as per the procedure prescribed under the Environmental Impact Assessment Notification of 2006. The existing plant was 11 kms away from Nagpur city. Over a



period of time, no doubt the city expanded and there is sporadic habitation around the project. There was no complaint whatsoever earlier. The Public Hearing was conducted in the premises of Vidharbha Industries Association, since it was the nearest point and convenient to all the people. The local MLA, Sarpanch, Scientists, Social Workers and other public representatives apart from the general public participated and there was a full debate for the whole day which is recorded in the Compact Disk. The gist of the Public Hearing however could not be made available immediately for paucity of time. Looking from any angle, absolutely there was no procedural wrangle in conducting Public Hearing and grant of Environmental Clearance. The appeal is devoid of merits and liable to be dismissed.

**Submissions:**

4. The learned counsel on either side advanced arguments at length and referred to various documents and case law in support of their arguments. We have given our earnest consideration and perused all the documents made available on record. We are of the considered opinion that the following points arise for consideration in this appeal.

- a) *Whether the Environment Impact Assessment report prepared for the project was proper and adequate and sufficient information was furnished;*
- b) *Whether the Public Hearing conducted for the purpose of inviting objections and suggestions, if any, was in*

*accordance with the Environmental Impact Assessment Notification 2006; and*

*c) Whether Expert Appraisal Committee was right in not taking cognizance of the past violations of the project proponent and also not examining the objections recorded at the time of Public Hearing.*

5. At the outset, we may notice that grant of Environmental Clearance is basically a procedural law and any procedural lapses such as collection and evaluation of basic data which may lead to threat to the environment, ecology and conservation of natural resources, shall have to be taken seriously by this Tribunal while dealing with the disputes coming up before it.

Before going into the merits of the present case, we may take note of the Preamble of the National Green Tribunal Act, 2010, Section 14 (1) & (2) and 20 thereof and the procedure prescribed under the Environmental Impact Assessment notification, 2006 for the purpose of granting Environmental Clearance, in nutshell:

**Preamble of National Green Tribunal Act 2010 -**

*"An Act to provide for the establishment of a National Green Tribunal for the effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources including enforcement of any legal right relating to environment and giving relief and compensation for damages to persons and property and for matters connected therewith or incidental thereto."*

**Section 14: "Tribunal to settle disputes -**

*(1.) The tribunal shall have jurisdiction over all the civil cases where a substantial question relating to environment (including enforcement of any legal rights relating to environment), is involved and such question arises out of implementation of the enactments specified in Schedule I.*

*(2.) The tribunal shall hear the disputes arising from the questions referred to in sub-section (1) and settle such disputes and pass order thereon."*

**Section 20: "Tribunal to apply certain principles-**

*The Tribunal shall, while passing any order or decision or award, apply the principles of sustainable development, the precautionary principle and the polluter pay principle."*

**Summarized Practice and Procedure as per Environmental Impact Assessment Notification, 2006**

- a. Categorization of projects - For the purpose of Environment Clearance the projects are broadly divided into two groups. Category A projects needs to be considered at the Central Government level whereas Category B projects are taken up at State Government level. The project involved herein is Category A project and thus required Environment Clearance from the Central Government.*



**b. Requirements of prior Environment Clearance -**

On filing application in prescribed format i.e., Form 1/Form 1-A including Terms of Reference proposed by the project proponent, the Expert Appraisal Committee for the concerned sector (in this case - Mining) constituted by the Ministry of Environment and Forests, Government of India examines the proposal and finalizes the Terms of Reference including additional Terms of Reference, if any for the Environmental Impact Assessment studies with specific reference to the project location and nature of proposed activities and their likely impacts on various environmental attributes. It also prescribes the time frame for the purpose of submitting report, etc.

- c. **Public Consultation** - Based on the Terms of Reference granted to the project, the proponent through his appointed consultant/s conducts the field studies and gathers the baseline data to prepare a DRAFT Environmental Impact Assessment report. The draft report is submitted to Ministry of Environment and Forests, Government of India and the concerned State Pollution Control Board with the request to hold Public Hearing. The Public Hearing is conducted by the State Pollution Control Board under the supervision of the concerned District Magistrate or his nominee as required in the Environmental Impact Assessment notification. The Public Hearing is desired to be conducted at the project site or in the close proximity whichever is convenient giving minimum 30 days clear notice.

The gathered public is initially briefed about the project followed by detailed presentation on the environmental aspects as provided in the draft Environmental Impact Assessment report. Subsequently, opportunity is given to all the interested persons to express their views. The views expressed are video-graphed and recorded as provided in the Environmental Impact Assessment notification. The project proponent or State Pollution Control Board officials or District Magistrate may clarify any of the doubts expressed by the public. Thereafter, the summary of the proceedings is drawn then and there and is read out in the local language.

- d. **Appraisal** – The project proponent, if required, may revise the DRAFT Environmental Impact Assessment report based on the inputs of the Public Hearing and prepare a brief note on the compliance of the issues raised in the Public Hearing. The revised Environmental Impact Assessment report is submitted to Ministry of Environment and Forests for being placed before the Expert Appraisal Committee. In the meantime, the records of the Public Hearing along with video-graph are furnished by State Pollution Control Board to the Ministry of Environment and Forests. The complete Environmental Impact Assessment report and the data furnished are examined by the Ministry of Environment and Forests/Expert Appraisal Committee in detail. The Expert Appraisal Committee may or may not recommend for grant of



*Environment Clearance. Finally, it is for the Ministry of Environment and Forests to take a decision for grant Environment Clearance subject to specific conditions keeping in view the precautionary principle and polluter pay principle or it may reject the Environment Clearance for reasons to be recorded.*

- e. Post Environment Clearance Monitoring – It is mandatory on the part of the project proponent to submit half-yearly compliance report in respect of the stipulated conditions in the grant of Environment Clearance in hard and soft copy to the regulatory authority. It is always open for the regulatory authority to cancel the grant of Environment Clearance, if the stipulations are not adhered to or there is any danger to the human habitation and/or serious threats are posed to ecology and environment of the surrounding which were not apprehended at the time of grant of Environment Clearance.*

A combined reading of the Preamble, Section 14 (1) & (2) and Section 20 of the National Green Tribunal Act, 2010 would reveal that this Tribunal has got vast jurisdiction to decide the environmental disputes including a dispute as to conservation of natural resources keeping posterity in to consideration, in a given case if it is brought before it. Of course, under Section 15, relief and monetary compensation can also be awarded to a victim/s of pollution and other environmental damage/s suffered – restitution of property damaged and also restitution of environment of such area as the Tribunal may think fit.



Discussion:

6. In the light of the above, we have examined the points formulated above.

- a) *Whether the Environment Impact Assessment report prepared for the project was proper and adequate and sufficient information was furnished.*

At the outset, we may notice that the present project is not a novice, but it is expansion of the original project wherein it is envisaged to install 3 units of 660 MW each within the existing premises of Koradi Thermal Power Station. It is proposed that commissioning of new units will phase out the four units each of 120 MW out of the seven older units. Thus, three units of 660MW and two units of 210 MW and one unit of 220 MW will be operational. There is no requirement of any additional land for the expansion of the unit for any purpose. The learned counsel for the appellant strenuously contended that though it appears an expansion of the original unit, it is not so. The original unit was of far less capacity whereas in the expansion of the project about 2000 MW energy is sought to be produced. For this purpose, huge quantity of coal would be required, which will result in causing greater environmental pollution in the area. The original project was established in the year 1974-75 and at that time, may be the Nagpur city was away from the project. But as of today, the project site is part of the urban agglomeration. The nature of the expansion or the spread of human habitation in and around the project were not taken into consideration in the Environmental Impact

Assessment report. The generation of fly ash and its effect on the surroundings was not at all considered. Apart from this, the project requires large quantity of water for the purpose of cooling, ash handling, boiler cooling and domestic consumption. The project being huge in nature would also cause nuclear radiation which results in affecting human health and the ecology. All these aspects were completely ignored in the Environmental Impact Assessment, though these aspects were raised in the Public Hearing. The Expert Appraisal Committee also had not considered the huge nature of project and the growth of the Nagpur city. Thus, the Expert Appraisal Committee appraisal suffered from lack of proper data and scientific information.

Whereas, learned counsel for Respondent No. 1 stated that the project being an expansion of original unit within the existing plant site and no further land etc. are required in the expansion. The question of examining human habitation around the unit and other aspects need not be taken seriously. The human habitation around the project mainly consists of workers of the thermal power project. Even otherwise, the Nagpur city is at a distance of more than 7 kms. All other aspects were taken into consideration in the Environmental Impact Assessment and the Expert Appraisal Committee recommended the expansion in view of the fact that there was no danger to the environment and ecology. The Public Hearing was conducted properly and all the precautions were taken to meet any unforeseen situation that may arise in future.

Whereas, the learned counsel for third respondent strenuously contended that all the allegations made by the



appellant are baseless and liable to be rejected. The Environmental Impact Assessment report does not suffer from any deficiencies. The Environmental Impact Assessment report was prepared by engaging an Environmental Consultant particularly in the field of thermal power projects. All the information required for the purpose of establishment/expansion of the unit had been furnished in the pro-forma prescribed. The Terms of Reference were addressed and discussed in the Environmental Impact Assessment report in detail. The same was rightly taken by the Expert Appraisal Committee while recommending the case of the proponent.

We have examined these allegations and counter allegations with reference to the documents placed on record. A perusal of the final Environmental Impact Assessment report dated April 2009 reveals that baseline data as per the prescribed Terms of Reference given by the Expert Appraisal Committee related to various attributes of environment (i.e. physical, biological and social environment) was collected from within the 10 kms radius of the present project site. All the parameters as to air and water are within the norms prescribed. Whereas, on perusal of ambient air quality model, it is revealed that the impacted zone would be including river Kanan zone, Township Kampttee and outskirts of Nagpur city. The flora and fauna study was taken up and it was found there was no such flora and fauna which is affected by the project. No doubt, there is human habitation around the project site within a distance of 4 kms. The final Environmental Impact Assessment report further reveals that the socio economic baseline data has been presented for 10kms study area having 57 villages based on Census data and Survey of India topo-sheets. For assessing



social and economic impact assessment, 7 villages in the immediate vicinity of the power plant were taken up and it was found that:

- i) Energy/power station was and is a primary need to assure economic growth; and
- ii) Site selection of the present Environment Clearance was environmentally proper at the time of its installation because it was away from any residential area. It was then located near derelict and abandoned mica mine area and also close to proven coal deposits of Western Coalfield Ltd.

From the various facts it is seen that the Environmental Impact Assessment report is based on the 10kms study area from the existing (old) project site whereas, the location of new proposed plant is around 1 km away from the old site towards Nagpur. Had the distance has been measured from the proposed project site, the baseline data and results would have been otherwise. Looking at these variations in distance and likely impact on baseline data, we have called for a fresh report from the Maharashtra State Pollution Control Board (Respondent No. 2). The Respondent No. 2 filed its detailed report and reveals that:

*"the farthest point of the expansion project was considered as a reference point to locate human habitation at a distance of 3 km radius. The officers of the Board visited the project site of M/s Koradi Thermal Power Station, expansion unit 3X660 MW at Koradi,*

Distt: Nagpur on 1.8.2011. The Respondent No. 3 provided the map of the project site expansion unit which reveals the center point of the project site is arrived at by interpolation method which was found to be between locations of proposed Electrostatic Precipitator No. 8 and Electrostatic Precipitators No. 9 having Latitude and Longitude of this center point was recorded as N 21 14' 6.5" and E 79 05' 34.1" respectively on the GPS instrument. The farthest point of the project boundary of this expansion project site is recorded at boundary wall near railway siding at South-East direction of center point. The distance from the center point to farthest point measured from the map as 1.3 kms and therefore in order to draw a circle of radius 3.0 km from the farthest point of the expansion project site, 1.3 km distance was added to it. Thus, a radius of 4.3 km is considered to draw circle from the center point of expansion project site to locate human habitations within 3.0 km radius from the farthest point of the project site on the map. The toposheet No. 55 03 & 55 04 are taken as a reference to draw map with such a modification. The map enclosed to the report reveals all the details. The villages within the vicinity of 4.3 km radius from the center point of the project has been considered and 10 settlements were found and as per the 2001 Census the total population of these settlements was 74865 and as per 2010 Census it was 80419 within 3 kms radius from the farthest point of Koradi Thermal Power Station (proposed project)."

From all these facts, which are on record, we are of the opinion, that it cannot be said, the Environmental Impact Assessment report suffered from significant deficiencies or lack



of information which resulted in recommendation of the grant of Environment Clearance by the Expert Appraisal Committee. However, it is expected that Expert Appraisal Committee/ Ministry of Environment and Forests should always take a note of even small deficiencies in the Environmental Impact Assessment report and should ask the project proponent to rectify the same.

With regards to the aspect of nuclear radiation and its impact on human habitation, the Environmental Impact Assessment report is totally silent as it was not required as per the granted Terms of Reference. Similarly, the report is silent about other thermal power plants existing or proposed in and around the project under reference since the Terms of Reference did not necessitate them to undertake cumulative impact assessment of all the thermal power projects of the area.

7. *b) Whether the Public Hearing conducted for the purpose of inviting objections and suggestions, if any, was in accordance with the Environmental Impact Assessment Notification 2006.*

It is alleged that the Public Hearing process was not followed as required under the law. The Public Hearing was conducted at a distance of 7 kms from the project site and many people were deprived of their participation to ventilate their grievances, if any. Even otherwise, the objections raised by the public were not properly recorded and the true and correct facts were not reflected in the minutes of the meeting. The gist of the Public Hearing was not furnished immediately on the conclusion of the proceedings, either in English or Marathi. The



objections raised by Mr. Paliwal as to the nuclear radiation effect of the proposed project on the human population around and ecology were not at all replied/incorporated in the final Environmental Impact Assessment report. Therefore, the Public Hearing was biased and vitiated. Whereas learned counsel for the respondents stated that the Public Hearing was conducted as per the procedure prescribed under the Environmental Impact Assessment Notification 2006 and all the points raised during Public Hearing were replied and met. All the concerned documents were enclosed to the minutes of the proceedings along with Compact Disk of Public Hearing proceedings. The signed minutes were sent to the Maharashtra State Pollution Control Board which had vetted the same and sent to the Ministry of Environment & Forests. The Public Hearing was not held in the office of the Maharashtra State Pollution Control Board as alleged, but it was held in the Hall of Vidharba Industries Association, Nagpur. The meeting was attended by as many as 89 persons and all the points raised by each individual participant were recorded. Out of 89 persons attended; only 30 are the local people inclusive of local MLA, Sarpanch and other public representatives. All the others were either consultants or officers of the proponent. No part of the Public Hearing was suppressed or mis-noted or fabricated as alleged by the appellant.

In this regard, we have witnessed the Compact Disk along with the learned counsel on either-side, parties herein and their representatives for about three long hours. On witnessing the Compact Disk relating to Public Hearing, we are of the opinion that the Public Hearing proceedings were conducted in the presence of the representative of the District

Magistrate by the Maharashtra State Pollution Control Board. Mostly the proceedings were in Marathi language. The local MLA, Sarpanch and other public representatives including Mr. Paliwal spoke on the occasion. Most of the people appreciated the establishment of the project which will get them employment and other related benefits. However, each one of them suggested need for full-proof safety system to avoid any health and other environmental problems in the area. The minutes of the Public Hearing proceedings held on 25<sup>th</sup> March 2009 would show the reasons furnished by the proponent for having preferred the project site and the latest technology being used for the purpose of the proposed expansion of 3X660 MW at Koradi project. All the points raised in the Public Hearing, as seen from the Compact Disk, were recorded meticulously in the proceedings dated 25<sup>th</sup> March 2009. The objections raised by Mr. Paliwal as to nuclear radiation was also recorded on page No. 19 of the said report. Neither the Compact Disk nor the minutes of the report would indicate anything substantially deviated in conducting the Public Hearing. However, the allegation made by the appellant that on conclusion of the Public Hearing the gist in Marathi language was not furnished appears to be true. But, it appears in view of long hearing and full-fledged participation of the people in the Public Hearing, due to paucity of time, the gist could not be furnished immediately on conclusion of the Public Hearing proceedings on 25<sup>th</sup> March 2009. Further, the venue of the Public Hearing was not the Maharashtra State Pollution Control Board office as contended by the appellant. It was a hall of the Industries Association of Nagpur and Koradi village which is no doubt at a distance of 7 to 8 kms. Understanding the fact that there are habitations within 4.3 kms radius of the project site, the Public



Hearing could have been conducted in a nearby place to the proposed project site. But Nagpur, being a metropolitan city, the distance cannot be taken seriously particularly when there was full participation of the public representatives and others. All these, in our view cannot be said to be a substantial procedural lapse in the Public Hearing, calling for its invalidation. But, it is always desirable to conduct the Public Hearing within the close proximity of the project site, say within 1km radius.

However, we may notice here that the Notification dated 21<sup>st</sup> February, 2009 inviting people to participate in the Public Hearing was not happily worded. The language used is not clear as alleged by the appellant. The authorities could have taken care to avoid any ambiguous or inappropriate wordings. A plain reading of the Notification, gives a restrictive meaning as alleged by the appellant. But, there was no bar for participation of the people in the Public Hearing. Further, as noticed from the Compact Disk, there was full participation of the local public representatives apart from others particularly the appellants themselves. No prejudice can be said to have caused to the appellants from the Notification dated 21<sup>st</sup> February 2009.

8. *c) Whether Expert Appraisal Committee was right in not taking cognizance of the past violations of the project proponent and also not examining the objections recorded at the time of public hearing.*

It is the argument of the learned counsel for the appellant that the expansion of the project was granted without taking



the past conduct of the proponent into consideration. The Maharashtra State Pollution Control Board, two years prior to the grant of Environment Clearance had noticed several irregularities committed by the proponent in maintaining the old site (project). Several show-cause notices were issued but there was no response from the project proponent. It had pointed out several irregularities and non-compliance of the precautionary measures which resulted in the pollution of the area. During the Environmental Impact Assessment study period, there was heavy dust emissions from all the stacks and effluent in the form of ash being discharged in Kolar and Kanhan rivers, which are drinking water source for Nagpur city and other villages. Even after the grant of Environmental Clearance, the Respondent No. 3 has not made any efforts to control the pollution and therefore, another letter dated 02.03.2010 was issued by the second respondent and also forfeited the bank guarantee of Rs. 10 lakhs on 10.03.2010. Even today the same situation continues. The Environmental Impact Assessment report had not taken a note of these emissions and relied upon the old data. Even after the grant of Environment Clearance, the pollution control equipment of the existing units have failed and emissions are much more than the annual average taken from environmental statement report of 2007-08.

The Expert Appraisal Committee also had not taken into account the conduct of the proponent while recommending the grant of Environmental Clearance. The project proponent (Respondent No. 3) tried to conceal the fact that the city of Nagpur is very close of the project site in order to mislead the Environmental Appraisal Committee as well as other authorities. The Karodi village has got an ancient temple of

Goddess Durga. The existing power plant was set up in 1974 near this village. The existing power plant is one km from Koradi towards Nagpur. The 10 kms radius was not taken properly. The factual position as seen from the map of the area shows that the major part of the Nagpur city was deliberately excluded from the Environmental Impact Assessment study. The Environmental Impact Assessment has not done any impact assessment on every sensitive receptor. No assessment has been done of the expected excess cardio-vascular and respiratory mortality, children's asthma and respiratory dysfunction that is attributable to the exposure to the air pollutants from the plant. No assessment of crop yield loss of net primary production attributable to the plant and air pollutant has been done. Ozone a secondary pollutant which causes immense injury to human health and vegetation including crops has not been studied and considered in the Environmental Impact Assessment report. No assessment of the impact on the water bodies has been conducted. Sulphur dioxide and Nitrogen dioxide are acidic and known to decrease pH of water bodies. Such a decrease has immense impact on aquatic life. These things were not properly studied. There are many more thermal power projects around Nagpur city and their cumulative effect was not studied and taken into consideration while granting Environment Clearance in the present case. Though Mr. Paliwal raised an important objection as to the effect of nuclear radiation in and around the plant, this was neither studied nor considered in the Environmental Impact Assessment. No measures have been taken to control the pollution caused by the existing unit. Looking from any angle, the grant of Environment Clearance was made without making any scientific study. The respondents have given a go



bye to the pollution that may cause and affect the human habitation and the ecology.

Whereas, the learned counsel for the respondent No. 3 strenuously contended that all the allegations made by the appellant are baseless, false, incorrect and misconceived and liable to be rejected. All the complaints made are regarding the old existing project (of the year 1974), which is sought to be replaced under the present grant of Environment Clearance. The existing plant has old technology and the entire machinery is worn out and has become outdated. When they were not able to meet the norms prescribed in maintaining various pollution standards, they are going for erection of new technology plant. As many as four units are proposed to be replaced by the new technology. Thus the contention of the appellant that the Maharashtra State Pollution Control Board had issued several notices for complying with the deficiencies pointed out and the same were not adhered to, has no relevance whatsoever to the grant of present Environment Clearance for the expansion/ replacement of the units with that of the old ones. Thus, it cannot be said that there was anything wrong in the Environmental Impact Assessment report which was well taken into consideration by Expert Appraisal Committee and Ministry of Environment and Forests. Further, there was no additional requirement of land or water involved in the expansion of the unit. The new unit is being located within the existing land where the old plant was located. The Nagpur Sewage Waste Water is proposed to be utilized for the purpose of the unit by erecting Sewage Treatment Plant for which a Memorandum of Understanding has been entered into with Nagpur Municipal Corporation.

9. In this regard, we have firstly taken note of the fact that though it appears that it is a new project, it is nothing but replacement of the old plant and machinery with the new technology for production of thermal power in 3X660 MW. May be there is increase in the production capacity of the unit compared to the old one. The fact that the Environment Clearance is granted in the nature of expansion for erection of a new plant of 3X660 MW is not in dispute. There is no requirement of any further land either by way of invoking Land Acquisition Act, 1894 or by negotiations. In so far as requirement and utility of huge quantity of water, it is stated that the Nagpur Sewage Waste Water is proposed to be utilized after entering into an agreement with the Nagpur Municipal Corporation by setting up of a Sewage Treatment Plant nearby the project site. Requirement of huge quantity of coal is also a factor which needs to be considered from the environmental point of view. In the present case, it is proposed to transport washed coal from Orissa. Mere transporting of washed coal from a distant place itself cannot have any bearing on the local environment. Further, this expansion of thermal power project will use a super critical boiler based technology, which will use washed coal and Electrostatic Precipitators will have 99.99% efficiency. In so far as ash management is concerned, a clear cut management plan has been evolved. A dumping location and ash pond have been created for re-circulating clear water in such a manner that water from the bund does not discharges directly into the adjoining water body. All these aspects have been reflected in the Environmental Impact Assessment report which was also clarified in the Public Hearing. Thus, it appears



no case is made out calling for our interference into the grant of Environment Clearance made in favour of Respondent No. 3.

However, the Environmental Impact Assessment as well as Expert Appraisal Committee have completely ignored the objections raised by Mr. Paliwal and others regarding nuclear radiation that would be caused by the proposed project. But we are of the opinion that in a project of this nature, as stated by Mr. Paliwal, in the Public Hearing, the effect of nuclear radiation was neither studied nor examined and it was simply brushed aside in the arguments before this Tribunal stating that there was no necessity of examining the project from nuclear radiation point of view as no such plant would cause nuclear radiation which harms the human habitation or the environmental ecology in the surrounding area. In this regard, affidavit by Respondent no. 1 has been filed stating that the nuclear radiation level would be within the permissible limits. Appellant and Project Proponent have not filed any affidavits, however, several research publications and reports were placed before us and two nuclear scientists were made to appear before this Tribunal (one on each side) to say that the nuclear radiation emanated from the thermal power project is more than the nuclear radiation which takes place from Nuclear Power Plant -- and the other one to say that no such nuclear radiation danger is seen in a plant of thermal power project. The learned counsel for the appellant also drew our attention to few research publications, both national and international, to show that there is bound to cause increased level of nuclear radiation in and around the thermal power stations of this nature, one of them reads as under:

*"Radioelemental characterization of fly ash from Chandrapur Super Thermal Power Station, Maharashtra, India by Rajeev Menon, P. Raja, Deepak Malpe, K. S. V. Subramaniam<sup>1</sup> and V. Balaram in CURRENT SCIENCE, VOL. 100, NO. 12, 25 JUNE 2011*

*Natural radioactivity due to the presence of  $^{40}\text{K}$ ,  $^{238}\text{U}$  and  $^{232}\text{Th}$  was measured in fly ash samples collected from economizer, aerator and electrostatic precipitator (EP) of the Chandrapur Super Thermal Power Station (CSTPS) using a NaI (TI)-based gamma ray spectrometer. The study indicates an elevated concentration of these radionuclides, especially in the finer ash samples from EP, which may provide an exposure pathway through inhalation of airborne ashes and could probably cause severe environmental and human health problems. The present study gains significance as it provides the requisite basic data on the radionuclides concentration in fly ash from CSTPS for a detailed follow up of environmental monitoring and to formulate effective management strategies."*

It was also placed before us that these radiations enter into the water bodies and food chain and in long run this results in impact on population residing around the project area. Our attention was drawn to the following:

#### *Coal Ash Is More Radioactive than Nuclear Waste*

*(Source:*

*<http://www.scientificamerican.com/article.cfm?id=coal-ash-is-more-radioactive-than-nuclear-waste>)*

*.....Over the past few decades, however, a series of studies has called these stereotypes into question. Among the surprising conclusions: the waste produced by coal plants is actually more radioactive than that generated by their nuclear counterparts. In fact, the fly ash emitted by a power plant—a by-product from burning coal for electricity—carries into the surrounding environment 100 times more radiation than a nuclear power plant producing the same amount of energy.*

*.....Fly ash uranium sometimes leaches into the soil and water surrounding a coal plant, affecting cropland and, in turn, food. People living within a "stack shadow"—the area within a half- to*



one-mile (0.8- to 1.6-kilometer) radius of a coal plant's smokestacks – might then ingest small amounts of radiation. Fly ash is also disposed of in landfills and abandoned mines and quarries, posing a potential risk to people living around those areas.

.....The result: estimated radiation doses ingested by people living near the coal plants were equal to or higher than doses for people living around the nuclear facilities. At one extreme, the scientists estimated fly ash radiation in individuals' bones at around 18 millirems (thousandths of a rem, a unit for measuring doses of ionizing radiation) a year. Doses for the two nuclear plants, by contrast, ranged from between three and six millirems for the same period. And when all food was grown in the area, radiation doses were 50 to 200 percent higher around the coal plants.

..... that individuals living near coal-fired installations are exposed to a maximum of 1.9 millirems of fly ash radiation yearly. To put these numbers in perspective, the average person encounters 360 millirems of annual "background radiation" from natural and man-made sources, including substances in Earth's crust, cosmic rays, residue from nuclear tests and smoke detectors."

This also poses lot of apprehension in our mind.

We have also noticed that may be the Nagpur city sewage water is proposed to be utilized. But it is common knowledge that the hot water let out from the boiler, if they are allowed to enter the land, it would not only contaminate the land but also would make the entire land around invalid for agriculture or otherwise. There are no details as to how these aspects have to be mitigated and monitored by the project proponents and further to be inspected and supervised by the authorities concerned.

We also observed that a large number of thermal power project are existing and/or are proposed in and around the

project area and thus are likely to have cumulative impacts especially in terms of nuclear radiation. It is given to understand, no national prescribed standards are available with regard to nuclear radiation for various types of eco-system.

**Conclusion:**

10. Taking all the above into consideration, we are of the considered opinion that this appeal requires to be disposed of with the following directions keeping in view the principles of sustainable development and precautionary principle.

- a. The first respondent, Ministry of Environment and Forests is directed to look into the matter as to long term impacts caused by nuclear radiation from the thermal power projects, by instituting a scientific long term study involving Bhabha Atomic Research Agency or any such other recognized scientific institution dealing with nuclear radiation with reference to the coal ash generated by thermal power project (Respondent No. 3) particularly the cumulative effect of a number of thermal power project located in the area on human habitation and environment and ecology. The study shall also take into consideration the health profile of the residents within the area in which the pollutants are expected to spread from the thermal power project.
- b. The Ministry of Environment and Forests shall direct the proponent to synchronize the commissioning of the project with that of the Sewage Wastewater Treatment plant, treated water from which is proposed to be used



for the operation of the project. Until, there is such synchronization, no Consent to Operate shall be issued by the Maharashtra State Pollution Control Board and the Board shall monitor the mitigating measures suggested in the Environmental Clearance.

- c. The Ministry of Environment and Forests shall include in the Terms of Reference of all the future projects asking the proponent to furnish details of possible nuclear radioactivity levels of the coal proposed to be used for the thermal power plant.
- d. The Ministry of Environment and Forests shall get the national standards prescribed, if not already available, from the Department of Atomic Energy, Govt. of India within a period of one year from the date of receipt of this order, as to permissible levels of nuclear radiation in residential, industrial and ecologically sensitive areas of the country.
- e. If any of these directions are not carried out, the appellant is at liberty to take appropriate steps as required under the law.

With the above directions, the Appeal stands disposed of.

(Dr Devendra Kumar Agrawal)  
*Expert Member*

(Justice C V Ramulu)  
*Judicial Member*