BEFORE THE NATIONAL GREEN TRIBUNAL

SOUTHERN ZONE BENCH AT CHENNAI

APPEAL NO. 13 OF 2019 (SZ)

IN THE MATTER OF:

P. SUNDARAVATHANAM & ANR. ...APPELLANTS

VERSUS

UNION OF INDIA & ORS. ...RESPONDENTS

INDEX

APPELLANT

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REJOINDER TO THE REPLIES FILED BY RESPONDENT NOS. 1 AND 4

MOST RESPECTFULLY SHOWETH:

1. That the Appeal has been filed by the Appellants challenging the Environmental Clearance dated 29.10.2018 under Section 16 of the National Green Tribunal Act, 2010 against the grant of Environmental Clearance (hereinafter referred to as the ("impugned EC") granted by the Ministry of Environment, Forests and Climate Change to M/s NLCIL (hereinafter referred to as the "Project Proponent"), for second expansion of (2X660 MW Supercritical Lignite based plant) adjacent to it's operating thermal power station–II

2. That, the averments made by the Respondent no.1and 4in theirrespective Replies are vehemently denied, unless specifically admitted herein and those in the Appeal are re-iterated. The main contentions which have been replied to/addressed by the Respondentsno.1 and 4 are as follows:-

    (i) The Appeal has been filed for publicity, personal gain and ulterior motive

    (ii) The site of expansion of the Thermal Power Station i.eCuddalore is Not critically polluted.

    (iii) Complete Document of the EIA was placed and available in the website of MoEF&CC

(v) The Project is needed to meet the National Energy Requirement

(vi) Cumulative impact assessment is not required to be done in this case as the ambient air quality is Within NAAQ standards.

(vii) Questions raised in Public Hearing have been considered by the EAC

(viii) The Ambient Air Quality has been correctly calculated and is within theNAAQ standards

(ix) EC is based on correct data in EIA regarding fuel input and Ash Content

(x) Project Proponent has carried out a Hydro-Geological study and the Fourth Respondent is not aware of Plagiarism from a 2009 Govt. Publication

(xi) IL&FS guidelines on siting are not mandatory or even directory in nature.

That the Appellant is rejoining/responding to the contentions raised by the Respondent No.1 and 4 in following paragraphs which are as follows:-

(i): In rejoinder to the contention (i)of the Respondent No.4 that the Appeal has been filed for publicity, personal gain and ulterior motive, it is stated that the same is wrong and denied. The Appellants are residents of Cuddalore District. The Appellants being part of the local community are project affected persons who arepreferring this Appeal against the grant of Environmental Clearance to highlight the adverse Environmental Impact of the said expansion.

3. The Principal Bench of this Hon'ble Tribunal in the matter of **Vimal Bhai vs. Ministry of Environment & Forest & Others(Appeal No. 5 of 2011)** has settled the proposition regarding the definition of aggrieved person as well as the *locus standi* of the person This Appeal was decided on 14.12.2011 while observing that -

"A reading of Section 2(j)(i) to (viii) would reveal that any individual, Hindu undivided family, Company, Firm, an association of persons or a body of individuals whether incorporated or not, trustees of a trust, a local authority and every artificial juridical person not falling within any of the preceding sub-clauses, would indicate "person" who can maintain an application/appeal under the NGT Act. But, it is the argument of the learned counsel of the Respondent that even the above defined person shall be a person either aggrieved or injured directly or indirectly and not otherwise.

Then the question arises whether in the environmental matters, a person who is really aggrieved/ injured shall alone be permitted to approach this Tribunal. A combined reading of the above sections, would indicate, that any person whether he is a resident of that particular area or not whether he is aggrieved and/or injured or not, can approach this Tribunal. In such situations, it is of course necessary to scan and find out the credentials of the applicant/appellants as to their true intentions and motives. No doubt that in the present case though the appellants have participated in the EC proceedings and they have not challenged the same. However, that does not mean that they cannot challenge the FC proceedings on any available legal grounds (However, it is to be noted that in the guise of challenging the FC, the appellants cannot be permitted to raise the grounds which might be raised, had the EC was challenged). Appellants apprehend a great danger and disaster to the environment and ecology, if the project is not properly envisaged and does not satisfy the principles of sustainable development and precautionary principles as is mandated under Section 20 of the NGT Act. In the matters of environmental cases, any individual or persons and body of individuals can agitate as to the correctness of the study of environment and ecology made by the granting authority. Further, nothing substantial has been demonstrated to doubt the credentials of the appellants except saying that they (appellants) are not aggrieved and/or injured person (s) under the Act and they are a busy body and their motives are ulterior. The person injured per-se as occurred in Section 18 (2) of the NGT Act is only for the purpose of claiming relief, compensation or settlement of disputes, is altogether different from the person aggrieved as available in Section 16. Person aggrieved and person injured are two different words which connote different meaning. Under Section 16any person aggrieved can approach this Tribunal by way of filing an appeal. Whereas, under Section 18 (2) the person injured per-se, whether it is an individual or a body of individual or a social organization or a Hindu joint family etc. Further under Section 14and 16 any person can approach this Tribunal for appropriate relief including the relief under Section 18."

"From the above it is clear that the State shall endeavour and safeguard the environment and wild life and it is the fundamental duty of the citizen to improve the natural environment including forests, lakes, rivers, and wildlife and also to have compassion for living creatures. Once, the protection and improving the natural environment is the fundamental duty of a citizen, any person can approach this Tribunal and agitate his grievance as to protection and improvement of the natural environment. The statutory provisions are subservient to the constitutional

mandates.Theperson as defined or person aggrieved as occurs in Section 2(j) 16 and 18 (2) of the NGT Act cannot be placed above "every citizen" as appears in Article 51(A) of the Constitution of India. Once the mandate is of every citizen, any person can approach this Tribunal complaining environmental threat in the activities of the State or any organization or individual.

Therefore, we are of the view that the appellants are interested persons in the environment andecology of the area, though they are not directly affected/ injured at this point of time. But, they canbe definitely called aggrieved persons since they apprehend some danger, if the project is launchedwithout taking proper precautions. The person aggrieved in environmental matters must be given aliberal construction and needs to be flexible. Therefore, we are of the considered opinion that persons like the appellants are also entitled to approach this Tribunal and the appeal ismaintainable."

4. It is very clear from the above cited Judgment that any person whether directly aggrieved or not may approach the Hon'ble Tribunal to initiate an action on *bonafide* ground to agitate his grievance as to protection and improvement of the natural environment.

5. ThePrincipal Bench in the case *of* ***Goa Foundation vs. Union of India, 2013 All India (NGT) Reporter (New Delhi) 234*** where on the question of *locus standi*, the Tribunal held as under –

"25.The very significant expression that has been used by the legislature in Section 18 is 'any person aggrieved'. Such a person has a right to appeal to the Tribunal against any order, decision or direction issued by the authority concerned. 'Aggrieved person' in common parlance would be a person who has a legal right or a legal cause of action and is affected by such order, decision or direction. The word 'aggrieved person' thus cannot be confined within the bounds of a rigid formula. Its scope and meaning depends upon diverse facts and circumstances of each case, nature and extent of the applicant's interest and the nature and extent of prejudice or injury suffered by him. P. RamanathaAiyar's The Law Lexicon supra describes this expression as 'when a person is given a right to raise a contest in a certain manner and his contention is negative, he is a person aggrieved' [EbrahimAboodbakar v. Custodian General of Evacue Property [AIR 1952 SC 319]. It also explains this expression as 'a person who has got a legal grievance i.e. a person wrongfully deprived of anything to which he is legally entitled to and not merely a person who has suffered some sort of disappointment'.

41.The implication of jurisdiction is, of course, not at the discretion of the judge but is relatable to the legislative intent and may be expanded within the framework of the statute. Once the legislature has intended to include 'all

civil cases' in contradistinction to criminal cases, then it is not desirable for the Tribunal to carve out another class of cases which are to be excluded from the jurisdiction of the Tribunal. This will amount to adding words to a statute which are not provided otherwise. In a civil case which raises a question relating to environment, the Tribunal shall have jurisdiction to decide disputes arising out of such a question. Therefore, there is no need to carve out any exception for exclusion which is not spelt out by the legislature itself.

42.Under the scheme of the Act, an anticipated action will also fall within the ambit of the 21 jurisdiction of the Tribunal. Section 20 of the NGT Act provides that, while deciding cases before it, the Tribunal shall take into consideration the three principles -- principle of sustainable development, precautionary principle and the polluter pays principle. The precautionary principle would operate where actual injury has not occurred as on the date of institution of an application. In other words, an anticipated or likely injury to environment can be a sufficient cause of action, partially or wholly, for invoking the jurisdiction of the Tribunal in terms of Sub-sections (1) and (2) of Section 14 of the NGT Act. The language of Section 20 is referable to the jurisdiction of the Tribunal in terms of Sections 14 and 15 of the Act. The precautionary principle is permissible and is opposed to actual injury or damage. On the cogent reading of Section 14 with Section 2(m) and Section 20 of the NGT Act, likely damage to environment would be covered under the precautionary principle, and therefore, provide jurisdiction to the Tribunal to entertain such a question. The applicability of precautionary principle is a statutory command to the Tribunal while deciding or settling disputes arising out of substantial questions relating to environment. Thus, any violation or even an apprehended violation of this principle would be actionable by any person before the Tribunal. Inaction in the facts and circumstances of a given case could itself be a violation of the precautionary principle, and therefore, bring it within the ambit of jurisdiction of the Tribunal, as defined under the NGT Act. By inaction, naturally, there will be violation of the precautionary principle and therefore, the Tribunal will have jurisdiction to entertain all civil cases raising such questions of environment. Such approach is further substantiated by the fact that Section 2(c), while defining environment, covers everything. Section 2(m) brings into play a direct violation of a specific statutory environmental obligation as contemplated under Section 5 of the Environment Act as being substantial question relating to environment These provisions, read with Section 3(1) and Section 5 of the Environment Act, which place statutory obligation and require the Government to issue appropriate directions to prevent and control pollution, clearly show that the legislature intended to provide wide jurisdiction to the Tribunal to deal with and cover all civil cases relating to environment, as stated by the Supreme Court in the case of S.A.L. Narayan Row &Anr. v. 22 IshwarlalBhagwandas&Anr. [AIR 1965 SC 1818). The character of the proceedings is normally not with reference

> *to the relief that the Tribunal can grant but upon the nature of the right violated and the appropriate relief which can be claimed."*

Therefore, while considering the above-stated judgment, it is very clear that the present Appeal is filed by persons who are affected by the expansion and not otherwise as alleged by the Respondent No.4.

6. In ***SAVE MON REGION FEDERATION VS. UNION OF INDIA AND ORS.(M.A. NO. 104 OF 2012IN APPEAL NO. 39 OF 2012)*** it has been held that:-

> "18. Law gives a right to 'any person' who is 'aggrieved' byan order to prefer an appeal. The term 'any person' has tobe widely construed. It is to include all legal entities so asto enable them to prefer an appeal, even if such an entitydoes not have any direct or indirect interest in a givenproject. The expression 'aggrieved', again, has to beconstrued liberally. The framers of law intended to give theright to any person aggrieved, to prefer an appeal withoutany limitation as regards his locus or interest."

7. The National Green Tribunal in ***Krishan Kant Singh v. M/s. TriveniEngg. Industries Ltd.[O.A NO.317/2014]*** held that:

> *"Under the provisions of the NGT Act, any aggrieved person can approach the Tribunal for redressal of his grievances in relation to environment within the ambit and scope of Sections 14, 16 and 18 of the NGT Act. The legislative object appears to be to catalyse the access to environmental justice, which need not be circumscribed by strict rule of locus standi in legal prescriptions."*

ii: In rejoinder to the contention (ii) of the Respondent No.1 and 4 that the site of expansion of the Thermal Power Station i.eCuddalore is Not critically polluted it is stated that the same is wrong and denied. It is stated that the Cuddulore SIPCOT region which is about less than 25 Kms in aerial distance from the present Plant which area is known to be one of the critically and highly polluted areas in India because of the continuing rapid industrialization over the last 15-20 years' time. As of today, within a radius of 25 kilometers aerial distance from the present Plant, there are the existing Thermal Power Plant units (and previous expansions) of the power plants in the area, associated mines, ash pits, and additional industry

8. In 2016,the score of Cuddalore on CEPI Index was 70.12 making the area Critically Polluted Area. In the CEPI data pertaining to 2018 produced before this Hon'ble Tribunal in Original Application No. 1038/2018 titled News item published in "The Asian Age" Authored by Sanjay Kaw-"CPCB to rank industrial units on pollution levels", the CEPI score of Cuddalorewas 62.56 because of which Cuddalore continued to be a Severally Polluted Area. It is important to mention here that the slight improvement does not guarantee that the area would not be relegated to it's earlier poor score or may be even worse. The fact remains that the Plant of the Respondent No.4 is a Red Category Industry operating in an area which environmentally Criticalhaving severe pollution even till today.

iii. In rejoinder to the contention no iii of the Respondent no.4 that Complete Document of the EIA was placed and available in the website of MoEF&CC, the same is wrong and denied. The Appellant has placed the Copy of EIA Report in CD showing the Incomplete EIA Report as uploaded/downloaded from MoEF&CC website as Annexure-A3. At the time of preparation of the present Appeal there were a number of documents which were not available online at the website of the Respondent No.1 which fact is acknowledged in the Reply filed by both Respondents. Respondent No.1 in it'spara D states:-

> "However, due to size limitation for each application, the annexures to the EIA report could not be uploaded as it was bulky document which contains raw environmental data and certain additional documents."

Therefore, the following documents like:-

(i) Sub-committee's recommendation made during the site visit on 4-5th February,2017

(ii) Request letter to DG-CSIR for facilitating the alternate new technologies available for utilizing of dry fly ash to enhance its utilization levels

(iii) Carbon Footprint Study

(iv) Need based assessment study/skill mapping for all the villages located in 10 km radius from the project site.

(v) Detailed and time bound action plan for phasing out of existing unit i.e. TPS-I along with waste management plan

(vi) Source of water and its sustainability even in lean season along with details of ecological impacts arising out of withdrawal of water and taking into account interstate shares, if any.

(vii) Vision document specifying prospective long term plan

(viii) Hydro geological study of the area through an institute /organisation of repute.

(ix) 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 waste water into the river/sea which were to be submitted along with EIA report.

(x) Detailed plan for rainwater harvesting and its proposed utilization in the plant.

(xi) Socio economic study of the study of area comprising of 10 km from the plant site (to be carried out through reputed institute/agency) consisting of detail assessment of the impact on livelihood of the local communities.

(xii) Air quality monitoring data of 104 observations a year for relevant parameters at air quality monitoring stations assessing for compliance of AAQ standards (annual average as well as 24 hours).

(xiii) Cumulative impacts of all sources of emissions including handling and transportation of existing proposed projects on the environment of the area which was to be assessed in detail alongwith details of the model used and input data used for modelling had to be provided. The air quality contours were to be plotted on a location map showing the location of project site

habitation nearby, sensitive receptors, if any. The windrose and isopleths were to be shown on the location map and the cumulative study had to include impacts on water soil and socio-economics.

(xiv) Radio activity and heavy metal contents of coal which were to be sourced had to be examined and submitted along with laboratory reports.

(xv) Details of transportation of fuel from the source (including port handling) to the proposed plant and its impact on ambient AAQ had to be suitably assessed and submitted.

(xvi) Detailed scheme for raising green belt of native species of appropriate width (50 to 100m) and consisting of at least 3 tiers around plant boundary with tree density of 2000 to 2500 trees pa with good survival rate of around 80% shall be submitted.

And other Annexures have not been placed on Public Domain on the website of MoEF&CC so as to facilitate persons from local project affected community to analyse, assess and critique the project, it's adverse impact on their Environment as such. Therefore, without the above studies/documents in EIA uploaded on the MoEF&CC website, the Project Affected persons were unable to prepare and do a thorough Environmental Impact Analysis thereby leading to infringement of their right to access to Justice. As far as getting the documents from RTI is concerned the Respondent No.1 by advocating the use of RTI cannot try to condone the non-uploading of the annexures of EIA. Secondly, Respondent No.1 is duty bound to follow the case of Ms. ShibaniGhosh vs. Mr. Shiv Pal Singh, decision No.CIC/SG/C/2011/001409/17503 decided by the Central Information Commission on 29.02.2012 in letter and spirit which it has failed to do in this case.

9. In the case of Ms. ShibaniGhosh vs. Mr. Shiv Pal Singh, decision No. CIC/SG/C/2011/001409/17503 decided by the Central Information Commission on 29.02.2012 it has been held that:-

> "The Right to Information is a fundamental right of the citizens which has been codified by the RTI. The act envisions that all citizens shall receive information primarily by *suomoto* disclosures by various public authorities as prescribed by section (4) of the act. Disclosures in accordance with the said Section are crucial to ensure transparency and accountability in institutions. This would reduce the load of RTI Applications being filed with each institution as information would be freely available to citizens and they would not have to apply for it. It further envisages that citizens would be required to specifically ask for information under section (6) only in a few cases. Citizens have been demanding that certain information is essential to them and should be available proactively in form of public notice boards, display boards etc. The Commission notes that the points on which information is sought to be displayed are actually covered under Section 4(1)(c) &(d) of the RTI Act."

10. The Commission directed the PIO to ensure that information related to Forestclearances to be displayed on the website of the Ministry of Forest & Environment and therefore the Respondent No.3 in that case was required to upload on it's website Form-I, Form-IA, Conceptual Plan and EIA/EMP report so that the public could have pointed out the omissions/commissions in those documents as the outcome of the EIA report would touch the lives of the people residing in the area. Considering the above stated decision of the CIC read with Article 19 of the Constitution of India, the right of a citizen to know has been infringed due to which the whole process of EIA and issuance of EC would not be free from doubt.

11. It is stated that the EAC failed to consider that the Project Proponent has provided incomplete information to it. Any EC granted on incomplete information is null and void. The Condition No.26 of the Environmental Clearance very categorically says that:-

> " 26. Concealing factual data or submission of false /fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act,1986".

Therefore, the EC dated 29.10.2018 is liable to be withdrawn on this ground alone.

(iv): In Rejoinder to the contention (iv) of the Respondent No.4 that the Project is needed to meet the National Energy Requirement it is stated that the same is wrong and denied. It is stated that Tamil Nadu currently has an installed capacity (including allocation from central generating stations) 32840 MW[1] against peak demand of 15727 MW[2] during 2019-20, showing a huge surplus installed capacity.

	Coal	Lignite	Gas	Diesel	Nuclear	Hydro	RES	Total
Installed Capacity (MW)- CEA (INCLUDING ALLOCATED SHARES IN JOINT & CENTRAL SECTOR UTILITIES)	11833	1791	1027	211.7	1448	2178	14352	32840

12. The projections made under EPS 18 were too high and have been revised in EPS 19, it seems to be a pure attempt of misguiding by the respondent no 4 by quoting EPS 18 and EPS 19 figures alternatively based on their convenience to portray a misleading picture of energy deficit, i.e., EPS 18 projected peak demand in Tamil Nadu to be at 20,816 MW[3] in 2016-17 which was revised to 15,412 MW by EPS 19 showing a change of nearly 26% in projected demand.
13. Further the demand projected through EPS 19 also seems to be projected on higher side when compared to actual demand data for past four years and reflects that actual peak demand was 8.8% and 13.6 % less than projected demand under EPS 19 respectively for 2018-19 and 2019-20.

	2016-17	2017-18	2018-19	2019-20
Uncertainty in Load Growth (Actual Peak Demand) (MW)	14823[4]	15,001[5]	15483[6]	15727[7]
Projected (EPS 19) Peak Electricity Demand at Power Station Bus Bars (Utilities) (MW)	15412	16299	17230	18213
%age difference between projected peak demand and actual peak demand (MW)	-3.8%	-8.0%	-10.0%	-13.6%

[1] http://cea.nic.in/reports/monthly/installedcapacity/2020/installed_capacity-06.pdf
[2] http://www.cea.nic.in/reports/annual/lgbr/lgbr-2020.pdf
[3] https://powermin.nic.in/sites/default/files/uploads/Power_For_All_Tamilnadu_Signed.pdf
[4] http://www.cea.nic.in/reports/annual/lgbr/lgbr-2017.pdf
[5] http://www.cea.nic.in/reports/annual/lgbr/lgbr-2018.pdf
[6] http://www.cea.nic.in/reports/annual/lgbr/lgbr-2019.pdf
[7] http://www.cea.nic.in/reports/annual/lgbr/lgbr-2020.pdf

Total energy demand also saw similar diversions when actual energy demand was respectively 6.9% and 12% less than the projected energy requirement by EPS 19 for 2018-19 and 2019-20.

	2016-17	2017-18	2018-19	2019-20
Uncertainty in Energy Requirement Growth (Actual Energy Requirement) (MU)	104511	106006	109482	108816
Projected (EPS 19) Electrical Energy Requirement at Power Station Bus Bars (Utilities) (MU)	105923	111583	117505	123724
%age difference between projected energy demand and actual energy demand (MU)	-1.3%	-5.0%	-6.8%	-12.0%

14. Further Tamil Nadu has more than 7500 MW[8] coal based power plants in various stages of construction which is further going to be surplus capacity which might not even be required, So any further proposal to add new capacity will surely lead to further surplus capacity and will not be required and will add to wastage of public money and non-Performing-Assets (NPAs) in power sector.

List of Operational Coal Based Power Plants in Tamil Nadu		
S.No.	**Power Plant Name**	**Capacity (MW)**
1	Chennai power station	414
2	Cuddalore IL&FS power station	1200
3	Mettur Thermal Power Station	1440
4	Mutiara Thermal Power Plant (Coastal Energen)	1200
5	Neyveli Thermal Power Station I	920
6	Neyveli Thermal Power Station II	1970
7	Neyveli Zero power station	250
8	North Chennai Thermal Power Station	1830
9	Thoothukudi IBTPL power station	300
10	Tuticorin NTPL power station	1000
11	Tuticorin Thermal Power Station	1050
12	Vallur Thermal Power Plant	1500
	Total (MW)	**13074**

List of Under Construction Coal Based Power Plants in Tamil Nadu		
S. No.	**Power Plant Name**	**Capacity (MW)**
1	Ennore SEZ Super Critical Thermal Power Project (Vayalur)	1320
2	Ennore Thermal Power Station	660
3	New Neyveli Thermal Power Station	1000
4	North Chennai Thermal Power Station	800
5	SEPC Tuticorin power station	525
6	Udangudi Super Critical Thermal Power Project	1600
7	Uppur power station	1600
	Total (MW)	**7505**

[8] https://endcoal.org/global-coal-plant-tracker/summary-statistics/;

The Appellants reiterate their reliance upon a report dated 01.01.2018 of the Central Electricity Authority's '*Committee on Optimal Energy Mix in Power Generation on Medium and Long Term Basis*' has clearly explained how the slow ramp up speed of coal-based thermal power plants make them economically unviable to meet peak demands which is Annexure-A6 with the Appeal.

(v): In Rejoinder to the contention (v) of the respondent no.1 and 4 that Cumulative Impact Assessment is not required to be done in this case as the ambient air quality is within NAAQ standards, it is stated that the same is wrong and denied.

15. As per paragraph H of the MOEFCC's Affidavit mentions, " As reported in the EIA Report there are 5 power plants and 4 Lignite mines located within the study area (10 km radius) of the proposed project." As the appeal noted in paragraph 22, there are associated ash pits, additional industry, and transportation impacts as a result of these power plants and lignite mines. These plants, mines and industries along with their allied activities are the main sources of heavy pollution in the Cuddalore District. For this purpose, it is necessary to conduct Cumulative Impact Assessment as part of the EIA study of the project which has not been done in this case.
16. Even the ToR condition 51 mandated that Cumulative Impact of all sources of emissions had to be carried out but the same was not done on the ground.Impacts due to the proposed project is predicted using Aermod model and the existing baseline concentration covers all existing sources as per the Project Proponent andthe concentrations are found to be within prescribed limits.
17. That the Project Proponent has admittedly only got assessed air emissions using Aermod model whereas it is well settled by a number of Judgments that for a Cumulative Impact Assessment total impact resulting from the interaction of the project with other project activities around it- past, present and those to come up in the future needs to be assessed.

18. That it is stated that no Cumulative Impact Assessment was done in this case, despite the mandatory requirement under Paragraph 9.4 of Form-1 of Appendix 1 of the EIA Notification, 2006. A perusal of the Paragraph 9.4 of Form-1at page 39 of the Index to the Compilation of Documents filed by the Respondent No.4 filled by the Project Proponent mentions the cumulative impact of industries in Plant's vicinity as 'No' which is patently incorrect. This also amounts to providing faulty and misleading information in Form 1 and the EC ought to be quashed in this ground alone.

19. That in Section 3.10.2.5 Industrial Estatesof the EIA the Industrial estates in the district Cuddalore as:-

    a. SIDCO Industrial Estate: Semmandalam, Cuddalore-1
    b. SIDCO Industrial Estate: Vadalur
    c. Ceramic Industrial Estate: Vridhachalam
    d. SIPCOT Industrial Estate, Phase I and II: Kudikadu, Cuddalore -5.

That Cuddulore SIPCOT region which is less than 25 Kms in aerial distance from the present Plant is known to be one of the critically and highly polluted areas in India because of the continuing rapid industrialization over the last 15-20 years' time. The SIPCOT Industrial Complex Phase-I and Phase -II at Cuddaloreis having about 30 industrial units with majority of them being highly polluting, having Comprehensive Environment Pollution Index (CEPI) score of 77.45 in 2009. The MoEF, Government of India, had imposed a moratorium on Environmental Clearance for new projects and the expansion on the 43 critically polluted clusters on 31.1.2010, in order to stipulate the environmental remediation/ mitigation activities by the industries as well as the State Governments concerned.

20. That this Hon'ble Tribunal observed the meaning and scope of the term Cumulative Impact Assessment Study in it's Judgment dated 10th November,2014 in Appeal no. 50 of 2012 in ***T. Muruganandam&Ors. vs. Ministry of Environment & Forests &Ors.*** as follows:-

> *"41…..This Cumulative Impact as the term indicates is not the impact of any project in isolation <u>but it is a total impact resulting</u>*

from the interaction of the project with other project activities around it- past, present and those to come up in the future. It is a comprehensive view of the impacts resulting from all the projects- past, present or planned ones, on the environment. Cumulative Impact may be same or different and those arising out of individual activities and tend to be larger, long lasting and spread over a greater area within the individual impact. Such studies are therefore commonly expected to:

i. *Assess effects over a larger area that may cross jurisdiction boundaries.*
ii. *Assess effects during a longer period of time into the past and future.*
iii. *Consider effects on other eco-system components due to interactions with other actions, and not just the effect of the single action under review.*
iv. *Include other past, existing and future (reasonably foreseeable) action, and*
v. *Evaluate significant effect in consideration of other than just local and direct effects."*

21. In ***VimalBhai v. Ministry of Environment &, 2011 SCC OnLine NGT 16***which was an Appealfiled against the forest clearance granted for diversion 80.507 ha of forest land for the construction of a 65m dam across the river Alakhnanda in Uttarakhand, the Hon'ble NGT delved into detail and to what would cumulative effects would entail. It has stated that cumulative effects are those that -

> "*(i) are caused by the aggregate of past, present, and future actions; (ii) are the total effect, including both direct and indirect effects, on a given resource, ecosystem, and human community of all actions taken, no matter who has taken the actions; (iii) need to be analysed in terms of the specific resource, ecosystem, and human community being affected; (iv) cannot be practically analysed beyond a reasonable boundary; the list of environmental effects must focus on those that are meaningful; (v) rarely correspond to political or administrative boundaries; (vi) may result from the accumulation of similar effects or the synergistic interaction of different effects; (vii) may last for many years beyond the life of the project that caused the effects; and (viii) should be assessed in terms of the capacity of the affected resource, ecosystem, and/or human community to accommodate additional effects.*"

22. At this juncture, it is pertinent to note contents of the EIA Guidance Manual for Thermal Power Plants prepared for the MoEF, Government of India, by IL & FS Ecosmart Ltd., In the said Guidance Manual for thermal power plants Cumulative Impacts have been defined as follows:

> **"***2.8.3 Cumulative Impacts*

Cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIA together with other projects in the same vicinity causing related impacts. These impacts occur when the incremental impact of the project is combined with the cumulative effects of other past, present and reasonably foreseeable future projects..”

23. That proceedings before the EAC dated 30 August, 2018 fails to mention even a word for need for carrying out Cumulative Impact Assessment even when the measured levels of at least one major pollutant, PM10, are very close to the NAAQS in the area, as shown in the EIA, Table 3-8 (excerpted below).

Table 3-8 Summary of the average baseline concentrations of pollutants

Parameters	Conc.	NAAQ Standards	Locations				
			A1	A2	A3	A4	A5
			Project Site	Periyakappankulam	Kunankurichi	Umangalam	Uttangal
PM10 Conc. (µg/m³)	Min.	100 (24 Hours)	60.0	62.0	60.8	46.0	50.3
	Max.		95.3	82.0	86.0	83.0	86.0
	Avg.		80.4	70.6	72.9	67.1	65.4
	98th 'tile		93.2	81.4	85.7	81.8	83.1

24. At Monitor A1, the 98th percentile is 93.2 ug/m3 and the maximum is 95.3 ug/m3. The NAAQS for PM10 is 100 ug/m3. This is not “well within” the NAAQS. Rather, given the very small sampling duration of 3 months, this is very close to the NAAQS. In addition, the maximum and 98th percentile values of PM10 at all of the other locations A2 through A5 should also be considered to be very close (i.e., more than 80%) to the NAAQS due to the very short sampling duration. Therefore, MOEF&CC is incorrect when it states (contradictory to facts) that the AAQ levels within the study area are “well within” the NAAQS. They are not, for at least PM_{10}. The EAC ought to have directed for carrying out a Cumulative Impact Assessment in the totality of above facts and circumstances. The decision of the EAC in recommending the project without any Cumulative Impact Assessment, shows non-application of mind on the part of EAC on this issue.

(vii) **In rejoinder to the contention vii.of the Respondent No.4** that Questions raised in Public Hearing have been considered by the EAC is wrong and denied. It is re-iterated that during the Public Hearing the participants came up with concerns about the proposed expansion, given the huge amount of environmental pollution likely and being caused by the Thermal Power Stations.

25. According to the Participants:-

a. There was no clarification provided for the need of land fill in a plane surface.

b. There is no clarification regarding the whether the water requirement is after recovery from effluent treatment plant or without recovery.

c. It was also taken up that the fuel requirement is mentioned as 10 MT in one document and 8 MT is another page of the application and if 10 MT of fuel is to be used then this project shall not fall in supercritical thermal power plant category so requested clarification in the project report.

d. It was also a matter of concern that fly ash generation would be 577.5 T/hr there will be increase in time and cost for the disposal of the same.

e. According to the participants pollution monitoring equipment should be provided in their village as fly ash is deposited in 70% to 80% of their agricultural land, lands have become not fit for Agricultural purpose due to ash dumping

f. Few people also complained about dumping of ash in fertile agricultural fields.

g. It was also mentioned that as Ash from the power plant mixes with water.

h. People wanted purified drinking water facilities to be extended to the villagers

i. It was also stated during the public hearing that the public were affected by breathing problems as there was dust and pollution problem in the area.

j. It was highlighted in the public hearing that due to air pollution, cancer has increased. It was stated that people are suffering from diseases and going to hospital. People also showed concern for a health survey team to be formed to conduct health survey of the people and take necessary action.

k. The Public at Public Hearing in their Query Nos. 4,7,8,10 and 18 have highlighted that people are affected with lung and kidney diseases. In reply to Query No. 18 the Project Proponent states that there were proven studies for air quality and water purity to prove that kidney and TB is not caused because of the Neyveli environmental conditions. However, no such details of the proven studied have been named or cited and nothing annexed with the EIA Report and the issue of health impact has been evaded cleverly by the Project Proponent. Infact no health assessment study has been done in this case which can portray the actual Health situation in the area surrounding the Thermal Power Plant in question.

l. There was also a concern by the public for forming a team to checking and taking necessary action to control air pollution.

m. There was concern about details to be provided for the transport of ash generated from the new power plant. It is stated that EC Specific Condition A(v) states that "Transportation of the Lignite shall be by combination of closed and open conveyor system from the Lignite Mines." However, dust from open transport of lignite was mentioned repeatedly in the public hearing comments and only a closed system should therefore be used.

n. According to Query No. 5 which is to the effect that the village surrounding is affected with dust, air and water pollution due to the operation of M/s. NLCIL mines and query No. 11 which states

that lorrycarrying lignite/overburden from Mine-I to Vadalur causing dust pollution and producing lung diseases and Query No. 13 which states that more than 200 lorries are plying from Mine-I to Mine-II in the village area in day time for transport of lignite and it causes dust pollution and vehicles also met with accident. Hence transporting lignite by lorry from uncovered vehicles needs to be stopped.

26. To the above queries it was incumbent upon the Project Proponent to show from the minutes of Public Hearing as to whether satisfactory answers to the queries of the Public during Public Hearing have been given by the Project Proponent. At pages 31 to 34 of the Reply filed by the Project Proponent, is only referring mainly to EAC minutes, which does not show that the EAC has considered the detailed scrutiny of whether Public Hearing queries have been answered.
27. That it is re-iterated that during the Public Hearing of instant project, many significant questions pertaining to various issues such as Air Pollution, Water Pollution, Compensation, Employment, Loss of Livelihood, etc. have been raised by different people. It is submitted that these questions have not been considered by the EAC during the appraisal of the project. Nothing in the EAC meeting minutes specifies if the EAC has made any effort to analyze the proceedings of the Public Hearing.
28. That it is re-iterated that it is EAC's duty to peruse through the Public Hearing proceedings, consider the questions which have been raised by the Public and the response of the Project Proponent for the same. Also, the EAC is required to record whether response of the Project Proponent is accepted or rejected by it and give reasons for the same. In the case of the instant project, none of it has been done by the EAC as the minutes do not reflect of any consideration of views expressed by the local community in the Public Hearing. This only means that the EAC has only considered the information which has been submitted by the Project Proponent and

not any information given by or discussed with the Public. Hence, the entire purpose of Public Hearing has been nullified by the EAC.

(viii) **In rejoinder to the contention (viii) of the Respondent No. 1 and 4** that the Ambient Air Quality has been correctly calculated and is within the NAAQ standards, the same is wrong and denied.

29. While it is true that a supercritical cycle is more efficient than a subcritical cycle, the actual efficiency realized depends on the exact steam pressure and temperature conditions in use and not just the design conditions. It simply means that more electrical power can be generated using the same amount of coal burned. Since emissions depend on the coal burned quantity, one should focus on that instead of electrical power that is generated - i.e., super or sub critical cycles. The Respondent No.4's reply mentions mercury emissions but does not state what controls are proposed for mercury control, beyond the cobenefits that will be realized as a result of FGD controls.

30. It is denied that what is being proposed by the Project is "latest technology." Simply using a supercritical cycle is NOT latest technology. Latest technology is ultrasupercritical cycle - with even higher steam temperatures and pressure than what is being proposed. In addition, 98% reduction of SO_2 using FGD is NOT the best technology either. There are many examples of greater than 99% reduction using FGD. In summary, what is being proposed in not latest.

31. It is stated that the baseline data collected by the Project Proponent is only with respect to the summer months of March-May 2017 is inadequatesince it is only during winter months that one can capture the worst case scenario which is not the case here, as the baseline data pertains to Summer months of March-May 2017. Taking a large metrological data which includinganything from 1 year to 5 years of complete (i.e., not just seasonal) meteorological (met) data will capture the variability of this data. That is the reason for requiring a large metrological data set for AERMOD (or any other) dispersion model - i.e., to capture the maximum possible degree of variability in metrological parameters such as wind speed,

direction, and sigmas. Regarding monitoring data collection, simply collecting a very small, seasonal, data set that also for summer months, similarly does not capture the variability.Just because March through May may be the most "oppressive" season does not mean that, in a given year, such conditions cannot begin earlier or end later. This contention that the oppressive conditions are fixed and only occur during March-May every year is simply false. Oppressive conditions are variable, and particularly so with climate change impacts being felt every year, which is increasing the variablity of conditions.

32. It is stated that the measured levels of at least one major pollutant, PM_{10}, are very close to the NAAQS in the area, as shown in the EIA, Table 3-8 (excerpted below).

Table 3-8 Summary of the average baseline concentrations of pollutants

Parameters	Conc.	NAAQ Standards	Locations				
			A1	A2	A3	A4	A5
			Project Site	Periyakappankulam	Kunankurichi	Umangalam	Uttangal
PM10 Conc. (µg/m³)	Min.	100 (24 Hours)	60.0	62.0	60.8	46.0	50.3
	Max.		95.3	82.0	86.0	83.0	86.0
	Avg.		80.4	70.6	72.9	67.1	65.4
	98th 'tile		93.2	81.4	85.7	81.8	83.1

At Monitor A1, the 98th percentile is 93.2 ug/m3 and the maximum is 95.3 ug/m3. The NAAQS for PM_{10} is 100 ug/m3. This is not "well within" the NAAQS. Rather, given the very small sampling duration of 3 months, this is very close to the NAAQS. In addition, the maximum and 98th percentile values of PM_{10} at all of the other locations A2 through A5 should also be considered to be very close (i.e., more than 80%) to the NAAQS due to the very short sampling duration.

33. Therefore, MOEF&CC is simply incorrect when it states (contradictory to facts) that the AAQ levels within the study area are "well within" the NAAQS. They are not, for at least PM_{10}.The predicted PM is 97.43 ug/m3 as compared to the norm of 100 ug/m3. Given the limited period of baseline data collection and the lack of proper meteorological data used in the modeling, it is more than likely that the predicted Particulate Matter is under-predicted. With almost no margin (i.e., at 97.43% of the norm), the MOEF&CC cannot assert, with any confidence, that the Particulate Matter NAAQS will be met. On the contrary, the analysis suggests that this NAAQS will be exceeded.

Table 4-12 Total Maximum GLCs from the proposed Stack Emissions for 150m Stack

Pollutant	Max Base line Conc. (µg/m3)	Estimated Incremental Conc. at source (µg/m3)	Total Conc. (µg/m3)	NAAQ standard	Distance from Source (km)	Direction e	% increase
PM	95.3	2.13	97.43	100	1.4	NE	2.2
SO_2	17.8	7.11	24.91	80	1.4	NE	39.9
NO_x	29.1	7.13	36.23	80	1.4	NE	24.5

34. Second, with regards to mercury, the MOEF&CC simply makes statements with no basis. The EIA makes no quantitative evaluation of mercury impacts from the expansion of the power plant. In fact, mercury emission calculations and modeling are wholly absent in the EIA analysis.The EIA at page 42, only contains a cursory statement about mercury as follows:

> "2.5.3.10 Mercury abatement as co-benefit of reduction of NOx, SO2 and dust by the operation of pollution control through ESP, FGD and DeNox system."

35. In addition, it is not clear the extent to which "abatement" of mercury will occur through the use of FGD, ESP, and DENOX. Taking these one at a time, FGDs can only remove the oxidized form of mercury (typically mercury chloride). Thus, the effectiveness of FGD as a mercury abatement device depends on the oxidized fraction of mercury in the exhaust gases at the inlet to the FGD. No analysis has been presented on this point. In addition, some fraction of this oxidized mercury can be reconverted to elemental mercury and reemitted from the FGD. No analysis has been presented on this point. Next, considering the ESP, it can only capture that fraction of the mercury which is present in the particulate form - i.e., bound in the ash. Again, this fraction, which is typically small, is not analyzed or presented in the discussion. Third, with regard to DENOX (i.e., SCR), it is not a mercury abatement device. Finally, any mercury that is present in elemental form in the exhaust gases leaving the boiler will be unlikely to be abated in any of the three devices mentioned. Based on this, it is simplistic to simply state, without quantification, how much net abatement of mercury might

occur in these three pollution control devices, which are designed for other pollutants.

36. Predicted GLC of PM using AERMOD which itself uses a small metrological data set is therefore, unreliable that also for summer months. To make the predictions more robust, a larger - i.e., minimum 1 to 5 years of metrological data should be used for modeling. Even so, as Respondent No.4 admits, there is a predicted increase of GLC for Particulate Matter, even with the flawed modeling which has been conducted. And, it is incorrect to conclude that this increase in predicted GLC for Particulate Matter, coupled with the monitored concentration of Particulate Matter is within the NAAQS because the ambient monitoring is also for very limited time periods and that also in summer months. Thus, both monitoring and modeling are flawed and their combined results cannot be used to robustly conclude that NAAQS will be met in the future.

37. In Paragraph M the MOEF&CC does not provide any technical rebuttals to the deficiencies noted in paragraph's 23 to 25. Rather it simply repeats that it conducted three months of meteorological monitoring since that is all that was required per the EIA Notification. 3 months of meteorological monitoring that also in summer months is insufficient to capture the variability of the meteorological parameters at any location. The terms of the EIA Notification cannot overcome this basic technical deficiency.Typically 1 to 5 years of meteorological data are required that too of winter months.

38. With regards to FGD, even 98% control is not something which can be regarded as great. Best plants globally are achieving greater than 99% control. This is not a trivial difference since a FGD with 99% control emits half of the SO_2 emissions as compared to a FGD with 98% control. Second, simply designing a FGD with a certain control efficiency, whether it is 98%, or 99%, or any other does not ensure that this level of removal will the achieved and maintained over time during actual operation.

39. The MOEF&CC's contention that FGD (for SO2 reduction) and DENOX (for NOx reduction) will be installed. It is stated that this is not sufficient. Appellant's Paragraph 29 simply recognizes that just installing control systems does not mean that they will work or work at the proper efficiency. They have to be:

(a) properly designed;

(b) properly maintained; and

(c) properly maintained.

It is stated that none of these important factors are discussed in the EIA. The EC granted to the operator does not have any requirements for design, maintenance, and operations either. So, for the MOEF&CC to simply assume that the controls will work and that the norms will be met – is unsupported and insufficient.

40. Maintaining this level of efficiency requires significant effort in equipment maintenance, maintaining limestone quality, slurry quality, spray header maintenance, pump maintenance, and many other factors. A detailed operational and maintenance plan is essential in order to ensure this. Similarly, ESPs are maintenance-heavy items. Maintaining ESPs in good condition requires significant effort, especially as they age. Mechanical components in ESPs undergo significant deterioration leading to distorted air flows and loss of electrical fields, collectively leading to lower ESP Particulate Matter capture efficiency. This is based on a long history of ESP operations worldwide. As to CEMS, Respondent No.4 states that CEMS will be used but does not provide details.

41. It is stated that on the issue of stack height-of course, higher stack height means more dispersion - i.e. dilution. Which is exactly what will happen even if the stack height is 100 meters. More focus should be on reducing the mass of pollutant emissions to the greatest degree possible - i.e., using SCR with greater than 90% efficiency; FGD with 99%+ efficiency; fabric filters instead of ESPs for

PM control; and additional activated carbon controls for mercury. Without doing the best to reduce mass emissions, the proposed power plant is indeed relying on dilution to solve its problem.

ix. In rejoinder to contention ix of the Respondent No.4 that EC is based on correct data in EIA regarding fuel input and Ash Content it is stated that the same is wrong and denied. Respondent No.4 merely reiterates conclusions based on faulty and inconsistent data presented in the EIA, and fail to respond to the allegations set forth by Appellants. Respondent No.4 do not address the fact that it based its unusually low estimation of 4.83% ash content on average of an unknown number of "lignite core samples" from undisclosed locations as stated in EIA Table 2-15, Page 64, even though the very same EIA contains numerous references to typical ash content of lignite coal as being 10% – more than double the amount Respondent No.4 rely upon to estimate volume of ash to be generated. Further, the maximum ash generation calculations in the EC were based on an assumption of that new units would consume only 8.09 Mt lignite per annum, but EIA Table 2-18 at Page 65 cites a fuel consumption rate of 577.5 tons/hour for each of the two generating units, (i.e., 1,155 tons/hour), which equates to 10.125 Mt/year. This is 25% higher than the amount relied upon by Respondent No.4 for ash volume calculations. Respondent No.4 has failed to provide any evidence to substantiate the lower fuel consumption estimate it relied upon to calculate ash volume.

42. Respondent No.4 has utterly failed to address the detailed, specific allegations raised by Appellants with regards to: 1) the Water Balance Diagram (WBD) contained in EIA envisages a huge discharge of 276 tons of ash and 9.9 million liters of contaminated ash transport water to ash disposal pond every day; and 2) according to WBD in EIA, the ash disposal pond will discharge 413 m^3/hr contaminated ash water to the environment, which is some 89% of the volume of water pumped to the disposal pond. The system described in the EIA and authorized in the EC makes a complete mockery of the "ZERO-liquid discharge"

requirement for thermal power plants, and is therefore patently illegal. Further, Respondent No.4 do not address the fact that no parameters are provided in EC to define what constitutes an "emergency" that could result in massive quantities of fly ash being disposed in mine voids. This creates a complete lack of accountability should Respondent decide to simply pump ash slurry to mine voids for any reason. This is especially troublesome because there is absolutely no monitoring system in place to ensure that ash disposed in mine voids does not result in environmental contamination, particularly of ground water.Respondent No.4 refers to alleged agreements with two cement companies, which leads Respondent MOEFCC to conclude without any basis that existing ash pond." Such blatant contradictions are the very definition of a failure to apply the mind.

The Respondent No.4 claims that fly ash reuse contracts are in place, but no vendor lists or contracts are provided in the EIA or in their reply. In fact, the massive volumes of coal ash relative to the limited capacity of the cement and reuse industry to utilize the ash is a well know problem across India that dictates that most ash is disposed on site, not reused. Even if the EIA's claim of 90% (2,496 tons/day) of ash produced by TPS-II-2 is reused, the remaining 10% (276 tons/day) will require the addition of more than 9.9 Million liters/day of water to transport and dispose of the ash in the pond. This basic fact, taken directly from the project proponent's own EIA, is inconsistent with the failure to properly address ash pond design, water management, etc. Almost all of the Appellant's numerous observations taken directly from the EIA are simply ignored, and we deem the Respondent's reply to be non-responsive.

43. The Respondent's reply is not responsive to the Appellant's many water budget and ash disposal observations taken directly from the EIA, ToR Condition 7(xxxvii), applicable MoEF&CC requirements, and EC Specific Condition A(xx). The Respondent ignores the fact that the EIA specifies that a bare minimum of 10% (276 tons/day) of the ash produced by TPS-II-2 will be disposed on site in wet impoundments, even assuming that cement plants can somehow take 2,496

tons/day (over 911,000 tons/year) of fly ash. The EIA's water balance diagram indicates that only 11% (50 m3/Hr) of slurry water will be recovered from the ash pond, which means that 413 m3/hour (9.9 million liters/day, or 3.6 billion liters/year) of water is lost to the environment. The bulk of that contaminated water will undoubtedly enter the subsurface groundwater system through the unlined ash pond, and evaporative losses will not account for much of that uncontrolled water loss.

x. In rejoinder to contention x of the Respondent No.4 thatProject Proponent has carried out a Hydro-Geological study and the Fourth Respondent is not aware of Plagiarism from a 2009 Govt. Publication is wrong and denied.

44. It is stated that the geologic map of Cuddalore district at Figure 3-11 appears to have been copied, and it provides no meaningful information about the geology at and near Project Proponent's proposed facility.Text comprising the subsequent three sections describing geomorphology, hydrogeology, and soils (Sections 3.4.8 to 3.4.10, Pages 93-99 of EIA) has been plagiarized verbatim from a government publication (V.Dinagaran, 2009) which is annexed with the Appeal.
45. The Respondent No.4 does not acknowledge that "seepage water" is in fact a groundwater withdrawal, whether actively pumped from wells and/or passively drained to the mine pools for extraction, and impacts on the source aquifer(s) are undeniable. It is a basic hydrogeological fact that groundwater "seepage" contributions to water accumulating in a mine pool are a gravity-driven aquifer withdrawal. The EIA and its appendices do not provide any explanation or scientific support for the respondent's contentions that the proposed Mine III will produce, for example, 544.8 cubic meters per hour (m3/Hr) of "Seepage Water". The Respondent No.4 claims that "*Mine III is designed to pump 1,50,000 GPM* (sic)… (and thus)…*the Storm Water requirement would be met even during lean period*". The capacity of pumps to extract water from a mine pool has nothing to do with the source of the water or the potential for storm water to accumulate during a lean (dry) period, such as the pre-monsoon summer.Therefore, the

Respondent No.4 is non-responsive to the Appellant's concerns on this issue in the Appeal.

46. The ToR requires the project proponent to evaluate hydrogeologic conditions at and near the site, and site-specific evaluations are conducted routinely to comply with ToR requirements for mining and power-plant projects across India. The Central Ground Water Board (CGWB) report cited by the Respondent No.4 is a generic 2009 evaluation for the large Neyveli basin (3,500 km^2) that provides a background starting-point for entities conducting the appropriate site-specific assessments envisioned in ToR condition No. 7(xxxiv). CGWB's 2009 report makes no direct or indirect statements about the Respondent's site, nor does the report state that the proposed groundwater withdrawals to facilitate mine operations are "*safe even after considering the present rate of pumping*

The Respondent-Project Proponent also states that "*it is also submitted that with regard to paragraphs 3.4.8 to 3.4.10,the Consultant has specifically observed about the 'study area'*," which further invalidates any claim that an appropriate and adequate hydrogeologic study of the proponent's site was conducted because the text in those sections of the EIA are plagiarized verbatim from the 2009 DingaranCGWB report.

47. The Respondent's reference of those EIA sections is ironic considering that they claim that "*The Fourth Respondent is not aware about the allegation pertaining to plagiarism*". The Respondent No.1 too has failed to investigate such an obvious example of unethical misappropriation.Instead the Respondent No.4 attempts to justify this blatant ethical failure by stating "*the Consultant had categorically stated that secondary data was collected from Government and Semi-Government organization*". The fact that the project proponent's consultant plagiarized pertinent parts of the EIA also tarnishes the claim that "*the primary baseline data pertaining to the 'study area' has been generated by the Consultant*." Legitimate hydrogeological assessments include evaluating the on-site hydrogeology, such as subsurface stratigraphy and aquifer parameters, not

merely collecting and analyzing random off-site water samples to augment plagiarized text that is not even specific to the project proponent's site.

The Respondent No.4 claims that the project proponent "*will not extract ground water within the Subject plant but will only utilise water from the Mines and other treated water*", that "*it is mandatory to extract water from the Semi-Confined Aquifer*", and that "*It is also mandatory to de-pressurise/ extract the water from the Confined Aquifer (Upper)*" in order to operate the lignite mine(s). Clearly, groundwater is being extracted, regardless of purpose, and the RespondentNo.4's reply has no bearing on its failure to conduct a site-specific, ToR-compliant hydrogeological assessment.

48. The Appellant identifies failures by the project proponents to evaluate potential impacts on surface water bodies (e.g., nallas) at and near the site, a subject that is not restricted to water withdrawals directly from those water sources, which is all that the Respondent's reply assumes. The issue of indisputable plagiarism of a 2009 CGWB report is addressed above, and it is not repeated here except to note that the Respondent No.4 takes no responsibility for the serious ethical and technical deficiencies that are manifest in the EIA. The Respondent No.4 makes a generic interpretation of plagiarized Figure 3-27 to claim the unsurprising conclusion that groundwater recharge occurs during the monsoon, yet they fail to identify what aquifer (unconfined, semi-confined, and/or confined) is reflected in this image and what bearing this seasonal fluctuation might have, if any, on the proponent's project site. The Respondent No.4 claims that "*it is false to state that the* (surface water and groundwater) *locations are not mentioned*", but that is clearly a different subject than what the Appellant stated by their concerns that the EIA does not contain "*information about exact well locations, depths, construction, ownership, use, history, aquifer(s) being pumped, sample collection dates or field methods employed, etc*." The Respondent's sole response to that fundamental data gap is that "*the dates on which the tests* (of)

Surface Water and Ground Water are collected are mentioned in Test Report pertaining to the baseline studies".

49. It is stated that No "test reports" are provided in the EIA, which the Respondent No.4 may be referring to a non-referenced 2017 report by Chennai Testing Laboratory Pvt Ltd (CTL) sandwiched between EIA Annexure 14 and Annexure 15. That report indicates that IIT Madras collected some water samples for analysis in 2015, but no meaningful data are provided in those two pages of IIT Madras' report. CTL collected samples for analysis between April 6th and 7th of 2017, but their report provides none of the Appellant's data requested for the sources of the groundwater samples (e.g., well depth). The CTL report provides no comparative tabulation between the 2015 and 2017 analytical results, and important data gaps remain unaddressed by the Respondent.

50. Relying on the plagiarized 2009 CGWB report to claim compliance with the ToR is responded by the Appellant's rebuttal in Paragraph 37, and this issue alone remains a glaring disqualification of the EIA. If other reports fulfill the ToR conditions requiring a site-specific hydrogeological assessment, then the Respondent No.4 should (1) provide those original reports in their entirety for evaluation and (2) revise and resubmit the EIA without the plagiarized text. The Respondent's claim that a project proponent is collaborating quarterly with CGWB "*to jointly monitor the ground water levels of the entire Neyveli Basis* (sic)" greatly overstates the role and importance of any EC – compliance reporting of water levels in conjunction with mine depressurization pumping. The Appellant reiterates here that CGWB's basin-scale monitoring program has only peripheral importance to site-specific hydrogeological conditions, and plagiarizing from that report does not constitute completion of the ToR-required hydrogeological investigation.

51. The Appellant describes public reports of water levels at depths of between 110 and 192 meters (360 and 630 feet, respectively), depths that would obviously not indicate a shallow unconfined aquifer system. The Respondent's inclusion of three groundwater hydrographs for very shallow, hand-dug wells provides no meaningful measure of water-level declines that may be imposed on surrounding areas by mine operations pertinent to the Appellant's question. Furthermore, the Respondent's hydrographs are for shallow wells with no divulged locations, unknown proximity to surface water recharge areas, and unreported well depths. The names provided on the three hydrographs do not correspond to monitored groundwater locations cited in the EIA, and the measurement dates on the hydrographs are sporadic and not directly comparable. The first hydrograph is for "Kunamkurichifield" (sic), which might be located somewhere in the vicinity of the Kunankurichi "tubewell" identified as groundwater sampling location GW3 in the EIA. If true, then that location is far from a lignite mine but close to the large TPS-II expansion lake that may act as a local recharge feature to the shallow unconfined aquifer. The other two hydrographs for hand-dug wells identified as "Mellakuppam" and "Mellakuppam House" are also undivulged locations, but a pair of temples located roughly two kilometers north of the TPS-II station bear that name. In any case, it does not appear that these shallow wells are located near any existing lignite mine, and the Respondent's hydrographs are fundamentally meaningless with respect to the Appellant's questions. Finally, the Respondent No.4 ignores the Appellant's observations that the EIA indicates that a massive volume of excess water must be available, and the EIA claim that there is no excess water to supply surrounding villages in incompatible and obviously false.

xi. In rejoinder to the contention xithat IL&FS guidelines on siting are not mandatory or even directory in nature it is stated that as per the IL&FS Guidelines itself "The purpose of developing these sector-specific technical EIA guidance manuals (TGM) is to provide clear and concise information on EIA to all the stakeholders *i.e.*, the project proponent, the consultant, the reviewer, and the public. The document is designed with a view to facilitate addressing of relevant technical and operational issues as mentioned in the earlier section. Besides, facilitates various stakeholders involved in the process of EIA clearance process. According to the Document, theProject proponent will be fully aware of the procedures, common ToR for EIA studies, timelines, monitoring needs, *etc.*, in order to plan the projects/ studiesappropriately. Consultants across India will have similar understanding about a given sector, andalso the procedure for conducting the EIA studies, so that the quality of the EIAreports gets improved and streamlined. It further says that Reviewers across the States/UTs will have the same understanding about an industrialsector and would able to draw a benchmark in establishing the significant impacts forthe purpose of prescribing the ToR for EIA studies and also in the process of reviewand appraisal.The guidelines further state that in addition, these manuals would substantially ease the pressure on reviewers at thescoping stage and would bring in functional efficiency at the central and state levels.

Therefore, it is stated that these Guidelines have important value not only with respect to siting but almost all the aspects related to the Thermal Power Plant industry.

In view of the abovementioned facts and circumstances it is stated that the prayer in the abovementioned Appeal may very kindly be allowed.

Pass any other orders as the Hon'ble Tribunal may deem fit and proper in facts and circumstances of the case.

APPELLANT

THROUGH

Ritwick Dutta Rahul Choudhary G. Stanly Hebzon Singh
Saurabh Sharma
Counsel for Appellant
N-71, LGF, Greater Kailash-1
New Delhi-110048

New Delhi / Chennai
Date: 01-03-2021

VERIFICATION

I, P. Sundaravathanam, S/oShriPeriyasamy N., aged about 63 years, R/o 8/59, 3rd Street, Veppankurichi, Post Vedakkuvellore, Neyveli-607802, Vrindhachalamtaluk, Cuddalore District, Tamil Nadudo hereby verify that the contents of the Paras 1 to 51 are true to my personal knowledge and that I have not suppressed any material fact.

APPELLANT

BEFORE THE NATIONAL GREEN TRIBUNAL

SOUTHERN ZONE BENCH AT CHENNAI

APPEAL NO. 13 OF 2019

IN THE MATTER OF:

P. Sundaravathanam&Anr. ...Appellants

Versus

Union of India &Ors. ...Respondents

AFFIDAVIT

I, P. Sundaravathanam, S/oShriPeriyasamy N., aged about 63 years, R/o 8/59, 3rd Street, Veppankurichi, Post Vedakkuvellore, Neyveli-607802, Vrindhachalamtaluk, Cuddalore District, Tamil Nadu, do hereby solemnly affirm and state as under:

1. That I am the Appellant No.1 in the above titled Appeal and am conversant with the facts and circumstances described in the present case and as such, I am competent to swear this affidavit.

2. That the contents of the accompanying Rejoinder are true and correct and nothing material has been concealed therefrom.

DEPONENT

VERIFICATION

Verified on this the 1st day of March, 2021 that the contents of the above mentioned affidavit are true and correct and nothing material has been concealed therefrom.

DEPONENT