BEFORE THE NATIONAL GREEN TRIBUNAL(SZ) AT CHENNNAI
O. A No. 74 of 2021

K.Saravanan

....Applicant

-Vs.-

Union of India,
Rep by its Secretary,
MoEF&CC, New Delhi

....Respondent

Index filed by MoEF&CC

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Dated at Chennai this the 23rd day of October 2023

Sai Srujan Tayi
Counsel for MoEF& CC/Respondent
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BEFORE THE NATIONAL GREEN TRIBUNAL

SOUTHERN ZONE, CHENNAI

Original Application No. 74 of 2021 (SZ)

IN THE MATTER OF:

K. Saravanan **...Applicant**

Verses

The Union of India **.... Respondent**

COMPLIANCE AFFIDAVIT ON BEHALF OF MINISTRY OF ENVIRONMENT, FORESTS & CLIMATE CHANGE, RESPONDENT NO. 1

MOST RESPECTFULLY SHOWETH: -

I, Dr.C.Palpandi, S/O Chendurpandi aged about 41years working as 'Scientist D' in the Regional Office (South Zone) having office located at 1st Floor Additional office Block for GPOA, Shastri Bhawan Haddows Road, Nungambakkam, Chennai-34 under Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India, do hereby solemnly affirm on oath and state as under:

C. Palpandi

Dr. C. Palpandi
Scientist 'D'
Government of India
Regional Office, MoEF&CC
Shastri Bhawan, Haddows Road,
Nungambakkam, Chennai - 600 006

1. That I am presently working as 'Scientist D' in the Regional Office (Southern Zone) of the Respondent No.1 and as such am well acquainted with the facts and circumstances of the case on the basis of the records available in my office and am thus duly authorized to file this Affidavit on behalf of the Respondent No. 1 herein, i.e. the Ministry of Environment, Forest and Climate Change. Specifically admitted hereunder:

2. That, the applicant has alleged that the said O.M. is unscientific and it is contrary to the mandate of the EIA Notification, 2006 which requires that the environmental impact of a proposed activity be studied, assessed and cleared by a competent authority. Further it is alleged that the O.M. runs contrary to the precautionary principle as well as the principle of sustainable development by allowing thermal plants to change their environmental footprint without any prior assessment of their impacts and it is also not backed by statutory powers under Environment (Protection) Act, 1986.

3. That the present application has been filed by the applicant :

   i. To Quash the Office memorandum dated 11.11.2020 bearing No. F. No J 13012/8/2009-IA. II (T) issued by the MoEF&CC.

   ii. To direct the respondent to pay costs to the applicant.

C. Palpandi.

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4. That, the Hon'ble Tribunal vide interim order dated 24.05.2023 has directed the MoEF&CC to revisit the Office Memorandum dated 11.11.2020 regarding 'Amendment in Environmental Clearance for change in coal source by Thermal Power Plants' by the Expert Appraisal Committee. The operative extract of the order issued by the Hon'ble Tribunal is reproduced below:

"1. We heard the learned counsels in part. As it is stated that the Office Memorandum under challenge is diluting the conditions already imposed in the Environmental Clearance, it may require a revisit by referring the same to the Expert Appraisal Committee.

2. The learned counsel appearing for the MoEF&CC and also the officials from the CPCB as well as the MoEF&CC who are present before us agree to the same.

3. Accordingly, we are granting time for them to consider this aspect and to revisit the Office Memorandum for modifying/sustaining/withdrawing the same..."

5. It is submitted that in compliance of order dated 24.05.2023 passed by the Hon'ble Tribunal, the MoEF&CC referred the matter to the Expert Appraisal Committee (Thermal Power Projects) for further examination

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of the issues. The representatives from Central Electricity Authority (CEA), Central Pollution Control Board (CPCB), Central Institute for Mining and Fuel Research (CIMFR), National Environmental Engineering Research Institute (NEERI), Hazardous Substance Management (HSM) Division of MOEF&CC, Control of Pollution (CP) Division of MOEF&CC & NTPC were also consulted in the matter.

Thereafter, the EAC discussed the issues involved in the matter in its meetings held on 19.06.2023, 01.08.2023, 16.08.2023, 27.08.2023 and 04.09.2023. Accordingly, after thorough examination of the information received on certain aspects from CEA and detailed deliberations on the findings/analysis report of the sub -committee, the EAC finalized its recommendations.

The copy of the EAC Report is annexed as **Annexure-1**.

6. That in view of the above, the MoEF&CC has decided to accept the recommendation of the EAC and accordingly, the OM dated 11.11.2020 is proposed to be amended.
7. It is submitted that the present compliance affidavit may kindly be taken on record and into consideration and the Hon'ble Tribunal may pass appropriate Order(s), direction(s) as deemed fit and proper under the facts and circumstances of the present case.

C. Palpandi

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8. That other/ancillary issues raised in the application under reply do not pertain to the MoEF&CC. The MoEF&CC seeks leave to make additional submissions, if required, during the course of the proceedings.

C. Palpandi

DEPONENT

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VERIFICATION

I, the above-named deponent do hereby solemnly affirm and state that the contents of the aforesaid affidavit are true and correct to my personal knowledge and have been derived from the official records maintained by the Respondent. No part of it is false nor has anything material been concealed therefrom.

Verified at Chennai on this 20th day of October, 2023.

C. Palpandi

DEPONENT

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REPORT ON THE DIRECTIONS OF
HON'BLE NATIONAL GREEN TRIBUNAL (NGT) SOUTHERN ZONE, CHENNAI IN O.A. NO. 74 OF 2021
IN THE MATTER OF
K SARAVANAN VS UNION OF INDIA BEFORE NGT (SZ), CHENNAI.

[A] Background

1. The MoEF&CC had issued Office Memorandum No. J-13012/8/2009-IA.II (T) dated 11.11.2020 exempting the necessity of amending the Environmental Clearance (EC) which inter-alia includes the change in fuel from imported coal to domestic coal. The O.M. states that:

"…… In order to simplify the procedure for change in coal source and encourage Thermal Power Plants to use domestic coal, the Ministry has decided the following procedure:

All the Thermal Power Plants (including Captive Power Plants) having Environmental Clearance can change the coal source (from imported to domestic, domestic to domestic, and domestic to imported) including Lignite, directly through e-auctions/short term linkage/long term linkage/other linkage options of Ministry of Coal or any organisation recognized for allotting coal Linkages, without seeking the amendment in Environmental Clearance, subject to the following conditions and thereby making earlier conditions in the EC regarding coal source redundant:

a) Details regarding change in source (location of the source, proposed quantity, distance from the power plant and mode of transportation), quality (Ash, Sulphur, Moisture content and Calorific value) shall be informed to the Ministry and its Regional Office. The quantity of coal transported form

each source along with the mode of transportation shall be submitted as part of EC Compliance Report.

b) *The applicable flue gas emissions standards for Particulate Matter, Sulphur Dioxide, Oxides of Nitrogen and Mercury shall be complied inline with Ministry's Notification vide S.O. 3305(E) dated 7.12.2015 and subsequent emissions. A progress of implementation and its compliance shall be submitted as part of Compliance Report.*

c) *Ash content in the Coal and Coal transportation is governed by the Ministry's Notification vide S.O. 1561(E) dated 21.5.2020. As for as possible, Coal transportation shall be by rail or other eco-friendly modes. However, road transportation is allowed with tarpulin covered trucks till the railway/conveyor belt infrastructure is made available. A progress (Physical and financial) of rail connectivity from nearest railway siding or conveyor connectivity to the power plant shall be submitted in the EC compliance report.*

d) *Additional ash pond is not allowed due to increase in ash content in the raw coal as against the ash pond permitted in the Environmental Clearance. The 100% flyash utilisation is to be achieved within 4 years in line with Flyash Notifications dated 14.9.1999, 27.8.2003, 3.11.2009 and 25.1.2016 and amended time to time or extant regulations on Fly ash utilization.*

e) *In case of exceptional circumstances, project proponents may approach Ministry seeking permission to use additional ash pond with cogent reasons, if any.*

f) *The details regarding monthly generation, utilization and disposal of flyash (includes bottom ash) shall be submitted to the Ministry and its Regional Office…..”*

2. The aforesaid Office Memorandum dated 11.11.2020 issued by the Ministry was challenged in the matter O.A. No. 74 of 2021 titled as K Saravanan Vs Union of India before Hon'ble NGT (SZ), Chennai.

3. The applicant has alleged that the said OM is unscientific and it is contrary to the mandate of the EIA Notification, 2006 which requires that the environmental impact of a proposed activity be studied and assessed and cleared by a competent authority. Further it is alleged that the OM runs contrary to the precautionary principle as well as the principle of sustainable development by allowing thermal plants to change their environmental footprint without any prior assessment of their impacts and it is also not backed by statutory powers under Environment (Protection) Act, 1986.

4. The applicant has mentioned the consequences of change in coal source, being the foundation of the aforementioned contention, which are listed hereunder:

i. Impact of stack emissions on air quality,

ii. Increased consumption of coal,

iii. Impact due to coal transportation,

iv. Impact due to storage of coal,

v. Ash generation and handling,

vi. Size of ash pond and

vii. Water requirements

5. The counter affidavit filed by the Ministry on 10.04.2023 before Hon'ble NGT inter-alia includes the following points:

- The Office Memorandum ('OM') doesn't override the EIA Notification, 2006,
- Purpose of the OM is in line with advisory issued by the Ministry of Power,
- OM mentions the mitigative measures taken to combat the various consequences of change of coal source listed in the application and
- Notifications stated in the OM connected to the EIA Notification, 2006

6. The Hon'ble Tribunal vide its order dated 24.05.2023, has passed the following directions:

> *"1. We heard the learned counsels in part. As it is stated that the Office Memorandum under challenge is diluting the conditions already imposed in the Environmental Clearance, it may require a revisit by referring the same to the Expert Appraisal Committee.*
>
> *2. The learned counsel appearing for the MoEF&CC and also the officials from the CPCB as well as the MoEF&CC who are present before us agree to the same.*
>
> *3. Accordingly, we are granting time for them to consider this aspect and to revisit the Office Memorandum for modifying/sustaining/withdrawing the same.*
>
> *4. Post the matter on 03.08.2023."*

7. The Ministry filed an interim compliance affidavit dated 01.08.2023 before the Hon'ble NGT seeking six months' extension time to conclude its recommendation as directed by the Hon'ble Tribunal vide its order dated 24.05.2023. Accordingly, Hon'ble Tribunal vide order dated 03.08.2023 passed

the following directions:

"....Pursuant to our last order dated 24.05.2023, an interim compliance affidavit is filed on behalf of the MoEF&CC, wherein it is stated that a meeting was convened by the Expert Appraisal Committee (EAC) members comprising of representatives from NTPC, Central Institute for Mining and Fuel Research (CIMFR), National Environmental Engineering Research Institute (NEERI), HSM Division, CP Division and Central Pollution Control Board. The said meeting was held on 19.06.2023 and after deliberation, it was decided as follows:-

To obtain requisite information from Central Electricity Authority (hereinafter referred to as "CEA") to examine whether there will be any significant change in environmental scenario and impacts due to change in coal source/quality.

To constitute a subcommittee, for the purpose of conducting a scientific analysis of the emission in different scenario of coal source to assess the impact and additional measures required to be taken by thermal power plant."

1. *The above said subcommittee may conduct the scientific analysis of the emission in different scenarios of coal sources to assess the impact and additional measures required by the Thermal Power Plant.*

2. *For the above exercise to be completed, the learned counsel appearing for the MoEF&CC sought for six weeks' time. While so, the learned counsel appearing for the applicant expresses his concern as to how the department would deal with the applications that are already pending consideration. Whether the impugned O.M.*

will be applied to the said pending applications or the applications will be kept pending till the final decision is taken up.

3. *Be that as it may, let the report of the MoEF&CC also furnish the particulars of those applications which are considered applying the impugned O.M.*

4. *Post the matter on 20.09.2023……"*

8. To ensure the compliance of the Hon'ble NGT directions, the Ministry had decided to refer the matter to the Expert Appraisal Committee (Thermal Power Projects) for further examination of the issues. The Ministry has also invited representatives from Central Electricity Authority (CEA), Central Pollution Control Board (CPCB), Central Institute for Mining and Fuel Research (CIMFR), National Environmental Engineering Research Institute (NEERI), Hazardous Substance Management (HSM) Division of MOEF&CC, Control of Pollution (CP) Division of MOEF&CC & NTPC to be a part of discussion on the matter.

[B] Expert Appraisal Committee (EAC) consideration:

9. Accordingly, the matter was considered by the EAC its meeting held on 19th June, 2023 under the Chairmanship of Shri Gururaj P. Kundargi at Indira Paryavaran Bhawan, MoEF&CC.

10. The EAC after detailed deliberations decided to obtain details on following aspects from CEA to examine whether there will be any significant change in environmental scenario and impacts due to change in coal source/quality:

a. Any study that has been carried out by any thermal power plant w.r.t.

emissions characteristic, ecological conditions after change in source of coal.

b. Heavy metal data for stack emissions, if available.

c. List of Thermal Power Plants who have changed coal source after O.M. dated 11.11.2020 and their status before and after the change w.r.t.:

- Impact of stack emissions on air quality
- Increased consumption of coal
- Impact due to coal transportation
- Impact due to storage of coal
- Ash generation and handling
- Size of ash pond
- Water requirement

11. The EAC opined that a sub-committee, comprising of following members may conduct a scientific analysis of the emission in different scenarios of coal sources to assess the impact and additional measures required by thermal power plant:

i. Expert Member & Representative of CEA, Ministry of Power- Chairman
ii. Representative of CPCB
iii. Representative of CSIR-NEERI
iv. Representative of CSIR-CIMFR
v. Representative of M/s NTPC Ltd.

[C] Analysis by Sub-committee

12. The EAC sub-committee of thermal power plant considered the issues

related to scientific analysis of the emission in different scenarios of coal sources to assess the impact and additional measures required by thermal power plant in its meeting held on 01st August, 2023 through virtual mode under the Chairmanship of Shri M.P. Singh (Expert Member & Representative of CEA, Ministry of Power).

13. It was informed that the CEA sought the data from the following thermal power generation companies:

i. NTPC Limited
ii. GSECL
iii. JSW, Torrangullu
iv. JSW, Barmer
v. NTPL
vi. Tata Trombay
vii. APGENCO
viii. TSGENCO
ix. Sembcorp
x. East Coast Power Limited

14. In response to the above, only NLC Tamil Nadu Power Limited (NTPL) and Andhra Pradesh Power Generating Company Limited (APGENCO) have provided data on change in coal source after MOEF&CC notification dated 11.11.2020.

15. The sub-committee meetings were held on 01.08.2023, 16.08.2023, 24.08.2023 and 27.08.2023 and the members also held mutual consultations among each other. The sub-committee interacted with EAC on 16.08.2023 and 27.08.2023 with its Draft Reports. The sub-committee submitted and presented the final scientific analysis report to EAC on 04.09.2023. The data collected by CEA from thermal power plants that altered their coal source after the O.M. dated 11.11.2020 (comparing parameters before and after the coal source change) was analyzed in conjunction with the findings of the analysis.

16. After detailed analysis of data collected, the Sub-committee has observed that:

a. The OM dated 11.11.2020 mentions the "change the coal source (from imported to domestic, one domestic to other domestic, and domestic to blended domestic to imported)".

b. Significant changes in coal characteristics may occur when the change takes place from 100% imported coal to 100% domestic coal and vice versa. However, due to the design constraints change in coal source from 100% imported coal to 100% domestic coal and vice versa is not possible without major modifications in boiler/ power plant design.

c. Coal is a natural material, with variable characteristics. Even within the same coal source, the characteristics vary from seam to seam and location to location. For plant design, statistical representative characteristics are taken into consideration. Plant designs generally allows for variation in coal characteristics within a certain range (± 20-25%) for boiler operation.

d. Changes in coal characteristics may occur from one domestic source to other domestic or from domestic to blended coal (blending with imported coal, maximum allowable being 30% but normally the blending ratio has been about 10% only).

e. Following coal characteristics determine the environmental impacts of coal usage:

i. Gross Calorific Value (GCV, kcal/kg) – affects the amount of coal consumption, as well as its transportation/ handling

ii. Ash Content (%) – Ash content of coal determines the quantity of ash generation and its transportation/ utilisation/disposal.

iii. Sulphur Content (%) – Sulphur content of coal determines the amount of SO_2 generation and emission and resultant incremental ground level concentration of SO_2. In case of power plants complying with new emission norms, the emissions will be determined by the applicable standards, irrespective of the sulphur content of coal used. However, in the plants which are still under the process of implementing the new emission norms, SO_2 emission may change due to change in coal source.

iv. Nitrogen Content (%) – Nitrogen content of coal affects total NOx emissions. NOx is formed in boiler in two parts – first due to oxidation of atmospheric nitrogen during combustion (thermal NOx) and second due to combustion of nitrogen content of coal (fuel NOx). While fuel NOx is directly related to Nitrogen Content of fuel, the thermal NOx depends on the combustion conditions. The emissions are determined by the applicable standards, irrespective of the type of coal used which are met by combustion modification based primary NOx control measures in the boiler. In the new plants which are still under the process of implementing the secondary NOx control measures as the emission norms are being decided, the emission of NOx is based on primary NOx control technology in-built in the boiler design.

v. Heavy Metals (%) – Heavy metals are present in coal in trace amounts and the emission standards have been prescribed for

thermal power plants for mercury. Therefore, the mercury emissions are governed by prescribed standards.

vi. The applicable emission standards (vide MoEF&CC Notification 07.12.2015 & its amendments) are as follows:

Parameter	**Units Commissioned before 31.12.2003**	**Units Commissioned between 01.01.2004 and before 31.12.2016**	**Units Commissioned After 01.01.2017**	**Timeline for Implementation for Different Categories***
SPM (mg/Nm^3)	100	50	30	A: 31.12.2022 B: 31.12.2023 C: 31.12.2024
NOx (mg/Nm^3)	600	450	100	
SO2 (mg/Nm^3)	Less than 500 MW: 600 500 MW & Above: 200	Less than 500 MW: 600 500 MW & Above: 200	100	A: 31.12.2024 B: 31.12.2025 C: 31.12.2026
Mercury (mg/Nm^3)	500 MW & Above: 0.03	0.03	0.03	
Water Consumption (m3/MWh)	All plants with Once Through Cooling shall install Cooling Towers and achieve specific water consumption up to a maximum of 3.5 m^3/MWh		New plants to be installed after 01.01.2017 shall have to	

	within a period of two years, i.e. 07.12.2017. All existing Cooling Tower Based Plants shall reduce specific water consumption up to a maximum of 3.5 m^3/MWh within a period of two years, i.e. 07.12.2017.	meet specific water consumption up to a maximum of 3.0 m^3/MWh and achieve zero waste water discharge, except thermal power plants using sea water.	

*Definition of Categories:

A: Within 10 km. radius of National Capital Region or cities having million plus population

B: Within 10 km. radius of Critically Polluted Areas or Non-attainment cities

C: Other than those included in category A & B

a. Impact factor methodology has been adopted to assess the impact of change in coal characteristics on various parameters as shown in the table below. The impact factor is defined as the ratio of impact after change in coal source to the impact before change in coal source.

S. No.	**Parameter wise criteria for Impact Factor**	**Impact Factor**	**Remarks**

1(a) Impact on stack emissions			
(i)	**Particulate Matter (PM):** **1.** The emission standard for PM stipulated in MOEF&CC Notification is independent of the coal quality. **2.** The design of PM Control Equipment is based on maximum ash content in coal likely to be encountered, guaranteeing the emission levels within the emission standards.	1	If a coal with lower GCV and higher ash content is used in power plant, the level of PM at the inlet of PM Control Equipment will be higher; but the outlet emission levels shall be within the emission standard due to design of equipment.
(ii)	**Sulphur Dioxide (SO_2)** 1. The emission standard for		

	SO2 stipulated in MOEF&CC Notification is independent of the coal quality. 2. The control of SO2 emission requires setting up of a control system like Flue Gas Desulphurisation system (FGD), Dry Sorbent Injection (DSI) system etc., designed based on maximum sulphur content likely to be encountered in coal. 3. If the control system is yet to be installed, the emission level before and after	$(GCV_{old}/GCV_{new})*(S_{new}/S_{old})$	If GCV reduces from 3850 to 3350 Kcal/kg and sulphur content changes from 0.44% to 0.29%, then the SO2 emission will change by a factor of

	change in coal source, shall change in proportion to change in coal consumption and change in sulphur content. 4. If the control system is installed, the emission level before and after change in coal source, shall be same irrespective of sulphur content of coal**.**	1	(3850*0.29/ 3350*0.44), i.e. by 0.76. It indicates a reduction by 24%. No change in emission.
(iii)	**Oxides of Nitrogen (NOx)** 1. The emission standard for NOx stipulated in MOEF&CC Notification is independent of	1	As emission limit for NOx are guaranteed by OEM, the emission levels are not likely to be exceeded. However, there could be minor changes due to fuel

	the coal quality. 2. The control of NOx emission requires various systems like low NOx Burner, Overfire Air System etc., designed and guaranteed by the Equipment Manufacturer. 3. With a particular control system installed, the emission level before and after change in coal source, shall be maintained within the standards.		NOx within the limits.
1(b) Impact on ambient air quality: As incremental GLC are proportional to the emission rates, the impacts shall be proportional to change in emission levels while all other factors are same.			

2. Impact on coal consumption			
	Quantity of Coal Usage: 1. Quantity of coal used is inversely proportional to GCV of coal and depending on increase/ decrease in GCV, the coal requirement may decrease/ increase respectively.	GCV_{old}/GCV_{new}	For example, if GCV is reduced from 3850 kcal/kg to 3350 kcal/kg, the coal consumption will increase by a factor of 3850/3350 = 1.15, i.e. 15%
3. Impact on coal transportation			
	With the change in quantity of coal required, the quantity of coal to be transported shall change in same proportion. If the mode of coal transport (MGR/	GCV_{old}/GCV_{new} 1	For example, if GCV is reduced from 3850 kcal/kg to 3350 kcal/kg, the coal consumption will increase by a factor of 3850/3350 = 1.15, i.e. 15%

	Railways/ Ships) are same as before change in coal source and managed as per EMP, there will be no additional impacts. If the mode of coal transport involves road transport, there will be additional impacts for the quantity of coal transported through road.	Shall depend on the quantity of coal transported by road.	Mitigation measures & permission as mentioned in MOEF&CC Notification dated 21.05.2020 shall be required.
4. Impact on coal storage			
	The area/ volume of coal storage yard does not change with the change in coal quality. The variation in quantity of coal storage in storage yard shall change	1	As the area/ design of coal storage does not change, the impacts shall be same before and after change in coal source.

	the sufficiency of the coal stored for power plant operation (in no. of days).		
5. Impact on ash generation and handling			
	The ash generation before and after change in coal source, shall change in proportion to change in coal consumption and change in ash content. Changes in ash generation will be less in the normal cases of blending of domestic coal with imported coal of low ash content	$(GCV_{old}/GCV_{new})*$ (Ash_{new}/Ash_{old})	**For example, i**f GCV reduces from 3850 kcal/kg to 3350 kcal/kg and ash content changes from 39.87% to 46.63%, then the ash generation will increase by a factor of (3850*0.4663/ 3350*0.3987), i.e. by 1.34. It indicates an increase by 34%.
6. Impact on size of ash pond			
	The area/ design of ash dyke does not change with the change in coal	1	As the area/ design of coal storage does not change, the impacts shall be

	quantity. Instead, the capacity for ash pond (in days) shall increase or decrease proportionately.		same before and after change in coal source. The ash utilisation and management are governed by the provisions of MOEF&CC Notification dated 31.12.2021 and 30.12.2022, which are part of conditions stipulated in Environmental Clearance.
7. Impact on water requirement			
	The standards for water requirement for thermal power plants stipulated in MOEF&CC Notification are independent of the coal quality. Water requirement for ash disposal will be less in the	1	As the maximum water requirement shall not exceed the standards, the impact factor shall be same.

	normal cases of blending of high ash domestic coal with low ash imported coal.		

Findings of the Sub-committee: Case Studies

16. In order to assess the impacts of Coal Blending on various parameters mentioned in Para 4, two case studies have been undertaken to study the impacts of coal blending up to 30% for the following two scenarios:

- Blending of domestic coal with imported coal to meet the coal shortage
- Blending of imported coal with domestic coal to save foreign exchange

17. The results of the case studies are as follows:

17.1 Case Study-I: Blending of Domestic (D) with Imported (I) Coal

Assumptions:

Typical Domestic Coal Characteristics:

MCL Coal; GCV (3850 kcal/kg), Ash (39.87%), Sulphur (0.44%)

Typical Imported Coal Characteristics:

Indonesian Coal; GCV (6960 kcal/kg), Ash (12%), Sulphur (0.96%)

Changes in impact factors for various parameters are calculated based on the formulas mentioned above for three blending ratios: 10% Imported,

20% Imported and 30% Imported. The same have been compared with respect to the Domestic Coal as baseline scenario. The results for various scenarios are as follows:

Parameters	**Change in Impact factor (Positive/ Negative) due to change in coal blending ratio**			
	100% (D) + 0% (I)	**90% (D) + 10% (I)**	**80% (D) + 20% (I)**	**70% (D) + 30% (I)**
Coal Consumption	Base	-7%	-14%	-20%
Generation of Ash	Base	-14%	-26%	-36%
Emission of PM	Base	-	-	-
Emission of SO2	Base	**+3%**	**+6%**	**+9%**
Emission of NOx	Base	-	-	-
Coal Transport	Base	-7%	-14%	-20%
Coal Handling	Base	-7%	-14%	-20%
Coal Storage	Base	-	-	-
Ash Use/ Disposal	Base	-14%	-26%	-36%
Water Requirement	Base	-	-	-
PM GLC	Base	-	-	-
SO_2 GLC with FGD	Base	-	-	-
SO_2 GLC without FGD	Base	**+3%**	**+6%**	**+9%**
NOx GLC	Base	-	-	-

It may be observed from the above that due to blending of domestic coal with imported coal up to 30%, the SO2 emission increases by 3-9% while

all other parameters are either same or decreased. In power plants with FGD, even this impact of higher SO2 emissions is normalized.

17.2 Case Study-II: Blending of Imported (I) with Domestic (D) Coal

Under this category, two sub cases have been discussed:

a) Blending of Imported Coal with High GCV Domestic (D) Coal

b) Blending of Imported Coal with Normal GCV Domestic (D) Coal

Assumptions for Sub-Case A:

Typical Domestic Coal Characteristics:

ECL Coal; GCV (6250 kcal/kg), Ash (14.6%), Sulphur (0.55%)

Typical Imported Coal Characteristics:

Indonesian Coal; GCV (6960 kcal/kg), Ash (12%), Sulphur (0.96%)

Changes in impact factors for various parameters were calculated based on the formulas mentioned above for three blending ratios: 10% Domestic, 20% Domestic and 30% Domestic. The same have been compared with respect to the Imported Coal as baseline scenario. The results for various scenarios are calculated as follows:

	Change in Impact factor (Positive/ Negative) due to change in coal blending ratio			
Parameters	**100% (I) + 0% (D)**	**90% (I) + 10% (D)**	**80% (I) + 20% (D)**	**70% (I) + 30% (D)**
Coal Consumption	Base	1%	2%	3%

Generation of Ash	Base	**3%**	**7%**	**10%**
Emission of PM	Base			
Emission of SO2	Base	-3%	-7%	-10%
Emission of NOx	Base			
Coal Transport	Base	1%	2%	3%
Coal Handling	Base	1%	2%	3%
Coal Storage	Base			
Ash Use/ Disposal	Base	**3%**	**7%**	**10%**
Water Requirement	Base			
PM GLC	Base			
SO2 GLC with FGD	Base			
SO2 GLC without FGD	Base	-3%	-7%	-10%
NOx GLC	Base			

It may be observed from the above that due to blending of imported coal with domestic coal of similar grade (high GCV) up to 30%, the coal consumption has increased by 1-3% and the ash generation increased by 3-10% while all other parameters are either same or decreased.

Assumptions for Sub-Case B:

Typical Imported Coal Characteristics:

Indonesian Coal; GCV (6960 kcal/kg), Ash (12%), Sulphur (0.96%)

Typical Domestic Coal Characteristics:

MCL Coal; GCV (3850 kcal/kg), Ash (39.87%), Sulphur (0.44%)

Changes in impact factors for various parameters were calculated based on the formulas mentioned above for three blending ratios: 10%

Domestic, 20% Domestic and 30% Domestic. The same have been compared with respect to the Imported Coal as baseline scenario. The results for various scenarios are calculated as follows:

Parameters	Change in Impact factor (Positive/ Negative) due to change in coal blending ratio			
	100% (I) + 0% (D)	**90% (I) + 10% (D)**	**80% (I) + 20% (D)**	**70% (I) + 30% (D)**
Coal Consumption	Base	5%	10%	15%
Generation of Ash	Base	**29%**	**61%**	**96%**
Emission of PM	Base			
Emission of SO2	Base	-1%	-2%	-3%
Emission of NOx	Base			
Coal Transport	Base	5%	10%	15%
Coal Handling	Base	5%	10%	15%
Coal Storage	Base			
Ash Use/ Disposal	Base	**29%**	**61%**	**96%**
Water Requirement	Base			
PM GLC	Base			
SO2 GLC with FGD	Base			
SO2 GLC without FGD	Base	-1%	-2%	-3%
NOx GLC	Base			

It may be observed from the above that due to blending of imported coal with domestic coal of normal GCV grade up to 30%, the coal

consumption increased by 5-15% and the ash generation increased by 29-96% while all other parameters are either same or decreased.

18. It may be noted that the above calculations are based on typical values of coal characteristics and the actual results shall value from cases to case. However, the above three case studies represent the normal operating range of imported and domestic coals and hence may be considered as representatives of various scenarios.

Comparison of Power Plant data with above analysis

19. The basic principles presented are compared with the data collected from two power plants, which have changed the coal source after OM dated 11.11.2020, as provided by CEA:

a. Sri Damodaram Sanjeevaiah TPS, Stage-I & II (2x800 + 1x800 MW) of Andhra Pradesh Power Generation Corporation Limited (APGENCO)

b. NTPL Power Station (2x500 MW) of NLC Tamil Nādu Power Ltd. (NTPL, A JV of NLC and TANGEDCO)

20. The Power Plants were asked to provide the data related to PLF, Coal Consumption, Coal transportation, Coal Characteristics (GCV, Ash & Sulphur Contents), Ash Generation, Water Consumption, stack emissions and ambient air quality etc. before and after change in coal source.

21. Based on available data, variations in coal quality and coal quantities used before and after change in coal source at APGENCO are as follows. Before change in coal source, APGENCO was using blend of domestic washed coal with imported coal. After the change in coal source, the quantity of imported coal was reduced considerably while domestic raw coal was used. The weighted average of parameters are used to compare the impacts of blending on various parameters, are as follows:

	APGENCO (Blend-I, 2016-17)	**APGENCO (Blend-II, 2022-23)**
Sources	Dom. Washed/ Imported	Dom. Washed/ Dom. Raw/ Imported
Quantities (Lakh T)	44.55/ 6.46	19.45/ 17.87/ 0.59
GCV (ADB)	4286/ 5807	4182/ 3724/ 5117
Weighted Average of GCV	**4479**	Domestic: 3963 Domestic Blended with Imported: 3981
Ash (%)	31.55/ 7.23	30.80/ 35.51/ 4.54
Weighted Average of Ash (%)	**28.5**	Domestic: 33 Domestic Blended with Imported: 32.6
Sulphur (%)	0.55/ 0.62	0.54/ 0.44/ 0.40
Weighted Average of S (%)	**0.56**	Domestic: 0.49 Domestic Blended with Imported: 0.49

21.1 The analysis of above, leads to the following observations:

i. There is a variation in characteristics of Coal itself (GCV from 3724 to 4286 Kcal/kg, Ash Content from 30.80 to 35.51%).

ii. Assuming a uniform blend of coals before and after change, the weighted average of GCV of domestic coal reduced from 4479 to 3963 Kcal/kg (due to inclusion of raw Coal). However, after blending with imported coal, the GCV after change in coal source increased slightly from 3963 to 3981 Kcal/kg.

iii. Similar observations were made with respect to Ash Content (first increase and then decrease after blending with imported coal).

21.2 Variations in coal quality and coal quantities used before and after change in coal source are as follows. Before change in coal source, NTPL was using blend of domestic coal from MCL and ECL, with wide variations in GCV & ash content. After the change in coal source, two additional coals, Low GCV/ High Ash Talabira Coal and Imported Indonesian Coal were also used. The weighted average of parameters were used to compare the impacts of blending on various parameters, as follows:

	NTPL (Blend-I, Oct., 2020 - Sep., 2021)	**NTPL (Blend-II, Oct., 2021 - Sep., 2022)**
Sources	MCL/ ECL	MCL/ ECL/ Talabira/ Indonesia
Quantities (Lakh	24.99/ 10.12	6.99/ 0.29/ 22.63/ 3.82

T)		
GCV (ADB)	3850/ 6250	3850/ 6250/ 3350/ 6960
Weighted Average of GCV	**4542**	Domestic (excluding Imported): **3495** Domestic Blended with Imported: 3887
Ash (%)	39.87/ 14.6	39.87/ 14.6/ 46.63/ 12
Weighted Average of Ash (%)	**32.6**	Domestic (excluding Imported): 44.7 Domestic Blended with Imported: **41.0**
Sulphur (%)	0.44/ 0.55	0.44/ 0.55/ 0.29/ 0.96
Weighted Average of S (%)	**0.47**	Domestic (excluding Imported): 0.33 Domestic Blended with Imported: **0.40**

iv. There is a variation in characteristics of Indian Coal itself (GCV – 3350 to 3850 kcal/ kg). In present case, the use of high GCV ECL coal is an exception as the total production of ECL is very limited and cannot be considered as a norm for country. However, Indian power plants use blends of domestic coal to average out GCV and Ash Contents.

v. Assuming a uniform blend of coals before and after change, the weighted average of GCV of domestic coal reduced from 4542 to 3495 Kcal/kg (due to inclusion of low GCV Talabira Coal instead of High GCV ECL Coal). However, after

blending with imported coal, the GCV after change in coal source increased from 3495 to 3887 Kcal/kg.

vi. Similar observations were made with respect to Ash Content (first increase and then decrease after blending with imported coal) and Sulphur Content (first decrease and then increase after blending with imported coal).

21.3 The coal characteristics data of both the companies along with PLF are summarized below:

	APGENCO			**NTPL**		
	Before	After	% Change	Before	After	% Change
GCV (kcal/kg)	4479	3981	-11%	4542	3887	-14%
Ash (%)	28.5	32.6	+14%	32.6	41	+26%
Sulphur (%)	0.56	0.49	-12.5%	0.47	0.40	-15%

The above table presents the changes in coal characteristics. However, the PLF of the Plant is another important factor which determines the total consumption of coal/ total generation of ash in a year. An aggregate impact of the coal characteristics and PLF are presented in the following sections.

21.4 An aggregate impact of the coal characteristics (GCV) and PLF are presented in the following sections.

	APGENCO		**NTPL**	
	Before	After	Before	After

PLF (%)	61.34	41.97	60.39	47.74
GCV (kcal/kg)	4479	3981	4542	3887
Coal Consumption (MTPA)	5.1	3.8	3.51	3.37

Though the GCV of coal has decreased in both the power plants, the actual quantity of coal consumed is also decreased due to decrease in PLF.

21.5 Both the companies have reported that there is no change in storage of coal stock or size of ash pond.

21.6 With the change in GCV and ash content, a change in ash generation was also observed, as follows:

	APGENCO		**NTPL**	
	Before	After	Before	After
Coal (TPD)	3217	3004	3556	3313

22. The Sub-Committee has summarised above findings as under:

a) Coal is a natural material, with variable characteristics. Even within the same coal source, the characteristics vary from seam to seam and location to location.

b) Significant changes in coal characteristics may occur when the change takes place from 100% imported coal (High GCV, 5000 kcal/ kg and above) to 100% domestic coal (Normal GCV, 3000-4000 kcal/ kg) and vice versa. However, due to the design constraints, the change in coal source from 100% imported coal to

100% domestic coal and vice versa as above, are not possible without major modifications in plant design.

c) Changes in coal characteristics may occur from one domestic source to other domestic source. However, these changes are restricted within the plant design range (± 20-25% of GCV).

d) Changes in coal characteristics may occur due to blending of imported coal with domestic coal (as per CEA Advisory dated 19.04.2011, maximum allowable being 30%, but normally the blending ratio has been about 10%).

e) The case study for the blending of imported coal with domestic coal (up to 30%) indicates that the impact remains within 9% for SO_2 emission without FGD whereas there will be reduction in coal consumption and ash generation. If the FGD is in operation, the additional impact of SO_2 shall be nullified, as the plant is operating within specified emission standards.

f) The case study for the blending of domestic coal with imported coal (up to 30%) indicates that the coal consumption increases up to 15% and ash generation increase up to 96%. The case study also shows blending of domestic coal with imported coal (up to 10%) indicates that coal consumption increases up to 5 % and ash generation increases up to 29%, whereas there will be reduction in SO2 emission (up to 3%).

g) The impact factors for coal storage and ash disposal areas are insignificant. However, if the change involves coal transportation by road, additional impacts may be there for which additional mitigation measures shall be required (as per MoEF&CC notification dated 21.05.2020).

[D] The Expert Appraisal Committee (EAC), Thermal Power Projects after thorough examination and detailed deliberations on the findings/analysis report of the sub -committee recommended that:

a) As significant changes in coal characteristics may occur when the change takes place from 100% imported coal to 100% domestic coal and vice versa; and due to the design constraints, the change in coal source from 100% imported coal to 100% domestic coal and vice versa are not possible without major modifications in plant design, except when the domestic coal is high GCV coal of similar grade. Therefore, it is proposed to remove the change from 100% imported coal to 100% domestic coal (except when the domestic coal is high GCV coal of similar grade) and vice versa same from the type of projects exempted from amendment in EC due to change in coal source. Whenever any project proponent intends to change from 100% imported coal to 100% domestic coal and vice versa; it has to approach MOEF&CC with a study on additional impact assessment and revised EMP.

b) There are changes in coal characteristics may occur from one domestic source to other domestic source or even within the same domestic coal sources. However, as these changes are restricted within the plant design range (± 20-25% of GCV) and the impacts of the changes are restricted to limited range, it is proposed to continue with exemption from amendment in EC due to change in coal source. However, these projects shall continue to comply with all the applicable norms and the provisions under OM dated 11.11.2020.

c) Changes in coal characteristics also occur due to blending of imported coal with domestic coal (as per CEA Advisory dated 19.04.2011, maximum allowable being 30%, but normally the blending ratio has been about 10%). The case study for the blending of imported coal with domestic coal (up to 30%) indicates that the impact remains within 9% for SO_2 emission without FGD whereas there will be reduction in coal consumption and ash generation. If the FGD is in operation, the additional impact of SO_2 shall be nullified, as the plant is operating within specified emission standards. Therefore, it is proposed to continue with exemption from amendment in EC due to change in coal source in this category of power projects for blending up to 30%. However, these projects shall continue to comply with all the applicable norms and the provisions under OM dated 11.11.2020.

d) The case study for the blending of domestic coal with imported coal (up to 30%) indicates that the coal consumption increases up to 15% and ash generation increase up to 96%. The case study also shows blending of domestic coal with imported coal (up to 10%) indicates that coal consumption increases up to 5 % and ash generation increases up to 29%, whereas there will be reduction in SO2 emission (up to 3%). Therefore, it is proposed to continue with exemption from amendment in EC due to change in coal source in this category of power projects for blending up to 10% only. Further, these projects shall continue to comply with all the applicable norms and the provisions under OM dated 11.11.2020. Whenever any project proponent intends to blend domestic coal with imported coal (more than 10%); it has to approach

MOEF&CC with a study on additional impact assessment and revised EMP.

In a nutshell, the proposed changes in applicability of OM dated 11.11.2020 are tabulated as follows:

S. No.	Change in Coal Source	Applicability of OM dated 11.11.2020	
1	Change from 100% imported coal to 100% domestic coal (except when the domestic coal is high GCV coal of similar grade)	Not Applicable	Project proponent shall approach MOEF&CC with a study on additional impact assessment and revised EMP and obtain amendment in EC.
2	Change from 100% domestic coal to 100% imported coal (except when the domestic coal is high GCV coal of similar grade)	Not Applicable	Project proponent shall approach MOEF&CC with a study on additional impact assessment and revised EMP and obtain amendment in EC.
3	Change from one domestic source to other domestic source, partial or full change	Applicable	Projects shall continue to comply with all the applicable norms and the provisions under OM dated 11.11.2020
4	Blending of imported	Applicable	Projects shall continue to

	coal in domestic coal based power projects up to a maximum of 30%		comply with all the applicable norms and the provisions under OM dated 11.11.2020
5	Blending of domestic coal in imported coal based power projects up to a maximum of 10%	Applicable	Projects shall continue to comply with all the applicable norms and the provisions under OM dated 11.11.2020
6	Blending of domestic coal in imported coal based power projects beyond 10%	Not Applicable	Project proponent shall approach MOEF&CC with a study on additional impact assessment and revised EMP and obtain amendment in EC.

e. Compliance Monitoring the Regional Office of the MoEF&CC:

In case of change in coal source within the purview of OM dated 11.11.2020 and its applicability as per above table, the PP shall have to submit a compliance report of the terms and conditions of the aforesaid OM duly certified by the IRO within 6 months of such changes adopted.

****

Email **Yogendra Pal Singh**

Re: OA No. 74 of 2021 and WP No 13266 of 2021 and WP No 13499 of 2021 in the matter of K Saravanan Vs Union of India before NGT (SZ), Chennai - reg.

From : gpkundargi@gmail.com Sun, Oct 01, 2023 01:19 PM

Subject : Re: OA No. 74 of 2021 and WP No 13266 of 2021 and WP No 13499 of 2021 in the matter of K Saravanan Vs Union of India before NGT (SZ), Chennai - reg.

To : Yogendra Pal Singh <yogendra78@nic.in>

Sub. Re:OA No 74 0f 2021 & WP No 13266 of 2021 and WP No 13499 in the matter of K Saravanan Vs Union Of India before NGT
{SZ} Chennai reg.

Dear Dr Yogendra ji,
Considering the consents received from sub committee,& deliberations in the EAC,Final Draft Report on the above Subject is Approved
for further necessary action at your End.
Thank you
G P Kundargi

On Wed, Sep 27, 2023 at 4:52 PM Yogendra Pal Singh <yogendra78@nic.in> wrote:

> Dear Sir,
>
> The draft report in the captioned, after receiving the consents from Sub Committee Members, is attached herewith for kind perusal and approval please.
>
> ---
>
> **From:** "Nazimuddin" <nazim.cpcb@nic.in>
> **To:** gpkundargi@gmail.com, "Yogendra Pal Singh" <yogendra78@nic.in>
> **Cc:** "mpsingh.cea" <mpsingh.cea@nic.in>, "JK PANDEY" <jkpandey@cimfr.nic.in>, "Sanjeev Goyal" <sk_goyal@neeri.res.in>, jaikrishnapandey@gmail.com, vijayprakash@ntpc.co.in, "Saurabh Upadhyay" <saurabh.upadhyay85@gov.in>, "Sourabh Kumar" <sourabh.9@govcontractor.in>, "ishanvi m" <ishanvi.m@govcontractor.in>
> **Sent:** Tuesday, September 26, 2023 6:26:24 PM
> **Subject:** Re: OA No. 74 of 2021 and WP No 13266 of 2021 and WP No 13499 of 2021 in the matter of K Saravanan Vs Union of India before NGT (SZ), Chennai - reg.
>
> Sir,
>
> Agree with the report. However, it is suggested that:
>
> - Sub para d) and e) of the recommendation can be combined
> - The compliance report in respect of conditions of OM can only be verified by IRO after submission by PP. The wording regarding "duly certified compliance report" may be modified accordingly in sub para f)

Regards

Nazimuddin, Sc F, CPCB

From: "Yogendra Pal Singh" <yogendra78@nic.in>
To: "mpsingh.cea" <mpsingh.cea@nic.in>, "JK PANDEY" <jkpandey@cimfr.nic.in>, "Sanjeev Goyal" <sk_goyal@neeri.res.in>, jaikrishnapandey@gmail.com, "Nazimuddin" <nazim.cpcb@nic.in>, vijayprakash@ntpc.co.in
Cc: gpkundargi@gmail.com, "Saurabh Upadhyay" <saurabh.upadhyay85@gov.in>, "Sourabh Kumar" <sourabh.9@govcontractor.in>, "ishanvi m" <ishanvi.m@govcontractor.in>
Sent: Sunday, September 17, 2023 6:18:16 PM
Subject: OA No. 74 of 2021 and WP No 13266 of 2021 and WP No 13499 of 2021 in the matter of K Saravanan Vs Union of India before NGT (SZ), Chennai - reg.

MOST IMMEDIATE
NGT MATTER

Sir,

Please find enclosed herewith the report **(final version)** on the above mentioned subject matter. The Chairman (EAC) has vetted the report. In this regard, I am directed to request you to provide your consent on the said report at the earliest so as to enable the Ministry to ensure the compliance of directions passed by the Hon'ble NGT (SZ).

Email **Yogendra Pal Singh**

Re: OA No. 74 of 2021 and WP No 13266 of 2021 and WP No 13499 of 2021 in the matter of K Saravanan Vs Union of India before NGT (SZ), Chennai - reg.

From : Sanjeev Goyal <sk_goyal@neeri.res.in> Mon, Sep 25, 2023 01:19 PM

Subject : Re: OA No. 74 of 2021 and WP No 13266 of 2021 and WP No 13499 of 2021 in the matter of K Saravanan Vs Union of India before NGT (SZ), Chennai - reg.

To : Yogendra Pal Singh <yogendra78@nic.in>

Dear Sir,

Thanks for sharing the final report.
The report is fine from myside.
Please also share copy of final version being submitted to Hon'ble NGT.

Regards,
SKGoyal
Chief Scientist & Head
CSIR-NEERI, Delhi Zonal Centre
Naraina, New Delhi

From: "Yogendra Pal Singh" <yogendra78@nic.in>
To: "mpsingh.cea" <mpsingh.cea@nic.in>, "JK PANDEY" <jkpandey@cimfr.nic.in>, "Sanjeev Goyal" <sk_goyal@neeri.res.in>, jaikrishnapandey@gmail.com, "Nazimuddin" <nazim.cpcb@nic.in>, vijayprakash@ntpc.co.in
Cc: gpkundargi@gmail.com, "Saurabh Upadhyay" <saurabh.upadhyay85@gov.in>, "Sourabh Kumar" <sourabh.9@govcontractor.in>, "ishanvi m" <ishanvi.m@govcontractor.in>
Sent: Sunday, September 17, 2023 6:18:16 PM
Subject: OA No. 74 of 2021 and WP No 13266 of 2021 and WP No 13499 of 2021 in the matter of K Saravanan Vs Union of India before NGT (SZ), Chennai - reg.

MOST IMMEDIATE
NGT MATTER

Sir,

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Email **Yogendra Pal Singh**

From : JK PANDEY <jkpandey@cimfr.nic.in> Mon, Sep 25, 2023 01:43 PM

Subject : Re: Fwd: OA No. 74 of 2021 and WP No 13266 of 2021 and WP No 13499 of 2021 in the matter of K Saravanan Vs Union of India before NGT (SZ), Chennai - reg.

To : Yogendra Pal Singh <yogendra78@nic.in>

Dear Dr Singh
I have already gone through the minutes and found in order.
Regards

Dr J K Pandey

Dr J.K.PandeyChief Scientist & Professor (Engg Sciences), ACSIR-CIMFRHead, Mine Fire, Ventilation, Miner's Safety and Health Research GroupCSIR-Central Institute of Mining and Fuel Research(Ministry of Science and Technology, Govt. of India)Barwa Road, Dhanbad-826015 (Jharkhand), IndiaPhone: +91 326 2296027-29 Extn 4341, +91 326 2396053 (Telefax), +919431727134 (Mob)Alternate email id: jaikrishnapandey@gmail.com

----- Original Message -----
From: Yogendra Pal Singh <yogendra78@nic.in>
To: JK PANDEY <jkpandey@cimfr.nic.in>
Sent: Mon, 25 Sep 2023 11:43:42 +0530 (IST)
Subject: Fwd: OA No. 74 of 2021 and WP No 13266 of 2021 and WP No 13499 of 2021 in the matter of K Saravanan Vs Union of India before NGT (SZ), Chennai - reg.

From: "mpsingh.cea" <mpsingh.cea@nic.in>
To: "Yogendra Pal Singh" <yogendra78@nic.in>
Sent: Monday, September 18, 2023 8:01:29 PM
Subject: Fwd: OA No. 74 of 2021 and WP No 13266 of 2021 and WP No 13499 of 2021 in the matter of K Saravanan Vs Union of India before NGT (SZ), Chennai - reg.

Slightly modification is required in last part [D] - a. b. c. d. f. --- missed e. in numbering.

Please see.

Regards,

Mahi Pal SIngh
Chief Engineer (TPP&D)
central Electricity Authority

From: VIJAYPRAKASH@NTPC.CO.IN
To: "mpsingh.cea" <mpsingh.cea@nic.in>
Sent: Monday, September 18, 2023 2:11:23 PM
Subject: Fw: OA No. 74 of 2021 and WP No 13266 of 2021 and WP No 13499 of 2021 in the matter of K Saravanan Vs Union of India before NGT (SZ), Chennai - reg.

महोदय / Sir,

For information please.

सादर / With Regards

Dr. Vijay Prakash, M. Tech. (IIT, Kanpur), MSW, Ph.D. (UK)
डॉ विजय प्रकाश, एम टेक, एम एस डब्ल्यू, पी एच डी (यू के)
Recipient of Commonwealth Scholarship in UK
Chief General Manager & HOD (Engg. Services)
मुख्य महाप्रबंधक एवं विभागाध्यक्ष (अभियांत्रिकी सेवाएँ)
NTPC Engineering Office Complex, Sector-24, Noida
एनटीपीसी इंजीनियरिंग ऑफिस कॉम्प्लेक्स, सेक्टर - 24, नोएडा
Tel.: 0120-4946930, 2410331; Mobiles: 09650991509
Alternate E-mail: vijayprakashntpc@gmail.com

From: VijayPrakash <VIJAYPRAKASH@NTPC.CO.IN>
Sent: 18 September 2023 10:02
To: Yogendra Pal Singh <yogendra78@nic.in>
Subject: Re: OA No. 74 of 2021 and WP No 13266 of 2021 and WP No 13499 of 2021 in the matter of K Saravanan Vs Union of India before NGT (SZ), Chennai - reg.

महोदय / Sir,

Some minor corrections are marked in trak change mode. Based on discussions and deliberations within the Sub-committee and EAC, I hereby give my consent as an individual member of the sub-commitee . However, it does not have the formal approval of the management of NTPC.

सादर / With Regards

Dr. Vijay Prakash, M. Tech. (IIT, Kanpur), MSW, Ph.D. (UK)
डॉ विजय प्रकाश, एम टेक, एम एस डब्ल्यू, पी एच डी (यू के)
Recipient of Commonwealth Scholarship in UK
Chief General Manager & HOD (Engg. Services)
मुख्य महाप्रबंधक एवं विभागाध्यक्ष (अभियांत्रिकी सेवाएँ)
NTPC Engineering Office Complex, Sector-24, Noida
एनटीपीसी इंजीनियरिंग ऑफिस कॉम्प्लेक्स, सेक्टर - 24, नोएडा

Tel.: 0120-4946930, 2410331; Mobiles: 09650991509
Alternate E-mail: vijayprakashntpc@gmail.com

From: Yogendra Pal Singh <yogendra78@nic.in>
Sent: 17 September 2023 18:18
To: mpsingh.cea <mpsingh.cea@nic.in>; JK PANDEY <jkpandey@cimfr.nic.in>; Sanjeev Goyal <sk_goyal@neeri.res.in>; jaikrishnapandey@gmail.com <jaikrishnapandey@gmail.com>; Nazimuddin <nazim.cpcb@nic.in>; VijayPrakash <VIJAYPRAKASH@NTPC.CO.IN>
Cc: gpkundargi@gmail.com <gpkundargi@gmail.com>; Saurabh Upadhyay <saurabh.upadhyay85@gov.in>; Sourabh Kumar <sourabh.9@govcontractor.in>; ishanvi.m@govcontractor.in <ishanvi.m@govcontractor.in>
Subject: OA No. 74 of 2021 and WP No 13266 of 2021 and WP No 13499 of 2021 in the matter of K Saravanan Vs Union of India before NGT (SZ), Chennai - reg.

MOST IMMEDIATE
NGT MATTER

Sir,

Please find enclosed herewith the report (final version) on the above mentioned subject matter. The Chairman (EAC) has vetted the report. In this regard, I am directed to request you to provide your consent on the said report at the earliest so as to enable the Ministry to ensure the compliance of directions passed by the Hon'ble NGT (SZ).