

**BEFORE THE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE BENCH AT CHENNAI
APPEAL NO. 15 OF 2020 (SZ)**

IN THE MATTER OF:

THE CONSERVATION ACTION TRUST AND ANR

...APPELLANTS

VERSUS

UNION OF INDIA & ORS

...RESPONDENTS

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WRITTEN SUBMISSIONS ON BEHALF OF THE APPELLANT

MOST RESPECTFULLY SHOWETH:

1. The Appellants are filing these written submissions in the above-mentioned Appeal filed against the Environment Clearance dated 29.06.2017 granted by Ministry of Environment, Forests and Climate Change (For short called as "MoEF&CC") to Telangana State Power Generation Corporation (For short called as "Project Proponent") for setting up of 5x800 MW Yadadri Super Critical coal based Thermal Power Plant (For short called as "Yadradri TPS") at Veerlapalem (V), Dameracharla (M), Nalgonda (D), Telangana State.
2. It is submitted that the Environmental Clearance for the proposed project has been granted in violation Environment Impact Assessment Notification, 2006 (For short called as "EIA Notification"), Environment (Protection) Act, 1986, MoEF&CC and IL&FS Siting Criteria guidelines, 2010, Public Trust Doctrine and Principles of Precaution and Sustainable Development. It is submitted that the Appellants have raised following critical issues with regard to the present project:
 - I. Invalid and wrong site selection
 - II. Cumulative Impact Assessment on AAQ has not been done.

- III. Hydro-geological impacts of the project have not been studied.
- IV. Vitiated Public Hearing for the Rejected EIA Report and No Public Hearing conducted for the revised EIA Report.
- V. EC granted for is in violation of Public Trust Doctrine

The Appellants submit as under in respect of the issues that have been raised above:

I. INVALID AND WRONG SITE SELECTION

- 3. The Appellants have raised following critical questions with regard to site chosen for the proposed project:
 - A. Project is located on perennial Tungapadu Stream and its streamlets
 - B. Project is located on Reserved Forests
 - C. Project is located in an area with least Forest Cover.
 - D. Project is located within 25 kilometers of Amrabad Tiger Reserve.
 - E. Alternatives Sites have not been explored

The Appellants submit as under in respect of the above issues:

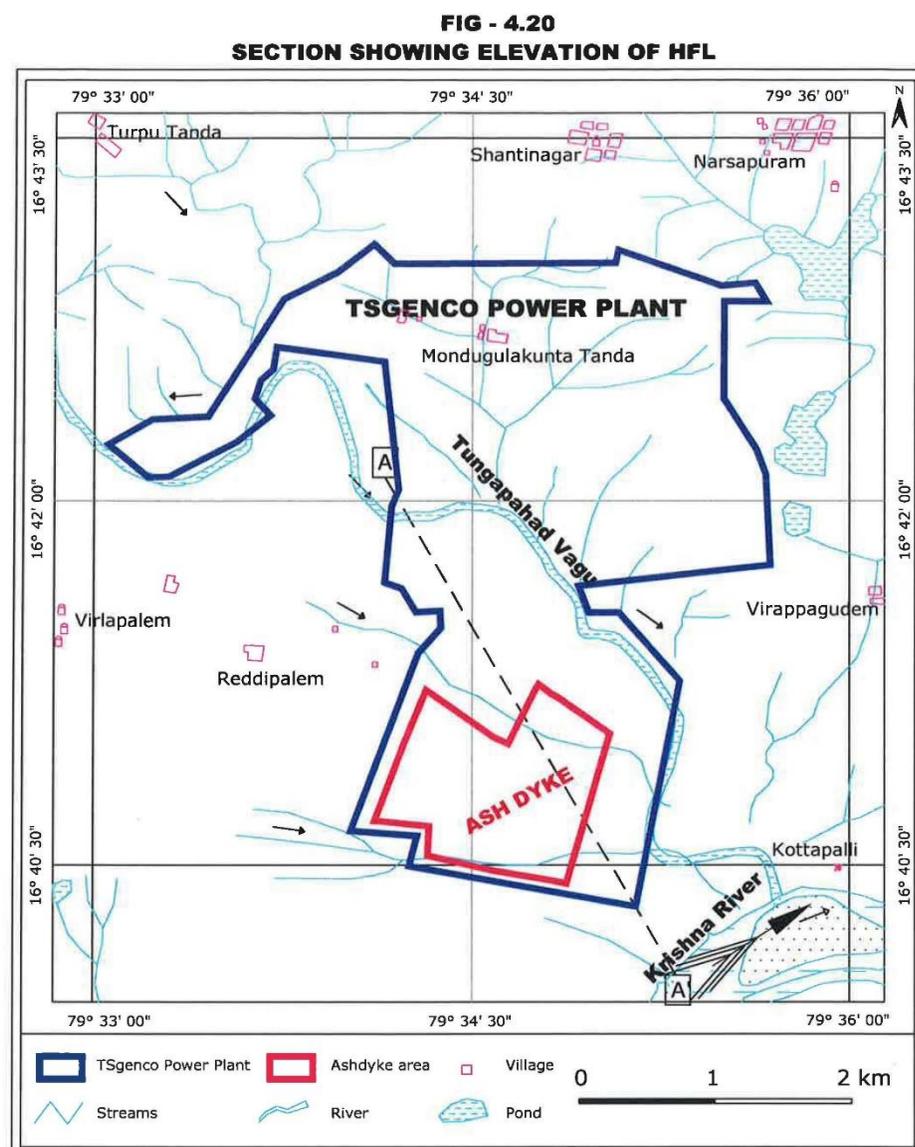
A. PROJECT IS LOCATED ON PERENNIAL TUNGAPADU STREAM AND ITS STREAMLETS

- 4. It is an admitted fact that the present project is located on perennial Tungapadu Stream (Called as "Vagu" in Telugu language) and a number of its Streamlets (Tributaries of Tungapadu Stream). The Tungapadu stream is one of the important tributaries of Krishna River. By virtue of the this fact, the Appellants have submitted in the Appeal that the project site selection for the project is in violation of the Terms of Reference (TOR) No. 21 which reads as under:

*"21). It **shall also be ensured** that a minimum of 500 m distance of plant boundary is kept from the HFL of river system / streams etc. and*

the boundary of site **should also be** located 500 m away from railway track and National Highways.” (Emphasis Supplied)

5. It is submitted that the bare perusal of the above TOR makes it clear that the present project, **including its project boundary, “should be”** located at distance of High Flood Line (HFL) plus 500 meters away from the river system or streams, etc. The onus of obliging to this condition has to be **“ensured”** by the Project Proponent. However, the following figure 4.20 from Page 262 of the Revised EIA Report of the present project makes it abundantly clearly that it is located on perennial Tungapadu stream and its streamlets, in complete disregard of the TOR No. 21:



6. By the above figure, it is very evident that the project is located on perennial Tungapadu Vagu (stream) and its streamlets. The Project Proponent in its reply to the above issue raised by the Appellant has submitted as under:

"89. ... The Appellant is misleading the with respect to TOR Point 21. TOR 21 States "It shall also be ensured that a minimum of 500 m distance of plant boundary is kept from the HFL of river system / streams etc. and the boundary of site should also be located 500 m away from railway track and National Highways." The Project Proponent has complied with all the conditions of the TOR 21. 500 m has left between the ash pond and the Tungapadu Vagu. 500 m has been left from the HFL of the River Krishna and the Project Boundary. The details have been shown in Fig. 4.20, Pg 262 of the Revised REIA Report."

[Paragraph 89 from the reply of the Project Proponent]

7. The above reply of the Project Proponent and the interpretation that it has given of TOR No. 21 in order to justify their site selection is startling. It is submitted that the perusal of the above figure 4.20 clearly reveals that the perennial Tungapadu Stream is flowing right in the centre of the project site. Further, number of its streamlets are also present within the project site. **The TOR No. 21 has nowhere said the project can be located on both the sides of the perennial stream, subject to the condition that "500 meters distance is maintained on both the sides of the stream."** The bare perusal of the TOR very clearly reveals that the project, including its boundary, should be located at a distance of HFL plus 500 meters of any river, stream, etc. This means that all of the project boundaries must be "away" from HFL plus 500 meters of any water river, stream, etc. Hence, the interpretation and submission made by the Project Proponent is erroneous and untenable.
8. Further, the perusal of the above reply provided by the Project Proponent also reveals that it has not stated anything about maintaining HFL plus 500 meters distance with regard to Tungapadu Vagu. It has only been stated that 500 meters distance will be maintained by the Project Proponent from Tungapadu Stream. Even this submission is erroneous and untenable.
9. All that the Project Proponent has relied upon is the recommendation by the sub-committee of EAC that the Project Proponent should maintain the distance of 500

meters on either sides of the Tungapadu Stream and same was accepted by EAC and MoEF&CC while granting the Environment Clearance for the project. It is submitted that the perusal of the sub-committee report reveals there is absolutely no word or any reason being given by the sub-committee as to why project is permitted to be set up in the present project against the TOR No. 21.

10. It is further submitted that TOR No. 21 is a standard TOR which is applicable all Thermal Power Plants and should be followed by all. However, in the case of the present project, there EAC and MoEF&CC have failed to apply their minds to the fundamental fact that a perennial stream along with its number of feeding streamlets are flowing within this project whose magnitude is of 2,800 acres of land and the capacity of 4,000 MW. Hence, it is submitted that the project siting is in clear violation of the TOR No. 21.

B. PROJECT IS LOCATED ON THE RESERVE FORESTS

11. It is also submitted that the present project's location is clearly in violation of the siting Criteria prescribed by the Central Electricity Authority (CEA), 2010. The same guidelines prescribe as under with regard to the siting criteria to be followed for the Thermal Power Plants:

"Guidelines for site selection of coal-based thermal power stations set by the MoEF

- *Locations of thermal power stations are avoided within 25 km of the outer periphery of the following:*

.....

– National park and wildlife sanctuaries;

– Ecologically sensitive areas like tropical forest, biosphere reserve, important lake and coastal areas rich in coral formation;

.....

- *Forest or prime agriculture lands are avoided for setting up of thermal power houses or ash disposal"*

12. It is submitted that from the above guidelines, it is clear that the Forest lands have to be avoided for setting up of the Coal-based Thermal Power Plants. The present project is spread across 2, 800 acres of land out of which 2095.28 acres is the forest land. **Therefore, 75% of the project is located on the Forest Lands which are undulating low hill ranges with extensive plateaus.** However, in contravention of the siting guidelines, the present project is located on the forest land.

C. PROJECT IS LOCATED IN A DISTRICT WITH LEAST FOREST COVER

13. It is further submitted that the Appellants have also raised the issue that the district in which present project is located (Nalgonda district) has only 6% of the total geographical area under forest cover. This fact was noted in the site visit conducted at the time of consideration of the project for forest clearance as under:

“Nalgonda District has a geographical area of 14240 Sq. km and the forest area in the district is about 6% of the geographical area. Looking to the percentage of area under forest cover, extreme caution needs to be exercised in diverting any forest land in the district. The forest is highly degraded and requires special measures and high inputs for rehabilitating and protecting the same.”

14. It is submitted that as noted in the above report, the geographical area of the district in which the present project is located has only 6% of forest cover, which too is highly degraded. This reflects the very poor environment situation of the area in which the present project is located. Therefore, even this fact also adds up to the avoidance of locating the present project on the Forest lands.
15. The Project Proponent has submitted as under in respect of project being located on the Forest area:

*“9... The "siting guidelines" give a framework for selection of land for the power plant of any industry. Avoidance of agricultural land/Reserve Forest land is required to be complied. It may be seen that the identified land though it is denoted as Reserve Forest land is a **degraded land**. Hence this land was identified. The same was authenticated by the Report of the Sub-committee of the EAC and MoEF&CC which visited the site and got convinced of the site conditions before recommending additional TORs for the project.”*

[Paragraph 9 From the Reply of The Project Proponent]

16. It is submitted that the Project Proponent has not responded anything on the fact that project is located on forest land and also in an area with least forest cover. It has simply dismissed the issue by stating that the forest land is a "**degraded forest land.**" Further, the Project Proponent astonishingly went on to claim that siting guidelines for the coal based Thermal Power Plants are dated way back to 1987 and that the Hon'ble Tribunal itself has asked MoEF&CC to revisit the same. Relevant excerpt from the reply of the Project Proponent is as under:

"It is pertinent to note that the Hon'ble NGT has advised MoEF to revise the siting guidelines in line with the current scenarios since the guidelines were promulgated "wayback" in 1987 (2640 MW coal based thermal power plant of M/s Nagarjuna Construction Company Ltd., Srikakulam in the year 2012.) Hence, saying that site selection guidelines have not been followed is not correct."

17. The above reply from the Project Proponent is completely false. The Project Proponent has not followed the siting criteria guidelines prescribed for Coal based Thermal Power Plants. Firstly, as the Appellants have submitted in the rejoinder, the siting criteria guidelines relied upon by the Appellant are from the year 2010. These are prepared by IL&FS for MoEF&CC and published (Notification No. CEAFIETD/MP/R/01/2010) by CEA under Section 177 of the Electricity Act, 2003. Therefore, they do not go "way back" to 1987, as falsely claimed by the Project Proponent. Further, Hon'ble Tribunal in its order dated 23.05.2012, referred by Project Proponent, has observed as under:

"25. In course of hearing we called upon Ms. Rathore, Learned Counsel for the appellant to produce a copy of the environmental guidelines and / or siting criteria framed by the MoEF for setting up of a Thermal Power Plant. In response Ms. Rathore produced a set of guidelines framed by the MoEF way back in the year 1987. According to the said guidelines, the location of the Thermal Power Plant should be avoided within 25 km. of outer peripheries of metropolitan cities, national parks and wildlife sanctuaries, ecological sensitive areas like tropical forests, bio-sphere reserves, national parks and sanctuaries, important lakes and coastal areas rich in coral formation etc. The guidelines does not create any embargo with regard to setting up Coal Based Power Plant in / or around Wetland.

26. After going through the guidelines, we feel that the same are not exhaustive nor has taken care of many factors affecting environment and ecology prevailing as on date. It is pertinent to note that the siting criteria produced before us, were framed 25 years ago (1987). By afflux of time number of further studies have been undertaken, new concept and theories in the field of environment

and ecology have developed. The changed scenario, scientific developments and change in technology mandates that the siting criteria as well as guidelines for setting up Thermal Power Stations (TPPs) should be revised to bring it in par with the modern techniques to suit the present environmental condition and to protect the ecologically sensitive areas. All these eventualities have not been kept in mind by the MoEF, which is still guided by the siting criteria formulated way back in the year 1987. We, therefore, direct the MoEF to take cognizance of the present day scenario and revise the siting criteria, guidelines for setting up of Thermal Power Projects to match with the present day requirements as early as possible so as to avoid future controversies. In course of hearing, this Tribunal was informed that an exercise in this respect was initiated in the year 2009 but then till date MoEF has not arrived at a logical conclusion. It should be kept in mind that the updated guidelines for setting up TPPs would not only avoid unnecessary litigation but would also go a long way in providing proper selection of environmentally compatible sites. Further, the principles of sustainable development and precautionary principles mandate that the guidelines should clearly spell out "GO" and "NO GO" areas for locating Thermal Power Plant so that the environmental issues can be internalised right from the beginning of project formation stage. We, therefore, direct the MoEF to frame new guidelines and siting criteria with the observations made in this paragraph for TPPs and file a copy thereof before this Tribunal within a period of three months hence.

However, it is made clear that the proposal of the present Project Proponent has rightly been dealt with in view of the siting criteria guidelines which were prevailing at the relevant time."

(Emphasis supplied)

18. It is submitted that the Hon'ble Tribunal has rightly asked MoEF&CC to revisit the siting criteria guidelines in the context of prevailing many factors which are affecting the Environment and Ecology. In the same order, the Hon'ble Tribunal has explicitly noted that the guidelines are not "**exhaustive**" enough to address the issues pertaining to Environment and Ecology. Hence, the Hon'ble Tribunal has asked the MoEF&CC to frame the new guidelines for Thermal Power Plants under the principles of Precaution and Sustainable Development.
19. Therefore, it is submitted that the Project Proponent has falsely referred the Hon'ble Tribunal's order dated 23.05.2012 in order to further advance their erroneous claims. Further, the claim of the Project Proponent that the Appellants have relied on the guidelines of 1987 is also not correct. The Appellants have relied on the guidelines issued by CEA in 2010.
20. It is submitted with the above facts that the Project is located in an area which has least area covered under forest (6% of the area), which too are in the state of

high degradation. It is in this degraded forest area that the Project Proponent has occupied 2095.28 acres of forest land in contravention of the siting criteria prescribed for the location of the Coal based Thermal Power Plants. Thus, it is submitted location of the project on the forest land and also in an area with least forest cover in the state of high degradation is in total contravention of the siting criteria prescribed for the coal based Thermal Power Plants.

D. PROJECT IS LOCATED WITHIN 25 KILOMETERS OF AMRABAD TIGER RESERVE

21. It is submitted that the same siting guidelines of 2010 for coal based Thermal Power Plants issued by CEA also state that the Thermal Power Plants should be located 25 kilometers away from the National Parks and Wildlife Sanctuaries. In the present case, it is an admitted fact that the project is located at a distance of 14.03 kilometers from the Amrabad Tiger Reserve. Hence, it falls within 25 kilometers of the Tiger Reserve. Therefore, even going by this fact, the project does not meet siting criteria guidelines of 2010.

E. ALTERNATIVE SITES HAVE NOT BEEN EXPLORED

22. The Appellants in the Appeal have also raised the issue of failure of Project Proponent to explore the alternative sites for the location of the proposed project. In this regard, the TOR No. 4 mandates as under:

"4) The project proponent needs to identify minimum three potential sites based on environmental, ecological and economic considerations, and choose one appropriate site having minimum impacts on ecology and environment. A detailed comparison of the sites in this regard shall be submitted."

23. It is submitted that by the above TOR, it is clear that the Project Proponent has to choose the appropriate site with all ecological and environmental considerations. The Project Proponent has provided the following information about sites which have been considered by it and the reasons why the present site has been selected:

TABLE 5.1
SITE SELECTION CRITERIA

S.No	Criteria	SITE-1 (Punukulachilaka)	SITE – 2 (Kurukonda and Kunaram	SITE – 3 (Veerlapelem)
...
...
13	<i>Reasons for Site selection and nonselection</i>	<ul style="list-style-type: none"> ➤ <i>Total land selected for the proposed project falls under Kinnerasani Wildlife Sanctuary</i> ➤ <i>Hence this site is not considered</i> 	<ul style="list-style-type: none"> ➤ <i>Total land selected for the proposed project is in endowment land</i> ➤ <i>High Court has granted stay for acquisition of lands belongings to the temples</i> ➤ <i>Hence this site is not considered</i> 	<ul style="list-style-type: none"> ➤ <i>Availability of Government Forest Land</i> ➤ <i>Availability of good road connectivity</i> ➤ <i>Availability of Rail connectivity</i> ➤ <i>Availability of nearby water source i.e. Krishna river</i> ➤ <i>Availability of land</i> ➤ <i>Existence of many cement industries in the vicinity of the proposed power plant for offtake of fly ash</i>

[Table 5.1 from Page 353 (Pdf Copy) Of Revised EIA Report]

24. It is submitted that the out of the 3 sites mentioned above, it is the Site-3 which has been chosen by the Project Proponent for the location of the present project.
25. The Project Proponent in the above table has submitted that Site-1 has not been considered for the project location since it is a Wildlife Sanctuary. It is submitted that this cannot be considered as the alternative site which has been considered by Project Proponent since the area has already been declared as a Wildlife Sanctuary. By no means, it can be considered as a site for the location of the project. Therefore, it is fallacious on part of Project Proponent to site Site-1 as the alternative site which has been considered.
26. Further, the Site-2 is already under order of Hon'ble High Court prohibiting the acquisition of endowment lands. Hence, this too cannot be shown by the Project Proponent as the alternative site which has been considered. Therefore, there is no basis and proper explanation offered by the Project Proponent as to why in the first place the Site-1 and Site-2 have been considered as alternatives when they cannot be considered at all as the sites for the project for the above mentioned reasons.

27. The Site-3 which is the selected site by the Project Proponent for the present project is altogether devoid for considering the location of the present project. It is important to note that the description provided above in Table 5.1 by the Project Proponent does not in anyway specify the ecological and environmental sensitivity of the present site. The Appellants have already raised the issues such as presence of Tungapadu Stream and its streamlets in the project site and flowing through it, 75% of the project being located on the Forest Lands which are undulating low hill ranges with extensive plateaus, the district in which project is located being with least 6% forest cover and the presence of Amrabad Tiger Reserve at 14 kilometers distance from the project site. All of these issues are paramount aspects of environment and ecology of the present project site. However, none of these things are presented and described by the Project Proponent for justifying the location of the present project site. All that the Project Proponent states in table 5.1 as justification for selecting the present is as follows:

- *Availability of Government Forest Land*
- *Availability of good road connectivity*
- *Availability of Rail connectivity*
- *Availability of nearby water source i.e. Krishna river*
- *Availability of land*
- *Existence of many cement industries in the vicinity of the proposed power plant for offtake of fly ash"*

28. It is clear from the above details provided and the justification offered by Project Proponent that it does not in any way provide any of the salient ecological and environmental aspects mentioned above of the present site. Even in its reply to the present appeal, nothing of these important facts have been submitted by the Project Proponent. All that the Project Proponent has submitted is as under:

*"16... Accordingly, the site selection team comprising of officials from TSGENCO, and Revenue officials from State Govt visited the Potential sites in Telangana State identifying the most suitable and viable site for setting up of supercritical thermal power projects in the state. Out of the three perspective identified in the Telangana state, the site selection committee has finalized the present site located in villages of Veerlapalem, Dilawarpur and Gangadevi Gutta of Damerachela (M) in Nalgonda Dist **which is***

having good rail/road accessibility, availability of water and the least R&R issues.”(Emphasis Supplied)

[Paragraph 16 from the Reply of the Project Proponent]

29. It is clear from the above reply of the Project Proponent that the crucial ecological and environmental raised by the Appellants with regard to the present project site have not been addressed.
30. Hence, with all the above facts, it is submitted that the proper exercise of exploring alternative sites for the proposed project has not been by the Project Proponent. It is further submitted that the present site selected for the proposed project is invalid and wrong in view of the facts above mentioned by the Appellants. Therefore, the TOR No. 4 is completely violated and defeated by the Project Proponent.
31. Hence, with the above facts from points A to E, it is submitted that site selection for the proposed project is invalid and wrong. The EAC and MoEF&CC have failed to apply their minds with regard to the site selection for the proposed project.

II. CUMULATIVE IMPACT ASSESSMENT ON AAQ HAS NOT BEEN DONE

32. The Appellants have also submitted that the Project Proponent has also failed to conduct the Cumulative Impact Assessment study on Ambient Air Quality (AAQ) as part of the EIA study of the proposed project. The Appellants have raised following issues in regard to it:
 - A. No firm Coal linkage and the source of Coal to be used for the project is unknown
 - B. Characteristic analysis of the Coal to be used for the project has not been done
 - C. Baseline monitoring of Heavy Metals and Radio Activity has not been done.

- D. Incremental Radio activity and Heavy Metal pollution load which will be added by the project has not been studied.
- E. Transportation route of Indigenous and Imported coal is unknown

The Appellants submit as under in respect of the above issues:

A. NO FIRM COAL LINKAGE AND THE SOURCE OF COAL IS UNKNOWN

33. It is submitted that in order to effectively study of the any project's impact on the AAQ, the primary requirement is to know the fuel, the source from which it shall be obtained and evaluation of its characteristics with authenticated testing. It is in this regard that TOR No. 44 required the Project Proponent to furnish following details.

"44. Quantity of fuel required, its source and characteristics and documentary evidence to substantiate confirmed fuel linkage shall be furnished."

34. It is clear from the above TOR that the **Project Proponent is mandated to provide quantity of fuel to be used, its source and its characteristics evaluation with documentary evidence**. However, neither the Revised EIA nor the reply of the Project Proponent clearly reveal and provide documentary evidence of the sources of indigenous coal and imported coal, along with their characteristic evaluation. This is clear from the following reply of the Project Proponent to this present appeal:

"28...COAL SOURCE AND LINKAGE

The MOU with M/s SCCL for supply of Indigenous coal and commitment letter for supply of coal as per the MOU are already enclosed in revised EIA as Annexure – 2E (I) and Annexure – 2E (II). Also, MoU entered with M/s. MSTC for supply of coal is revised as directed by the EAC during the 63^d meeting is enclosed as Annexure – 2 E (III) in revised EIA report."

46... In reply to Para 45, it is submitted that the source of coal is from SCCL which will be among the "basket of mines of Kothagudem area"

[Paragraphs 28 and 46 from the Reply of the Project Proponent]

35. It is submitted that above reply from the Project Proponent reveals that only Memorandum of Understandings (MOUs) have been entered into with M/s SCCL

for supply of indigenous coal and with M/s MSTC for supply of imported coal. Further, the perusal of annexures 2E (I), 2E (II) and 2 (III) reveals that they do not specify the exact sources or the exact mines from which the indigenous and imported coals will be brought for the project. Further, the reply of the Project Proponent reveals the source of indigenous coal as "basket of mines from Kothagudem area". But, it does not specify the exact mine from which it will be obtained. Hence, the exact source and the mine from which domestic coal will be obtained remains unknown. Further, the country, place, mine, etc. from which imported coal will be obtained also remains unknown.

36. These issues were noted in the 63rd meeting of EAC as under:

"The coal linkage documents for imported and domestic coal cannot be considered as firm coal linkage. Imported coal MoU says non-enforceable and also doesn't specify the quality of coal and source of coal is also not specified. The MoC allocation/approval for domestic coal is required."

37. It is clear from the above noting of EAC that the MOUs entered into for coal supply are not enforceable. Further, the EAC has also noted that source from which both indigenous and imported coal will be supplied has also not been specified by the Project Proponent. The same issue has also been noted in the **re-constituted new EAC** in its 1st meeting dated 28th December, 2016, as under:

"The coal linkage documents for imported and domestic coal cannot be considered as firm coal linkage. Imported coal MoU says non-enforceable and also doesn't specify the quality of coal and source of coal is also not specified. The MoC allocation/approval for domestic coal is required."

38. Thus, it is clear even from the 1st meeting of EAC that the Project Proponent has not produced documentary evidence to show firm coal linkage for both indigenous and domestic coal. Furthermore, **the 5th EAC meeting dated 26th April, 2017, during which the project was recommended for Environment Clearance,** also notes as under:

"xi...Domestic coal will be sourced from mines of Singareni Collieries Company Ltd. using rail network. MoU has been signed between M/s SCCL and M/s TSGENCO to supply 7 MTPA of G9 and above grades of domestic coal/WG-G9 grade coal. Another MoU has been signed between M/s MSTC Limited and M/s TSGENCO to supply imported coal of

7 MTPA which will be sourced from Indonesia/Australia/South Africa, etc."

39. Finally, even the **impugned Environment Clearance (EC)** letter also notes as under with respect to the source of domestic and imported coal:

"Domestic coal will be sourced from mines of Singareni Collieries Company Ltd. using rail network. MoU has been signed between M/s SCCL and M/s TSGENCO to supply 7 MTPA of G9 and above grades of domestic coal/WG-G9 grade coal. Another MoU has been signed between M/s MSTC Limited and M/s TSGENCO to supply imported coal of 7 MTPA which will be sourced from Indonesia/Australia/South Africa, etc."

40. All the facts presented above clearly reveals that the Project Proponent does not have firm coal linkage both for indigenous and imported coal as the Project Proponent has failed to specify the exact mine, the source, place from which coal required for the proposed project will be obtained. Therefore, the primary requirement for effective Cumulative Impact Assessment study to be done has been completely undone by the Project Proponent. Hence, the TOR No. 44 has been completely violated. However, the EAC and MoEF&CC have cleared the project without the application of mind, even after noticing this crucial issue.

B. CHARECTERISTIC ANALYSIS OF THE COAL TO BE USED FOR THE PROJECT IS ALSO UNKNOWN

41. It is further submitted that as per the TOR No. 44, the Project Proponent was also required to provide documentary evidence of the characteristic analysis of the coal which is going to be used for the project. Along with this, the TOR No. 42 required the Project Proponent to provide fuel analysis. Further, the TOR No. 43 required the Project Proponent to submit radio activity and heavy metal analysis with laboratory reports. The TOR Nos. 42 and 43 are excerpted hereunder for ready reference:

"42. Radio activity and heavy metal contents of coal to be sourced shall be examined and submitted along with laboratory reports.

43. Fuel analysis shall be provided. Details of auxiliary fuel, if any, including its quantity, quality, storage etc should also be furnished."

42. It is clear from both the above TORs that the Project Proponent was required to provide fuel analysis and it's radioactive and heavy metal contents with laboratorial

reports. However, as mentioned above, the Project Proponent does not have confirmed fuel linkage and it is not known even as on date about the source from which the coal will be obtained for the project. Therefore, it is not possible to provide the characteristic analysis, along with radio activity and heavy metal content, of the coal which is going to be for the project. The revised EIA Report of the project has only provided the analysis of the M/s SCCL mines for indigenous coal and M/s MSTC for the imported coal. In this regard, the Project Proponent has replied as under:

"28... The project will use blend coal having ratio of 50% Indigenous and 50% Imported coal or 100% Imported coal with LDO as startup fuel and Heavy Fuel Oil (HFO) for flame stabilization. The following are the characteristics of the coal proposed for use in the power project"

COAL ANALYSIS

<i>Description</i>	<i>Unit</i>	<i>Indian Coal (based on SCCL data)</i>	<i>Imported Coal (based on MSTC's data)</i>	<i>Blended Coal (50% Indian Coal & 50% Imported Coal)</i>
Proximate analysis				
<i>Fixed Carbon</i>	<i>%</i>	<i>33.0</i>	<i>42.94</i>	<i>37.97</i>
.....	
Ultimate Analysis				
<i>Carbon</i>	<i>%</i>	<i>49.41</i>	<i>57.75</i>	<i>53.58</i>
.....	

(Emphasis supplied)

[Paragraph 28 from the reply of the Project Proponent]

43. It is submitted that for all the analysis of coal characteristics provided in the revised EIA Report, the Project Proponent has only relied on the **"data provided by SCCL for indigenous coal and MSTC for imported coal."** This serves as a sufficient proof that the exact source, the place and the mine from which coal will be obtained for the project remains unknown and the characteristic analysis provided in the EIA is based on the data given by M/s SCCL and M/s MSTC. However, the data is not based on the tests conducted on the actual imported and indigenous coal which will be used for the project. Therefore, even the TOR Nos. 42 and 43 are completely violated by the Project Proponent. On this basis too, the incremental pollution which will be added by the present project on the AAQ and cumulative impact assessment results shown in the EIA report AAQ also false and cannot be relied upon.

IMPORTANCE OF HAVING CONFIRMED FUEL LINKAGE AND EVALUATING ITS CHARACTERISTICS BEFORE ISSUE OF THE ENVIRONMENT CLEARANCE

44. As submitted above by the Appellants, the Project Proponent as on date does not have confirmed fuel linkage either for indigenous coal or for the imported coal. Therefore, the analysis of project's impact on AAQ presented in the revised EIA report cannot be relied upon as they are not particular to the exact mine from which coal is going to be utilized for the project. All the incremental pollution load figures given by the Project Proponent in the EIA report is only based on data given by M/s SCCL for indigenous coal and M/s MSTC for imported coal. However, they do not provide details of exact mine from which coal was tested and the results presented.
45. However, in order to demonstrate the importance of the having firm linkage and the evaluation of its characteristic analysis before grant of EC, the Appellants submit as under:

46. The so called heavy metal test report presented by the Project Proponent in the revised EIA report at Annexure-2D itself shows major variations in the heavy metal parameters of the coal obtained from the two different indigenous mines located at about 45 kilometers distance from each other. The comparative analysis provided at Annexure-2D is excerpted hereunder for ready reference:

S.No	Parameters	Units	Coal Sample (Manuguru Site)	Coal Sample (KTPS Site)
Heavy Metals				
1	Cadmium as Cd	mg/kg	<0.1	<0.1
2	Chromium as Cr	mg/kg	151.2	132.3
3	Copper as Cu	mg/kg	14.6	14.2
4	Iron as Fe	%	0.25	1.76
5	Cobalt as Co	mg/kg	9.7	<0.1
6	Manganese as Mn	mg/kg	53.7	254.4
7	Nickel as Ni	mg/kg	87.8	61.1
8	Lead as Pb	mg/kg	<0.1	<0.1
9	Zinc as Zn	mg/kg	48.8	35.6
10	Arsenic as As	mg/kg	<0.1	<0.1
11	Mercury as Hg	mg/kg	<0.1	<0.1
12	Titanium as Ti	mg/kg	631.2	607.6
13	Antimony as Sb	mg/kg	<0.1	<0.1
14	Vanadium as V	mg/kg	14.6	10.2
15	Thallium as Tl	mg/kg	<0.1	<0.1
16	Tin as Sn	mg/kg	<0.1	<0.1

47. It is submitted that as per the own heavy metal test report of Project Proponent, there is wide variation in the quantity of heavy metals in two coal mines tested by the Project Proponent. The heavy metals such as Chromium, Cobalt, Manganese, Nickel, Zinc, Titanium and Vanadium show major variations in their quantity between **the two coals of two mines located at only 45 kilometers difference between them.**

48. It is further submitted that the Appellants has made the following tabular chart to show the difference in the emission values (in tons) of some of the heavy metals between the two samples tested by the Project Proponent. With the estimated usage of 7 Million Tonnes Per Annum (MTPA) indigenous coal for the project, the emissions of some of the heavy metals of both the indigenous coals tested will be as under:

PARAMETER	EMISSION IN TONNES (From Manuguru	EMISSION IN TONNES (From KTPS site	DIFFERENCE IN TONNES

	site Coal Sample)	Coal Sample)	
Chromium	1058.4	926.1	132.3
Cobalt	67.9	<0.7	67.2
Manganese	375.9	1780.8	1404.9
Nickel	614.6	427.7	186.9
Zinc	41.6	249.2	207.6
Titanium	4418.4	4253.2	165.2
Vanadium	102.2	71.4	30.8

49. The above differential calculations are provided by the Appellants with the following calculation formula:

Heavy metal parameter (in mg/kg) x Annual Consumption (in Million tonnes) =
Annual Emission (in Tonnes)

50. It is submitted that the perusal of the above results compiled by the Appellant with Project Proponent's own heavy metal report produced in the revised EIA report reveals the startling variation between the quantities of different heavy metals. Therefore, it is absolutely very important that the Project Proponent should have confirmed fuel linkage with exact mine, location and authentic documentary evidence presented of all the environmental pollutants present in it. However, as facts on record itself demonstrate, the Project Proponent has miserably failed to carry this exercise and the EAC and MoEF&CC have granted the EC for the project without the application of their mind. Hence, the TOR Nos. 42 and 43 have been completely violated.

**C. BASELINE MONITORING OF HEAVY METALS AND RADIO ACTIVITY
HAS NOT BEEN DONE**

51. The importance of studying the impacts of Radio Activity and Heavy Metals prior to the grant of Environment Clearance is well established by the Hon'ble Tribunal in ***Krishi Vigyan Arogya Sanstha & Ors. Vs. Union of India & Ors. [Appeal No. 07/2011(T)]***. Further, the Hon'ble Tribunal in ***Uma Maheshwar Dahagama Vs Union of India [Appeal No. 46 of 2016 (SZ)]*** has held as under:

"47...So under such circumstances it is clear from the discussion above that there was no study conducted by the Expert agency appointed by the project proponent for preparing the EIA report and no study was conducted regarding the impact of coal to be used on environment on account of the possible emission of radio-activity and heavy metal from the fly ash/bottom ash generated on account of use of the coal as fuel in such thermal power plant effect which has been considered by this Tribunal in Appeal No. 07/2011 mentioned above. Such studies were not available before the Expert Appraisal Committee or before the MoEF&CC though the Expert Appraisal Committee in 45th meeting had deferred the consideration of proposal by insisting for such study as well and in spite of the same, the Expert Appraisal Committee had recommended the project with a direction to the project proponent to conduct this study and submit the report to MoEF&CC. MOEF&CC also simply reiterated this condition and directing the project proponent to conduct the study and produce the report later for consideration and granted environment clearance. So as such there was non-compliance of the direction issued by this Tribunal regarding study to be conducted and impacts on environment before considering the grant of environment clearance to thermal power plants.

....

....

1. Project proponent shall be directed to conduct radio-activity and heavy metal test of coal to be used including alternative coal which they propose to use and probable impact of the same on environment and the mitigative measures to be taken to reduce impact if any on environment."

52. It is clear from the above Judgments of the Hon'ble Tribunal that the Radio activity and Heavy Metals impacts assessment study is a precautionary study which has to be conducted as part of the EIA study and results have to be furnished before the EAC and MoEF&CC.
53. In the present case, as per the own submission of the Project Proponent, the following are the industries which are located within the 15 kilometers radius of the present project.

OPERATING AND PROPOSED INDUSTRIES WITHIN 15 KM RADIUS

	Distance (km)	Direction	Capacity		
			Cement Plant (MTPA)	Captive Power plant (MW)	Captive Limestone Mines (MTPA)
Operating industries in 15 km radius					
India Cements Limited	4.8	E	4.275	55	3 mines Mine-1:1.4 Mine-2:1.4 Mine-3:1.85
Parasakti Cements	8.0	SW	2.26		3.5
Panna Cements	9.6	ENE	1.00	77	1.50
Deccan Cements	11.3	E	1.5	15	2.3
Andhra Cements	11.7	SE	2.31	30	3.0
Proposed industries in 15 km radius					
TSGENCO	0	0	-	4000 MW	-
Krishna Godavari Power Plant (Not commissioned)	4.5	SE	-	60 MW (Independent Power Plant)	
My Home Industries Ltd Plant (Green field project)	11.9	ESE	2.5	-	4.0

54. As per the above table from the revised EIA Report of the project, there are 5 Cement industries which are operating within 15 kilometers of the project. They account to 11.345 MTPA of cement production every year. Further, there are also 7 limestone mines which account to 14.95 MTPA production every year.
55. It is submitted that Cement industries are one of the sources for heavy metals in the atmosphere. A research study titled as **Assessing Metal Exposures in a**

Community near a Cement Plant in the Northeast U.S., Published on 19th

January 2015, (available at:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4306904/>) reports that the cement industries are one of the key sources of release of heavy metals in the air.

Relevant excerpt from page 2 is as under:

“Cement production is one of the key industrial sources of particulate matters (PM) and metals, especially copper (Cu), zinc (Zn), Pb, nickel (Ni), Cd, Hg and As, which are generated from both combustion of fossil fuels and processing of the raw materials [7,8]. It is estimated that cement production accounts for about 9% of global Hg emissions [9]. Most studies on metals from cement plants have focused on ambient environmental levels in the air [10,11] or soil [12–15], and a few on biomonitoring using plants [16,17]. Very few studies have examined exposures of metals in human near a cement plant [18], and no study has evaluated the contribution to metal exposures through inhalation or ingestion of dust from cement plant in the presence of other primary pathways, such as smoking or diet. Moreover, correlations among different metals, which may reveal potential shared sources, were underexplored.” (Emphasis Supplied)

Copy of the relevant pages from the study titled as **Assessing Metal Exposures in a Community near a Cement Plant in the Northeast U.S., Published on 19th January 2015** are marked as **ANNEXURE-A39.**

56. The above study notes that the Cement industries cause dispersion of Heavy Metals into the air both because of combustion of fossil fuel and processing of raw material. By virtue of these facts, the Project Proponent was required to carry the baseline concentration of all the above-mentioned heavy metals and radio activity in the study area. However, the Project Proponent failed to conduct such a study. The perusal of the summary of baseline monitoring results presented in the revised EIA report (Page 76 of the Revised EIA report) reveals that only Particulate Matter₁₀ (PM₁₀), Particulate Matter_{2.5} (PM_{2.5}), Sulphur Dioxide (SO₂), Oxides of Nitrogen (NO_x), Mercury (Hg) and Carbon Monoxide (CO).

Copy of the baseline monitoring results presented at Page 76 of the revised EIA report are marked as **ANNEXURE-A40.**

57. However, the Project Proponent has not conducted baseline monitoring of radio activity and heavy metals. This was required to be done by the Project Proponent

especially by the presence of number of Cement industries within the study area as they are one of the sources of emission of heavy metals. However, the revised EIA report does not provide details as to why the heavy metals and radio activity has not been monitored during EIA study. Hence, it is submitted the Project Proponent has not carried out the baseline monitoring of Heavy Metals and Radio Activity in the project area as part of the EIA Study of the project.

D. INCREMENTAL RADIO ACTIVITY AND HEAVY METAL POLLUTION LOAD WHICH WILL BE ADDED INTO THE AIR BY THE PROJECT HAS NOT BEEN STUDIED

58. It is further submitted that the revised EIA report only presents incremental pollution load which will be added by the project only with regard to 3 air pollutants, namely Particulate Matter₁₀ (PM₁₀), Sulphur Dioxide (SO₂) and Oxides of Nitrogen (NO_x). The perusal of Table 4.6 from revised EIA report reveals that only these three pollutants have been presented with their incremental concentration to be added.

Copy of the Table 4.6 from revised EIA report is marked as **ANNEXURE-A41**

59. The Project Proponent has not provided any details of the incremental heavy metals load which will be added by the project to the existing air pollution and impacts of the same have not been studied. Further, the Project Proponent has also not provided the details of the radio activity which will be generated and the impacts of the same have not been provided. Therefore, even by this aspect, the TOR Nos. 42 and 43 have been completely violated by the Project Proponent.

E. TRANSPORTATION ROUTE OF INDIGENOUS AND IMPORTED COAL IS UNKNOWN

60. The Project Proponent under TOR Nos. 45 and 46 was also mandated to provide the details of the transportation route of both indigenous and imported coal. Both the TORs are excerpted hereunder for ready reference:

"45. Details of transportation of fuel from the source (including port handling) to the proposed plant and its impact on ambient AAQ shall be suitably assessed and submitted. If transportation entails a long distance it shall be ensured that rail transportation to the site shall be first assessed. Wagon loading at source shall preferably be through silo/conveyor belt.

46. For proposals based on imported coal, inland transportation and port handling and rail movement shall be examined and details furnished. The approval of the Port and Rail Authorities shall be submitted."

61. It is clear from the above TORs that the Project Proponent was required to provide the details of transportation route of both indigenous and imported coal. Further, it was also required to study of transportation route and present its impact on the Ambient Air Quality. However, no such exercise was carried out by the Project Proponent as the revised EIA does not provide the details of the transportation and also its impact on the AAQ. This issue was not noted even by the EAC and MoEF&CC. In this regard, the EC letter of the project notes as under:

"xi.. The imported coal shall be supplied from Kakinada/Krishnapatnam port or any other nearest port in India. Necessary permissions have been obtained for utilising port facilities at Kakinada/Krishnapatnam/Vishakhapatnam. The railway line is proposed from Vishnupuram Railway station on Bibinagar-Nadikudi Main line of South Central Railway. The distance between Vishnupuram Railway station to proposed project is about 8 km."

62. It is clear from the above noting in the EC letter itself that transportation route of both indigenous and imported coal remains unknown. This is also clear from the following reply of Project Proponent to the present appeal:

"28... COAL TRANSPORTATION

Indigenous coal will be transported from SCCL Mines using the Rail network. Imported coal will be received by ships at Krishnapatnam/Kakinada/Vishakhapatnam ports. From the ports, coal will be transported by Indian Railways to the plant site."

[Paragraph 28 from the Reply of the Project Proponent]

63. Further, the impact of the transportation of coal for the project on AAQ has not been carried out. This is also evident from the reply of the Project Proponent question raised by Mr. N. Harinder in his representation during the public hearing. The same is excerpted hereunder:

QUESTION	TSGENCO RESPONSE
What is the impact of train transportation of imported coal on Ambient Air Quality?	The impact of coal transportation by train will be mitigated by covering the wagons with tarpaulin at the port.

64. The above reply from the Project Proponent reveals that no details of the impact of transportation of coal on the AAQ have been provided by the Project Proponent. In fact, no such details are also provided in the revised EIA of the project.

65. Hence, with the above facts, it is submitted that the Project Proponent has not carried out impact assessment of the transportation of coal on AAQ and therefore the TOR Nos. 45 and 46 have been violated by the Project Proponent.

CUMULATIVE IMPACT ASSESSMENT ON AAQ HAS NOT BEEN STUDIED

66. It is submitted that it is clear from the issues detailed above that the Project Proponent does not have Firm Coal linkage since the source from which both indigenous and imported coal will be obtained. Further, in the absence of firm coal linkage, its characteristics and its impacts on the AAQ are also not known. Furthermore, the project is also surrounded number of cement plants and the mines which are also the sources of air pollution, especially radio activity and heavy metals. However, the Project Proponent has not conducted the baseline monitoring of both these things. It has also failed the study the incremental radio activity and heavy metals which will be added by the project. Even the route by which coal will be transported and its impact on the AAQ has also not been studied and no such details have been provided by the Project Proponent.

67. All these issued have neither been addressed in the revised EIA Report nor in the reply provided by the Project Proponent. Hence, by virtue of all the facts provided above from the points A to E, it is submitted that Cumulative Impact Assessment of the project on Ambient Air Quality has not been studied and addressed by the Project Proponent. Hence, the TOR Nos. 42, 43, 44, 45 and 46 have been

completely violated by the Project Proponent. The EAC and MoEF&CC have cleared the project without applying their minds on the above issues.

III. HYDRO-GEOLOGICAL IMPACTS HAVE NOT BEEN STUDIED

68. The Appellants in the Appeal have also raised the issue of Hydro-geological impacts of the project not being studied by the Project Proponent as part of the EIA study. The Appellants have raised following issues with regard to it:

- A. No Hydro-geological impact assessment study has been done
- B. Impacts of Ash Pond on Hydro-geology has not been studied
- C. Cumulative impact assessment study on Krishna River has not been done.
- D. Streamlets Tunagapadu Stream will be destroyed.

Appellants submit as under in respect of the above issues:

A. NO HYDRO-GEOLOGICAL IMPACT ASSESSMENT STUDY HAS BEEN DONE

69. It is submitted that the Hydro-geological impact assessment study is a precautionary and primary study which has to be conducted as part of the EIA study in order to evaluate the Hydro-geological impacts of the proposed project. Further, the outcome of the same has to be considered by the EAC and MoEF&CC. This is especially important in the present case by virtue of presence of Tungapadu Stream, its streamlets, the plateaus, undulating low hills, forest lands, granite rocks and limestone, etc. in the project area.

70. In this regard, the TOR No. 22 required the Project Proponent to conduct Hydro-geological impact assessment study and produce action plan for mitigating impacts. TOR No. 22 is excerpted hereunder for ready reference:

"22) Hydro-geological study of the area shall be carried out through an institute/ organization of repute to assess the impact on ground and surface water regimes. Specific mitigation measures shall be spelt out and time bound Action Plan for its implementation shall be submitted."

71. The Appellants have raised the issue that the revised EIA Report does not contain the Hydro-geological impacts study report. The Project Proponent in its reply has submitted as under:

"65. In reply to Para 64, it is submitted that the *salient aspects of the Hydrogeological study done by M/s Hydro-Geosurvey consultants Pvt Ltd was incorporated in the Revised EIA report at Para 3.4.3 of Page 101.*"

(Empahasis supplied)

[Paragraph 65 from the Reply of the Project Proponent]

72. It is submitted that as per own admission of the Project Proponent in the above reply, only salient aspects of the Hydro-geological impact assessment study have been presented in the revised EIA Report. But, the full copy of Hydro-geological impact assessment study has not been provided in the EIA Report and have not been presented to the EAC and MoEF&CC during the appraisal of the project. Therefore, the precautionary study has been completely undone by the Project Proponent. Hence, the TOR No. 22 has been completely violated by the Project Proponent.

B. IMPACTS OF THE ASH POND ON THE HYDRO-GEOLOGY HAVE NOT BEEN STUDIED

73. It is further submitted that another precautionary study that the Project Proponent has not carried as part of the Hydro-geological impact assessment is studying the design, maintenance and impacts of Ash Pond on Hydro-geology of the project area. Even this aspect has been admitted by the Project Proponent in its reply which is excerpted hereunder for ready reference:

"51... The Project Proponent has stated that the detail design of the Ash Pond can be done during the Detailed Engineering stage and based on the geo-technical investigation. Any physical investigation can be done only upon receipt of EC..."

"58... In reply of 56, it is submitted that as stated in the earlier paragraphs, a detailed design of the ash pond as per BIS and CEA guidelines will be carried out. This can only be done during the detailed engineering stage since the process involves conducting geo-technical investigations..."

83... In reply to Para 84, it is respectfully submitted that the Project Proponent will undertake detailed engineering studies including geo-technical to design the ash pond, as explained earlier..."

[Paragraphs 51, 58 and 83 from the Reply of the Project Proponent]

74. It is clear from the above replies of the Project Proponent itself that the design and maintenance of the Ash Pond have not studied and finalized during the EIA study of the project. Further, in the absence of same, it cannot be said that the impacts of the Ash Pond on the Hydro-geology of the project area have been studied. As submitted above the project area involves significant ecological factors such as Tungapadu Stream, its streamlets, the plateaus, undulating low hills, forest lands, granite rocks and limestone, etc. By virtue of these factors, it was absolutely necessary that the impacts of the Ash Pond should be studied as part of the EIA study. However, the Project Proponent has negated it and EAC and MoEF&CC have as failed to apply their minds. Therefore, on this aspect also, the TOR No. 22 has been completely violated by the Project Proponent.
75. The issue of studying the Hydro-geological impacts, including studying the impacts of the Ash Pond, of the Thermal Power Plants as a precautionary study has been noted by the Hon'ble Tribunal in ***Uma Maheshwar Dahagama Vs Union of India [Appeal No. 46 of 2016 (SZ)]*** and directed the Project Proponent to do such a study afresh. Relevant excerpt from the Judgment is as under:

"61...It may be mentioned here that it is an admitted phenomena that on account of collection of fly ash and bottom ash and ash slurry in the ash pond have impact on ground water of that area if that is not properly maintained.

....

3) The project proponent shall be directed to conduct fresh study regarding the area for installation of FGD system, Hydro-geological impact assessment on account of the ash pond due to storage of ash slurry in the ash pond, its location and the mitigation measures to be taken for avoiding any possible pollution on account of the same on water quality in that area."

76. Thus, as noted by the Hon'ble Tribunal, the Hydro-geological impact assessment study is a precautionary and must be part of the EIA Study. In the present case, it

has not been done and the impacts of the Ash Pond of the present project are also unknown. Therefore, TOR No. 22 has been violated even on this basis.

C. CUMULATIVE IMPACT ASSESSMENT ON KRISHNA RIVER HAS NOT BEEN DONE

77. The Appellants in the appeal have also specifically raised the issue that the project proponent has failed to do the Cumulative impact assessment study on the on Krishna River water. The Appellants in the additional affidavit have also produced adequate scientific literature which vindicates the serious ecological impacts the Krishna River basin has been facing due to various reasons and issues.
78. As mentioned above already, the present project is surrounded by 5 cement plants with a total production capacity of 11.345 Million Tonnes Per Annum capacity. **All of these industries are already operating and use Krishna River water for their operation.** The average water consumption by the Cement plants for producing one kilogram of Cement varies from 0.2 litres to 0.5 litres depending on the type of raw material. Taking the least amount of 0.2 litres of water consumption per kilogram, the existing 5 cement plants consume 2296000 m³ amount of water every year from river Krishna for their operation. Apart from this, there are also limestone mines and residential colonies of these industries which also use the Krishna River water. These facts have not been acknowledged by the Project Proponent either in the revised EIA Report or in its reply. Further, the Project Proponent has also not carried out the cumulative impact that these are already having on the Krishna River as a result of withdrawing water from it. In this regard, a question was asked by Mr. G. Mohan and Mr. N. Harinder during the public hearing and the reply was given by Project Proponent. The question and reply are excerpted hereunder for ready reference:

S.No	Issue	Proponent Response

16	What is the total amount of Krishna River which is drawn per year by the 22 cement industries within 15 kms radius of the proposed project site?	Information may be obtained from Irrigation & CAD Dept or respective cement industries.
17	The EIA report does not also say anything about ecological and environmental impacts of already existing industries within 15 kms radius of the Krishna River. Please give us "Detailed Explanation" of the ecological and environmental impact of the industries within 15 kms radius of the proposed project.	The baseline study was conducted with in the 10 km radius of the project area. The cumulative impact assessment study duly considering the existing industries was carried out and incorporated in the EIA report.

(Emphasis Supplied)

79. The above reply from the Project Proponent about the amount of water drawn by cement plants and their ecological and environmental impacts sufficiently proves that no such impact assessment was ever carried out. The reply to the question no. 16 saying "information may be obtained from I&CAD department or respective cement industries" demonstrates that water withdrawal from the existing industries and their impact on ecology and environment has never been considered by the Project Proponent.
80. It is submitted that the amount of water drawn by the 5 cement industries within 15 kilometers itself is 2296000 m³, apart from water consumption of limestone mines and residential colonies. The present project's water consumption is another addition to these. Further, there are also proposed industries within the 15 kilometers radius of the project site. Therefore, it was all the more required that the Project Proponent was required to carry Cumulative impact all these industries on the ecology and environment of all these industries on River Krishna.
81. The Appellants in the Appeal as well in the Additional affidavit has raised the ecological and environmental which are being faced by the Krishna River by referring to scientific research.
82. The research study titled '**Krishna River Basin, India - Case Study (2014)**' (https://www.researchgate.net/publication/321758841_Krishna_River_Basin_India_-_Case_Study) has highlighted the substantial decrease in the ecological flow of

water from Krishna River to Sea and that the river has become almost a “closed basin”. Relevant excerpt from page 4 is as under:

"Due to a long history of unsustainable water allocations, the river has regularly stopped flowing to the sea. The basin is now considered to be almost "closed". In a closed basin, annual rainfall matches the extractions from the basin, and no water flow reaches the ocean. According to Biggs (2007), the cause of the reduction in flow was almost completely from irrigation expansion. Discharge at the Vijayawada gauging station downstream from the diversion to the Krishna Delta had reduced from 56 km³ in the 1960's, to 13km³, despite no significant reduction in rainfall (Biggs, 2007). By the late 1990s the total reservoir capacity in the Krishna River basin approximated the annual run-off volume."

Copy of the relevant pages from the above report are already marked in the Additional Affidavit dated 29.03.2021 filed by the Appellant as **Annexure-A35.**

83. Further, the issue of Krishna River becoming a closed basin was also highlighted in the 121st report of International Water Management Institute (IWMI), a CGIAR institution. The Report, **J.P. Venot et al, Shifting Waterscapes: Explaining basin closure in the Lower Krishna Basin, South India (IWMI, Colombo, 2007)**, says as under:

"The Krishna Basin has seen an increasing mobilization of its water resources and a dramatic development of irrigation, with little regard to the limits of available water resources. This progressively led to closure of the basin (zero or minimal discharge to the ocean): by 2001-2004, surface water resources were almost entirely committed to human consumptive uses, increasing groundwater abstraction contributed to the decrease in surface water base flows and the discharge to the ocean was almost zero..."

.....

"By 1996-2000, 77% of the Lower Krishna Basin net inflow was depleted and discharge to the ocean amounted to 17.9 BCM/yr, defining a moderately modified ecosystem. During the drought of 2001-2004, likely to forecast the future waterscape of the Lower Krishna Basin, all indicators pointed to a fully committed situation, with depletion amounting to 98.8% of the net inflow, a lack of discharge to the ocean, a dramatic overdraft of the aquifers and the shrinkage of surface irrigated agriculture."

Copy of the relevant page of the 121st Report of International Water Management Institute (IWMI) is already annexed with the Rejoinder as **Annexure-A31.**

84. Another study titled '**Land, Water and Ecosystems Management in the Krishna River Basin (2007)**, (<https://edepot.wur.nl/29999>) at pages 57-58

notes as under:

"...Nowadays, the increased fresh water need for mainly drinking water, irrigation and industrial purposes in the upstream areas of the river basin has led to an increased total storage capacity of 34.5 km³. This has resulted in a significant decrease of fresh water flow into the Krishna estuary and an increase of saline water intrusion. Bouwer et al (2006) have studied the combination of this increased water use in the upper Krishna river basin in view of the expected climate change. They concluded that the impact of salt water intrusion will increase even more in the next decennia."

Copy of the relevant pages of the study titled, '**Land, Water and Ecosystems Management in the Krishna River Basin (2007)**', are already annexed in Additional Affidavit dated 29.03.2021 filed by the Appellant as **Annexure-A36**.

85. It is submitted that from the above studies referred by the Appellants, it is clear that the Krishna River is facing several ecological and environmental issues. Therefore, all the ecological environmental concerns have to be comprehensively addressed as part of the EIA study. In this regard, the TOR No. 23 required the Project Proponent to do as under:

"23) Detailed Studies on the impacts of the ecology including fisheries of the River/Estuary/Sea due to the proposed withdrawal of water / discharge of treated wastewater into the River/Sea etc shall be carried out and submitted along with the EIA Report. In case of requirement of marine impact assessment study, the location of intake and outfall shall be clearly specified along with depth of water drawl and discharge into open sea."

86. It is submitted that the in spite of the above requirement, the Project Proponent has not done ecological and environmental impacts that river Krishna is faced with. However, the facts placed above by the Appellants clearly demonstrate that the no such exercise has been done by it and the same have not been considered by the EAC and MoEF&CC. In fact, when questioned about these issues by Dr. K. Babu Rao during the Public Hearing, the Project Proponent has replied as under:

<i>SNo</i>	<i>Query Raised</i>	<i>TSGENCO Response</i>

9.	<p><i>".....EIA report is concerned about the availability of water and not about the ecological impacts of drawing huge quantities of water from Krishna River.</i></p> <p><i>What is the minimum ecological flow that is required for the Krishna River in the affected stretch?</i></p> <p><i>What are the ecological impacts of drawing the water on aquatic life and vegetation? Why is no attempt made to study these aspects?</i></p>	<p><i>"15 % of minimum flow is considered as minimum ecological flow required for the Krishna River. TSGENCO drawl is 30 % of the minimum flow and 70 % of the minimum flow is available for sustaining the ecology of the river stretch....."</i></p>
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87. The above reply from the Project Proponent is nothing but a re-iteration of what has been presented in the Revised EIA Report. However, it is submitted neither the revised EIA Report nor the above reply of the Project Proponent address any of the above-mentioned issues with regard to ecological and environmental issues with regard to Krishna River. All that is stated what availability and withdrawal of it without any reference to above-mentioned issues based on scientific literature. Hence, it is submitted that the TOR No. 23 has been violated by the Project Proponent and the Cumulative impact assessment study on River Krishna has not been studied.

D. STREAMLETS OF TUNGAPADU STREAM WILL BE DESTROYED

88. It is also submitted that the streamlets or tributaries of Tungapadu stream in the project area will be destroyed because of the proposed project. As submitted above, the project area involves sensitive environmental factors such as Tungapadu Stream and its streamlets in the project site and flowing through it, 75% of the project being located on the Forest Lands which are undulating low hill ranges with extensive plateaus. By virtue of the present project, the amount of cutting and filling requirement is very vast. In this regard, the Project Proponent

has replied as under to the question raised by Mr. N. Harinder on the Revised EIA Report.

S.No	QUESTION	TSGENCO RESPONSE
94	"What will happen to the Plateaus in the project area? What is the extent of cutting/mining required of the plateaus of the project area?"	"The project development will involve cut and fill quantities for achieving the required grades as per the layout design. Quantify of cutting is estimated about 80, 00, 000 m³ and quantify of filling required is about 66, 00, 000 m³. The fill quantity required is less than the cut quantity. Hence, the material obtained from cutting will be used for filling low lying areas. No material will be required from outside the project area"

(Emphasis Supplied)

89. It is clear from the above reply of the Project Proponent that the quantity of cutting and filling required for the project is enormous. Cutting of 80, 00, 000 m³ and the filling of 66, 00, 000 m³ of the Plateaus and low hill ranges located in the forest will naturally damage the streamlets and their hydro-geology in the project area. Therefore, it is impossible to protect the streamlets of Tungapadu Stream in the project area and they will be destroyed once for all. Even this issue has neither been addressed by the revised EIA report or by the Project Proponent or by the EAC and MoEF&CC.

HYDRO-GEOLOGICAL IMPACTS HAVE NOT BEEN STUDIED AND CONSIDRED

90. The Appellants have already highlighted various environmental factors and issues relating to Hydro-geological impacts of the proposed project. Firstly, it is again submitted that the project area has presence of Tungapadu Stream, which is a major tributary of Krishna River, and its streamlets, the plateaus, undulating low hills, forest lands, granite rocks and limestone, etc. By virtue of these environmental factors, it is paramount that precautionary Hydro-geological impact assessment study was done with the evaluation of the project's impact on the

Hydro-geology. However, no such precautionary study was done and placed before the public, the EAC and MoEF&CC. This is in complete violation of TOR No. 22. Hence, on this basis itself, the EC granted for the project is liable to be set aside.

91. Further, as per the own submission of the Project Proponent itself in the reply, the impacts of Ash Pond on the hydro-geology of the project area have not been studied. The Project Proponent submitted that the details investigation are due to be done on ash pond design, maintenance and its impacts of hydro-geology of the project. Furthermore, by the facts provided above, the Cumulative impacts of various industries located in the project area on the Krishna River has also not been done by the Project Proponent. The adequate scientific literature referred by the Appellants provide sufficient proof of numerous ecological and environmental that are Krishna River is facing. None of these issues have been addressed by the Project Proponent. The Project Proponent has also not addressed the issue of streamlets which will be destroyed as a result of Cutting of 80, 00, 000 m³ and the filling of 66, 00, 000 m³ of the Plateaus and low hill ranges prevalent in the project area. Therefore, the TOR No. 23 which required the Project Proponent to study these aspects has also been violated.
92. Hence, it is submitted with the above facts that the Project Proponent has not studied and considered the Hydro-geological impact assessment study and its impacts.

IV. VITIATED PUBLIC HEARING OF THE REJECTED EIA REPORT AND NO PUBLIC HEARING CONDUCTED FOR THE REVISED EIA REPORT

93. The following are the major steps that have taken place with respect of the Public Hearing of the proposed project:
- A. Vitiating public hearing conducted for the rejected EIA Report.
 - B. Arbitrary exemption from conducting the Public Hearing for the Revised EIA Report.

C. Revised EIA Report has not been provided in vernacular language.

The Appellants submit as under with as under in respect of the above issues:

A. VITIATED PUBLIC HEARING CONDUCTED OF THE REJECTED EIA REPORT

94. It is submitted that the public hearing for the proposed project was conducted on 31.05.2016. However, the EIA Report which was put before the public was full of faults, incomplete information and was plagiarised. This was reported during the Public Hearing and also complained to the EAC by several people. Therefore, when the proposal came up for appraisal before the EAC in its 63rd meeting dated 29th and 30th, August, 2016, the EAC noted as under:

"(2.5.2) The EAC inter-alia observed/recommended the following:

1. Plagiarism, Irrelevant content, and absence of crucial site and plant specific analysis:

*EAC received several complaints about issues such as plagiarism and 'copy-paste' sections of the EIA. **On examination, EAC found several such instances.** Some examples are reproduced in below table.*

.... ..

... ..

*In addition to above 'copy-paste' exercise, EAC also observed several **incorrect or irrelevant statements** in the Final EIA report. For example,*

- *Section 7.8, Occupational Health and Safety - "As a **small business owner** one has certain rights and responsibilities regarding health and safety in the workplace." (a project of 4000 MW cannot be called „small business“).*
- *Section 7.6.3.1 subheading Handling of heavy bags -"**Handling of heavy bags of the final products** may lead to occupational injuries like strains, sprains and cramps. This can be avoided by going for mechanical handling of the product or minimising the weight for manual handling." (in case of this project final product is electricity !).*

Further it is also observed that two important Sections of the EIA Report, namely 7.6 "Risk Assessment" and 7.7 "Disaster Management Plan" are almost entirely generic and contain hardly any site or project specific aspects. For example, though Tungapadu Vagu passes through the project site and EAC has directed specific measures for the protection of the same, there is no mention of Tungapadu Vagu in either section 7.6 or section 7.7. Instances such as possible effects of its flooding and /or embankment breach on the plant or impact of a disaster at plant on the Vagu and its environment/downstream, which should have been properly assessed in these two section, are completely missing.

Based on above observations, it is amply clear that several parts of the EIA/EMP have been prepared simply based on 'copy-paste' approach, without application of mind and considerations of site

specific factors for crucial aspects such as Risk Assessment and Disaster Management. Above is a representative and not exhaustive list, indicating a casual approach towards the preparation of the EIA report on the Project Proponent's part. So, in light of the allegations of significant plagiarism and above mentioned observations, the MoEFCC may take necessary action on the relevant stakeholders.

2. Absence of FGD in plant layout, and consequent processes:

PP has contended that the plant will comply with MOEFCC notification dt. 7th December 2015 regarding stack emission, and that FGD will be installed. EAC asked PP about the location of FGD in the plant layout. In response to this query, PP admitted that FGD has not been included in the plant layout yet. Similarly, FGD and associated processes are also not covered in water balance, process flow and mass balance calculations.

In light of this, the plant layout needs to be revised to include FGD and allied equipment / processes, and various plant processes need due consideration of issues like disposal of sludge in solid waste management, sulphur balance, water balance etc.

3. Absence of crucial details and data regarding water withdrawal and availability:

In response to a query regarding specific water withdrawal point, PP informed that specific water withdrawal point has not been specified / considered in the EIA. In the absence of specific water withdrawal point, it would not be feasible to assess issues such as sustainability of water even in lean period, ecological impacts arising out of withdrawal of water, downstream uses and impact thereon etc. Further, the committee also observed that crucial data regarding water availability is quite dated and recent data, which is most relevant, has not been considered. For example, in Table 7 regarding monthly observed discharge at Pondugala G & D site, data only upto year 1999 – 2000 has been considered. These deficiencies need to be addressed and adequate study of downstream impact of water withdrawal and water availability during lean period need to be included in the EIA.

4. Need for firm commitment from Irrigation Department to maintain minimum ecological flows in Tungapadu Vagu

Additional ToR#7 states that "To sustain the downstream ecology of the Tungapadu Vagu, the **Irrigation Department should release** minimum ecological flows from the reservoirs constructed in the upstream. (emphasis added). In response, the PP has merely stated that "Irrigation Department will be informed and will be requested to take necessary action...." (Slid. 126 of the presentation). This clearly shows that as yet there is no firm commitment of the irrigation department to release minimum ecological flows. Hence, a firm commitment from irrigation department needs to be obtained and the same should be included in the revised EIA.

5. Explore the feasibility of ACC instead of WCC.

6. Cumulative impact study of various industries in buffer zone has not been made with details on emission data, stack heights and distances from plant site.

7. The impact of fugitive emissions on ambient air quality, with prediction of PM10 and PM2.5 has not been made from the sources such as Coal Handling Plant, Coal Storage yard, Ash Pond, lime handling and storage including gypsum that will be generated from

FGD unit. Impact of fugitive emission due to transportation of material is also required to be assessed.

8. The coal linkage documents for imported and domestic coal cannot be considered as firm coal linkage. Imported coal MoU says non-enforceable and also doesn't specify the quality of coal and source of coal is also not specified. The MoC allocation/approval for domestic coal is required.

9. Coal analysis report from BHEL regarding use of blended coal.

10. EIA report as well as subsequent responses by PP indicate substantial confusion and lack of details regarding actual coal unloading and transportation arrangements.

Some places it is mentioned that coal will be transported from two ports and some other places four ports are mentioned. Hence, complete and specific details regarding coal import ports and coal transportation routes need to be provided. Clear permissions from Railways and Port Authorities for imported coal should be obtained.

11. ToR 17, details of the mineralogical map from the State Geology Dept. Accordingly, MoC permission.

12. The PP submitted a detailed response to all the recommendations made by the Sub-Committee in its report on the Site Visit in the 50th EAC (T&C) meeting held during 28– 29 January, 2016. The PP should provide action plans on the recommendations relating to restoration of degraded forest areas in the project area and creation of a permanent corpus fund for tribal welfare and adequate compensation for land losers irrespective of their status besides best possible R&R package and extending social welfare schemes and healthcare systems for local communities.

13. As per the EIA report, the soil characteristics suggest that the land in the study area is a fertile land. Therefore, provision should be made to collect the top soil from the project area and preserve for raising plantation, etc.

14. Approximately, 75% and 25% areas are having under the category of forest and nonforest land, respectively. The forest land (including degraded) proposed to be included in the minimum 33% green belt should be treated as rejuvenation of forestland, instead otherwise may be.

15. The PP should give proper & detailed response along with an Action Plan in respect of queries raised during the Public Hearing along with CSR budgetary details provided during the stage of commissioning of the Project.

16. As the public hearing was valid and it was done very recently, the PP should publish public notices in the leading local newspapers, Gram Panchayats, Website of PP etc. along with the intimation that the public can send its comments if any, to the PP and also MoEF&CC on the revised EIA/EMP (which shall be available on Ministry's website, PP's website, Regional Office of SPCB, Gram Panchayat etc.) within 15 days after publication of the public notice.

*(2.5.3) The EAC suggested to PP to revise EIA in light of above mentioned observations. The proposal was accordingly, **deferred.**" (Emphasis Supplied)*

95. It is submitted that the EAC in its meeting has found many major shortcomings in the EIA Report. These shortcomings include the offence of Plagiarism, absence of crucial details regarding water, lack of Cumulative impact assessment study, absence of coal linkage and coal analysis, coal loading and unloading and its transportation, absence of FGD in the layout, absence of mineralogical map, lack of detailed response to the queries raised in the public hearing, etc. The lack of these crucial and fundamental aspects in the EIA Report shows the complete disregard that the Project Proponent has for the law, environment and people.
96. It is further submitted that no EIA report is complete which is plagiarised, which has incomplete information and false information, no evaluation being on the impacts of the project on Air, Water, etc., no evaluation of the facts provided about the present load of pollution already prevailing in the project area and many other crucial details noted as missing by the EAC. Therefore, on this very basis, the so called Public Hearing conducted for the project was arbitrary and vitiated. Hence, on this very basis, the Project Proponent was asked to do the public hearing again by the EAC in its 63rd meeting.

B. ARBITRARY EXEMPTION FROM DOING THE PUBLIC HEARING FOR REVISED EIA REPORT

97. However, the Project Proponent came up with the proposal of exempting it from conducting the public hearing again before the **re-constituted new EAC in its 1st meeting** dated 28th December, 2016. The so called justification offered by the Project Proponent is as under:

"(2.7.2) PP vide their letter dated 08.10.2016 and during the presentation along with their Environmental Consultant, viz., M/s B.S. Envi-Tech Pvt. Ltd., Secunderabad inter-alia stated following:

i. Requests for exemption of re-conducting the Public Hearing as the Public Hearing was conducted recently on 31.05.2016 which was attended by 3,500 people from surrounding villages of which 54 persons spoke regarding environmental and social issues and a total 16 written representations received from the villagers.

.... ..

iv. Re-conducting of public hearing will cause substantial delay in project schedule and will have major impact on power starved new state of Telangana as it is now facing acute power problem.

....

vii. No change in location, capacity, extent of land and survey numbers of the project area, re-conducting of Public Hearing may be exempted.

....

Committee after detailed deliberations, exempted M/s TSGENCO Ltd. for re-conducting the Public Hearing subject to the following conditions:

.....

ii. Revised EIA/EMP shall be submitted to Telangana State Pollution Control Board for puploading the revised EIA/EMP on their website for seeking public comments. Notice shall be published in two newspapers preferably one in vernacular language of the locality concerned and another one in English newspapers to seek the public comments/suggestions within 3 weeks from the date of notice.

iii. PP should address all the public comments received within 3 weeks, incorporate the issues & action plan in the revised EIA and submit the final EIA/EMP to the Ministry for further consideration."

(Emphasis Supplied)

98. It is submitted that above dilution of mandatory requirement of doing Public Hearing for the revised EIA Report done by the **by the new EAC** is arbitrary and illegal as the public have had barely any information about the project and its impacts. The claim of the Project Proponent that ***"Re-conducting of public hearing will cause substantial delay in project schedule"*** shows complete disregard that it has on the compliance to the law and fundamental right of the public to have information about the project and its impacts.
99. It is further submitted that this is not the first time that the same Project Proponent went on to not comply with the law. The same Project Proponent commenced illegal construction of another Thermal Power Plant (4x270MW Bhadradi TPP) without obtaining prior mandatory Environment Clearance and Consent to Establish in violation of EIA Notification, EP Act, Water Act and Air Act. This was brought to the notice of Hon'ble in ***Human Rights Forum Vs Union of India (Application No. 206 of 2015 (SZ))***. In this same matter, the Hon'ble

directed the MoEF&CC and TSPCB to take criminal action against the Project Proponent by stating as under:

*“38. **Issue No.3:** In so far as it relates to this issue, we have no hesitation to come to a conclusion that appropriate penal action must be taken against the officers concerned who are responsible for undertaking such construction activities before obtaining EC in accordance with Section 15 of the Environment (Protection) Act, 1986. We are at a loss to understand as to why the Board has not chosen to take any penal action against the officials of the third respondent who are responsible for such activity under the Water Act and Air Act which empowers the Board to take such action. Even if the government is eager to proceed with the construction activity and complete the project early in its desire to fulfil the needs of the people, it is the officials of the third respondent who are expected to properly advise the government in order to enforce rule of law. If only such proper precautionary measures have been taken by the officers of the third respondent such fait accompli situation would not have arisen. The Executive has to bear the responsibility for such violation of law. Under these circumstances, we direct the second respondent to initiate appropriate prosecution against the officials of the third respondent in accordance with the powers conferred under the Water Act and Air Act. That apart, the authorities have to take appropriate criminal action under Section 15, 16 and 17 of the Environment (Protection) Act, 1986”*

100. In spite of the Criminal action which has been imposed by the Hon'ble Tribunal for haste exhibited and the illegal construction of the project undertaken without the rule of the law, the same haste and utter non-compliance of the law could also be seen in the present project. It is the same haste and same non-compliance of law that has led to submission of plagiarised, incomplete and full of false information in the rejected EIA Report.

101. Further, even in spite being asked to do the Public Hearing again, the Project Proponent has gone before the newly constituted EAC seeking the exemption from doing the public hearing again with the claim that ***“Re-conducting of public hearing will cause substantial delay in project schedule”*** This also further shows the arbitrary and callous attitude of the Project Proponent towards the compliance of the law and rights of the people.

C. REVISED EIA REPORT WAS NOT PROVIDED IN THE VERNACULAR LANGUAGE

102. The arbitrary and callous attitude of the Project Proponent is also revealed by the revised EIA Report not being provided in the vernacular (Telugu) language. In this

regard, a question was asked through the written representation of Mr. N. Harinder. The reply of the Project Proponent sufficiently exemplifies the non-compliance of law by the Project Proponent. The question raised and the reply provided by the Project Proponent are excerpted hereunder:

S.No	Issue raised by Sri N. Harinder	TSGENCO Response
5	<i>No telugu version is made available to people in several panchayats. Thimmapuram and Narsapuram are not given even the English version. What is the basis of providing information to people? Is it selectively done with a motive to push the project due to institutional vested interests of TSGENCO?</i>	<i>TSGENCO had complied with the directive of MoEF&CC. The people have welcomed the establishment during the public hearing conducted on 31-05-2016. The local people are aware about the proposed project. Thus there is no vested interests of TSGENCO.</i>

103. The above reply of the Project Proponent sufficiently demonstrates that it has failed to do its fundamental duty to provide the EIA Report in the vernacular language.

VITIATED PUBLIC HEARING FOR THE REJECTED EIA REPORT AND NO PUBLIC HEARING CONDUCTED FOR THE REVISED EIA REPORT

104. Explaining the need of public hearing and people's right to be informed of the pros and cons of the projects, the Ho'ble High Court of Himachal Pradesh in **Him Privesh Environment Protection Society & Anr Vs State of Himachal Pradesh & Ors (CWPIIL No. 15 of 2009)** has observed as under:

"65. If we go through the record of the public hearing, it is apparent that the public was not informed about the pros and cons of the Project. In this behalf, we may submit that the Pollution Control Board, the MoEF and the EAC must play a more pro-active role than what is being done at present. Sitting in the Green Bench, we have heard hundreds of matters and we are

*constrained to observe that in almost all, if not all, cases the word of the project proponent is accepted to be the gospel truth. Obviously, the project proponent and/or the consultants who prepare the project reports will paint a rosy picture about the project and will gloss over and in fact hide the ill effects of the project. This is where the role of the Pollution Control Board and the MoEF starts. Why should we wait for NGO's or local inhabitants to come to Court to question the validity of the project. They do not have the wherewithal, the finances, the capability or the knowledge to oppose the report. We are of the considered view that the duty of the Pollution Control Board and the Officers of the Board or the MoEF is to verify the facts stated by the Project Proponent. **It is the duty of the Pollution Control Board, the EAC and the persons who conduct the public hearing to ensure that the pros and cons of the project are explained in simple language to the villagers. How will the poor villagers know that a project is going to affect their health or not? In fact no layman would know what is hazardous waste or pollution generated by a particular project. In our considered view it is the duty of the Pollution Control Board, the MoEF and EAC to examine each project report and thereafter bring forth even the negative aspects of the project to the knowledge of the people. There is no use of having a public hearing if the public is not aware of the effects of the project both positive and negative.** We have not come across a single case in the last two years, during which we have been hearing environmental cases where the Pollution Control Board or the MoEF have actually brought such facts to the notice of the Public during public hearing. **A public hearing without first informing the public is a total sham.**"*

(Emphasis Supplied)

105. The above paramount observations of the Hon'ble High Court of Himachal Pradesh are aptly applicable to the present case in respect of the essence, significance and people's fundamental right to hearing and know the complete details of the project. As submitted above, in the present case, the rejected EIA did not contain many aspects of the project and the former EAC has aptly rejected it on the basis of many issues noted, including the issue of plagiarism. Therefore, the so called public hearing which was conducted has no meaning. Further, the Project Proponent was arbitrarily exempted from conducting the revised EIA Report on the reason of ***"Re-conducting of public hearing will cause substantial delay in project schedule"*** Furthermore, the revised EIA Report was not even provided in vernacular language to the lay people to know the pros and cons of the project. Thus, as noted above by the Hon'ble High Court of Himanchal Pradesh that the public hearing for the proposed project was made a total sham.

106. The significance of Public Hearing is also elaborated by Hon'ble High Court of Delhi in ***Samarth Trust Vs Union of India [Writ Petition (Civil) No. 9317 of 2009]***. It was held that Public Hearing is form of social audit and participatory justice. If the public are deprived of the full information of the project, such a public hearing would be farce as it will not provide opportunity for effective participation. Relevant excerpt from the Judgment of the Hon'ble High Court of Delhi is as under:

*"17. What is the purpose of a public hearing? Can largely rural people effectively articulate their concerns on (sometimes) complex environmental issues? Is a public hearing a procedural formality – motions that have to be gone through because of legal requirements? **A public hearing is a form of participatory justice giving a voice to the voiceless (particularly to those who have no immediate access to courts) and a place and occasion to them to express their views with regard to a project. Participatory justice is in the nature of a Jan Sunwai where the community is the jury. Such a public hearing gives an opportunity to the people to raise issues pertaining to the social impact and the health impact of a proposed project.** Since a public hearing affects the rights of the parties, it must be conducted in a formal or at least in a semi-formal manner and the video-recording as well as the Minutes of the proceedings must be faithful to what has actually transpired so that the views of the participants are known. **The advantage of a public hearing is that it brings about transparency in a proposed project and thereby gives information to the community about the project; there is consultation with the affected parties and they are not only taken into confidence about the nature of the project but are given an opportunity to express their informed opinion for or against the project. This form of a social audit, as it were, provides wherever necessary, social acceptability to a project and also gives an opportunity to the EAC to get information about a project that may not be disclosed to it or may be concealed by the project proponent.***

*18.... **Finally, unless all necessary information is available, no effective public hearing can be conceived by the locally affected persons. Looked at from another point of view, if the draft EIA or its summary is not available to the local populace, their participation in the public hearing will be nothing but a farce.***

(Emphasis supplied)

107. It is submitted that both the above paramount observations of the Hon'ble High Courts are aptly applicable to the present case the first EIA was altogether rejected by the former EAC on the basis of Plagiarism, faulty information, etc., without fulfilling the very purpose of EAC. Therefore, the public who participated in

the Public Hearing barely had any sufficient information of the project. Hence, it is farce and sham as noted in the referred Judgments.

108. Further, the so called Revised EIA Report never had public hearing conducted for it and it was not even published in the vernacular language. Hence, the very purpose of conducting the conducting the public hearing under EIA Notification, 2006 is defeated and the notification is violated by the Project Proponent.

V. EC GRANTED FOR THE PROJECT IS IN VIOLATION OF PUBLIC TRUST DOCTRINE AND PRINCIPLES OF PRECAUTION AND SUSTAINABLE DEVELOPMENT

109. It is submitted that the EC granted for the proposed project is in violation of the Public Trust Doctrine and the Principles of Precaution and Sustainable Development for the following reasons:

- A. EAC and MoEF do not have authority to allow the project on the present site
- B. EAC and MoEF do not have the authority to exempt Public Hearing
- C. Non-application of Mind by the EAC and MoEF&CC in granting the EC for the project.

The Appellants submit as under in respect of the above issues:

A. EAC AND MOEF DO NOT HAVE AUTHORITY TO ALLOW THE PROJECT ON THE PRESENT PROJECT SITE

110. The Appellants have already submitted that the site selection for the present project is clearly in violation of the TOR NO. 21 by virtue of the fact that the Tungapadu Stream and its streamlets are within the project site and flow through it. The TOR No. 21 reads as under:

*"21). It **shall also be ensured** that a minimum of 500 m distance of plant boundary is kept from the HFL of river system / streams etc. and*

*the boundary of site **should also be** located 500 m away from railway track and National Highways.” (Emphasis Supplied)*

111. Further, the Appellants have also submitted that the present site for the project is also in violation of the siting criteria guidelines which prohibits the setting coal-based Thermal Power Plants in the Forest Areas and also 25 kilometers away from Wildlife Sanctuaries. The siting criteria guidelines read as under:

"Guidelines for site selection of coal-based thermal power stations set by the MoEF

- *Locations of thermal power stations are avoided within 25 km of the outer periphery of the following:*

.....

- *National park and wildlife sanctuaries;*

- *Ecologically sensitive areas like tropical forest, biosphere reserve, important lake and coastal areas rich in coral formation;*

.....

- *Forest or prime agriculture lands are avoided for setting up of thermal power houses or ash disposal”*

112. Furthermore, the Appellants have also submitted that the district in which the project only has 6% of forest cover which too is highly degraded. The Appellants have further highlighted that alternative sites for the proposed project have not been considered.

113. In view of the above issues, the present site should not have been selected at all by the Project Proponent and approved by the EAC and MoEF&CC. Beginning from the screening stage to the appraisal state, the EAC and MoEF&CC have never applied their minds in respect of site selection for the proposed project.

114. In view of the above facts presented by the Appellants, the proposal should have been rejected by the MoEF&CC at the screening stage itself. However, nothing of that sort was done and the proposal was forwarded for consideration of TOR for the project. When the project came up for scoping before the EAC in the 45th meeting dated 29th and 30th of October, 2015, the committee observed as under:

"The Committee noted that, a tributary/channel of River Krishna is passing across the proposed site. The Committee had detailed discussions with the PP regarding shifting of the proposed site/revising the layout so that the said channel is not affected. The Committee opined that a site visit by a Sub-Committee is required to ascertain the ground situation before taking a decision. The PP also requested the Committee for the site visit.

*In view of above, the proposal was **deferred** and shall be considered after submission of the site visit report by the Sub-Committee."*

115. It is submitted that as the meeting minutes noted above, the committee decided to visit the project site in order to ascertain the ground situation. It is important to note here that even at this scoping stage, the EAC has not rejected the proposal by virtue of the issues mentioned above by the Appellants.

116. After the sub-committee of EAC visited the project site, it has come out with a 9 page report. The perusal of same report reveals that from pages 1 to 5 is all general description of the project area. From pages 6 to 9 what is presented is summary and recommendations which is as under:

"Based on the observations made during Site Visit, discussions held with all the stakeholders including Project Proponent, and critical evaluation of documents submitted, the Sub-Committee recommends the following:

(i) The Tungapadu Vagu is a perennial natural rivulet and is the lifeline for the local communities by providing water not only for irrigation, and recharging groundwater but also for draining the area into Krishna River.

a) The Tungapadu Vagu should not be diverted but it should be preserved and protected, and enhanced its flows.

b) The PP should leave a minimum of 100 m buffer on either side of its banks and this buffer should be developed into native forest.

c) No effluent should be discharged into the rivulet or Krishna River.

d) In areas where the banks are breached, the breaches should be plugged and strengthened.

e) In areas where the riverbed is silted/partial blocked due to landslides, the blocks and silt should be removed in a way that the original gradient is maintained.

f) No water from the stream is extracted.

g) To sustain the downstream ecology of the Tungapadu Vagu, the Irrigation Department should release minimum ecological flows from the reservoirs constructed in the upstream.

.....

.....

(viii) Issue of ToR to TSGENCO for setting up of 5x800 MW coal-fired supercritical TPP at Veerlapalem village of Dameracherla Mandal in Nalgonda District of Telangana State may be considered by including the above recommendations as ToRs besides other generic ToRs."

117. The perusal of the above excerpt from the sub-committee report reveals that there was no discussion or description as to how setting up of a huge magnitude Thermal Power Plant cannot be allowed in violation of the TOR No. 21 and other relevant issues mentioned above. All that the report notes is that the Tungapadu Stream should not be disturbed and that the EAC may consider the granting of TOR.

118. Thereafter, the TOR was recommended by EAC in its 50th meeting dated 28th and 29th January, 2016. It is submitted that even during this meeting, there was no discussion of the EAC with regard to the siting of the project. All that the meeting minutes note is as under:

*"After detailed deliberations, the Committee recommended the following ToR in addition to the standard TORs (as applicable) at **Annexure-A1** for undertaking detailed EIA study and preparation of EMP."*

119. It is submitted nothing in the above description provides any details of discussions and deliberations that have happened in the EAC meeting about the sub-committee report, the reasons why present site has been cleared for the project and why the TOR No. 21, siting criteria guidelines and the consideration of alternative sites have been overlooked for the present project, etc. Hence, EAC and MoEF&CC have cleared the project in violation of the legally binding rules. The same power is not vested with the EAC and MoEF&CC. The Hon'ble Tribunal in ***Samata Vs Union of India [2014 ALL (I) NGT REPORTER (1) (SZ) 1]*** has observed as under:

*"54...The EAC is constituted consisting of a Chairman and number of members who are experts from different fields only with the sole objective of national interest in order to ensure establishment of new projects or expansion of already existing activity without affecting the ecological and environmental conditions. **Thus, a duty is cast upon***

the EAC or SLEAC as the case may be to apply the cardinal and Principle of Sustainable Development and Principle of Precaution while screening, scoping and appraisal of the projects or activities. While so, it is evident in the instant case that the EAC has miserably failed in the performance of its duty not only as mandated by the EIA Notification, 2006, but has also disappointed the legal expectations from the same. For a huge project as the one in the instant case, a thermal power plant with an estimated cost of Rs. 11,838 crore, covering a total area of 1675 acres of land, the consideration for approval has been done in such a cursory and arbitrary manner even without taking note of the implication and importance of environmental issues.”

120. As the Hon'ble Tribunal noted above, the EAC and MoEF&CC are expected to enforce the applicable law. However, in the present case, the legal rules by which the proposed project was supposed to be dealt with has not been followed by EAC and MoEF&CC. Therefore, the site for the present project has been granted in violation of the EIA Notification. Hence, it is submitted that such a power is not vested with the EAC and MoEF&CC.

B. EAC AND MOEF&CC DO NOT HAVE THE AUTHORITY TO EXEMPT PUBLIC HEAIRNG FOR THE PROJECT

121. It is submitted that when the present project came up for appraisal before the former EAC in its 63rd meeting, the following are the some of the major issues which are notice by it:

- I. Plagiarism, Irrelevant Content, Absence of crucial site and plant specific analysis.
- II. Absence of FGD in the plant layout
- III. Absence of crucial details regarding water withdrawal and availability.
- IV. Absence of commitment from state Irrigation and Catchment Area Development (I&CAD) department for minimum ecological flows of Krishna River
- V. Absence of Cumulative Impact Assessment study on AAQ
- VI. Non-study of impact of Fugitive emissions on AAQ
- VII. Non-study of impact of fugitive emissions from transporation

VIII. Absence of Firm Coal linkage

IX. Absence of Coal Analysis

X. Absence of Mineralogical map.

XI. Absence of proper and detailed response to questions raised in the Public Hearing

122. It is submitted that as the former EAC noted above, there are many issues which were omitted from consideration and were not evaluated of their environmental impacts in the former EIA Report. Further, the EAC also noted that the Project Proponent has resorted to Plagiarism and presenting irrelevant content. Therefore, the EAC rejected the EIA Report and asked the Project Proponent to revise it. It is submitted that when the EIA Report itself is rejected, the so called Public Hearing conducted for the project cannot be said to be valid, but vitiated.

123. However, the Project Proponent has got the exemption from conducting the Public Hearing by **re-constituted new EAC** in its 1st meeting. The so called justification offered by the Project Proponent is ***"Re-conducting of public hearing will cause substantial delay in project schedule."*** It is submitted that the perusal of the 1st meeting of the new EAC reveals that the no justification or any reasons or or the power by which the EAC has granted the exemption from conducting the public hearing for the revised EIA report. All that the meeting minutes of EAC note is as under:

"Committee after detailed deliberations, exempted M/s TSGENCO Ltd. for re-conducting the Public Hearing subject to the following conditions"

124. All that the meeting minutes note is **"committee after detailed deliberation,"** exempted the Project Proponent from conducting re-conducting the public hearing. It is submitted that the exemption granted by EAC is bereft of any reasons or justification. Further, the power to exempt the Project Proponent from conduct

public hearing again is not vested either with the EAC or MoEF&CC. Such an exemption of public hearing without following the due course of law is in violation of EIA Notification.

125. The Hon'ble Supreme Court in ***Hanuman Laxman Aroskar Vs Union of India (2019) SCC 401*** has held as under on the significance of Public Hearing:

*"100 The importance of public consultation is underscored by the 2006 notification. Public consultation, as it states, is "the process by which the concerns of local affected persons and others who have a plausible stake in the environmental impacts of the project or activity are ascertained with a view to take into account all the material concerns in the project or activity design as appropriate". This postulates two elements. They have both, an intrinsic and an instrumental character. **The intrinsic character of public consultation is that there is a value in seeking the views of those in the local area as well as beyond, who have a plausible stake in the project or activity. Public consultation is a process which is designed to hear the voices of those communities which would be affected by the activity. They may be affected in terms of the air which they breathe, the water which they drink or use to irrigate their lands, the disruption of local habitats, and the denudation of environmental eco-systems which define their existence and sustain their livelihoods.***

*101 Public consultation involves a process of confidence building by giving an important role to those who have a plausible stake. It also recognizes that apart from the knowledge which is provided by science and technology, local communities have an innate knowledge of the environment. The knowledge of local communities is transmitted by aural and visual traditions through generations. **By recognizing that they are significant stakeholders, the consultation process seeks to preserve participation as an important facet of governance based on the rule of law. Participation protects the intrinsic value of inclusion.***

102 The 2006 notification postulates:

(i) A public hearing at or in close proximity to the project site to ascertain the views of "locally affected persons";

(ii) Obtaining written responses from "other concerned" individuals having a "plausible stake" in the environmental aspects of the project or the activity;

(iii) The duty of the SPCB to conduct hearings and to forward the proceedings to the regulatory authority within the stipulated time;

(iv) Placing on the website of the Pollution Control Board a summary of the EIA report in the prescribed format and the making available of the draft EIA report by the regulatory authority on a written request by any person concerned, for inspection;

(v) The duty of the applicant to address all material concerns expressed during the process of public consultation;

(vi) The making of appropriate changes in the draft EIA and EMP; and

(vii) The submission of the final EIA report by the applicant to the regulatory authority for appraisal.

Each of these features is crucial to the success of a public consultation process. Public consultation cannot be reduced to a mere incantation or a procedural formality which has to be completed to move on to the next stage. Underlying public consultation is the important constitutional value that decisions which affect the lives of individuals must, in a system of democratic governance, factor in their concerns which have been expressed after obtaining full knowledge of a project and its potential environmental effects.

103 Apart from the intrinsic value of public consultation, it serves an instrumental function as well. The purpose of ascertaining the views of stakeholders, is to account for all the material concerns in the design of the proposed project or activity. For this reason, the process of public consultation involves several important stages. The Pollution Control Board is under a mandate to forward the proceedings to the regulatory authority. The project proponent must address all material environmental concerns and make appropriate changes in the draft EIA and EMP. The project proponent may even submit a supplementary report to the draft EIA. Each of these elements is crucial to the design features of the 2006 notification. **A breach will render the process vulnerable to challenge on the ground that: (i) significant environmental concerns have not been taken into account; (ii) there was an**

absence of a full disclosure when the EIA report was put up for consultation; and (iii) concerns which have been expressed by persons affected by the project have not been adequately dealt with or analysed. (Emphasis Supplied)

126. As the Hon'ble Supreme Court held above, the Public Hearing is not a mere formality as it has constitutional validity and guarantee of people's right to participate. The participation of public in the public hearing is an important facet of governance as it has intrinsic and instrument characters embedded in it. Further, the court also held that the absence of full disclosure of information and not addressing the significant environmental concerns breaches the whole purpose of public hearing.

127. In the present case, it is clear that the rejected EIA Report did not contain full information of the project as it was plagiarised and full of deficiencies as noted by the EAC. Therefore, the Public Hearing conducted for the rejected EIA Report did not serve any purpose. Further, arbitrary exemption which has been given for the Project Proponent for the new revised EIA Report also defeated the purpose and constitutional values embedded in the public hearing, as noted above by the Hon'ble Supreme Court. Hence, it is submitted that such a power to overrule the Public Hearing as mandated by the EIA Notification is not vested with EAC and MoEF&CC.

C. NON-APPLICATION OF MIND BY THE EAC AND MOEF&CC DURING THE APPRAISAL

128. It is submitted that the Appellants have raised several issues which have not been dealt with and addressed by the Project Proponent in the revised EIA Report. The Appellants provided detailed description of numerous issues relating to Site Selection, Cumulative Impact Assessment on AAQ, Hydro-geological impacts and Public Hearing. It is submitted that none of these have been considered and appraised by the **re-constituted new EAC** in its 5th meeting, during which

project has been recommended for the Environment Clearance. Relevant excerpt from the same meeting minutes is as under:

"Committee after detailed deliberations, recommended for grant of Environment Clearance subject to the following additional conditions in addition to the specific conditions pertaining to Thermal Power Projects mentioned at Annexure-A2"

129. Therefore, even at the stage of Appraisal done by **new EAC Committee**, none of the critical issues mentioned above relating to project were discussed and deliberated. After the recommendation of the EAC, the project was issued Environment Clearance on 29.06.2017 by the MoEF&CC.
130. The Hon'ble Supreme Court in ***Hanuman Laxman Aroskar Vs Union of India (2019) SCC 401*** has held as under on the role of EAC:

116. The EAC, as an expert body, has to scrutinize all relevant aspects of the project or activity proposed, including its impact on the environment. In taking that decision, the EIA report is an input for its analysis. The scrutiny and appraisal has to be undertaken by the EAC as an expert body and its reasons must reflect that this has been done. The recommendations of the EAC furnish a guide for the MoEFCC. Indeed, the 2006 notification stipulates that the recommendations of the EAC would normally be accepted. Consequently, a failure of due process before the EAC, as in the present case, must lead to the invalidation of the EC."

(Emphasis supplied)

131. It is submitted that as pertinently held by the Hon'ble Supreme Court, it is the duty of EAC under the EIA Notification to scrutinize all issues related to the project and assess its impact as an expert body. However, in the present case, as elaborately submitted above Appellants, many of the issues related to the project have not been dealt with and considered by the EAC. Hence, the as Hon'ble Supreme Court held, the whole process of appraisal stipulated by the EA Notification has been invalidated and the EC granted for the project invalid.

D. EAC AND MOEF&CC HAVE FAILED TO GIVE REASONS FOR GRANTING THE EC

132. The importance of recording the reasons by administrative authorities have been recognized as a settled law by the Judiciary in a number of Judgments. The Hon'ble Supreme Court in ***Hanuman Laxman Aroskar Vs Union of India (2019) SCC 401*** has held that EAC is duty bound to give reasons. Relevant excerpt from the Judgment is as under:

*"114 The EAC is an expert body. It must speak in the manner of an expert. Its remit is to apply itself to every relevant aspect of the project bearing upon the environment. It is not bound by the analysis which is conducted in the EIA report. It is duty bound to analyse the EIA report. Where it finds it deficient it can adopt such modalities which, in its expert decision-making capacity, are required. **The reasons which are furnished by the EAC constitute a live link between its processes and the outcome of its adjudicatory function. In the absence of cogent reasons, the process by its very nature, together with the outcome stands vitiated.***

(Emphasis supplied)

133. The Hon'ble Supreme Court has pertinently held that reasons given by EAC and MoEF&CC in its decision making serve as the live link and in the absence of reasons, the decision making becomes vitiated. Further, the Hon'ble Supreme Court in ***Maharashtra State Board of Secondary and Higher Secondary Education Vs. K.S. Gandhi (1991) 2 SCC 716*** has held as follows:

"21. Thus, it is settled law that the reasons are harbinger between the minds of the maker of the order to the controversy in question and the decision or conclusion arrived at. It also excludes the chances to reach arbitrary, whimsical or capricious decision or conclusion. The reasons assure an inbuilt support to the conclusion/decision reached. The order when it affects the right of a citizen or a person, irrespective of the fact, whether it is quasi judicial or administrative fair play requires recording of germane and relevant precise reasons. The recording of the reasons is also an assurance that the authority concerned consciously applied its mind to the facts on record..."

134. Apart from the above case, in a number of other Judgments such as the Hon'ble Supreme Court in ***Namit Sharma v. Union of India [(2013) 1 SCC 745]***, ***Ravi YashwantBhoirVs Collector (2012) 4 SCC 407***, the Hon'ble Delhi High Court in ***Utkarsh Mandal Vs Union of India [2009 X AD (Delhi) 365]*** and the Hon'ble Tribunal in ***SamataVs Union of India [2014 ALL (I) NGT***

REPORTER (1) (SZ) 1] and in other judgments have clearly laid down that the administrative authorities have to give reasons in support of their decisions.

135. In the present case, no such recording of reasons or the explanation of the justification with which the present project has been granted EC was given by EAC and MoEF&CC. The Appellants have already raised the issues such as presence of Tungapadu Stream and its streamlets in the project site and flowing through it, 75% of the project being located on the Forest Lands which are undulating low hill ranges with extensive plateaus, the district in which project is located being with least 6% forest cover and the presence of Amrabad Tiger Reserve at 14 kilometers distance from the project site. Further, the Appellants have also raised many number of issues relating to Coal, Air, Water, Public Hearing, etc. which are related to the proposed project.

136. All the above issues have been overruled and the project has been granted EC without any reasons and justification given by the EAC and MoEF&CC. In these facts and circumstances of the case, it was all the more required by the EAC and MoEF&CC to record reasons for its decision to grant EC for the project. However, the no such reasons have been given. Further, the directions which have given to EAC and MoEF&CC in a number of Judgments to record reasons for its decisions making have not been complied.

EC GRANTED FOR THE PROJECT IS IN VIOLATION OF PUBLIC TRUST DOCTRINE AND PRINCIPLES OF PRECAUTION AND SUSTAINABLE DEVELOPMENT

137. The Hon'ble Supreme Court in ***M.C.Mehta v. Kamal Nath (1997) 1 SCC 388*** has held that Public Trust Doctrine is part of the law of country and that the state is custodian of the natural resources by holding as under:

"The State is the trustee of all natural resources which are by nature meant for public use and enjoyment. Public at large is the beneficiary of the sea- shore, running waters, airs, forests and ecologically fragile lands. The State as a trustee is under a legal duty to protect the natural resources. These resources meant for public use cannot be converted into private ownership."

138. Further, the ***Hon'ble Supreme Court in Common Cause Vs Union of India (1996) 6 SCC 667*** has held as under about the role of state under Public Trust

Doctrine:

"The Court has also invoked the "Doctrine of Public Trust" which is a doctrine of environmental law under which the natural resources such air, water, forest, lakes, rivers and wildlife are public properties "entrusted" to the Government for their safe and proper use and proper protection. Public Trust Law recognizes that some types of natural resources are held in trust by the Government for the benefit of the public. The doctrine enjoins upon the Government to protect the resources for the enjoyment of the general public rather than to permit their use for private ownership or commercial purposes. The "Doctrine of Public Trust" has been evolved so as to prevent unfair dealing with or dissipation of all natural resources..."

139. The essence of the Public Trust Doctrine, the state as the trustee and its constitutional duty of State as the custodian and regulator in conservation of natural resources and improving environment is also laid emphasis by the ***Hon'ble Supreme Court in Centre for Public Interest Litigation Vs Union of India (2012) SCC 1: (2012) 1 KCCR 293 (SC), Intellectuals Forum Vs State of A.P (2006) 3 SCC 549, Centre for Environmental Law Vs Union of India (2013) 8 SCC 234, Fomento Resorts & Hotels Ltd. Vs Minguel Martins (2009) 3 SCC 571, Hinch Lal Tiwari Vs Kamala Devi (2001) 6 SCC 496*** and in a number of other cases.

140. Expanding further on the State as the custodian and protector of the natural resources, the ***Hon'ble Tribunal in its recent order dated 10-05-2019 in Lt. Col. Sarvadaman Singh Oberoi Vs Union of India & Ors*** has noted as under:

"6. There can be no dispute that the water bodies play significant role in recharge of ground water, preventing soil erosion, harnessing rain water and maintaining micro-climate in the area. Need for conservation and protection of water bodies is thus obvious....

7. The Hon'ble Supreme Court in Hinch Lal Tiwari v. Kamala Devi & Ors. (2001) 6 SCC 496 observed:

"It is important to notice that the material resources of the community like forests, tanks, ponds, hillock, mountain etc. are nature's bounty. They maintain delicate ecological balance. They need to be protected for a proper and healthy environment which enables people to enjoy a quality life which is the essence of the guaranteed right under Article 21 of the Constitution. The Government, including the Revenue Authorities i.e. Respondents 11 to 13, having noticed that a pond is falling in disuse, should have bestowed their attention to develop the same which

would, on one hand, have prevented ecological disaster and on the other provided better environment for the benefit of the public at large. Such vigil is the best protection against knavish attempts to seek allotment in non-abadi sites."

*8. The above observations advance the Public Trust Doctrine which is based on the principle that certain resources like air, water and forests have such great importance to the people as a whole that the same cannot be subject of private ownership. The same are gift of the nature and should be made freely available to the people. **The Doctrine requires the State to protect such resources and not to permit them to be used for private or commercial purposes.**¹ **This concept is applicable to wetlands and all water bodies which is essential for protection of the environment.** If the ponds and other such water bodies are not protected and conserved, this will in turn affect recharge of ground water, rain water harnessing and soil preservation."*

(Emphasis supplied)

141. It is submitted that as the Hon'ble Supreme Court and Hon'ble Tribunal held above, the constitutional duty is cast upon MoEF&CC and the EAC under it to protect the natural resources. In the present case, it is evident by the facts presented above that the EC for the present project has been granted without looking into number of issues relating to ecology and environment. Thus, the duty to protect the natural resources cast upon it by the Constitution of India, EP Act and Public Trust Doctrine and Principles of Precaution and Sustainable Development have been violated.

142. In view of the above facts and circumstances, the Hon'ble Tribunal may be pleased to allow the prayer made in the Appeal.

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ANNEXURE - 139

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Assessing Metal Exposures in a Community near a Cement Plant in the Northeast U.S.

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Abstract

Cement production is a major source of metals and metalloids in the environment, while exposures to metals and metalloids may impact human health in the surrounding communities. We recruited 185 participants living in the vicinity of a cement plant in the northeast U.S., and measured the levels of aluminum (Al), arsenic (As), cadmium (Cd), lead (Pb), mercury (Hg), and selenium (Se) in blood and Hg in hair samples from them. A questionnaire was used to assess potential sources of Hg exposure. Multivariate regressions and spatial analyses were performed to evaluate the relative importance of different routes of exposures. The metal concentrations in blood or hair samples of our study participants were comparable to the U.S. general or regional population. Smoking contributed significantly to Cd and Pb exposures, and seafood consumption contributed significantly to Hg and As exposures, while variables related to the cement plant were not significantly associated with metal concentrations. Our results suggest that our study population was not at elevated health risk due to metal exposures, and that the contribution of the cement plant to metal exposures in the surrounding community was minimal.

Keywords: cement plant, metal pollution, human exposures, blood, hair, mercury, arsenic, lead, cadmium

1. Introduction

Many metals or metalloids, such as lead (Pb), mercury (Hg), cadmium (Cd), and Arsenic (As), can lead to toxic effects in human, even at low levels of exposure. For example, many studies have observed neurodevelopmental effects from Hg [1,2] and Pb [3,4] exposures; chronic exposures to Cd in particulate forms have been associated with changes in pulmonary functions [5]; and chronic As exposures in humans may cause skin, lung and bladder cancer [6].

Cement production is one of the key industrial sources of particulate matters (PM) and metals, especially copper (Cu), zinc (Zn), Pb, nickel (Ni), Cd, Hg and As, which are generated from both combustion of fossil fuels and processing of the raw materials [7,8]. It is estimated that cement production accounts for about 9% of global Hg emissions [9]. Most studies on metals from cement plants have focused on ambient environmental levels in the air [10,11] or soil [12,13,14,15], and a few on biomonitoring using plants [16,17]. Very few studies have examined exposures of metals in human near a cement plant [18], and no study has evaluated the contribution to metal exposures through inhalation or ingestion of dust from cement plant in the presence of other primary pathways, such as smoking or diet. Moreover, correlations among different metals, which may reveal potential shared sources, were underexplored.

LaFarge Cement Plant (EPA facility ID: NYD002069557; [Figure 1](#)) is located in Ravena, Albany County, New York (NY), surrounded by approximately 15,000 residents and four schools [19]. In the year 2008 alone, the cement plant emitted in total 139 lb of Hg, 160 lb of Pb, 12 lb of Cd, 154 lb of As and 5565 lb of Se into the atmosphere [20]. To address community concerns about possible health impact from metals released by the cement plant, we initiated this study in collaboration with Community Advocates for Safe Emissions (CASE), a local environmental group formed by concerned citizens. The objectives of this study were: to measure specific metals and metalloids in whole blood samples and Hg in hair samples collected from people living in the Ravena community at various distance from the cement plant; to explore potential correlations among these metals; and to evaluate the potential contribution of emissions from the LaFarge cement plant to metal exposures in this community. The overall intent of this investigation was to inform the citizens of Ravena and public health officials of the potential human health risk of this cement plant as well as cement plants in general.

4000 MW (5 X 800 MW) YADADRI THERMAL POWER STATION Veerlapalem Village, Damercherla Mandal, Nalgonda (Dist), Telangana	Revised EIA Report
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TABLE - 3.3
SUMMARY OF AMBIENT AIR QUALITY

Station Code	Locations	98 th Percentile values					
		PM ₁₀	PM _{2.5}	SO ₂	NO _x	Hg	CO
*Winter '15-16		µg/m³				ng/m³	mg/m³
A1	Project Site	66.4	31.6	23.7	26.1	-	1.5
A2	Veerppagudem	41.7	13.5	10.2	11.6	-	1.8
A3	Wazirabad	63.8	29.5	17.2	18.2	-	1.3
A4	Daida	37.6	11.5	8.7	13.6	-	1.3
A5	Gottimukkala	31.9	19.3	13.4	18.0	-	1.2
A6	Adividevulapalli	37.1	11.8	9.0	20.3	-	1.1
A7	Veerlapalem	42.1	18.8	10.7	13.8	-	1.4
A8	Ragadappa	32.6	11.1	10.6	13.2	-	1.3
A9	Kallepalli	38.4	12.5	9.8	16.3	-	1.3
A10	Damercherla	63.4	30.0	24.6	28.1	-	1.2
Post Monsoon '16 (October-16)							
A1	Project Site	50.9	15.3	9.6	10.8	<0.1	<1
A2	Veerppagudem	40.4	12.6	10.1	11.4	<0.1	<1
A3	Wazirabad	61.5	26.7	14.1	16.2	<0.1	<1
A4	Daida	35.3	11.6	8.3	10.5	<0.1	<1
A5	Gottimukkala	48.6	20.2	11.3	13.1	<0.1	<1
A6	Adividevulapalli	41.2	15.5	10.1	12.6	<0.1	<1
A7	Veerlapalem	40.7	14.2	9.4	11.2	<0.1	<1
A8	Ragadappa	39.8	11.9	8.7	10.3	<0.1	<1
A9	Kallepalli	42.6	16.7	10.1	12.2	<0.1	<1
A10	Damercherla	64.2	28.3	12.5	14.8	<0.1	<1
NAAQ Standards for Industrial, Residential, Rural and Other Areas		100	60	80	80	Not specified	02 (8hourly)

*Source: M/s Bhagavathi Ana Labs Pvt. Ltd.

3.3.3 NOISE ENVIRONMENT

In order to know the baseline noise levels, in and around the Project site. Noise levels were measured at 10 villages in the study area.

Details of noise monitoring stations are given in **Table - 3.4**.



4000 MW (5 X 800 MW) YADADRI THERMAL POWER STATION
Veerlapalem Village, Damercherla Mandal, Nalgonda (Dist), Telangana

Revised
EIA Report

TABLE - 4.6
AMBIENT AIR QUALITY - OVERALL SCENARIO

Station Code	Locations	GROUND LEVEL CONCENTRATIONS, UG/M ³			NAAQ standard for Industrial, Rural and Residential Areas
		BASELINE CONCENTRATION	INCREMENTAL CUMULATIVE CONCENTRATION	OVERALL CONCENTRATION	
PARTICULATE MATTER (PM10)					
A1	Project Site	50.9	5.0	55.9	100
A2	Veerappagudem	40.4	3.0	43.4	
A3	Wazirabad	61.5	<1.5	63.0	
A4	Daida	35.3	<1.5	36.8	
A5	Gottimukkala	48.6	2.0	50.6	
A6	Adividevulapalli	41.2	3.0	44.2	
A7	Veerlapalem	40.7	8.0	48.7	
A8	Ragadappa	39.8	3.0	42.8	
A9	Kallepalli	42.6	3.0	45.6	
A10	Damercherla	64.2	2.0	66.2	
SULPHUR DIOXIDE					
A1	Project Site	9.6	18.0	27.6	80
A2	Veerappagudem	10.1	9.0	19.1	
A3	Wazirabad	14.1	<5	19.1	
A4	Daida	8.3	7.0	15.3	
A5	Gottimukkala	11.3	<5	16.3	
A6	Adividevulapalli	10.1	7.0	17.1	
A7	Veerlapalem	9.4	11.0	20.4	
A8	Ragadappa	8.7	9.0	17.7	
A9	Kallepalli	10.1	7.0	17.1	
A10	Damercherla	12.5	<5	12.5	
OXIDES OF NITROGEN					
A1	Project Site	10.8	20	30.8	80
A2	Veerappagudem	11.4	9.0	20.4	
A3	Wazirabad	16.2	<5	21.2	
A4	Daida	10.5	<5	15.5	
A5	Gottimukkala	13.1	<5	18.1	
A6	Adividevulapalli	12.6	7.0	19.6	
A7	Veerlapalem	11.2	11.0	22.2	
A8	Ragadappa	10.3	9.0	19.3	
A9	Kallepalli	12.2	9.0	21.2	
A10	Damercherla	14.8	<5	19.8	