BEFORE THE NATIONAL GREEN TRIBUNAL (SZ) CHENNAI

APPEAL No. 46 of 2016 (SZ)

IN THE MATTER OF:

Uma Maheshwar Dahagama,
5-1-270 Krishna Nagar Street,
Jyothi Nagar Post Office,
Jyothi Nagar, Karim Nagar District,
Telengana – 505 215. ....Appellant

Versus

Union of India,
Through the Secretary
Ministry of Environment and Forests &
Climate Change,
Indira Paryavaram Bhawan, Jor Bagh Road,
Ali Gunj, New Delhi – 110 003.
& Others .... Respondents

PAPER BOOK -IV

NOTES ON SUBMISSIONS FILED ON BEHALF OF THE 3rd RESPONDENT – NTPC LTD ALONG WITH THE EXHIBITS A TO E.

M/s.KING & PARTRIDGE
C.MOHAN
M.KUMARESAN
ADVOCATES FOR 3RD RESPONDENT

BEFORE THE NATIONAL GREEN TRIBUNAL (SZ) CHENNAI

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New Delhi – 110 003 and others ….Respondents

PAPER BOOK-IV

INDEX TO NOTES ON SUBMISSIONS FILED BY 3RD RESPONDENTS

ALONG WITH EXHIBITS A TO E

S.NOs	DATE	DESCRIPTION OF DOCUMENTS	PAGE NOS.
1.	01.12.2020	Notes on Submissions filed by the 3rd Respondent	**1-60**
2.	21.05.2020 **Exhibit - A**	MOEF&CC vide Notification Permitted Thermal Power plants to use coal without stipulations as ash content and distance	**61**
3.	11.11.2020 **Exhibit - B**	Amendment in EC for change in coal source by Thermal Power Plants.	**69**
4.	06.11.2019 **Exhibit - C**	The heavy metal analysis report of Mandakini-B Coal Block	**72**
5.	21.10.2020 **Exhibit - D**	Amendment in EC condition regarding monitoring of Radioactivity.	**75**
6.	02.11.2020 **Exhibit - E**	The certificate issued by Medical Superintendent, Peddapalli	**77**

Dated at Chennai on this 1st day of December 2020

M/s. KING & PARTRIDGE
C.MOHAN
M.KUMARESAN
ADVOCATES FOR 3rd RESPONDENT

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1. Union of India,
   Through the Secretary
   Ministry of Environment and Forests &
   Climate Change,
   Indira Paryavaram Bhawan, Jor Bagh Road,
   Ali Gunj, New Delhi – 110 003.

2. Telangana State Pollution Control Board,
   Through the Member Secretary,
   A-3, Paryavaran Bhawan, Sanath Nagar,
   Hyderabad, Telangana – 500 018.

3. M/s. National Thermal Power Corporation Limited
   NTPC Bhavan, Scope Complex, 7,
   Institutional Area, Lodhi Road,
   New Delhi – 110 003
   Through the Managing Director. .... Respondents

NOTES ON SUBMISSIONS FILED ON BEHALF OF THE 3rd RESPONDENT – NTPC LTD.

The above-named 3rd Respondent most respectfully submits as follows:

This Notes on Submissions is filed on behalf of the 3rd Respondent – NTPC Limited which is shown by the Appellant as National Thermal Power Corporation Limited which was its earlier name and from and before the present Appeal came to be filed. The 3rd Respondent is called as NTPC Limited hence cause title needs to be amended. This Hon'ble Tribunal may accordingly direct the office to amend the name of the 3rd Respondent as NTPC Limited instead of M/s. National Thermal Power Corporation Limited.

This Notes on Submissions is in continuation to, addition to and in supplement to the pleadings and documents filed on behalf of NTPC Limited before this Hon'ble Tribunal. The Counsel for the Appellant has provided the Appellant's Written Submissions hereinafter referred to as "AWS" dated 14.04.2017 through WhatsApp to the Counsel for NTPC Limited on

28.10.2020. This 3rd Respondent has endeavored to counter and meet the written submissions of the Appellant in this Notes on Submissions.

NUMBERING OF PAPER BOOK/DOCUMENT SETS FILED BY BOTH APPELLANT AND RESPONDENTS

For convenience, the common index to paper books/documents filed by both the Appellant and the Respondents are given volume Numbers and as set out herein. The copies of the index have already been provided to this Hon'ble Tribunal as well the Appellant Counsel and the Co-respondent Counsels on 27.10.2020.

VOLUME.NOS	DESCRIPTION OF DOCUMENTS/VOLUMES	DATE
I	PAPER BOOK I MEMORANDUM OF APPEAL FILED BY THE APPELLANT	17.02.2016
II	PAPER BOOK II TYPED SET OF DOCUMENTS FILED BY THE APPELLANT	17.02.2016
III	PAPER BOOK I REPLY STATEMENT FILED BY THE 3RD RESPONDENT- NTPC	27.06.2016
IV	PAPER BOOK II TYPED SET OF DOCUMENTS FILED BY THE 3RD RESPONDENT- NTPC	27.06.2016
V	REPLY AFFIDAVIT FILED BY THE 1ST RESPONDENT- MOEF & CC	28.10.2016
VI	REPLY FILED BY THE 2ND RESPONDENT ALONG WITH ANNEXURES TSPCB	28.10.2016
VII	REJOINDER FILED BY THE APPELLANT ALONG WITH ANNEXURES	18.11.2016
VIII	ADDITIONAL REJOINDER FILED BY THE APPELLANT ALONG WITH ANNEXURES	28.11.2016
IX	PAPER BOOK III REPLY TO REJOINDER FILED BY THE 3RD RESPONDENT NTPC ALONG WITH ANNEXURES	06.02.2017
X	RESPONSE TO REPLY REJOINDER BY THE APPELLANT	10.03.2017

This Notes on Submission consists of 2 parts: -

PART- I Introduction, overall picture of the project and relevant facts relating in paragraphs -1 to 60 pages 1 to 19

PART –II 3rd Respondent Reply to Appellant's objections in his Written Submissions (AWS) in paragraphs 61 to 189 pages 20 To 60

PART- I

A. INTRODUCTION

1. This Appeal challenges the Environmental Clearance (EC) granted by the Ministry of Environment and Forest and Climate Change (MOEF&CC) vide Letter No.J-13012/112/2010-IA.II(T) dated 20.01.2016 to establish the Telangana Super Thermal Power Project (STPP) Phase-I (2x800) MW to NTPC Limited at Ramagundam.

2. NTPC Limited was formed /incorporated as National Thermal Power Corporation Limited in 1975 and is a fully owned Government of India Company. It operates as a Public Sector Undertaking under the Ministry of Power, Government of India. In recent times, given the change of characteristics and operations of the Company, it came to be renamed as NTPC Limited and is India's largest energy conglomerate incorporated to accelerate power development in India. NTPC Limited became a "Maharatna" Company in May 2010, one of the ten companies to be awarded the status. Present installed capacity of NTPC Group is 62,910 MW (including 11,755 MW through JVs/Subsidiaries) comprising of 45 NTPC Stations (24 Coal based stations, 7 gas based stations, 1 Hydro station, 1 small hydro, 11 Solar PV and 1 Wind based Station) and 25 Joint Venture stations (9 coal based, 4 gas based, 8 hydro, 1 small hydro 2 Wind and 1 Solar PV). NTPC Limited has been operating its plants at high efficiency levels. It is respectfully submitted that due to economic liberalization and increase in various development activities, the need for power has increased manifold. Several parts of the country are affected by power shortages. Development and growth can co-exist only if adequate and sufficient power is available for the same. It is a common knowledge that households in India both urban and rural are not having enough power supply, leave alone industries.

3. It is a bane of India due to inadequate supply of power, new industries are not developing, the existing industries are suffering huge

loss due to very high interest rates beyond profit ratio, directly result in layoffs, industrial unrest, inability of industries to service loans to banks etc., uncontrollable NPAs, consequently huge loss to banks, requiring very large financial support to banks by Union Government out of tax money curtailing, welfare activities and retarding capital investments for economic growth. Well it is a vicious circle pushing India backward. Economic growth, sustainable development and energy security are all intrinsically interlinked. One cannot be divorced from the other.

4. **It is respectfully submitted that while enacting and promulgating the Andhra Pradesh Re-organization Act, 2014 by which the State of Telangana came to be created, as part of the infrastructure requirements Item No.7, NTPC Limited was required to establish a 4000 MW power facility. Item No.7 under the 13th schedule of the Andhra Pradesh Reorganization Act, 2014** ***filed as Annexure-R3/18 in Volume IV*** **is exacted hereunder:**

> ***"7. NTPC shall establish a 4000 MW power facility in the successor State of Telangana after establishing necessary coal linkage."***

5. It was in fulfillment of this priority/necessity to the new born State that NTPC had applied and obtained Environmental Clearance on 20.01.2016. Even though there was a requirement/ mandate for NTPC to set up a 4000 MW coal fired power station for the State of Telangana, the project is being taken up in two phases. Accordingly, under Phase–I NTPC is setting up a Thermal Power Plant of capacity of 1600 MW (2 x 800 MW) within the existing plant owned site at Ramagundam. The existing site was constrained to be chosen, due to non-availability of adequate and suitable alternative site with coal linkage and due to the urgency to establish the power plant to cater to the need of new born State for development. The State of A.P was compelled to be divided and Telangana state was created due to the demand for urgent rural electrification, growth in all fields and industrial development to Telangana area which remained under level opted over for several decades.

6. The existing plant at Ramagundam was commenced in the year 1978 and started generating power from 1983 onwards. The existing capacity is 2600 MW with an additional 10 MW solar added recently and supplied to the grid operated by the Power Grid Corporation of India. 17% of this

existing 2600 MW is supplied to Telangana State and rest is supplied to the other Southern States.

7. Ramagundam is located in Peddapalli District of Telangana State (Peddapalli was carved out of earlier Karimnagar District on 16.10.2016). The existing plant is coal fired power plant with coal being supplied from the Singareni Collieries Company Limited (SCCL). This is also called a pit head power station. The existing plant has been operating successfully at this location from 1978 and several thousands of employees both permanent and contractual have significantly contributed to the development of the entire area. A visit to the existing plant would disclose that NTPC has been maintaining it as one of the best power plant~~s~~ at Ramagundam which has been also repeatedly recognized and awarded as one of the best power plants.

8. It is a matter of record that after establishment of the power plant in the year 1978 onwards, **NTPC has carried out aggressive afforestation by planting more than 13.5 lakh trees which are now fully grown**. From the Indian Meteorological Department (IMD) data recorded for the last 50 years it is evident that the average maximum temperature in and around Ramagundam area has fallen by about **0.3 degrees centigrade due to extensive afforestation** carried out by NTPC in the surrounding areas in spite of industrial growth in and around Ramagundam area. The land tract of the area is mostly arid and dry, giving it a desert environment. While so, after setting up of the power plant sincere and serious efforts were taken nor planting of trees, which are not only contributing to the economic development of the area, but also helped to reduce the average mean temperature of Ramagundam. **It is also submitted that the existing plant of Ramagundam has been adjudged as India's best power station by "Power Magazine" of USA based on the efficiency and environmental performance of the station.**

9. When the statutory requirement to set up the present power plant fell on NTPC, for the Telangana Super Thermal Power Project Phase–I, all aspects required for setting up the project were examined and the existing plant area at Ramagundam was short listed taking into consideration the various aspects and time factor requirements.

B. DETAILS OF PROGRESS AND PROCESS OF THE PROPOSED PLANT

The Basic Requirements for a Super Thermal Power Plant are I) Land II) Water and III) Coal. The details are hereunder:

I. LAND

10. The conceptualization of power project which includes site selection, arranging inputs like land, water and fuel, preparation of Feasibility Report (FR), Environmental Impact Assessment (EIA) and other studies, various approval processes constitute a long drawn process spanning over 2 years. All the details are not readily available in the beginning and parallel activities were undertaken for various studies and approvals to save the time. No additional land from outside is being acquired as the proposed project which will be located inside the existing premise of Ramagundam STPP. Needless to state that Land Acquisition of large extent under the new Land Acquisition Act was a highly time consuming, pro-active, multifaced activity, which will cause inordinate delay in the establishment of the power plant, defeating very need of the new born State for quick development. By avoiding acquisition of additional land for proposed project, NTPC has conserved the land resource which is one of the most important natural resource of Environment.

11. NTPC owns and holds about 9,602 acres of land at Ramagundam. Given large scale opposition for acquiring vast area of farmlands and stringent requirements of the present Land Acquisition Act, finding enough land was extremely difficult. In such circumstances, it was decided for resizing of the existing plant to fit the new plant was within the existing land available a solution feasible and accordingly NTPC has adopted and embarked on the same.

12. The land requirement for Telangana STPP Phase-I (2x800) MW is 635 acres. An area of 235 acres for main plant and 400 acres for ash pond and township and associated facilities are being accommodated with the existing facilities.

13. As no land is being acquired for the project and the proposed project is being accommodated within the existing plant premises of Ramagundam STPP, **there is no R&R related issues**. However, demographic profile of the study area was included in the EIAR based on secondary data.

II. WATER

14. Water in the form of existing supply from the Godavari River /Yellampally reservoir is available. The water requirement for Telangana STPP Phase-I (2x800) MW is 4000 m^3/hr which is well below to MOEF&CC standards of 4800 m^3/hr notified on 28.06.2018.

15. The Telangana STPP Phase-I (2x800) MW proposed project does not envisage any drawl of ground water during the operation phase of the project. The entire water requirement for the project will be met from the Yellampalli Barrage and hence no significant impact on ground water is envisaged.

16. The project is not located on the water body. The river Godavari is located at aerial distance of about 4.0 Km from the existing Ramagundam Power Plant. It is further submitted that the water system of proposed project is designed on the concept of Zero Liquid Discharge (ZLD) in order to reduce the quantity of effluents generated from the plant. Hence, no significant and long-term impact on surface water quality is envisaged.

17. The Environmental Impact Assessment Report (EIAR) that the proposed project is designed with Zero Liquid Discharge (ZLD) concept thereby ensuring that all the effluent generated from the plant process are systematically collected, treated and completely recycled and reused in the process again leaving no effluent discharge outside the plant boundary to the surrounding environment under all conditions round the year. It is submitted that the effluent water generated will be treated and recycled/re-used for different plant usage. **The entire concept of Zero Liquid Discharge (ZLD) scheme was already presented before EAC in the form of Water Balance Diagram and other details.** It is further submitted that a separate storm water drainage network is being constructed to facilitate discharge of rainwater. The water system of proposed project is designed on the concept of Zero Liquid Discharge (ZLD) in order to reduce the quantity of effluents generated from the plant.

18. The effluents generated will be treated as per the statutory norms and recycled/ re-used for different plant usage. It is to be noted that during the monsoon season when the evaporation loss are minimal, the excess monsoon water will be discharged into the natural water course/ river after proper treatment and there is no significant impact on the nearby water course is anticipated.

(II) a. ASH WATER RECIRCULATION SYSTEM (AWRS) FOR PROPOSED PLANT:

19. Ash Water Recirculation System (AWRS) is adopted in order to ensure that the effluent from the proposed project during operation phase is contained within permissible limits.

(II) b. HIGH CONCENTRATION SLURRY DISPOSAL (HCSD). THERE WILL BE NO HEAVY METAL LEACHING IN ASH POND

20. Project envisages eco-friendly High Concentration Slurry Disposal (HCSD) system for disposal of fly ash wherein the ash slurry gets solidified and there is no free water as overflow or leachate and for the bottom ash storage ash dyke will be designed with impermeable layer to avoid leaching into ground water. It is proposed to provide thick fill of solidified Bentonite mixed with clay of about 30 cm in the bottom of ash pond area which will act as an impermeable layer and hence there will no likelihood of leachate or ground water contamination. In Indian coal the concentration of heavy metals is very low, but ash content is more. Hence, heavy metal will be in microscopic percentage in the very huge quantity of ash found. The fly ash will be utilized 100% hence heavy metal in the ash pond will be very negligible consequently there will be no heavy metal contamination of ground water. The water quality is always alkaline in nature and hence it will not permit percolation of heavy metal. Therefore, leaching of heavy metals in the ash pond is highly unlikely.

(II) c. NO HEAVY METAL CONTAMINATION:

21. The study carried out at existing stations to determine impact on Heavy Metals due to leaching near ash pond area, revealed no significant impact on ground water regime. The monitoring results included in Environmental Impact Assessment Report (EIAR) also concluded that the quality of ground water is well within the prescribed Indian Standards IS: 10500-2012 limits and free from heavy metal contamination, at all the location around the existing power project.

(II) d. CSR - CD PROGRAMMES. DRINKING WATER PROVISION IN VILLAGES

22. It is also submitted that fluoride content in ground water is a common problem in entire Telangana region and it is not particular to the proposed project area. The said fluoride content is not relatable to the existing power plant of NTPC. However, it is to be noted that the NTPC as

a responsible corporate citizen has already installed Reverse Osmosis (RO) plant at Kundanpally Gram Panchayat and other neighbouring villages for supplying treated drinking water to the surrounding villages under its Corporate Social Responsibility – Community Development (CSR-CD) programmes.

(II) e. ASH WATER RECIRCULATION SYSTEM (AWRS) FOR EXISTING PLANT: LATEST- OCT 2020

23. Ash Water Recirculation System (AWRS) for existing Ramagundam units where in ash water up to 100% is being treated and recycled/reused for ash handling. AWRS is implemented, to reuse ash pond discharge from October, 2020 and is kept in service.

24. An integrated effluent treatment cum Ash Water Recirculation System (AWRS) has been provided. All effluents from plant area are finally treated and treated effluents are confirmed to the discharge standards. However, during the inspection visit of R.O, MOEF&CC inadequate treatment of effluent was observed due to maintenance of clarifier. NTPC has already started monitoring of Effluent Treatment Plant (ETP) inlet and outlet parameters on daily basis. Also domestic effluents are being continuously treated as per the stipulated statutory standard in the dedicated Sewage Treatment Plant (STP).

25. It submitted that the waste water generated in the existing plant is treated as per the statutory norms and recycled/re-used for different plant usage such as ash handling/ash slurry pumping, service water etc. Also domestic effluents are being continuously treated as per the stipulated statutory standard in the dedicated Sewage Treatment Plant (STP) and re-utilized for gardening and horticulture purpose. The Zero Liquid Discharge is under progress at existing power plant. The excess water over and above re-use is only being discharged into the natural water course / river after proper treatment and hence, no significant impact on the nearby water course leading to Godavari River is anticipated.

III. COAL (NEW PLANT)

26. The provision of coal shall be as per the allotment by Ministry of coal (MoC) to project proponent. The coal source and coal characteristics were changed during various stages of appraisal of the project for Environmental Clearance (EC) during Expert Appraisal Committee (EAC) meeting. However before grant of EC tapering coal linkage was given. The project proponent

has comply with the Ministry of Environment and Forest & Climate Change (MOEF&CC) Office Memorandum (OM) dated 01.11.2010 which requires that Thermal Power Project with coal sourcing from dedicated coal blocks shall be considered for Environmental Clearance (EC) only after the firm coal linkage is available and status of Environmental Clearance / Forest Clearance (EC / FC) of the linked coal mine is known.

27. The coal requirement for the project is estimated as 8.0 Million Tonnes Per Annum (MTPA) and there is no change in the quantity requirement throughout the appraisal. NTPC had approached Ministry of Power (MoP) for coal linkage for the project following which Ministry of Coal (MoC) vide its Office Memorandum (OM) dated 10.09.2015 had allotted Mandakini-B Coal Mine Block in Odisha State for the proposed Telangana STPP. Further, in order to expedite the process of project implementation, Ministry of Coal (MOC) vide its letter dated 21.09.2015 has also accorded in-principle approval for grant of Tapering Linkage from Coal India Limited (CIL) for Telangana STPP, Phase-I (2x800 MW) as an exceptional case till the operation of Mandakini-B Coal Mine Block. The uncertainty in coal linkage, as sought to be projected by the Appellant is not correct. Further it does not have any impact on Environmental Impact Assessment Report (EIAR) as impact assessment study has been carried out based on the worst case scenario *i.e. worst fuel characteristics, worst meteorological condition and worst operating conditions.*

28. It is submitted that the coal quality parameters for Western Coalfields Ltd. (WCL) was considered as tapering linkage for Telangana STPP Phase-I (2x800) MW. WCL coal characteristic are well known, since the mine is operating for the past several decades and is being dealt with by EAC and MoEF&CC frequently.

29. Ministry of Environment and Forest & Climate Change (MOEF&CC) Circular dated 19.01.2011, clarifies that firm coal linkage is required only at the stage of grant of Environmental Clearance (EC).

30. NTPC is pursuing the matter with General Manager (GM), Western Coal Field Ltd (WCL) to provide the Proximate Analysis Report including its heavy metal and radioactivity contents for the quality of coal proposed to be supplied for the project. However, its radioactivity content and heavy metal analysis report will be submitted to Regional officer MOEF&CC once the same is received from Western Coal Field Ltd (WCL). It is further

submitted that the variation in normative coal quantity for Telangana STPP Phase-I (2x800 MW) was due to the commitment of Western Coal Field Ltd (WCL) to supply better quality of coal in comparison to the inferior quality of coal of South Eastern Coalfields Limited (SECL) as considered in draft Environmental Impact Assessment Report (EIAR). Please refer paragraph 64 and 65 regarding Heavy Metal and Radioactivity analytical report about the WCL coal tapering linkage. Reports shows no adverse quality. Hence the issue of coal linkage is fully complied without compromising environment protection.

C. PUBLIC HEARING- NO COMPLAINT RAISED IN THE CONDUCT OF MEETING.

31. The issues raised by the public during the Public Hearing/PH proceedings and the responses along with action plan presented by the NTPC in detail. Only after considering the same, the EAC then recommended Environmental Clearance (EC) stipulating specific conditions for implementation under the applicable Rules and Regulations. It is further submitted that the Public Hearing (PH) for Telangana STPP was conducted successfully on 23.05.2015 in accordance with the EIA Notification dated 14.09.2006 in presence of about 1000 villagers and other public. The meeting was chaired by Additional District Magistrate (Karimnagar), Regional Officer (Telangana SPCB), Panchayat Board members, Local MLAs and officials of NTPC. The issues raised during the public consultation was summarized in Telugu and translated into English version by Telangana State Pollution Control Board (TSPCB) and subsequently forwarded to Director (Thermal), MOEF&CC, New Delhi by Environment Engineer, Telangana State Pollution Control Board. The Appellant had also participated in the public hearing on 23.05.2015. He raised the issues relating to ambient temperature and also against setting up of Coal based power projects and suggested to set up non-conventional power generation plants such as wind energy, solar power plants.

D. MITIGATIVE MEASURES

32. **All the emissions covered under baseline concentration and the additional load due to the operation of proposed 2x800 MW will be arrested by the proposed mitigation measures to control the emissions at source meeting the latest emission Notification for thermal power plant such as:**

i. Installation of high efficiency Electro Static Precipitators (**ESPs**) to limit the particulate emission below 30 mg/Nm^3,

ii. Twin flue stack of 275 m height for wider dispersal of remaining particulates and gaseous pollutants resulting in lower ground level concentrations.

iii. Installation of Flue Gas Desulphurization (**FGD**) system for controlling and limiting SO_2 emission 100 mg/Nm^3 under all design conditions.

iv. Installation of appropriate low Nitrogen oxide (**NO_2**) burners for controlled Nitrogen Oxide (**NO_2**) emission. Exploring the feasibility to install De- NO_2 system such as Selective Catalytic Reduction (**SCR**) system will be taken up. It will be installed in boiler for controlling and limiting Nitrogen oxide (**NOx**) emission 100 mg/Nm^3 under all design conditions.

ASH DISPOSAL SCHEME

v. The ash disposal scheme for fly ash envisages collection of fly ash by Dry Ash Extraction System (**DAES**) to the storage silos and residual fly ash transported through High Concentration Slurry Disposal (**HCSD**) system, which uses thick – viscous – high concentration slurry of ash for disposal which gets solidified within 1-2 days, thereby minimizing the possibility of fugitive emission and leaching. Further, under the above disposal system there is no risk of ash flying in the wind due to its being cemented. The necessary contracts in this regards have been given to various parties which are in various stages of implementation.

vi. Dust suppression and extraction system shall be installed at coal handling plant area and ash handling plant to control fugitive dust emission. It is being implemented.

vii. Water spraying shall be done at all dust generation areas viz., the coal and ash handling areas.

AMBIENT AIR QUALITY (AAQ)

viii. Regular monitoring of ambient air quality parameters through three nos. fixed Continuous Automatic Ambient Air Quality Monitoring Stations (**AAQMS**) as well as portable Ambient Air Quality Monitoring equipment is being monitored and data obtained.

AFFORESTATION

ix. Extensive plantation and afforestation are being undertaken in all available spaces.

x. Already green cover has been developed in existing Ramagundam STPP, Township area and around the proposed Telangana main plant site. Plantations is being continued at all available spaces in and around the project area. Till date 1,25,000 tree plantation have been completed after the grant of Environmental Clearance (EC) dated 20.01.2016.

xi. To support State Govt's Plantation Program in the area "Telangana ku Haritha Haram" an amount of Rs. 57 lakhs during 2016-17 and Rs 77.5 lakhs during 2017-18 has been given to District Forest Department. In 2019-20 more than 90 thousand trees have been planted in and around the plant area through TSFDCL and Ramagundam Municipal Corporation.

ZERO LIQUID DISCHARGE (ZLD)

xii. **The entire concept of Zero Liquid Discharge (ZLD) scheme was already presented in the form of water balance diagram. It is further submitted that a separate storm water drainage network is also being constructed to facilitate discharge of rainwater**.

All the aforesaid work are in progress at different stages of completion for establishing the above mentioned mitigative measures at a cost of about Rs. 1554.81 Crores.

E. HEALTH RISK ASSESSMENT

33. NTPC has undertaken Health Risk Assessment Study, carried out by M/s. Pollucon Laboratories Private Limited, Surat in 10 km radius during year 2008 -2009 wherein the health status of population was found satisfactory and no major health related problems were reported. NTPC has been regularly conducting various health check-up medical camps for employees / contactors and surrounding villages at regular interval in and around the project area under its Corporate Social Responsibility (CSR) activities. It is also substantiated by the fact that the records available at the local district health centres / primary health centres etc. also does not report any endemic / epidemic or other relatable to industrial pollution disease in the study area. The existing project is having well established 50 bed hospital with advanced facility to cater any medical needs and exigencies.

34. The health initiatives of NTPC aim at creating awareness and improving health standards of rural poor through providing various facilities and reaching quality health care in the areas of general medicine, eye care, dental care, etc. Some of the health related activities undertaken in the vicinity of project area are:

✓ Health related infrastructure provided at Kundanpalli and Sai Seva Samithi Government Area hospital, Godavarikhani, IRCS Mancherial etc.

✓ Regular monthly health camps are conducted at New Mogalpahad, Kundanpalli, Mallialpalli & PK Ramaiah colony.

✓ School children health camps, seasonable health camps for the villagers are being conducted every year.

✓ Pulse polio camps are conducted twice in a year along with the national programme in the nearby villages.

✓ Special camps like: Eye camps, IOL operations, PCP camps (Distribution of appliances on free of cost), Homeo medicine distribution for chicken guinea, Diabetic retinopathy camps, Anemia camps etc., are being conducted.

✓ Support to Government TB Hospital.

✓ DOT centre for the treatment of TB.

✓ Supporting state government in conducting family planning operations of more than 65,000 since 1982

35. Further to the aforesaid Health related initiatives carried out by 3rd Respondent, a fresh Occupational Health Disorder Survey of the study area has been stipulated as a Specific Condition number (xi) in the Environmental Clearance (EC) by MOEF&CC. The study has been completed and the report was submitted to Regional officer of MoEF & CC (Southern Zone) at Chennai on 25.11.2018 in half yearly compliance. The report does not indicate any adverse impact on health.

F. TELANGANA STPP PHASE-I (2X800) MW (NEW) AND ITS PRESENT STATUS

36. NTPC Telangana Phase-1 (2 x 800MW) construction was divided into packages and contracts were awarded to reputed organizations. For example SG Island package was awarded to M/s.BHEL, TG Island Package to M/s.GE, BOP package to M/s.TPL, Ash dyke package to M/s.Subash Infra Pvt.Ltd and FGD package to M/s.GEPIL.

37. Construction work started in the year 2016 with men and material. The project was conceptualized with state of art technology and the work is in full swing. The first unit (1 x 800MW) was anticipated to be commissioned in October 2020. However, all works came to a grinding stop with implementation of Nationwide Lockdown due to COVID-19 pandemic in March 2020. However, major works had to be stopped from 1st April to 31st August, 2020 due to scarcity of manpower and latter due to shortage of material. Majority of civil structures and erection works related to these packages are in different stages of completion and are being recommenced.

38. **As per the revised schedule for the commission of Unit-1, is changed to June 2021 and for the Unit-2 is changed to November 2021. Telangana STPP Phase-I both the units will be commissioned in the year 2021-2022.**

39. **The total cost of the project is Rs. 10,598/- Crores. Till date (October 2020) an amount of approximate of Rs.7,665/= Crores has already been spent.**

G. STUDIES (EC CONDITIONS):

a. HEALTH STUDY

40. In the year 2016 Health risk assessment study was carried out by M/s. Pollucon Laboratories Pvt Ltd, Surat in 10 km radius. The study revealed that there is no specific endemic disease in the surrounding area & the health status of study population was satisfactory and health problems reported during the study were not showing any unusual pattern. The health related problems found during the study like General health related complaints, Hypertension/Blood pressure, Malnutrition, Anaemia, Refractive error which were mainly due to life style related factors and not due to pollutants in emission. The report had been submitted to Regional officer of MoEF&CC at (Southern Zone) Chennai vide letter dated 25.11.2018.

b. SATELLITE STUDY

41. The consultancy contract for Satellite Imagery Study for NTPC Telangana was awarded to Telangana State Remote Sensing Application Centre (TRAC), Govt. of Telangana in the year 2016. TRAC study reports

are submitted to Regional Officer of MoEF & CC (Southern Zone) at Chennai of MOEF&CC. 1st Satellite imagery reports was submitted on 16.03.2018 and the 2nd satellite imaginary report was submitted on 02.11.2019.

c. IMPACT ON AGRICULTURAL FIELDS

42. In respect of existing plant. A scientific study for assessment of impact on vegetation within 10 km radius of the Telangana STPP due to ash water generated was awarded to Tropical Forest Research Institute-Jabalpur. Preliminary site visits were made, samples collections and analysis are completed. The consultant has to submit the final report.

d. TEMPERATURE STUDY

43. The long term monitoring of temperature to be carried on-site and off-site of the TPP. This is being a unique scientific study, bidders were invited to bid for the work through open tendering. Only one party had due to certain logistic problems. shown interest. Due to the same, the work could not be awarded. The scope of the work is being reviewed, so that the said study could be executed through limited tendering.

e. SOCIAL AUDIT

44. Work order for Social Audit of CSR activities under CD-Budget was awarded to Department of Business Management, Shathavahana University, Karimnagar to check the status of Corporate Social Responsibilities, Community Development Activities (CSR-CD) undertaken by NTPC, Ramagundam for the project affected families. The study is based on both primary as well as secondary data. For collecting primary data, a well-structured questionnaire has been prepared. Overall sample for this study is 1600 respondents out of 16 likely Project affected villages, covering 100 from each village. Most of the beneficiaries are happy and satisfied by the activities undertaken by NTPC station. No doubt, NTPC is doing an excellent work for the development of the community people but in future they can contribute more in the areas like – adult literacy programs, digital initiatives, and construction of school building, international scholarships, tree plantation drives and other such initiatives. Audit Report was submitted to Regional Officer of MOEF&CC (Southern Zone)at Chennai on 08.05.2019 along with EC Six Monthly Compliance report.

H. VARIOUS WORKS FOR PREVENTION AND CONTROL OF POLLUTION AND MONITORING OF ENVIRONMENTAL PARAMETERS.

a. STACK:

45. Twin flue stack of 275 m height are constructed for higher and wider dispersal of remaining particulates and gaseous pollutants to achieve lower ground level concentrations has been constructed.

b. FGD INSTALLATION

46. NTPC has already initiated action plan for installing FGD system in the layout for all units for controlling SO_2 concentration in flue gas in compliance to latest MOEF&CC emission norms for TPP dated 07.12.2015. FGD Package is awarded in Jan-2018 to M/s. GEPIL. Civil foundation works of various buildings viz., ball mill building, limestone building, gypsum de-watering building completed. Super-structure work, Absorber tower, tank erection are in progress.

c. ELECTROSTATIC PRECIPITATORS

47. The High Efficiency Electrostatic Precipitators (ESP) designed with state of art technology, are being installed to achieve guaranteed efficiency of 99.99 % in order to comply with the stipulation.

48. Besides, dust extraction systems and ash handling points, transfer areas and other vulnerable dusty areas shall be provided with suitable water spray systems, which are included in the design of the plant to suppress/avoid dust emissions from the coal and ash handling areas. However, NTPC will also make all its efforts in order to comply with the latest emission Notification by MOEF&CC for TPP dated 07.12.2015.

d. DUST EXTRACTION SYSTEMS

49. Adequate number of dust suppression and dust extraction systems are under construction in coal handling area including coal stockyard area, ash handling area and other dusty prone area for control of fugitive dust emissions.

50. Water sprinklers will also be installed at dust prone sites in order to attenuate fugitive dust emission. Dry fog dust suppression system is being provided at all transfer points.

e. ASH DYKE AND ASH WATER RECIRCULATION SYSTEM (AWRS)

51. Ash Dyke works like ash pond, toe drains, peripheral drains, roads and AWRS works like construction of pump house building, installation of pumps, laying of pipe line and other allied structures and activities are in progress.

f. ASH SILOS

52. An ash management & disposal scheme consisting of Dry Ash Extraction System (DAES) for dry collection of fly ash with storage facility (silos), supply of ash to entrepreneurs for utilization and promoting ash utilization to maximum extent and safe disposal of unused ash in the ash pond area is in progress.

g. RAIN WATER HARVESTING SYSTEM (RWHS)

53. Adequate measures are taken to harvest rainwater. Rain Water Harvesting System (RWHS) covers major areas in the main plant like offsite buildings, switchyard control rooms are having provisions of rain water harvesting. These works are incorporated in the contract.

h. EFFLUENT TREATMENT PLANT

54. The water system of Telangana STPP, Phase-I has been designed with Zero Liquid Discharge (ZLD) Concept by maximum recycle and reuse of waste water after treatment for various plant activities.

55. NTPC has already revised its water requirement in order to comply with the latest Notification by MOEF&CC for TPP dated 07.12.2015. An effluent management scheme consisting of 3.5 MLD STP is under construction to treat the wastewater as per the prescribed statutory standards of TSPCB/CPCB. Along with reuse pipeline network for utilizing the treated water for horticulture and plantation requirements of both plant and townships, thereby reducing the freshwater consumption.

i. GREEN COVER

56. Already green cover has been developed in existing Ramagundam STPP, Township area and around the proposed Telangana main plant site. Plantations is being continued at all available spaces in and around the project area. Till date 1,25,000 tree plantation has been completed after the grant of Environmental Clearance (EC) dated 20.01.2016.

57. Also, to support State Govt's Plantation Program "Telangana ku Haritha Haram" an amount of Rs. 57 lakhs during 2016-17 and Rs 77.5

lakhs during 2017-18 has been given to District Forest Department. In 2019-20 more than 90 thousand trees have been planted in and around the plant through TSFDCL and Ramagundam Municipal Corporation.

58. Due to non-availability of sufficient and suitable land within the NTPC premises, at present stage all possible measures are being taken and done to complete the target. However, we are pursuing to identify suitable land in and around the plant area for plantation of tree saplings.

j. STACK MONITORING

59. Works for online Continuous Emission Monitoring System (CEMS) for monitoring PM, SO_2, NOx and Hg in stack emission are in progress for proposed units.

k. AMBIENT AIR QUALITY MONITORING LOCATIONS.

60. Four online Ambient Air Quality Monitoring locations are identified in consultation with Telangana State Pollution Control Board. Online analyzers have reached the station.

PART-II

I. 3rd RESPONDENT REPLY TO THE APPELLANT'S WRITTEN SUBMISSIONS (HEREINAFER REFERRED TO AS "AWS").

THE OBJECTIONS IN THE "AWS" ARE REPLIED IN SERIATUM AS FOLLOWS

OBJECTIONS IN AWS

I. COAL PROPOSED TO BE USED FOR THE PROJECT HAS NOT BEEN TESTED FOR ITS CHARACTERISTICS AND THE IMPACT OF RADIOACTIVITY AND HEAVY METALS FROM THE SAME COAL HAVE NOT BEEN STUDIED BY PROJECT PROPONENT AND APPRAISED BY THE EAC AND MOEF&CC- PARA NOS. 6 TO 9, PAGE 8 TO 11

THE REPLY OF 3RD RESPONDENT

61. With regard to **coal characteristic- radioactivity,** the following are submitted. The coal requirement for the project is estimated as 8.0 Million Tonnes Per Annum (MTPA) and there is no change in the quantity requirement throughout the appraisal. However, NTPC has approached Ministry of Power (MoP) for coal linkage for the project following which Ministry of Coal (MoC) vide its Office Memorandum (OM) dated 10.09.2015 **(filed as ANNEXURE-R3/5 Volume IV)** had allotted Mandakini-B Coal Mine Block in Odisha State for the proposed Telangana STPP. Further, in order to expedite the process of project implementation, Ministry of Coal (MOC) vide its letter dated 21.09.2015 **(filed as ANNEXURE-R3/6 Volume IV)** had also accorded in-principle approval for grant of tapering coal linkage from Coal India Limited (CIL) for Telangana STPP, Phase-I (2x800 MW) as an exceptional case till the operation of Mandakini-B Coal Mine Block. The alleged uncertainty in coal linkage, as sought to be projected by the Appellant is not correct and does not have any impact on Environment. Environmental Impact Assessment Report (EIAR) as impact assessment study has been carried out based on the worst case scenario *i.e. worst fuel characteristics, worst meteorological condition and worst operating conditions.* The coal analysis report do not disclose any excess/concern in respect of radioactivity and heavy metal parameters.

62. Ministry of Environment and Forest & Climate Change (MOEF&CC) Circular dated 19.01.2011 **(filed as ANNEXURE-R3/10 Volume IV)**, had clarified that **firm coal linkage is required only at the stage of grant of Environmental Clearance (EC).**

63. It is submitted that the coal quality parameters for Western Coalfields Ltd. (WCL) of Coal India Limited was considered as tapering linkage for Telangana STPP Phase-I (2x800) MW during appraisal of EC. It is submitted that even if a firm coal linkage has been indicated at the time of grant of Environmental Clearance (EC), a power plant can change the source of coal during the operating life of the project for a variety of reasons such as – delay in start of operation of linked coal mine, temporary reduction in output of linked coal mine etc.

64. Telangana STPP is designed to cope up with wide variety of ash content in coal and is equipped with high efficiency Electro-precipitators to achieve particulate emissions norms, tall stack for wide dispersion of emissions, dry ash extraction system and fly ash handling system to facilitate ash utilization. Therefore variation in ash content in coal is not significant currently. **Besides, this, MOEF&CC vide Notification dated 21.05.2020 has permitted Thermal Power plants to use coal without stipulations as ash content and distance. A copy of MOEF&CC Notification dated 21.05.2020 is submitted as Exhibit - A along with this notes on submissions.**

65. **Further, MOEF&CC vide Office memorandum dated 11.11.2020 has permitted that all the Thermal Power Plants (including Captive Power Plants) having Environmental Clearance can change the coal source** (from imported 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 organization recognized for allotting coal linkages, without seeking the amendment in Environmental Clearance, subject to certain conditions and compliance of new emission norms dated 07.12.2015 for thermal power plants and thereby making earlier conditions in the EC regarding coal source. A copy of MOEF&CC Office memorandum dated 11.11.2020 is submitted as **Exhibit - B along with this notes on submissions.**

RADIOACTIVE CONTENTS

66. The monitoring of Radio activity and heavy metals in coal samples was stipulated in TOR No. xxxix. Accordingly, the analysis report of radio activity for SCCL coal is also included in the Final EIA report and the was **filed as Annexure-R3/30 Volume IX.** It is noteworthy to mention that in Compliance to stipulations in EC, the analysis report of WCL coal was done and it revealed that the measurement values for radioactive contents in

WCL coal are well below the clearance level for radionuclides of natural origin in bulk solid as per the Atomic Energy Regulatory Board (AERB) directive 01/2010 (Table-3) dated 26.11.2010.**The copy of AERB directive is filed as Annexure-R3/32 Volume IX).**

HEAVY METAL IN COAL ASH

67. In so far as para Nos. 10 to 13, page11 to 13 of the AWS with regard to **HEAVY METAL,** the following is submitted. The heavy metal analysis **report dated 01.10.2016 of WCL coal from Environmental Protection Training & research Institute (EPTRI), Hyderabad was filed as Annexure-R3/31 Volume IX.** The heavy metal analysis report of Mandakini-B Coal Block is submitted as **Exhibit - C dated 06.11.2019 along with this notes on submissions.**

68. **It is further mentioned that there are no specific BIS standards/regulations for monitoring of Radioactivity in coal and ash in India.** Further, MOEF&CC vide letter dated **21.10.2020** has also amended the EC conditions relating to in-built continuous monitoring of Radioactivity and Heavy metals in Coal samples and only periodic sampling has been stipulated. A copy of MOEF&CC letter dated 21.10.2020 is submitted as **Exhibit-D filed along with this notes on submissions.**. Office Memorandum (OM) dated 19.11.2018 on Standard EC conditions for coal-based power plants does not stipulate any such condition regarding monitoring of Radio activity and heavy metals in coal.

69. In so far as the contentions in para 11 of the AWS, the contents of which are not admitted. The Appellant on his own has devised a methodology and projected the calculations in the tabular statement. The Appellant has not given the details of the calculations. The Appellant has not shown on what basis and under what procedure required by law, the calculations were made and submitted. This respondent does not accept the correctness of the calculation and the requirement there for. The Appellant has made lop sided projection and has not stated in what quantum of ash the said quantum of heavy metal shall be found and what shall be the percentage. As per the EC requirements 100% of the fly ash generated have to be utilized for some other use. The unutilized coal ash will remain as bottom ash in the ash pond which is impermeable. Hence the microscopic and insignificant of quantity of alleged heavy metal in the enormous quantity of ash will also get disbursed outside the plant area for different usages.

70. It is relevant to refer here the total quantity of coal that will be used for this project is 8 Million Tonnes Per Annum. The expected ash content in the coal is 34 % to 43 % of coal used. Therefore the ash generated would be about 3.44 Million Tonnes annually. The alleged quantum of each of the heavy metal mentioned in para 11 of AWS shall be found mixed in the above said quantum of ash. The above fact shall prove the microscopic and insignificant percentage of heavy metal in the ash. The Appellant projected, knowing an incorrect representation as if the heavy metal will be in such bulk quantity in the ash pond, to prejudice the mind of this Hon'ble Tribunal. Therefore, the alarming projection with respect to heavy metal calculation is neither true nor correct. In view of the above, all the allegations and apprehensions of Appellant are untenable and have no meaning. It is also submitted that there is no violation of TOR xxxix and xi during appraisal of EC.

OBJECTIONS IN AWS

II. CUMULATIVE IMPACT ASSESSMENT STUDY ON AAQ HAS NOT BEEN DONE PROPERLY- PARA NOS. 14 TO 26, PAGE 13 TO 22

THE REPLY OF 3RD RESPONDENT

71. With regard to **Cumulative Impact Assessment study - Emission/Temperature,** the following is submitted. The cumulative impact assessment study was done in compliance with the Terms of Reference (TOR) condition by NABT accredited agency – VIMTA LABS Limited, Hyderabad and based on all authentic data collected from secondary sources and considering the worst case scenario (worst fuel characteristics, worst meteorological conditions as well as worst operating conditions). However, the actual concentration of pollutants expected during the operation phase of the project would be much less than the predicted values. **The copy of cumulative impact assessment study is filed as Annexure-R3/1 Volume IV. Moreover, stringent mitigative conditions on the 3rd respondent shall ensure the new plants shall not add pollution to the existing AAQ.**

72. The cumulative study has been carried out for 10 km radius by considering all relevant potential sources of emission of industries like existing Ramagundam STPS, Kesoram Cements, FCI, Singareni power house and opencast coal mines located within study area. The cumulative incremental concentrations of PM, SO_2 and NOx are 11.41 µg/m^3, 54.47 µg/m^3 and 20.11 µg/m^3 respectively.

73. However, from 10 to 15 km radius study area, Ramagundam OCP-1 & OCP-2 and Jaipur power plant (2X600 MW) of SCCL are the potential emission sources. **Subsequently, cumulative impact assessment has been carried out by NABET accredited agency considering all polluting industries in 15 Km radius including both the OCP and SCCL TPP and the same are discussed below.** For comparison purpose which indicates that the cumulative concentrations when 15 Km radius area considered for PM, SO_2 (with FGD & without FGD) and NOx are 23.4 µg/m^3, 58.7 µg/m^3 & 62.4 µg/m^3 and 33.2 µg/m^3 respectively which are **well within the National Ambient Air Quality Standards (NAAQS), 2009.**

CUMULATIVE CONCENTRATIONS DUE TO THE INDUSTRIES IN STUDY AREA (10/15 KM RADIUS)

Pollutant	Cumulative Concentration (µg/m^3) 10 Km	Cumulative Concentration (µg/m^3) 15 Km	Direction	NAAQS 2009 (µg/m^3)
PM_{10}	11.41	23.4	SW	100
SO_2 (with FGD)		58.7		80
SO_2 (without FGD)	54.47	62.4		
NOx	20.11	33.2		80

74. The contentions made by Appellant in para-17 of written submissions dated 14.04.2017 are denied that incomplete and wrong Cumulative impact assessment was done by 3rd Respondent as alleged. The underground coal mining projects have less impact on air quality than open cast coal mining projects. In fact UG have localized impact on air quality, hence they have not been considered in modelling for cumulative impact assessment, even if considered it will not make any difference in the AAQ.

75. It is submitted that the cumulative impact assessment study was done in compliance to the Terms of Reference (TOR) condition and based on all authentic data collected from secondary sources, which is also available in public domain. A project proponent has limited access on other industries environmental data. What is available in public domain alone could be accessed. Hence with available data's cumulative assessments had been done 10 km. The Appellant cannot fault the 3rd respondent for doing study for 10km which is permitted in the ToR. Subsequently for

15km was also done which also disclose that AAQ standard is not exceeded. Further the proposed power plant will not add the pollution due to stringent mitigative measures stipulated in EC.

76. It is also submitted that the 3rd Respondent has also committed to implement various mitigative measures such as FGD, High Efficiency ESP, 275 m tall chimney, Dust suppressions system, Dust extraction system and Closed conveyor system etc. in order to control the air emission / pollution from the project and maintain the ambient air quality in the surrounding area within the latest National Ambient Air Quality (NAAQ) limit and also to comply with the latest emission standards for Thermal Power Plant dated 07.12.2015. In view of aforesaid it can be concluded that the contention made by Appellant is totally misguiding and based on his misinterpretation and hence denied as alleged. It is submitted that the Judgments referred to by the Appellant are irrelevant and not applicable to the present facts and circumstance.

77. The baseline AAQ value of 23.5 $\mu g/m^3$ SO_2 has been reported for winter season (period Dec'2014-Feb'2015) in the final EIAR during which only Three (3) Thermal Power Plant (TPP) of 2680.5 MW (2600 MW of NTPC, 62.5 MW of TGENCO and 18 MW of SCCL) were in operation in 10 Km radius. 2x660 MW of SCCL (falling in more than 10 Km radius) came into operation only in 2016. Further, Appellant is trying to mislead the Hon'ble tribunal by quoting that 23.5 micro grams of SO_2 value was observed in the study area with 3880 MW power generation.

78. It is submitted that 3rd Respondent has incorporated the General Layout Plan (GLP) of the proposed project in the EIAR which precisely shows the space provision kept in the layout where Flue Gas Desulphurization (FGD) system can be retrofitted and the Expert Appraisal Committee (EAC) after taking cognizance of entire facts and making lengthy deliberation on the proposal twice in its meetings has accorded the EC with project specific conditions to install Flue Gas Desulphurizing (FGD) system to reduce SO_2 emission level which was also committed by 3rd Respondent. Hence, 3rd Respondent denies the alleged statement of the Appellant that the impugned order of EC has been granted by the 1st Respondent without any application of mind.

79. It is submitted that 3rd respondent has conducted the AAQ modelling simulations study considering the worst coal parameters & all worst case

scenario that all industries are operating at a time wherein the resultant concentration in the study area also revealed that the observed value is found well within the statutory NAAQS limit. However, it is to be noted that 3rd Respondent has also committed to install various mitigative measures (i.e. FGD) for controlling SOx emission/pollution from the project in order to comply with EC specific condition and the latest emission standards for Thermal power plant dated 07.12.2015 .The copy of Gazette Notification is filed as **Annexure-R3/13 Volume IV.** Thus, it is respectfully submitted that the requirement of FGD has been imposed by EAC only after full consideration of cumulative impact and after applying its mind for the project conditions and the implications therein.

80. It is also submitted that in compliance to the EC condition 3rd Respondent has already included FGD cost in there project budget under the Environmental protection head. A cost provision of **Rs. 1554.81 Crores** has been kept towards providing environmental protection measures.

81. It is submitted that in order to control SO_2 emission values within latest MOEF&CC emission Notification for TPP dated 07.12.2015, 3rd Respondent has proposed to install wet lime stone based flue gas desulphurization (FGD) system to capture SO_2. Details of the system along with its working principle and chemistry are filed as **Annexure-R3/33 Volume IX**. Thus, in view of above excerpt the contentions made under Para VI are totally incorrect and hence denied as alleged.

OBJECTIONS IN AWS

III. BASELINE MONITORING OF AAQ HAS BEEN FALSELY CONDUCTED- PARA NOS. 27 TO 34, PAGE 22 TO 28

THE REPLY OF 3RD RESPONDENT

82. With regard to **Baseline monitoring of AAQ,** the following are submitted. The contentions made by Appellant are denied that baseline monitoring of AAQ is falsely conducted. The Appellant is making false allegations that AAQ locations are not selected scientifically and do not represent the pre-dominant Upwind & downwind directions, sensitive receptors.

83. **It is submitted that MOEF&CC Guidelines and Terms of Reference (TOR) have not stipulated number of sampling locations to be monitored, rather only require that the ambient air quality**

sampling stations should be monitored both in upwind and downwind direction. The selection of Ambient air quality locations was done by Functional Area Expert (Air Quality) of a reputed QCI-NABET accredited EIA Consultant. The said EIA consultant has done more than 200 EIA studies of various developmental projects. The ambient air quality monitoring was carried out during winter season from December 2014 to February 2015 at 4 different locations taking into consideration the upwind and the pre-dominant downwind direction, population zone, villages in the vicinity and sensitive receptors including reserved forests. It is evident from AAQ modelling given in Chapter-4 that maximum ground level concentrations of pollutant will occur at about 2.2 km distance from project. Therefore selected AAQ locations has observed maximum concentrations of pollutants. Further, It is noteworthy that the monitoring locations were also selected in consideration of other practical issues like safety of instruments, accessibility & availability of continuous power supply and all other essential factors which are prerequisite for the ideal conditions for monitoring.

84. As per IMD data (1971-2000) the pre-dominant wind directions are from W,NE, NW. It may be concluded from it that maximum ground level concentrations will occur in downwind direction E, SW, SE. Therefore one station was put at one of the upwind directions at NE and one location at one of the downwind direction SE. All AAQ station are located at densely populated area in vicinity of many industries. The assessment of impacts on air quality of these populated area are very much required. The maximum Ground Level Concentration (GLC) was predicted at SW direction which have most of the area covered by water bodies, waste land, low population area. Therefore, all four AAQ locations are in compliance of MOEF&CC TOR condition no. (xxxvi).

85. Therefore, the allegations of Appellant given in para-III (point -27-34) of written submissions dated 14.04.2017 are false and baseless.

OBJECTIONS IN AWS

IV. FALSE DATA ON AAQ POLLUTION HAS BEEN PRESENTED- PARA NOS. 35 TO 49, PAGE 28 TO 37

THE REPLY OF 3RD RESPONDENT

86. With regard to **False data on AAQ Pollution having been presented,** the following are submitted. In reply to the contents of Para -IV

sub-Para 35 of AWS namely that a false and fabricated ambient Air Quality data on pollution produced in the Environmental Impact Assessment (EIA) Report are denied. It is further submitted that the micro ambient air quality of any region is always very dynamic and changing in nature and further depends upon various triggering factors viz. emission from point & non-point sources, fugitive emissions, vehicular emissions etc. at different locations in any given period of time. The reading/measurement in a location at a particular time at a particular day of a particular year cannot be compared as standard. Hence cannot match exactly for different monitoring period. It is submitted that Ambient Air Quality Monitoring levels may vary with season and hence, comparison of data on one to one basis for two different seasons is scientifically not correct. It is further submitted that the basic purpose of comparison of maximum baseline values of Sulphur Dioxide (SO_2) for two different study periods in the Environmental Impact Assessment (EIA) report i.e. December, 2014 to February, 2015 with April, 2011 to April, 2012 is to confirm that whether there is any major variation in monitored values of Sulphur Dioxide (SO2) in the study area**. However, it is unjustifiable and illogical to compare maximum baseline data of one year period of April, 2011 to April, 2012 with maximum baseline data of one season (December, 2014 to February, 2015).**

87. It is further submitted that the period of baseline monitoring plays a role in prediction Ambient Air Quality parameters concentration in any micro level environment and hence cannot be matched exactly with two different monitoring period & location. It is to be noted that the location and period of monitoring for Fertilizer Corporation of India (FCI) and proposed project are also different. As the climatic parameters of any area for any period of time varies widely from season to season and year to year, hence comparing the ground level concentration of Fertilizer Corporation of India (FCI) Ambient Air Quality baseline data (representing summer season) with two different consultants data for two different period i.e. for one year data & one season data (representing winter season) is totally unscientific and illogical. The vagaries of nature is such that no particular data can be treated as correct representative. It cannot be said FCI report was correct in measurement and that report NTPC was window dressed especially when the study had been done by MoEF&CC accredited agency.

88. It is also submitted that already **three numbers of Continuous Automatic Ambient Air Quality Monitoring Stations are operational**

for existing units for continuous monitoring of all Ambient Air Quality parameters and the online data is being shared continuously on real time basis to Telangana SPCB / CPCB and are available in public domain. In Expert Appraisal Committee meeting, a representative of CPCB also participated and these AAQ data's were presented before the committee. Both EIA reports of NTPC and FCI had been appraised by same regulatory authority i.e. MOEF&CC. Therefore one report cannot be said to correct and other as wrong. The AAQ data's depends on many factors like instruments, calibrations, sources of pollution during monitoring period, topography, pollution barrier, micro-meteorology etc. The high level of data for some periods in various CPCB reports may be due to location of its AAQ monitoring locations nearby Open Cast Coal Mines and road side etc. The coal mine area has localized impact on air quality and air pollution contain with in mining area due to fugitive emissions which is not a point source. EAC as the name denotes comprised of Experts who on daily basis deal with same subject like Hon'ble Judges. Hence, they know not only the subject but also fact situation prevailing. Therefore, they cannot be easily misled to believe wrong facts.

AAQ AND PM_{10} is Less than AAQ AVERAGE

89. In Para-40 page no 32 of AWS, the Appellant has himself stated that in 2014 AAQ monitoring report of CPCB, 91% times, the AAQ pollutants are within NAAQS standards and only 9% time it exceeded while annual average pollution levels of PM10 was observed 55 $\mu g/m^3$ which is well within the NAAQS standards 2009 for annual PM_{10} weighted time average limit 60 $\mu g/m^3$.

SO_2 WITHIN NAAQ- 2011 & 2015

90. In fact, CPCB reports of 2013 and 2014 (page 53 and page 65 of volume 10) as referred by Appellant, it is evident that pollution levels are decreasing year by year drastically due to effective implementation of pollution control action plan by industries including NTPC. Therefore, during winter season, 2015, AAQ levels can be observed within limits as depicted by EIA report of NTPC. The Appellant himself has to agree that maximum SO2 levels in ambient air in both NTPC EIA data [2011-12 (29 $\mu g/m^3$) and 2015 (23.5 $\mu g/m^3$)] and FCI EIA data (34 $\mu g/m^3$) are well within the National Ambient Air Quality Standards.

91. It is submitted that the 3rd Respondent has also committed to install various mitigative measures in order to control the air emission / pollution from the project and maintain the ambient air quality in the surrounding area within latest National Ambient Air Quality (NAAQ) limit and also to comply with the latest emission standards for Thermal Power Plant dated 07.12.2015. The allegation in para 41 of AWS regarding SO2 emission/pollution in the project area was falsely reported is denied. The allegation of the Appellant based on seasonal variation and on in own assumption and what ought to be the pollution level is nether rational nor logical, since pollution levels are bound to be different on the same season in different years and different season on same years. The pollution level data are only to be compared on an average basis that too subject to natures variation which is unpredictable and inaccurate. As regard to SO2 emission, the project will have FGD installation and tall stack of 275m to control the same. Therefore, the objection of the Appellant is only in form not in substance.

OBJECTIONS IN AWS

V. PROJECT IS LOCATED ON A WATERBODY- PARA NOS. 50 TO 53, PAGE 37 TO 39

THE REPLY OF 3RD RESPONDENT

92. With regard to **Project is located on a waterbody,** the following are submitted. The Appellant is attempting to confuse between **study area and project area.** The 3rd Respondent respectfully submits that the Hydro-Geological report incorporated in the Environmental Impact Assessment Report (EIAR) already covered the impact of the proposed project on water body and stated that there are number of seasonal/monsoon feeder nallahs, ponds etc. are located in the **study area (i.e. 10 km radius) and not specifically inside the proposed project area** except project storm water discharge drain. Also it is noteworthy to record that the extent of study area is very vast in comparison to the proposed project area and therefore it is erroneous and irrational to consider the entire study area as project area. In addition it is also noted that River Godavari is located at an aerial distance of about 4.0 Km from the existing Ramagundam Power project.

93. NTPC had hired a technical expert consultant M/s VIMTA Lab Limited, Hyderabad who in turn engaged the services of M/S. Multi Tech

Services, Hyderabad for Hydrogeological Study of project site and study area report is a part of EIAR. The term **water body** has specific connotation in law, which will be only those water bodies which are delineated in Revenue records. The Appellant has not produced any revenue records to show that the project area has any delineated water body.

94. It is submitted that the proposed project is to be situate within the existing premises of Ramagundam STPP which lands were already converted decades back (1978) into industrial land use. NTPC as a responsible corporate entity has not acquired any additional land for proposed expansion project. The existing vacant land of MGR area will be used for main plant of proposed project. There are certain location where the storm water may get stagnated temporarily for a short period during heavy rain in the monsoon season. The water will disappear quickly due to percolation and evaporation. Therefore the allegation that NTPC's power plant are located on waterbody is not true and is incorrect.

95. Similarly Figure no. 8, 10, 11 and 12 do not show any water body in project site. The project site is an industrial land. The satellite-based land use map in Figure 3.2.2 in EIA Report also shows that existing plant and proposed plant site are not located on any water body. It is submitted that the contention of Appellant is completely wrong and based on his own imagination without any record that project is located on water bodies. Hence, the allegation that the project is located on a water body is denied.

OBJECTIONS IN AWS

VI. GROUND WATER AND SURFACE WATER IN THE PROJECT ARE POLLUTED ABOVE THE STIPULATED STANDARDS- PARA NOS. 54 TO 65, PAGE 39 TO 44

THE REPLY OF 3RD RESPONDENT

96. With regard to **Ground Water and Surface Water in the Project,** the following are submitted The Appellant has made baseless and vague multiple allegations with regard to Ground Water and Surface Water Quality in AWS. The 3rd Respondent denies all the allegations therein and makes the following specific submissions.

97. The Appellant is misrepresenting that the EIA Study process and even consideration of Study area (10 km radius) as **'project area'** as revealed in the first line of the sub-para 54 of Para-VI. He has also stated-

"That the Appellant has also submitted that the Ground Water and Surface Water in the **project area** are already polluted above the stipulated standards of Indian Bureau of Indian Standards IS: 10500:2012". It may be noted that the water quality sampling was done at three locations in Study area (10 Km) which are not located in **Project Area**.

98. It may be noted that Water quality of Surface Water Bodies can be better compared with **"Best Designated Use Criteria for Surface Waters Streams" of CPCB,** than **IS: 10500 :2012.** As IS: 10500 :2012 denotes the drinking water quality standards not the quality of Surface water bodies.

99. The all three surface water quality samples taken in EIA study meets the **"Best Designated Use Criteria for Surface Waters Streams"** Class "C"(**Drinking water source after conventional treatment and disinfection**) of CPCB except BOD concentration in few of the samples of SW1-Peddampet pond. The slightly high BOD levels at SW1-Peddampet pond was observed due to domestic sewage discharge from nearby village population. It indicate that all surface water quality of study area is satisfactory and water can be used for drinking after treatment and disinfection.

100. Best Designated Use (BDU) criteria of CPCB for surface water stream is given below:

Best Designated Use Criteria for Surface Waters Streams

Designated-Best-Use	**Class**	**Criteria**
Drinking Water Source without conventional treatment but after disinfection	A	Total Coliforms Organism MPN/100ml <50 pH between 6.5 - 8.5 Dissolved Oxygen > 6mg/l Biochemical Oxygen Demand < 2mg/l
Outdoor bathing (Organised)	B	Total Coliforms Organism MPN/100ml < 500 pH between 6.5 - 8.5 Dissolved Oxygen > 5mg/l Biochemical Oxygen Demand < 3mg/l
Drinking water source after	**C**	**Total Coliforms Organism MPN/100ml < 5000**

conventional treatment and disinfection		**pH between 6 - 9 Dissolved Oxygen > 4 mg/l Biochemical Oxygen Demand < 3mg/l**
Propagation of Wild life and Fisheries	D	pH between 6.5 - 8.5 Dissolved Oxygen > 4mg/l Free Ammonia (as N) < 1.2 mg/l
Irrigation, Industrial Cooling, Controlled Waste disposal	E	pH between 6.0 - 8.5 Conductivity at 25^{o}C:.< 2250 umhos/cm Sodium Absorption Ratio < 26 Boron < 2mg/l

101. The Appellant is silent about the compliance most of the parameters in Surface water and Ground water samples w.r.t.IS: 10500:2012 and only protecting less important parameters, related to natural geological characteristics like hardness, Calcium, Alkalinity, Magnesium, Copper and iron etc. Surface water is bound to have impurities depending upon local soil and environmental condition.

102. The proposed project is designed with Zero Liquid Discharge (ZLD) concept thereby ensuring that all the effluent generated from the plant process are systematically collected, treated and completely recycled and reused in the process again leaving no effluent discharge outside the plant boundary to the surrounding environment under all conditions round the year. It is submitted that the effluents generated will be treated and recycled/re-used for different plant usage. The entire concept of Zero Liquid Discharge (ZLD) scheme is already presented in the form of **Water Balance Diagram (WBD) is filed as Annexure R3/23 Page No. 278 in Volume IV)**. It is further submitted that a separate storm water drainage network is being constructed to facilitate discharge of rain water. Thus the contents of Para VI are denied as alleged. More details about ZLD are furnished in para 122 to under the heading Feasibility of ZLD study.

103. The monitoring results included in Environmental Impact Assessment Report (EIAR) also concluded that the quality of ground water is well within the permissible limit as prescribed in Indian Standards IS: 10500-2012 and free from heavy metal contamination at all the location around the existing power project.

104. Further, it is also substantiated from the Hydrogeological report (attached as Annexure- XVII in final EIAR) that **totally seven ground water samples were collected from hand pumps in the study area and were analyzed for different water quality parameters (37 parameters) including physical, Chemical, heavy metals and bacteriological parameters**. The summarized details with acceptable and permissible limits along with the monitored ranges of highlighted parameters are presented below : **Please refer Indian Standards IS: 10500-2012 page 266 and 267 of Volume IX.**

Summary of Highlighted Ground Water Quality Parameters

Parameter	Units	Acceptable Limit	Permissible Limit	Range (Sample)	No. of Samples Exceeding Permissible Limit (Total sample -7)
Turbidity	NTU	1	5	2-14	4
Total Dissolved Solids	mg/l	500	2000	710-844	0
Total Hardness as $CaCo_3$	mg/l	200	600	345-433	0
Total Alkalinity HCo3	mg/l	200	600	127-413	0
Calcium as Ca	mg/l	75	200	72.5-101.9	0
Magnesium as Mg	mg/l	30	100	24.8-49.5	0
Copper as Cu	mg/l	0.05	1.5	<0.01-0.22	0
Manganese as Mn	mg/l	0.1	0.3	<0.01-0.24	0
Iron as Fe	mg/l	0.3	1.0	0.04-0.96	0
Aluminium as Al	mg/l	0.03	0.20	0.08-0.24	1

105. **In para 54 of AWS at page 40, the Appellant has given a tabular statement purporting to be on the basis IS 10500 :2012. In the said tabular statement, the Appellant has wilfully omitted** column No. 4 of said IS Report under the heading permissible limits in the alternative source. In the tabular statement mentioned above, the column 4 is included and the correct factual details are portrayed. In view of the same, the averments made in para 54 at page 40 AWS is factually incorrect and

hence to be rejected. It is submitted that in view of the fact that the project is based on ZLD, the concerns raised by the Appellant are imaginary and based on assumptions.

106. The analysis results reveals that out of the total 10 ground water quality parameters, 8 parameters are well within permissible limits of IS 10500: 2012 drinking water standards. However, 4 out of 7 samples showed slightly higher turbidity. Another sample showed (1 out of 7) slightly higher value of Aluminum (0.24 ml/l) against IS 10500:2012 limit of 0.20 ml/l. Hence, it can be inferred that 3rd Respondent has got the final EIAR prepared through reputed QCI-NABET accredited consultant with due diligence and in very transparent manner without hiding any existing facts.

107. It may also be noted that the permissible limits of water quality parameters are more critical than Acceptable limits of IS 10500 :2012. It is very difficult that all parameters of Water Quality meet the acceptable limits while compliance of permissible limits is more important.

108. A few Heavy metals were selected and projected by the Appellant in Water Quality Monitoring which is not correct. The Appellant has referred to the heavy metals (Antimony, Cobalt, Silver, Thallium) in periodic table of Chemistry willfully to prejudice the mind of this Hon'ble Tribunal and not the heavy metals relevant and to be investigated in Water Quality. Neither IS 10500 :2012 standards nor CPCB "BDU Criteria" has any water quality standards for Antimony, Chromium, Cobalt, Silver, Thallium. Hence the reference to these metals are not relevant for consideration.

OBJECTIONS IN AWS

VII. IMPACT OF THE GROUND WATER UTILIZATION FOR THE CONSTRUCTION ACTIVITIES HAS NOT BEEN STUDIED- PARA NOS. 66 TO 70, PAGE 44 TO 46

THE REPLY OF 3RD RESPONDENT

109. With regard to **Impact of the ground water utilization for the construction activities,** the following are submitted. In reply to sub-para 66 of Para-VII of AWS. As Thermal Power project is a large infrastructural project, the design and construction methodology were revised on the basis of clearances like Environmental Clearances, Consents from SPCB, Water commitment from State Govt., CEA and Ministry of Power etc. The Ground

Water (GW) availability is at 4-6 meters at that time. In Environmental Impact Assessment Report (EIAR) it was mentioned that ground water may be utilized during construction phase.

110. However, NTPC is not going to extract any ground water during construction phase and the water requirement will be met from its existing balancing reservoir. It is further submitted that the water quantity availability for the existing station is sufficient which is being received from Yellampally project and stored in existing balancing reservoir. The same was also presented and affirmed by NTPC during the 45th EAC meeting of MOEF&CC held on 29.10.2015 and based on which EAC later recommended the project for Environmental Clearance. **It may be noted that all proceedings of EAC, replies of additional details sought by MOEF&CC during appraisal of application of EC are part of EIA and EC appraisal process.** If any change in EC proposal, for better protection of Environment, as suggested by EAC or proposed by project proponent during EAC meeting, cannot be termed as deviation to EIA report. Therefore, the allegations of Appellant are baseless and false that project proponent has cover-up this issue and only agreed that groundwater will not be used for construction after the Appellant raised the issue of use of ground water.

111. In reply sub-para 67 of Para-VII of Written submission of Appellant, it is totally misleading that details of quantum of water to be used in construction, has not provided. The water requirement for the proposed Telangana STPP for construction activities is approx. 1000 m^3/day will be met from existing NTPC Balancing Reservoir. The same information has already been submitted by project proponent in its sur-rejoinder.

112. The reply of sub-para 68 of Para-VII of written submission of Appellant are already given in above paras, for sake of brevity need not to be repeated.

113. In reply to sub-para 69-70 of para –VII of written submission of Appellant, it is said that construction of such large infrastructure project cannot be completed without water, as Appellant intended. NTPC as corporate responsible citizen has followed all procedure and legal compliance for use of water for construction. As the quantity of the water requirement for the proposed Telangana STPP for construction activities is approx. 1000 m^3/day will be met from existing NTPC Balancing Reservoir,

which is comparatively very insignificant increment (i.e. <0.005%) to the existing water requirement of existing project. Beside this, storm water collected in drains, low lying areas in project areas, treated sewage water will also be used in construction to optimize the raw water requirement. This implies that the impact from the additional drawl of 1000 m^3/day during construction phase may not cause any impact on availability of ground/surface water regime. The Appellant should note that by changing the units of water requirement from m^3/day to liters/day the impact cannot be shown higher. Further, Irrigation department, Government of Telangana which is empowered to allocate the water to various users after consideration of impact due to withdrawal of water, on availability of water in water source and competing users in Telangana state. It has accorded certified permission vide its letter dated 31.03.2015 for drawl of additional 60 Cusecs (2 TMC) water throughout the year from Sreepada Yellampalli barrage to meet the water requirement of the proposed project during its operation phase. The copy of commitment letter dated 31.03.2015 is filed as **Annexure-R3/34 Volume IX.** As far as withdrawal of water and its impacts are concerned these are much wider issues under the justification of State Water Resources/Irrigation Dept. and Central Water Commission (CWC) and the EIA Study does not have sufficient resources and time to cover the entire study. Therefore, these issues are addressed based on the recommendations of WRD/CWC, who are the custodian and monitoring agencies for these resources. Beside this, IIT Roorkee, in its Hydrogeological report has observed in Section 5.2 **"As the required water from the Yellampalli project is very less compared to the availability, no adverse impact on surface water is envisaged."** Hence, no significant impact on ground water or surface water regime is anticipated due to the construction of proposed project.

OBJECTIONS IN AWS

VIII. IMPACT OF THE ASH POND ON THE GROUND WATER HAS NOT BEEN STUDIED- PARA NOS. 71 TO 78, PAGE 46 TO 53

THE REPLY OF 3RD RESPONDENT

114. With regard to **Impact of the ash pond on the ground water,** the following is submitted. In reply to sub-para of para-71 of written submissions of Appellant, it is submitted that Appellant expressed its apprehension without any scientific and technical justifications.

115. The study carried out at existing stations to determine impact of Heavy metals due to leaching near ash pond area revealed no significant impact on ground water regime. The monitoring results included in Environmental Impact Assessment Report (EIAR) also concluded that the quality of ground water is well within the prescribed Indian Standards IS: 10500-2012 limits and free from heavy metal contamination around the existing power project.

116. In relation to the allegations made it is submitted that the location of ash pond was selected after making techno feasible examination of all available option. The ash pond site selection was done considering the following aspects:

a. Ash pond area shall be as close as possible to the proposed power plant to reduce the pumping cost
b. Scope for vertical and horizontal expansion of the ash pond depending on estimated life of the power plant
c. Relatively less permeable stratum to prevent migration of ash water into the ground water
d. It is also submitted that technical and feasibility aspects are covered in Feasibility Report of project which was submitted along with application of EC to MOEF&CC.

117. Beside this, a Hydrogeological Study for Proposed Telangana STPP has been carried out by technical consultant M/s Multi-Tech Services, Hyderabad to assess the impact of proposed project including ash ponds on surface and groundwater and to suggest mitigation measures.

To assess the hydraulic property of aquifer such as permeability, transmissivity, hydraulic conductivity etc., long duration pumping test was done on existing well at Mathangi Colony of varying depths in order to estimate the lateral and vertical variations in hydraulic characteristics. The natural strata conditions has also been described in said report through lithological sections at various Bore wells based on earlier NTPC Studies.

The Hydro-geological Report incorporated in the Environmental Impact Assessment Report (EIAR) already covered the impact of the proposed project on Water body and inferred that there are no. of seasonal/monsoon feeder nallahs, lakes, ponds etc. are located in study area (i.e. 10 km radius) and not specifically inside the proposed project area except project storm water discharge drain.

118. It is true that groundwater observed at shallow depth (4-6 m) in study area in EIA report. But the groundwater contamination depends on various factors in addition to depth of ground water table. It is submitted that leaching of heavy metals from ash ponds depends on characteristics of coal. And bottom layer of ash pond. In Indian coal the concentration of heavy metals are very low and the ash water is always alkaline in nature. Further, it has been scientifically proven that the leaching of heavy metals from ash occurs only under pH 4 or below. In practice the pH of the ash water is either neutral or alkaline (7 or above) and hence the leaching of heavy metals are highly unlikely. It is submitted that NTPC as a responsible corporate organization will adopt all mitigation engineering and scientific measures mentioned below in (a) to (g) to prevent contamination of groundwater.

a. **Ash Water Recirculation System (AWRS) (EXISTING PLANT):** It is submitted that the existing station has installed Ash Water Recirculation System (AWRS) for all its units where in ash water up to 70% is being treated and recycled /reused for ash handling. However, 3rd Respondent has already planned the scheme for implementation of Ash Water Recirculation System (AWRS) for existing Ramagundam units where in ash water up to 100% is being treated and recycled/reused for ash handling. AWRS is implemented, to reuse ash pond discharge from October, 2020 and is kept in service.

b. **Clay/Bentonite blended soil impervious layer:** It is proposed to provide an impermeable layer of clay/bentonite blended soil of about 30 cm thick in the bottom ash lagoon and over flow lagoon to prevent any possibility leachate percolating sub surface and ground water.

c. **Spillways/Garland Drains:** To exit the surface run-off from catchment during monsoon, spillways/garland drains at suitable locations around the dyke will be provided.

d. **Engineered Designed Ash Ponds:** The proposed ash pond has been designed by an expert agency to ensure safety and minimization of pollution from ash ponds.

e. **100% Ash Utilization :** The 3rd Respondent had put its best efforts to increase fly ash utilization from existing plant at Ramagundam. Due to its efforts, the existing Ramagundam plant has achieved about 89% ash utilization in the financial year 2015-16, 93.16 % in FY2016-17, 100.95% in FY 2017-18, 110.31% in FY2018-19 and 118.22% in FY2019-20 which is beyond the required compliance. Due to sincere efforts of Ramagundam

STPP, pond ash is also being lifted by user industries which resulted more than 100% utilization. NTPC has submitted an Ash Utilization plan to MOEF&CC in EC appraisal process for 100 % utilization of ash from its proposed Telangana STPP Phase-I. The ash will be disposed in ash ponds only in emergency situation, like technical problems in ash disposal system, law & order problem and force-majeure etc.

f. **Scientific reclamation of Ash Pond after Closure:** The final ash surface will be covered with earth cover which will be subsequently reclaimed with vegetation after closure of ash ponds.

g. **Development of Geo-Polymer Aggregates:** Due to NTPC innovativeness, focus on R&D, ash is slowly turning into Gold after its recent successful venture "Geopolymer Aggregate". NTPC at its Ramagundam unit has taken of the research project to generate aggregates using more than 90% fly ash. Now, it has successfully developed "Geopolymer Coarse Aggregates" as a replacement to a natural aggregate and can be used in building construction. Geopolymer aggregate will not only increase ash utilization, but also saves the environment. Technical parameter, as per Indian Standards for its suitability to use in concrete works were tested by National Council of Cement and Building Material (NCCBM), Hyderabad and results are in acceptable range.

ASH POND WAS DISCUSSED BY EAC

119. It is further submitted that 3rd Respondent has submitted its reply to all the queries sought by EAC in the 45th meeting with respect to impact on agricultural field, water quality of ash pond etc. vide its letter dated 16.11.2015 the copy of reply dated 16.11.2015 as submitted to MOEF&CC is filed as **Annexure-R3/20 Volume IV**. Therefore, it is denied that impact of ash pond was not discussed in EC appraisal process.

SELECTIVE REFERENCE OF REPORTS BY APPELLANT

120. The allegations of Appellant in sub-para 72-74 of para-VII of AWS that EIA report and Hydrogeological report did not have information about impact of proposed ash pond are misleading. The Appellant apparently has not read all these reports and only selective chapters/sections has been referred.

121. With respect to sub-para 75 of para-VII of AWS it is submitted that in this sub-para, Appellant has relied on Hydrogeological report and quoting various data of report while in sub-para 71-75, he is showing that

the said report is not adequate and does not contain various important information.

122. The Appellant has attempted to project some mathematical calculations for quantity of heavy metals to be discharged in to proposed ash ponds without application of science and engineering and taking in to consideration of other mitigation measures that are being taken. It is erroneous that Appellant has considered 0% ash utilization in proposed project which is an expansion of existing Ramagundam Project that have more than 100% ash utilization. The concentrations of heavy metals in coal does not reach 100% in ash ponds with ash water. The quantity of heavy metals is used to reduce in various pollution control systems and further get diluted while mixing with water. 34-43% ash is generated out of huge quantity coal used (8 Million Tonnes Per Annum) coal burnt in boilers. It is submitted that leaching of heavy metals from ash depends on characteristics of coal as well as the structure of bottom layer of ash pond. In Indian coal the concentration of heavy metals are very low. The ash water environment is always alkaline in nature which will not permit leaching. The 3rd respondent will take all mitigation measures to prevent contamination of groundwater as suggested by EIA Report, Hydrology Report and additionally required by design. Further, NTPC will make best efforts for 100% ash utilization in proposed Telangana STPP and it have shown its commitment in existing project which has achieved more than 100% ash utilization.

123. In reply to Sub-para-77 of Para-VII of AWS, it is submitted that each and every minute technical detail cannot be given in EIA report. These details are covered in project feasibility reports. However, during presentation before EAC, the provision of HCSD was discussed and EAC members are already aware about its better performance. NTPC has used successfully the HCSD System in other NTPC projects like Mouda, Solapur, Kudgi, Khargone, Gadarwara etc.

MEMBERS OF EAC MALIGNED- UNFAIR

124. In reply to Sub-para-78 of Para-VII of AWS, it is submitted that all issues raised are already replied in the above paragraph and hence are not repeated for the sake of brevity. The allegations made against expert members of EAC by Appellant are also baseless and insulting in nature. Since members of EAC all are persons of in depth knowledge, vast experience, high qualification and well known in the field of Environment.

As Telangana STPP was not the only project apprised by the said members of EAC. The EAC members had examined several power and other projects and hence they know how to appraise the project. Therefore, discussions had been held in both EAC meeting and NTPC had replied of various queries, observations of members. NTPC had also replied on additional details sought by EAC.

OBJECTIONS IN AWS

IX. FEASIBILITY OF ZERO LIQUID DISCHARGE (ZLD) HAS NOT BEEN EVALUATED AND IMPACT OF THE WASTE WATER HAS NOT BEEN STUDIED- PARA NOS. 79 TO 83, PAGE 54 TO 57

THE REPLY OF 3RD RESPONDENT

125. With regard to **Feasibility of Zero Liquid Discharge (ZLD),** the following are submitted. The requirement for ZLD and FGD were introduced only vide **MOEF&CC Gazette Notification dated 07.12.2015**. The requirement for ZLD was notified vide amendment to EC dated 06.03.2017. However the proposed project was designed with Zero Liquid Discharge (ZLD) concept, thereby ensuring that all the effluent generated from the plant process are systematically collected, treated and completely recycled and reused in the process again leaving no effluent discharge, outside the plant boundary to the surrounding environment under all conditions round the year.

126. It is submitted that the effluents generated will be treated and re-used / recycled for different plant usages. The entire concept of Zero Liquid **Discharge (ZLD) scheme was already presented in the form of water balance diagram which was part of the record.** It is further submitted that a separate storm water drainage network is being constructed to facilitate discharge of rainwater. Hence, there shall be no significant and long-term impact on surface water quality is envisaged on account the new plant.

127. It is also submitted in our rejoinder that the feasibility of Zero Liquid Discharge (ZLD) for the proposed Telangana STPP have been technically explored/examined in adherence to the latest MOEF&CC Gazette Notification dated 07.12.2015 for thermal power plant i.e. and accordingly schematic process wise water balance diagram was designed with (i.e. 2.5 m^3/hr/MW) ZLD concept which maximum recycle/reuse of the plant

effluent after adequate treatment. After implementation of this scheme with above cited Notification there will be no possibility of discharge of any quantum of industrial waste water. Hence, no significant and long-term impact on surface water quality is envisaged

128. Also, after detailed deliberations and considering all the facts and figures presented by the Member Secretary (Thermal), MOEF&CC during the 1st meeting of the re-constituted Expert Appraisal Committee (EAC) held on 28th December, 2016, the Committee recommended to amend the respective conditions in the said ECs in line with the notified standards of Environment (Protection) Amendment Rules, 2015 vide S.O 3305(E) dated 07.12.2015. Hence, the apprehension raised is negated. Moreover, the statement of Appellant is completely denied that the proposed ash pond is more than 8 km away from the upcoming Telangana STPP. Whereas the actual aerial distance of ash pond is location about 4 Km only.

129. The water system of proposed project is being designed on the concept of Zero Liquid Discharge (ZLD) in order to reduce the quantity of effluents generated from the plant. Hence, no significant and long-term impact on surface water quality is envisaged.

130. It is was already specified in the EIA report that High BOD was mainly due to the discharge of untreated domestic wastewater from the municipal centres of the region / country which results into higher/increased value of Biochemical Oxygen Demand (BOD) & bacterial pollution which multiply on decaying organic waste

131. Section 2.2.2.1 of Chapter-2 of EIAR , describe the various Water Systems (Circulating water Systems, Water treatment systems and effluent treatment systems) proposed to be installed in said project and by these systems only Zero Liquid Discharge shall be achieved. The details of effluent treatment system given in this section is reproduced as below for ready reference.

EFFLUENT TREATMENT SYSTEM

132. The liquid effluents shall be collected and treated recycled/reuse generally as per the following design philosophy.

i. The filtered backwash water of PT Plant shall be collected and recycled back to the DM system clarifier.

ii. The sludge from clarifiers of Water PT plants shall be taken to sump/pit and pumped to ash slurry sump for disposal to ash dyke.

iii. The waste effluents from neutralization pits of DM plant and Condensate Polishing Plant shall be collected in the respective neutralization pits and neutralized before pumping to ash slurry sump leading to bottom ash dyke area.

iv. CW system blow down would be used for firefighting system, coal handling plant & dust suppression system and ash handling Plant. Excess CW blow down if any shall led to Central Monitoring Basin.

v. A coal settling pond shall be provided to remove coal particles from coal handling plant waste. Decanted water shall be pumped back to the coal dust suppression system.

vi. Service water effluent drains from various areas shall be separately routed to a sump. From the sump the service water shall be pumped up to lamella clarifier for treatment of suspended solids. Treated service water shall recycled back to service water tank to the extent possible for re-use.

133. The contentions raised by Appellant in sub-para 80 of para VIII of AWS are erroneous and so expressed due to incomplete reading of EIA report.

134. The concept and methodology for each particular pollution abatement system like ZLD is given in EIA report and detailed technical feasibility, data, BOQ are given in Project Feasibility report. The Project feasibility report is also submitted to MOEF&CC along with Final EIA Report during application of EC. The various types of wastewater to be generated in the proposed project with their quantity, expected pollutants, treatment proposed, details of recycle/ reuse and nil discharge are given in Table-4.7 of Chapter-4 of Final EIA report.

135. It is submitted that 3rd Respondent has submitted the reply to all the queries sought by EAC in the 45th meeting with respect to impact on agricultural field, water quality of ash pond, water quality of River Godavari etc. vide its letter dated 16.11.2015. **The copy of reply dated 16.11.2015 was submitted to MoEF & CC is filed as Annexure-R3/20 Volume IV.**

THE APPELLANT IS NOT JUSTIFIED IN DEMANDING VERBATIM RECORDING OF EIA ENQUIRY AND DISCUSSIONS. IT IS NOT MANDATED.

136. The effluents generated will be treated and recycled/re-used for different plant usage. The entire concept of Zero Liquid Discharge (ZLD) scheme is already presented in the form of Water Balance Diagram. **The copy of water balance diagram is filed as Annexure-R3/23 in Volume IV**. It is further submitted that a separate storm water drainage network is being constructed to facilitate discharge of rain water.

OBJECTIONS IN AWS

X. IMPACT OF THE WASTE WATER FROM THE PROPOSED PROJECT HAS NOT BEEN STUDIED- PARA NOS. 84 TO 87, PAGE 57 TO 59

THE REPLY OF 3RD RESPONDENT

137. With regard to **Impact of waste water from the proposed project,** the following are submitted. The contents of Heading X in para 84 of the AWS are denied. The effluent treatment systems in the proposed project was already given in para no.2.2.2.1 of Chapter-2 of Final EIA report. Besides this, various types of wastewater to be generated in the proposed project with their quantity, expected pollutants, treatment proposed, details of recycle & reuse and ZLD discharge are given in Table-4.7 of Chapter-4 of Final EIA report.

138. It is further submitted that a separate storm water drainage network is under construction to facilitate usage and drainage of rain water. Thus, the contents of Heading X para (84) are denied as not correct.

139. It is submitted that after the revision of scheme for water balance utilization/process wise water requirement for the proposed Telangana STPP in line with the latest MoEF & CC Notification dated 07.12.2015 and EC amendment letter dated 06.03.2017, there will be no possibility of discharge of industrial waste water even during the monsoon season. Thus, there will be no question of any quantity of effluent discharge from the plant.

140. As per amendment letter dated 06.03.2017, 1st Respondent (MOEF&CC) had examined the proposal in light of the OA No.315/2016 in the matter of Sunil Dahiya Vs Union of India pending before Hon'ble NGT Delhi. The matter was placed before EAC in its 1st meeting held on

28.12.2016 and EAC recommended for amendments in EC in line with the Ministry's Notification dated 07.12.2015. Ministry accepted the recommendations of EAC and amended the following conditions related to Wastewater in the EC dated 20.01.2016.

"ii. Specific condition no. 6A(xxiii): Wastewater generated from the plant shall be treated and reused for various purposes within the plant. There shall not be any discharge of wastewater. Zero liquid discharge shall be adopted and specific water consumption shall be achieved as per the MoEF&CC Notification S.0.3305(E) dated 07.12.2015."

CONSTRUCTION STATUS OF WATER SYSTEMS OF PROPOSED PROJECT

141. The water and wastewater Treatment Plant system is awarded as BOP package to M/s. TPL Ltd. The construction of Effluents treatment system with provision of recycle & reuse of effluents is in progress as shown below.

- PT-CW Clarifiers 3nos & PT DM- Clarifier 1no erection completed.
- DMWS Tank 2 nos Erection and painting competed.
- CST 2 nos Erection and painting competed.
- UF & RO tank erection completed, painting in progress.
- UF-RO DM Building Equipment erection competed, piping works are in progress.
- Additional STP 3.5 MLD is ready for commissioning to cater the additional treatment requirement due to upcoming NTPC Telangana project.

142. STP is based on MBBR technology with inlet tank, balancing tank MBBR 1 and 2, treated water tank and sludge digestion tank. Treated water shall be reused for horticulture. Purchase Order is awarded for reuse of treated water through a dedicated pipeline network distribution with anticipated Date of Commissioning is August 2021.

143. In view of above, it is clear that 3rd Respondent is serious about MOEF&CC stipulation of Zero Liquid Discharge in proposed project and taking action accordingly.

OBJECTIONS IN AWS

XI. ENVIRONMENTAL IMPACT OF FGD HAVE NOT BEEN STUDIED - PARA NOS. 88 TO 93, PAGE 59 TO 61

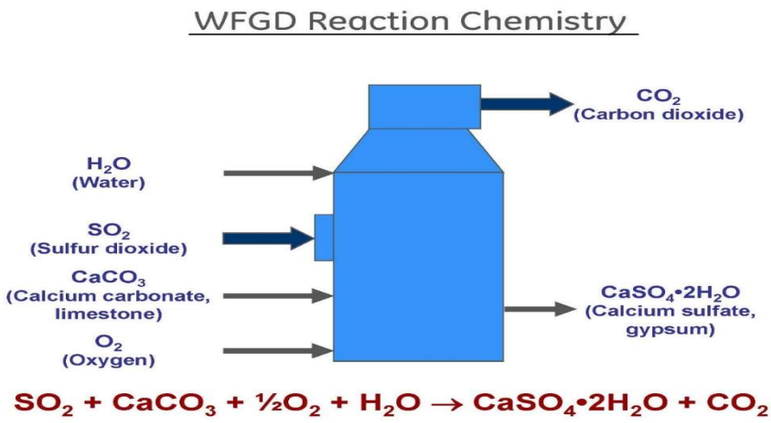
THE REPLY OF 3RD RESPONDENT

144. With regard to **Environmental impact of FGD,** the following are submitted. It is submitted that in order to control SO2 emission values to be within latest MOEF&CC emission Notification for TPP dated 07.12.2015, 3rd Respondent is in the process of constructing wet lime stone based Flue Gas Desulphurization (FGD) system, at the tail end of the steam generator downstream of the ESP, to capture SO2. The FGD shall have a scrubber as the main reaction vessel in which SO2 gas shall be captured in limestone slurry to produce gypsum as by product. The FGD shall be provided with lime stone preparation system. The scrubber shall be provided with bypass system. Necessary auxiliary equipment's and systems like cyclones, vacuum filters, belt conveyors, pumps, storage vessels for different liquids, piping and fittings, Zero Liquid Discharge (ZLD) etc. shall complete the FGD plant. The compulsory provision of FGD and ZLD introduced only in the Notification dated 07.12.2015. Whereas the project recommendation was made by EAC in the 45th & 46th meetings held on 29.10.2015 & 26.11.2015 respectively However in anticipation of requirement of FGD condition was incorporated in the EC. Certain basic preparations had been made even before the Notification and certain aspects mentioned in EIAR such as space and location for FGD etc.

145. The Indian coal has average range of sulphur content of 0.3 to 0.7 % where as coal in other countries are very much higher than the Indian coal. The technology and engineering for establishing FGD for the different varieties of coal are vastly different. The FGD is new introduction in India by MoEF&CC Notification dated 07.12.2015. Needless to state that the technology and engineering for FGD with reference to Indian coal was at a very nascent Phase when the NTPC applied for EC for expansion. Practically there was no FGD operating in India that too for power plants. The above said facts have to be borne in mind while appreciating FGD issue. Hence the objections raised in the AWS are not to be sustained. The Appellant had to use limestone and the bi product is gypsum, in the operation of FGD referred to para 94 of the AWS. The sufficient and required methodology had been evolved and engineered to avoid pollution if any in the usage of lime stones. As mentioned earlier contract for supply and erection and

building of FGD have already been given and the progress achieved as on today is 75% at huge cost of several hundred crores.

146. As regard handling and quick disposal of byproduct of gypsum, there will be no problem at all since gypsum is in great demand, in the ever growing and large cement industry. Gypsum is one of the basic raw material for the production of cement. NTPC is already look out for gypsum consumers. Therefore, no pollution problem is envisaged arising out of use of lime stones and the generation gypsum as a bi product in FGD operation.



147. NTPC has also committed to implement various mitigative measures such as FGD, ESP etc in order to control the air emission / pollution from the project and to maintain the Ambient Air Quality in the surrounding area within the latest National Ambient Air Quality (NAAQ) limit and also to comply with the latest emission standards for Thermal Power Plant dated 07.12.2015.

148. During the appraisal of EC proposal for Telangana STPP, EAC members considered the border line value of resultant SO_2 concentration and accordingly FGD condition was stipulated in the Environment Clearance (EC).

63RD EAC MEETING RELATE TO ANOTHER PROJECT

149. With regard to 63rd EAC meeting held on 29th and 30th August 2016 (long after Notification dated 07.12.2015 and EC dated 20.01.2016) referred in para 88 of the AWS, it is submitted that the Appellant has intentionally quoted the same to confuse and mislead the Hon'ble Tribunal. The said meeting was related to some other project proponent namely. M/s Telangana State Power Generation Corporation Ltd. (TSGENCO) for its

5x800 MW Super Critical Coal Based Yadadri Thermal Power Station at Village Veerlapalem, District Nalgonda, Telangana. The 3rd Respondent does not have any relation to appraisal of this project of M/s Telangana State Power Generation Corporation Ltd. (TSGENCO).

SPACE FOR LOCATION OF FGD SPECIFIED AND CONSIDERED BY EAC

150. During preparation of Draft and Final EIA report, the new emission norms dated 07.12.2015 for SO_2 were not notified. However, as a proactive approach, NTPC had incorporated in the General Layout Plan (GLP) of the proposed project in the EIA Report which precisely shows the space provision kept in the layout where Flue Gas Desulphurization (FGD) system can be retrofitted if required in future and same was also included in Chapter-2 of final EIAR submitted to 1st Respondent. The Expert Appraisal Committee (EAC) after taking notice of entire facts and making lengthy deliberation on the proposal twice in its meetings has accorded the EC with project specific conditions to install Flue Gas Desulphurizing (FGD) system to reduce SO_2 emission level which was also committed by 3rd Respondent.

151. Thus, it is respectfully submitted that the requirement of FGD has been imposed by EAC only after full consideration and after applying its mind for the project conditions and the implications therein.

152. It is submitted that Appellant in his petition has included the details of EAC recommendations of 46th EAC meeting held on 26.11.2015 which itself precisely substantiate that EAC has meticulously considered and discussed each and every environmental aspect of the project during appraisal of the project for EC and stipulated various stringent project specific conditions therein for implementation.

153. NTPC in compliance to the EC condition had estimated FGD cost of Rs. 720 crores in its project budget under the Environmental protection head. The Details of the FGD system along with its working principle and chemistry were filed as **Annexure-R3/33 Volume IX**.

154. The FGD process details in EIA report were not included because neither it was stipulated in MOEF&CC, ToR nor there were emission norms for SO_2. New emission norms were notified on 07.12.2015 only and after the submission of EC application on 24.06.2015 and 01.10.2015.

155. However, in case of proposed Telangana STPP the EC application submitted by NTPC was screened after online submission and then essential/additional documents/information were sought twice before appraising the project in the EAC meeting and this confirms to the adherence to the norms. EAC of MOEF & CC after deliberation, reviewing and discussing all presented facts, information & clarifications, provided by NTPC, relating to all primary & secondary environmental aspects at length, twice, during its 45th & 46th meetings held on 29.10.2015 & 26.11.2015 respectively, recommended the project for Environmental Clearance that too by stipulating various project specific stringent conditions i.e. installation of FGD, MoU for ash utilization, Occupational Health survey etc. All these conditions were stipulated under Environmental Clearance, explicitly, corroborate the fact that MOEF&CC had considered the reason for recommending the project for EC. Further additional, project specific conditions, for implementation to protect environment in sustainable manner, were stipulated by MoEF & CC.

156. MOEF&CC has accorded the Environmental Clearance (EC) for Telangana STPP Phase-I (2x800) MW vide letter dated 20.01.2016. **The copy of Environmental Clearance is filed as Annexure-R3/11 Volume IV** and the said EC condition FGD is required in a Specific Conditions : no (iv)

"FGD shall be installed as the emissions are found to be almost reaching threshold limit of 80 unit (for worst case scenario) and also considering the cushion w.r.t NAAQS."

157. In view of above, it is submitted that stipulation of FGD was done after detailed deliberation in EAC meeting and MOEF&CC Notification on emission norms dated 07.12.2015. Only after assessing the feasibility of FGD System in proposed project, NTPC has awarded the construction and installation of FGD to M/s GE Power India Limited (GEPIL). The construction status of FGD System at NTPC Telangana STPP Project is as below.

CONSTRUCTION STATUS OF FGD-NTPC TELANGANA

158. The FGD package is awarded to M/s GE Power India Limited (GEPIL) and 75 % of work has been completed and balance work is under final stage. The 1st and 2nd vacuum belt filter were successfully erected in Gypsum dewatering building. Cone pre-assembly completed, inside lining work is under progress. Pre-assembly of inlet ducting commenced, cone

outlet elbow preassembly in progress. The target for completion of FGD System is anticipated by FY 2021-2022 which will coincide with the commissioning of each units.

OBJECTIONS IN AWS

XII. HYDRO-GEOLOGICAL IMPACTS HAVE NOT BEEN STUDIED- PARA NOS. 94 TO 96, PAGE 61 TO 63

THE REPLY OF 3RD RESPONDENT

159. With regard to **Hydro-Geological impacts,** the following are submitted. It is denied that Hydro-Geological study with impact assessment was not based on factual data as alleged. It is submitted that the **Environmental Impact Assessment Report (EIAR) covers both Geology and Hydrogeology details in chapter 3 under section 3.1** based on secondary data collected from the Government Records and annexed Hydro Geological Report based on Primary survey conducted by approved consultant which substantiate the true and authentic status hydro geological status of the study area and hence cannot be out rightly rejected. It is further submitted that the monitoring results included in Environmental Impact Assessment Report (EIAR) are also based on site specific study conducted by reputed QCI-NABET accredited consultant and it's report concluded that the quality of ground water and surface water are well within the prescribed standards at all the locations around the existing power project.

160. With regard to contentions made in para 94-95 of Heading -XII of AWS the same had been already addressed in earlier paragraphs and are not repeated. The Appellant has referred to the decision in ***Samata V/s Union of India***, **[2014 ALL (I) NGT REPORTER (1) (SZ) 1]** which is not relevant to fact and circumstance of this project. In the said decision, no specific Hydrogeological Study was carried out by project proponents and effluents were envisaged to be discharged into the natural water bodies. While in current project, 3rd Respondent, has carried out a separate Hydrogeological Study through M/s Multi-Tech Services, Hyderabad to assess the impact of the project on drainage, surface hydrology, groundwater etc. **The said report is filed as Annexure R3/12 of page 261 of Volume IV.** Various test like Pump tests were also conducted by consultant as per MOEF&CC TOR. No additional land was acquired by

NTPC to avoid change in natural drainage system. Further, no wastewater is proposed to be discharge into any water body as the proposed project is designed with Zero Liquid Discharge (ZLD). Therefore, no significant impact is anticipated on drainage, surface hydrology and groundwater.

OBJECTIONS IN AWS

XIII. HEALTH IMPACTS OF THE PROPOSED PROJECT HAVE NOT BEEN STUDIED- PARA NOS. 97 TO 103, PAGE 63 TO 66

THE REPLY OF 3RD RESPONDENT

161. With regard to **Health impacts of the proposed project** the following are submitted. It is submitted that 3rd Respondent is a responsible corporate citizen and makes constant efforts to build and nurture long lasting relationships with members of the society in general and the communities residing around its plants. Most people in rural areas live in unhygienic conditions and suffer from general ailments and diseases due to lack of awareness and necessary medical help. The 3rd Respondent regularly organizes medical camps to mitigate this problem. The health initiatives aim at creating awareness and improving health standards of rural poor through providing facilities and reaching quality health care in the areas of general medicine, eye care, dental care, etc. Some of the health-related activities undertaken in the vicinity of project area are:

a. Health related infrastructure provided at Kundanpalli and Sai Seva Samithi Government Area hospital, Godavarikhani, IRCS Mancherial etc.

b. Regular monthly health camps are conducted at New Mogalpahad, Kundanpalli, Mallialpalli & PK Ramaiah colony.

c. School children health camps, seasonable health camps for the villagers are being conducted every year.

d. Pulse polio camps are conducted twice in a year along with the national programme in the nearby villages.

e. Special camps like: Eye camps, IOL operations, PCP camps (Distribution of appliances on free of cost), Homeo medicine distribution for chicken guinea, Diabetic retinopathy camps, Anemia camps etc., are being conducted.

f. Support to Government TB Hospital.

g. DOT centre for the treatment of TB.

h. Supporting state government in conducting family planning operations of more than 65,000 since 1982

162. It is also substantiated by that fact that the records available at the local district health centres / primary health centres etc. also does not reported any major endemic / epidemic disease in the study area. The certificate issued by Medical Superintendent, Peddapalli vide letter dated 02.11.2020 regarding there is no outbreak of any Epidemic and Endemic in this area for last 5 years. **The copy is Exhibit No.E filed along with notes on submissions.**

163. **It is submitted that the existing project is having well established 50 bed hospital with advanced facility to cater any medical exigencies**.

OBJECTIONS IN AWS

XIV. TERMS OF REFERENCE ISSUED FOR THE EIA STUDY HAVE NOT BEEN COMPLIED - PARA NOS. 104 TO 116, PAGE 66 TO 70

THE REPLY OF 3RD RESPONDENT

164. With regard to **Terms of reference issued for the EIA Study,** the following are submitted. It is further submitted that 3rdRespondent has complied with all the conditions stipulated in the TOR accorded by MoEF&CC and included in the Environmental Impact Assessment Report EIAR. It is to be noted that as no land is being acquired for the project and the proposed project is being accommodated within the existing plant premises of Ramagundam STPP hence, No Socio-Economic study was desired. However, demographic profile of the study area was included in the EIAR based on secondary data. Thus, the contentions made by the Appellant are totally baseless, unjustified and denied.

165. **As per TOR condition No.I:** was considered. India Meteorological Department (IMD) temperature data for period 1951-1980 (i.e before commissioning of industries) and IMD data for period 1971-2000 (after commissioning of various industries) is compared with the latest 2014 annual temperature data recorded at Ramagundam STPS and accordingly the temperature profile variation graph has been plotted. (Refer section 3.3.3.3 & figure 3.3.3 of Chapter-3 of EIA Report).

Latest status: Long term monitoring of temperature profile will be undertaken both on-site and off-site of the TPP during operation of the project and accordingly the necessary corrective action will be taken.

166. **As per TOR condition No.III:** The proposed Telangana STPP is a non-polluting project. However, certified compliance from the Regional Officer of MOEF & CC (Southern Zone) Chennai for existing Ramagundam STPS is **filed as Annexure- R3/27 Volume IV.**

Latest status: The Environmental Clearance (EC) compliance reports for both Ramagundam STPP and Telangana STPP are being regularly submitted once in Six months to Regional Officer Chennai, the last report filed on 17.06.2020 and 27.10.2020.

167. **As per TOR condition No.XI:** Land use based on satellite imagery was discussed under Section 3.2.4 & Table 3.2.3 of Chapter-3 of EIA Report. Land use map given in Figure-3.2.2 of Chapter-3. The environment setting representing 10 km radius of study area was given in Table-1.1 of Chapter-1 of EIA Report.

Latest status: The consultancy contract for the stipulated condition was awarded to Telangana State Remote Sensing Application Centre (TRAC), Govt. of Telangana. TRAC study reports are submitted to Regional Officer of MOEF&CC (Southern Zone at Chennai). The First report was submitted on 16.03.2018 and Second Report on 02.11.2019. The work is under progress and will be carried out for a period of 5 years upto 2022.

168. **As per TOR condition No.XIV:** The land use details based on census records of are given in Section-3.2 of Chapter-3. The land use details based on satellite imagery is shown in Figure-3.2.2 of Chapter-3 of EIA Report.

Latest status: The consultancy contract for the stipulated condition was awarded to Telangana State Remote Sensing Application Centre (TRAC), Govt. of Telangana. TRAC study reports are submitted to Regional Officer, MoEF, Southern Zone at Chennai. The First report was submitted on 16.03.2018 and Second Report on 02.11.2019. The work is under progress and will carried out for a period of 5 years up to 2022.

169. **As per TOR condition No.XX:** The summary of Hydro-Geological details of project site are given in Section-3.1 of Chapter-3.The detailed

Hydro-Geological study report of the area is **filed as Annexure- R3/21 Volume IV.**

Latest status: A separate comprehensive Hydro geological study of the area was awarded to Indian Institute of Technology Roorkee (IIT – Roorkee).The study is for a period of one year and the final report was submitted by the consultant in November 2016.

170. **As per TOR condition No.XXI:** The plant will be operated on Zero Liquid Discharge (ZLD) concept Impact on ecology is addressed in section 4.2.7 and 4.3.9 of Chapter-4 of the final EIA report. Marine impact is not applicable.

171. **As per TOR condition No.XXXIV:** A survey on Environmental Human Health Risk Assessment was conducted by M/s. Pollucon Laboratories Pvt. Ltd, Surat in and around Ramagundam area. The study revealed that there is no specific endemic disease in the surrounding area & the health status of study population was satisfactory and health problems reported during the study were not showing any unusual pattern. The health related problems found during the study like General health related complains, High blood pressure, Malnutrition, Anemia, Refractive error were mainly due to life style related factors and not due to above mentioned pollutants in emission.

Latest status : M/s Pollucon Laboratories Pvt. Ltd, Surat, conducted the Occupational Health and Epidemic Health Disorders Survey of the study area (10 Km radius) and submitted its report to NTPC. **The Health survey Final report was submitted to the Regional Officer of MOEF&CC (Southern Zone), at Chennai on 25th November 2018. As per the said report there was no adverse findings on health matters.**

172. **As per TOR condition No.XXXVII:** A list of existing and proposed in the study area shall be furnished.

Latest Status: The following are the list of industries: 2600 MW Ramagundam STPS (Adjacent),Fertilizer Corporation of India, 1.7 km, SE ,TSGENCO (62.5 MW) - 2.1 km, NW ,SCCL OCP-IV – 2.9 km, N ,18 MW SCCL Power House, 3.7 km, ENE,SCCL OCP-III - 4.5 km, SE, Kesoram Cements Ltd, 7.3 km, SW were taken in to account.

173. **As per TOR condition No.XXXVIII:** Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall

be well assessed. The details of the model used and the input data used for modelling shall also be provided.

Latest status: Cumulative impact of air quality levels in the study area to the proposed project has been undertaken. **The copy of the cumulative assessment was filed as Annexure- R3/1 Volume IV.**

174. **As per TOR condition No.XXXIX:** Radioactivity and Heavy metal contents of coal to be sourced shall be examined and submitted along with the laboratory reports.

Latest Status : Radio activity and Heavy Metal contents of coal are filed **as Annexures- R3/29 and 30 Volume IX**

OBJECTIONS IN AWS

XV. THE PROJECT PROPONENT HAS NOT COMPLIED WITH THE ENVIRONMENTAL CLEARANCE CONDITIONS OF THE EXISTING THERMAL POWER PLANT- PARA NOS. 117 TO 126, PAGE 70 TO 73.

THE REPLY OF 3RD RESPONDENT

175. With regard to **False data on AAQ Pollution having been presented,** the following are submitted. It is submitted that the Environmental Clearance for the Ramagundam STPP, Stage-III (1x500) MW was accorded by MOEF&CC vide its letter dated 25.09.1995 and its amendments dated 14.12.1998 & revalidation on 08.11.2000. NTPC is regularly submitting the six-monthly EC compliance reports along with Ambient Air Quality, Water Quality and Noise data to Telangana State Pollution Control Board (Telangana SPCB) and Regional officer of R.O MOEF&CC, Chennai. In addition, the continuous real time online Ambient Air Quality data is being shared with Telangana SPCB/CPCB. The last report was submitted on 17.06.2020 and 27.10.2020.

176. It is submitted that most of the Environmental Clearance conditions which where mentioned as either complied or partly complied in the six monthly compliance report as forwarded by R.O, MOEF&CC to Director (Thermal), MOEF&CC vide its letter dated 05.10.2015. It is further stated that as most of the condition were fully complied and also efforts were already initiated to comply with the other conditions. Those aspects that are mentioned as partially complied are relating to ongoing process and insignificant in nature. It is stated that no significant impact will be caused to the Environment.

177. **As regards to compliance of Environment Clearance condition No.6 in the existing plant.** It is submitted that Appellant under the heading XV-para 188 page 71 of AWS. Certain reports forwarded by R.O of MoEF&CC to Director (Thermal). It was mentioned certain EC conditions have complied and certain other conditions partially complied. The Appellant has not referred to the date of the report which were referred to. However, on verification, it appears that he refers to report dated 05.10.2015. It is relevant to refer here the partially complied subject matters are not of such a nature that will disqualify the Respondent from seeking and retaining EC for expansion. Moreover, EC condition No. 6 is relating to AAQ. The third-party consultant is monitoring the AAQ as per the NAAQ standard 2009 and the same has been forwarded to TSPCB and Regional officer of MoEF&CC (southern Zone) Chennai. Therefore, the objections raised by the Appellant that certain EC conditions of the existing plant are only complied and EAC ought not to have referred for MoEF&CC for grant of EC for the expansion, is not at all tenable.

178. **It is submitted that Ambient Air Quality monitoring for the stations for PM_{10}, $PM_{2.5}$, SO_2 and NO_x are being carried out twice a week at 3 locations identified with TSPCB through MOEF&CC recognized laboratory and record maintained.** Other parameters as per NAAQ standards are being regularly monitored and submitted to the concerned authority till date.

179. **As regards to compliance of Environment Clearance condition No.7 mention in para 120 of AWS in page no. 72 :** It is submitted that the existing power plant station has AWRS along with treatment system and the ash pond water is treated and reused to the maximum extent.

180. **As regards to compliance of Environment Clearance condition No.13 and 3 mention in para 123 of AWS**: It is submitted that the Ramagundam, 1x500, Stage III has been provided with 100% Dry ash extraction system since the inception stage itself. The dry ash is supplied for manufacturers of cement, RMC and brick/blocks. Balance ash of Stage III given for mine stowing and clay brick manufacturing.

181. **Revised Ash Utilization Plan submitted to MoEF&CC on 03.08.2000 and the same is being implemented. In compliance to the latest fly ash Notification dated 03.11.2009, revised action plan has also been submitted. In FY 2018-19, the station has achieved ash**

utilization of 110.31%. For 100% ash utilization, station has created following facilities.

1) Station has installed Dry Ash Extraction System. Also, Rail loading facilities commissioned in unit 4&5 to meet the distance customer's demand.

2) Pond ash is utilized in Mine stowing purpose, ash dyke raising, clay brick units, etc.

3) The station has AWRS along with treatment system and the ash pond water is treated and reused to the maximum extent.

182. **As regards to compliance of Environment Clearance condition No.20 mention in para 124 of AWS**: It is submitted that data is regularly being furnished through six monthly compliance reports to MoEF&CC, CPCB and TSPCB. Continuous emission monitoring system (CEMS) for gaseous emissions also has been installed and being monitored continuously.

183. **As regards to compliance of Environment Clearance condition No. 5 and 25 mention in para 125 of AWS.** It is submitted that the funds on environmental protection measures along with item – wise break-up is provided in the project cost. The total funds earmarked for environmental protection has not been diverted for other purposes.

184. The latest EC compliance report submitted to Regional Office of MOEF&CC Chennai was submitted on 17.06.2020 and 27.10.2020 which complied all EC conditions. All the reports and documents submitted to Regional officer, MoEF&CC is available in the public domain.

OBJECTIONS IN AWS

XVI. AND XVII. NON-APPLICATION OF MIND BY THE EAC AND MOEF&CC- PARA NOS.127 TO 136, PAGE 73 TO 79

THE REPLY OF 3RD RESPONDENT

185. With regard to **Non-Application of mind by the EAC and MOEF&CC** the following are submitted. It is submitted that Environmental Clearance for Telangana STPP was accorded by MOEF&CC based on presented facts, information & clarifications, as provided by 3rd Respondent. Detailed discussions were held thereafter on all the issues related to cumulative impact, rise in temperature, baseline environment,

social impact etc. The Expert Appraisal Committee (EAC) of the MOEF&CC had recommended the project for Environmental Clearance under the provisions of EIA Notification dated 14.09.2006, stipulating additional project specific conditions which aspects clearly disclose detailed consideration and application of mind.

186. It is submitted that project features, point wise compliance of TOR, Public Hearing proceedings, action plan, EC compliances of existing project and other issues were discussed in detail at 45th EAC meeting of MOEF&CC held on 29.10.2015. EAC has sought various clarifications and additional information to project proponent. The 3rd respondent has submitted the replies of clarifications and additional information sought by EAC vide letter dated 16.11.2015.

187. The proposal of EC was again discussed in 46th EAC meeting of MOEF&CC held on 26.11.2015 and detailed deliberation was done on various issues and reply given by project proponent. Even after, recommendation of EC by EAC, the proposal used to move at various levels at MOEF&CC for final accord of Environmental Clearance.

188. The verbatim recording of all discussions and deliberation of EAC was not required to be made. Hence the Appellant is not justified in demanding the same. The EC recommendation was not only objective but also subjective satisfaction of EAC and MoEF&CC

189. **It is to be noted that the panel of EAC constituted under the MOEF&CC included well qualified & experienced professionals from various recognized/reputed Government institutions who are capable of studying the various environmental and social consequences of the project and recommend/accord clearances at various stages of the project development, constructions and operation. If the processes specified in various laws are followed and standards prescribed in various laws are complied with, there cannot be any undue threat to environment.**

J. CONCLUDING SUBMISSION

1. The generation and supply of power is the fundamental requirement for comfortable human living condition, for every institution, and development of commerce and industries. Therefore, **sustaining** the EC and power plants should be the approach, rather than **suspending** the EC and the power plants.
2. The jurisdiction and objectives of the National Green Tribunal is allowing sustainable development and to balance environmental protection for future generation.
3. If any error, mistake, short coming in the grant of EC are found, the same could always be rectified before any damage is done to the environment especially when establishment of power projects normally takes 5 to 7 years.
4. Every ToR requirement may not be considered as a mandatory condition precedent for the grant of EC.
5. Some requirement could also be incorporated as a condition to the EC for compliance during and before the project is completed and put into operation.
6. The grant of EC is only the beginning of the industrial undertaking.
7. No industrial undertaking could come into operation "Without Consent To Establish (CTE) and Consent To Operate" (CTO) from State Pollution Control Board.
8. The SPCB always have control over the industry and power to stop even close the industry either temporarily or permanently.

Therefore, for all the reasons stated above, the prayer to set aside, the EC granted by MoEF&CC to 3rd respondent, is liable to be rejected.

For all the reasons stated above, it is prayed that this Hon'ble Tribunal may be pleased to dismiss the above appeal with costs and thus render justice.

Dated at Chennai on this the 1st day of December, 2020.

M/s. KING & PARTRIDGE
C.MOHAN
M.KUMARESAN
ADVOCATES FOR 3rd RESPONDENT

टी. विशाल / TOOPRAN VISHAL
वरिष्ठ प्रबंधक / Sr. Manager (EMG)
एनटीपीसी लिमिटेड, रामागुण्डम NTPC Limited, Ramagundam
ज्योतिनगर /JYOTHINAGAR-505 215.

3rd Respondent- NTPC Ltd

रजिस्ट्री सं. डी.एल.- 33004/99 REGD. No. D. L.-33004/99

भारत का राजपत्र
The Gazette of India

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अधिसूचना

नई दिल्ली, 21 मई, 2020

का.आ. 1561(अ).—जबकि केन्द्रीय सरकार ने पर्यावरण (संरक्षण) नियमावली, 1986 के नियम 5 के साथ पठित पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 3, धारा 6 और धारा 25 के तहत अपनी शक्तियों का प्रयोग करते हुए, ऐश सामग्री (ऐश कंटेंट) को 34% तक की सीमा सहित कोयले का उपयोग करने के लिए ताप विद्युत संयंत्रों की कतिपय श्रेणियों को अधिदेशित करते हुए भारत के राजपत्र, असाधारण में सा.का.नि. 02 (अ), तारीख 2 जनवरी, 2014 द्वारा पर्यावरण (संरक्षण) नियमावली, 1986 के नियम 3 के उपनियम 8 का संशोधन प्रकाशित किया।

और जबकि सा.का.नि. 02 (अ), तारीख 2 जनवरी, 2014 द्वारा उक्त अधिसूचना द्वारा निम्नलिखित समय-सीमा तक कच्चे अथवा मिश्रित अथवा लाभकारी कोयले (बेनिफिसिएटिड कोल), जिसमें ऐश सामग्री चौंतीस प्रतिशत (34%) से अधिक ना हो, का उपयोग करने के लिए त्रैमासिक आधार पर कोयला आधारित ताप विद्युत संयंत्रों को अधिदेशित किया गया है :

क्रम सं.	विद्युत संयंत्र की श्रेणी	गर्तमुख(पिट-हैड)/कोयला खान से ताप विद्युत संयंत्र के अवस्थान की दूरी	समय-सीमा
(क)	एकल ताप विद्युत संयंत्र (किसी भी क्षमता के) और कैटिप्व ताप विद्युत संयंत्र (100 मेगावाट और अधिक क्षमता सहित)	गर्तमुख विद्युत संयंत्रों को छोड़कर गर्तमुख से दूरी पर ध्यान दिए बिना शहरी क्षेत्रों,या परिस्थितिकीय रूप से संवेदनशील क्षेत्रों या अत्यधिक प्रदूषित क्षेत्रों में अवस्थित	2 जून, 2014 से प्रभावी।
(ख)		1000 किमी से अधिक दूर	2 जून, 2014 से प्रभावी।
(ग)		750-1000 किमी के बीच	1 जनवरी, 2015 से प्रभावी।
(घ)		500-749 किमी के बीच	5 जून, 2016 से प्रभावी।

और जबकि, केंद्रीय सरकार ने पर्यावरण (संरक्षण) नियमावली के नियम 5 के उप-नियम (3) के साथ पठित पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 6 और धारा 25 के अधीन अपनी शक्तियों का प्रयोग करते हुए भारत के राजपत्र, असाधारण में स.का.आ. 3305 (अ), तारीख 7 दिसंबर, 2015 और सा.का.नि.593 (अ), तारीख 28 जून, 2018 द्वारा विद्युत उत्पादन की क्षमता और विद्युत संयंत्र की संस्थापना की तारीख और समय-बद्ध रीति से प्राप्त किए जाने के आधार पर ताप विद्युत संयंत्रों की विभिन्न श्रेणियों के लिए उत्सर्जन मानकों और विनिर्दिष्ट जल उपभोग को प्रकाशित किया था।

और जबकि, पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय ने विद्युत मंत्रालय द्वारा दिनांक 13 अक्तूबर, 2017 को प्रस्तुत की गई यथा संशोधित योजना के अनुसार विभिन्न ताप विद्युत संयंत्रों को वर्ष 2022 तक प्रदूषण नियंत्रण उपकरण संस्थापित करने के लिए पर्यावरण (संरक्षण) अधिनियम, 1986 की धारा 5 के तहत निर्देश जारी करने के लिए केंद्रीय प्रदूषण नियंत्रण बोर्ड को दिनांक 7 दिसंबर, 2017 के फा.सं. क्यू-15017/40/2007-सीपीडब्ल्यू द्वारा निदेश दिए।

और जबकि, विद्युत मंत्रालय ने अन्य बातों के साथ-साथ यह अभ्यावेदन किया है कि प्रदूषण नियंत्रण प्रौद्योगिकियों के उन्नत होने के साथ ही ताप विद्युत संयंत्र दहन प्रक्रिया से उत्पन्न फ्लाई-ऐश का पता लगाने में बेहतर उपकरणों से सुसज्जित हुए हैं और बिना धुला कोयला अधिक कुशलता और मितव्ययता से प्रयोग किया जा सकता है; ताप विद्युत संयंत्रों को राख अवयवों की विभिन्न किस्मों के साथ कोयले के लिए डिजाइन किया गया है और इनमें सूखी राख (ड्राई ऐश) निकालने, उसका रखरखाव करने और राख के उपयोग के लिए आपूर्ति प्रणालियों को उपलब्ध कराया गया है; धुले कोयले के उपयोग से बिजली उत्पादन महंगा हो जाता है; ताप विद्युत संयंत्रों में उत्पन्न फ्लाई-ऐश सीमेंट निर्माण, ईंटें बनाने, सड़क बिछाने, खनन के उपरांत रिक्त हुए स्थलों और निचले क्षेत्रों को भरने के लिए बैक-फिल सामग्री जैसे कई लाभकारी उपयोगों के लिए प्रयोग की जा रही है; औसतन ऐश की मात्रा 34% तक बनाए रखने की आवश्यकता उद्योगों को कोयले का आयात करने के लिए प्रेरित करती है जिससे विदेशी मुद्रा इत्यादि का बहिर्वाह (आऊटफ्लो) होता है।

और जबकि, कोयला मंत्रालय ने अन्य बातों के साथ-साथ अभ्यावेदन किया है कि कोयला खानें वर्षों से कच्चे कोयले की गुणवत्ता, आकार और बाहरी सामग्री में सुधार के लिए निरंतर कड़े प्रयास कर रही हैं जिससे सभी संबंधित उपकरणों की टूट-फूट में उल्लेखनीय कमी आई है, कोयला धुलाई प्रक्रिया में कई प्रकार का रखरखाव होता है और कोयला खानों से धुलाई-स्थलों (वाशरीज़) तक कोयले की बड़ी मात्रा को सड़क द्वारा ले जाने और फिर आगे

विद्युत संयंत्रों तक ले जाने के लिए रेल साइडिंग्ज़ तक ले जाने से बचना; धुलाई की प्रक्रिया केवल कोयले को धुले हुए कोयले और वाशरी अवशिष्ट में बाँटती है जबकि खनित कोयले की राख की मात्रा वही रहती है; निम्न श्रेणी कोयला वाशरी अवशिष्ट कई छोटे उपयोगकर्ता उद्योगों में, अधिक प्रदूषण आदि सृजित करते हैं।

और जबकि, कोयला मंत्रालय और विद्युत मंत्रालय ने इसलिए अनुरोध किया है कि दिनांक 2 जनवरी, 2014 की अधिसूचना पर पुन: विचार द्वारा, विद्युत संयंत्रों को धुले हुए कोयले के प्रयोग के लिए अधिदेशित करने पर गौर किया जाना अपेक्षित है जिससे पर्यावरण पर प्रतिकूल प्रभाव डाले बिना कोयले की लंबी दूरी की ढुलाई के लिए बिजली के उत्पादन में आसानी होगी।

और जबकि, नीति आयोग ने अपनी रिपोर्ट में वाशरीज़, कोयला खनन, परिवहन और विद्युत संयंत्रों में कोयले की खपत की दृष्टि से इस विषय का विश्लेषण करने के बाद अन्य बातों के साथ-साथ संक्षिप्त में यह अभ्यावेदन किया है कि समीपवर्ती उद्योगों में वाशरी अवशिष्ट का इस्तेमाल अधिक प्रदूषण पैदा करता है; चूंकि वाशरी अवशिष्ट अनेक छोटे उद्योगों में वितरित होते हैं, इसलिए विद्युत संयंत्र पर उत्पन्न प्रदूषण की तुलना में अनेक स्थलों पर उत्पन्न प्रदूषण को नियंत्रित करना अधिक कठिन होता है; धुलाई प्रक्रिया में उत्पन्न राख (ऐश) कोयला कणों के साथ-साथ पानी को भी प्रदूषित करती है और इसका लाभकारी उपयोग नहीं किया जा सकता, कोयला धुलाई प्रक्रिया में पानी का अधिक प्रयोग होता है, अपशिष्ट सृजन होता है; वाशरी अवशिष्ट के निपटान का पर्यावरण पर प्रतिकूल प्रभाव होता है क्योंकि इसमें बड़ी मात्रा में निम्न श्रेणी कोयला अवशिष्ट, तरल अपशिष्ट प्रवाह, कोयला भण्डारण, कोयला मिट्टी का रखरखाव, अपवाह और उड़ने वाली धूल का रखरखाव और निपटान करना होता है, कोयला धुलाई का स्थलाकृति, जल निकास स्वरूप और गुणवत्ता, जल निकायों, बड़े पैमाने पर प्रतिवेशी वायु गुणवत्ता पर भी प्रतिकूल प्रभाव पड़ता है; धुलाई प्रक्रिया से विद्युत उत्पादन की लागत में भी वृद्धि होती है जिसका कोई पर्यावरणीय लाभ इत्यादि भी नहीं होता।

और जबकि, नीति आयोग ने इसलिए सिफारिश की है कि पर्यावरणीय और प्रदूषण मानकों का निर्धारण करना और उन्हें लागू करना विवेकपूर्ण होगा, जिन्हें कोयले में ऐश की मात्रा प्रतिबंधित किए जाने के बजाए, परिवहन दूरी के आधार पर विद्युत उत्पादकों के साथ जोड़ा जाना चाहिए।

और जबकि, पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय ऊर्जा मंत्रालय, कोयला मंत्रालय के अभ्यावेदनों, नीति आयोग और कई हितधारकों की रिपोर्ट पर विवेचन करने तथा सावधानीपूर्वक विचार करने के बाद एवं जनहित में निम्नलिखित निष्कर्ष पर पहुंचा है—

i) खनित कोयले में ऐश सामग्री की मात्रा समान रहती है। वाशरी से ऐश सामग्री दो स्थानों (वाशरी और विद्युत संयंत्र) में विभाजित हो जाती है जबकि बिना धुला कोयला विद्युत संयंत्र में प्रयोग किया जाता है, ऐश सामग्री का निपटान केवल एक स्थान अर्थात विद्युत संयंत्र में किया जाता है;

ii) ताप विद्युत संयंत्र प्रदूषण नियंत्रण, ऐश प्रबंधन के लिए तकनीकी रूप से सुसज्जित होते हैं क्योंकि उनमें फ्लाई-ऐश का निराकरण करने के लिए उच्च क्षमता वाले उपकरण होते हैं, ड्राई ऐश निष्क्रमण और हैंडलिंग सिस्टम, ऐश उपयोग के लिए सप्लाई सिस्टम और फ्लू गैसों को तितर-बितर करने के लिए बड़े टाल (स्टैक) होते हैं;

iii) पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय ने उत्सर्जन मानक अधिसूचित किए हैं जिनमें क्रमश: ताप विद्युत संयंत्रों को समयबद्ध रीति से इन मानकों का पालन करने के लिए अधिदेशित किया गया है;

और जबकि, फ्लाई ऐश प्रबंधन और विभिन्न स्तरों पर बिना धुले कोयले के संसाधन के दौरान उत्पन्न अन्य संबंधित पर्यावरणीय पहलुओं सहित बिना धुले कोयले की हैंडलिंग के लिए यथासंभव उत्कृष्ट कार्यढांचे को अपनाना समयोचित है।

और जबकि, कोयला मंत्रालय ने अभ्यावेदन किया है कि मौजूदा अप्रत्याशित कोविड-19 महामारी और इसके फलस्वरूप देश में ऊर्जा उत्पादन के लिए कोयला क्षेत्र की मांग को प्रोत्साहित कर घरेलू कोयले के उपयोग की तत्काल आवश्यकता को देखते हुए यह वांछनीय है कि तत्काल अधिसूचना जारी की जाए।

अब, इसलिए, केंद्रीय सरकार पर्यावरण (संरक्षण) नियमावली, 1986 के नियम 5 के उपनियम (4) के साथ पठित पर्यावरण संरक्षण अधिनियम, 1986 (1986 का 29) की धारा 3, धारा 6 और धारा 25 के तहत अपनी शक्तियों का प्रयोग करते हुए, उक्त नियमावती के नियम 5 के उपनियम (3) के भाग (अ) के तहत सूचना देने की अनिवार्यता को हटा देने के उपरांत जनहित में पर्यावरण (संरक्षण) नियमावली, 1986 को आगे संशोधित करते हुए एतद्वारा निम्नलिखित नियम बनाती है, अर्थात्:

1. (1) इन नियमों को पर्यावरण (संरक्षण) संशोधन नियमावली, 2020 कहा जाएगा।

(2) ये सरकारी गज़ट में प्रकाशित होने की तारीख से लागू होंगे।

2. पर्यावरण (संरक्षण) नियमावली, 1986 में, नियम 3 में, उपनियम (8) के लिए निम्नलिखित उपनियम प्रतिस्थापित होगा, अर्थात् :-

''(8) ताप विद्युत संयंत्रों को, ऐश सामग्री अथवा दूरी संबंधी अनुबंधों के बिना, निम्नलिखित शर्तों के अध्याधीन कोयले के प्रयोग की अनुमति होगी:

(1) उत्सर्जन मानदण्डों के लिए प्रौद्योगिकीय समाधान निर्धारित करना:

i. वर्तमान अधिसूचनाओं और केंद्रीय प्रदूषण नियंत्रण बोर्ड द्वारा समय-समय पर जारी अनुदेशों के अनुसार विविक्त सामग्री के लिए विनिर्दिष्ट मानदंडों का अनुपालन करना।

ii. वाशरी के मामले में मिडलिंग और अवशिष्टों का एफबीसी(तरलीकृत तल दहन) प्रौद्योगिकी आधारित विद्युत संयंत्रों में उपयोग किया जाए। एफबीसी संयंत्रों में मिडलिंग और अवशिष्टों के लिए वाशरी में संयोजन (लिंकेज) होना चाहिए।

2. ऐश पॉन्ड का प्रबंधन:

i. ताप विद्युत संयंत्र धुले हुए कोयले से बिना धुले हुए कोयले पर स्विच करने के कारण फ्लाई-ऐश पॉन्ड(मौजूदा विद्युत उत्पादन क्षमता) की अतिरिक्त क्षमता की पात्रता प्राप्त किए बिना, समय-समय पर जारी की गई अधिसूचनाओं में यथा-अधिसूचित शर्तों का पालन करें।

ii. ऐश प्रबंधन के लिए जल की खपत को अनुकूल करने हेतु समुचित प्रौद्योगिकी समाधान लागू हों;

iii. यदि आवश्यक हो तो फ्लाई-ऐश का अधिकतम उपयोग सुनिश्चित करने के लिए स्थल विशिष्ट स्थितियों के आधार पर ऐश का पृथक्करण इलैक्ट्रो-स्टेटिक अवक्षेपक (प्रेसीपिटेटर) स्तर पर किया जाए।

iv. ताप विद्युत संयंत्र उपर्युक्त 2(i) के अध्याधीन, छोड़ी हुई अथवा चालू खानों (वर्किंग माइन्स) में (खान मालिकों द्वारा सुविधाजनक बनाया जाए) पर्यावरणीय सुरक्षा उपायों के साथ फ्लाई-ऐश का निपटान करें।

3. परिवहन:

i. ढके हुए रेलवे वैगन (तिरपाल अथवा किसी अन्य माध्यम से ढके हुए रेलवे वैगन) और/अथवा खान-क्षेत्र से परे ढके हुए वाहक (कन्वेयर) द्वारा ही कोयले का परिवहन किया जाए। तथापि, जब तक रेल परिवहन/वाहक इन्फ्रास्ट्रक्चर उपलब्ध नहीं हो जाता, सड़क परिवहन ट्रकों द्वारा किया जाए जो तिरपाल अथवा किसी अन्य माध्यम से ढके हुए हों।

ii. ताप विद्युत संयंत्र द्वारा सुनिश्चित किया जाए कि

(क) रेल अथवा कन्वेयर द्वारा परिवहन के लिए विद्युत संयंत्र में अथवा इसके समीप रेल साइडिंग सुविधा अथवा कन्वेयर सुविधा स्थापित हो; और

(ख) यदि रेल अथवा कन्वेयर सुविधा की अनुपलब्धता के कारण परिवहन न हो पाए, तो यह सुनिश्चित किया जाए कि संबंधित खान के डिलीवरी स्थान से कोयले का परिवहन ढके हुए ट्रकों (तिरपाल अथवा किसी अन्य माध्यम द्वारा), अथवा किसी अन्य यंत्रीकृत बंद ट्रक से सड़क द्वारा हो।

(4) इसे वित्तीय वर्ष 2020-21 और उसके बाद के लिए संबंधित परियोजनाओं हेतु संगत पर्यावरणीय स्वीकृति की अतिरिक्त शर्तें भी समझा जाएगा। मौजूदा पर्यावरणीय स्वीकृतियों को संशोधित किया जाएगा ताकि संगत क्षेत्रों के लिए उपरोक्त शर्तों को प्रवर्तनशील बनाया जा सके। तदनुसार संबंधित राज्य प्रदूषण नियंत्रण बोर्ड द्वारा प्रचालन की अनुमति जारी की जाएगी।

[फा.सं. 13014/01/2020–आईए-I(टी)]

गीता मेनन, संयुक्त सचिव

टिप्पण—मूल नियम भारत के राजपत्र में सं.का.आ. 844(अ), तारीख 19 नवंबर 1986 द्वारा प्रकाशित किए गए थे और पश्चातवर्ती संशोधन सं.का.आ. 82(अ), तारीख 16 फरवरी, 1987; का.आ. 64(अ), तारीख 18 जनवरी, 1988; सा.का.नि. 931(अ), तारीख 27 अक्तूबर,1989; का.आ. 23(अ), तारीख 16 जनवरी, 1991; सा.का.नि. 95(अ), तारीख 12 फरवरी, 1992; सा.का.नि. 329(अ), तारीख 13 मार्च, 1992; सा.का.नि. 562(अ), तारीख 27 मई, 1992; सा.का.नि. 884(अ), तारीख 20 नवंबर, 1992; सा.का.नि. 386 (अ), तारीख 22 अप्रैल, 1993; सा.का.नि. 422 (अ), तारीख 19 मई, 1993; सा.का.नि. 801 (अ), तारीख 31 दिसंबर, 1993; सा.का.नि. 320 (अ), तारीख 16 मार्च, 1994; सा.का.नि. 560 (अ), तारीख 19 सितंबर, 1997; सा.का.नि. 378 (अ), तारीख 30 जून, 1998; सा.का.नि. 07 (अ), तारीख 22 दिसंबर, 1998; सा.का.नि. 407 (अ), तारीख 31 मई, 2001; सा.का.नि. 826 (अ), तारीख 16 नवंबर, 2009; सा.का.नि. 513 (अ), तारीख 28 जून, 2012; सा.का.नि. 02 (अ), तारीख 02 जनवरी, 2014; का.आ. 3305 (अ), तारीख 07 दिसंबर, 2015; सा.का.नि. 593 (अ), तारीख 28 जून, 2018; और का.आ. 236 (अ), तारीख 16 जनवरी, 2020 द्वारा किए गए।

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 21st May, 2020

S.O. 1561(E).—Whereas the Central Government had, in exercise of its powers under Section 3, Section 6 and Section 25 of Environment (Protection) Act, 1986 (29 of 1986) read with rule 5 of Environment (Protection) Rules, 1986, published draft rules further to amend sub-rule (8) of rule 3 of Environment (Protection) Rules, 1986, in the Gazette of India, Extraordinary, *vide* number G.S.R. 02(E), dated the

2nd January, 2014 mandating certain categories of thermal power plants to use coal with ash content restricted to 34%.

And whereas, the said Notification *vide* number G.S.R. 02(E) dated the 2nd January, 2014, mandated coal based thermal power plants to use raw or blended or beneficiated coal with ash content not exceeding thirty-four percent (34%), on quarterly basis, by the time lines given below:

Sl. No.	Category of Power Plant	Distance of location of Thermal Power Plant from pit-head/coal mine	Time lines
(a)	Stand-alone Thermal Power Plants (any capacity), and Captive Thermal Power Plants (with capacity of 100 MW and above)	Located in urban areas, or ecologically sensitive areas or critically polluted areas, irrespective of distance from pit-head, except pit-head power plants.	With effect from 2nd June, 2014.
(b)		beyond 1000 km	With effect from 2nd June, 2014.
(c)		between 750-1000 km	With effect from 1st January, 2015.
(d)		between 500-749 km	With effect from 5th June, 2016.

And whereas, the Central Government had, in exercise of its powers under sections 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986) read with sub-rule (3) of rule 5 of the Environment (Protection) Rules, in the Gazette of India, Extraordinary, *vide* number S.O. 3305 (E), dated the 7th December, 2015 and G.S.R. 593 (E), dated the 28th June, 2018 published the emission standards and specific water consumption for various category of thermal power plants, based on capacity of power generation and date of installation of power plant and to be achieved in time bound manner.

And whereas, the Ministry of Environment, Forest and Climate Change directed the Central Pollution Control Board vide F.No.Q-15017/40/2007-CPW dated the 7th December, 2017 to issue Directions under Section 5 of Environment (Protection) Act, 1986, to various Thermal Power Plants to install pollution control equipment as per the revised plan submitted by the Ministry of Power dated the 13th October, 2017 by 2022.

And whereas, the Ministry of Power has, *inter alia*, represented that with advancement in pollution control technologies, thermal power plants are better equipped to capture fly-ash generated in combustion process and unwashed coal can be used more efficiently and economically; thermal power plants are designed for coal with wide variety of ash content and are equipped with dry ash evacuation, handling and supply systems for ash utilisation; using washed coal makes power generation costlier; fly ash generated in thermal power plants is being used in several beneficial uses like cement manufacturing, brick making, road laying, back-fill material for reclamation of mine voids and low lying areas; requirement of maintaining average ash content to 34% prompts industries to undertake import of coal, resulting in outflow of foreign exchange etc.

And Whereas, the Ministry of Coal has, *inter alia*, represented that the coal mines are constantly striving to improve raw coal in terms of quality, size and extraneous material over the years which has considerably reduced wear and tear of all related equipment, coal washing process involves multiple handling and avoidable road transportation of huge quantities of coal from coal mines to washeries and then to rail sidings for onward transport to power plants; the washing process only divides the coal into washed coal and washery rejects while the ash content of mined coal remains the same; use of low grade coal washery rejects, in the multiple small user industries, generates more pollution etc.

And Whereas, the Ministry of Coal and Ministry of Power have, therefore, represented that the mandating power plants to use washed coal requires to be revisited by reconsidering the notification dated the 2nd January, 2014 which will help ease power generation for long distance haulage of coal without adverse impact on the environment.

And Whereas, the **NITI Aayog**, in its report after analysing the issue from the perspective of washeries, Coal mining, transportation and consumption of coal at power plants has, *inter alia*, summed up that use of washery rejects in nearby industries generates more pollution; since washery rejects are distributed in number of smaller industries, the pollution control at numerous points is more difficult than controlling the

pollution at power plant end; Ash generated in the washing process pollutes water along with coal particles and cannot be gainfully utilised; Coal washing process involves increased water use, effluent generation; Disposal of washery rejects has negative environmental impact as it has to handle and dispose huge quantity of low grade coal washery rejects, liquid effluent streams, coal storage, handling coal dust, runoff and fugitive dust; Coal washing also adversely impacts topography, water drainage pattern and quality, water bodies, surrounding air quality at large scale; Washing process increases the cost of power generation with no commensurate environmental advantages etc.

And Whereas, NITI Aayog has, therefore, recommended that it may be prudent to determine and enforce the environmental and pollution norms, to be complied with by the power generators, rather than restricting the ash content in coal, based on distance of transportation.

And Whereas, the Ministry of Environment, Forest and Climate Change, after deliberating the representations from Ministry of Power, Ministry of Coal, report of NITI Aayog and various stakeholders and after careful considerations & in larger public interest, arrived at the following:

(i) The extent of ash content in mined coal remains the same. With washeries, the ash content gets divided at two places (washeries and the power plant), whereas if unwashed coal is used in power plant, the ash content is handled at only one place viz. the power plant;

(ii) Thermal power plants are technologically equipped to address pollution control, ash management as they have high efficiency equipment to capture fly ash, dry ash evacuation and handling systems, ash supply systems for ash utilisation and tall stacks for wider dispersal of flue gases;

(iii) The Ministry of Environment, Forest and Climate Change has notified emission norms, mandating respective thermal power plants to adhere to such norms in a time bound manner;

And Whereas, it is expedient to adopt best possible framework towards handling of unwashed coal including management of fly ash and other associated environmental aspects arising out of processing of unwashed coal at different stages.

And Whereas, the Ministry of Coal has represented that in view of the existing unprecedented COVID-19 pandemic and the resultant immediate requirement of utilization of domestic coal by stimulating coal sector demand for power generation in the country, it is desirable to issue the notification at the earliest.

Now, therefore, in exercise of the powers conferred by Section 3, Section 6 and Section 25 of the Environment Protection Act, 1986 (29 of 1986) read with sub-rule (4) of rule 5 of the Environment (Protection) Rules, 1986, the Central Government, after having dispensed with the requirement of notice under clause (a) of sub-rule (3) of rule 5 of the said rules, in public interest, hereby makes the following rules to further amend the Environment (Protection) Rules, 1986, namely :-

1. (1) These rules may be called the Environment (Protection) Amendment Rules, 2020

   (2) They shall come into force on the date of their publication in the Official Gazette.

2. In the Environment (Protection) Rules, 1986, in rule 3, for sub-rule (8), the following sub-rule shall be substituted, namely :-

"(8) Use of coal by Thermal Power Plants, without stipulations as regards ash content or distance, shall be permitted subject to following conditions:

(1) **Setting Up Technology Solution for emission norms:**

(i) Compliance of specified emission norms for Particulate Matter, as per extant notifications and instructions of Central Pollution Control Board, issued from time to time.

(ii) In case of washeries, Middling and rejects to be utilized in FBC (Fluidised Bed Combustion) technology based thermal power plants. Washery to have linkage for middling and rejects in Fluidised Bed Combustion plants.

(2) **Management of Ash Ponds:**

(i) The thermal powers plants shall comply with conditions, as notified in the Fly Ash notification issued from time to time, without being entitled to additional capacity of fly ash pond (for existing power generation capacity) on ground of switching from washed coal to unwashed coal.

(ii) Appropriate Technology solutions shall be applied to optimise water consumption for Ash management;

(iii) The segregation of ash may be done at the Electro-Static Precipitator stage, if required, based on site specific conditions, to ensure maximum utilization of fly ash;

(iv) Subject to 2(i) above, the thermal power plants to dispose flyash in abandoned or working mines (to be facilitated by mine owner) with environmental safeguards.

(3) **Transportation:**

(i) Coal transportation may be undertaken by covered Railway wagon (railway wagons covered by tarpaulin or other means) and/or covered conveyer beyond the mine area. However, till such time enabling Rail transport/conveyer infrastructure is not available, road transportation may be undertaken in trucks, covered by tarpaulin or other means.

(ii) It shall be ensured by the thermal power plant that

a. Rail siding facility or conveyor facility is set up at or near the power plant, for transportation by rail or conveyor; and

b. If transportation by rail or conveyor facility is not available, ensure that the coal is transported out from the Delivery Point of the respective mine in covered trucks (by tarpaulin or other means), or any mechanized closed trucks by road.

(4) This shall also be deemed to be additional conditions of the relevant Environmental Clearances for respective projects for financial year 2020-21 and onwards. The existing Environmental Clearances shall stand modified so as to make the above conditions operative for relevant sectors. The Consent to Operate shall be issued by respective State Pollution Control Boards accordingly."

[F.No.13014/01/2020-IA.I(T)]

GEETA MENON, Jt. Secy.

Note:-The principal rules were published in the Gazette of India *vide* number S.O. 844(E), dated the 19th November,1986 and subsequently amended *vide* numbers S.O. 82(E), dated 16th February, 1987; S.O. 64(E), dated18th January, 1988; G.S.R. 931(E), dated 27th October, 1989; S.O. 23(E), dated 16th January, 1991; G.S.R. 95(E), dated 12th February, 1992; G.S.R.329(E), dated 13th March, 1992; G.S.R. 562(E), dated 27th May, 1992; G.S.R. 884(E), dated 20th November, 1992; G.S.R. 386(E), dated 22nd April, 1993; G.S.R. 422(E), dated 19th May, 1993; G.S.R. 801(E), dated 31st December, 1993; G.S.R. 320(E), dated 16th March, 1994; G.S.R. 560(E), dated 19th September, 1997; G.S.R. 378(E), dated 30th June, 1998;G.S.R. 7(E), dated 22nd December, 1998; G.S.R. 407(E), dated 31st May, 2001; G.S.R. 826(E), dated 16th November, 2009; G.S.R. 513(E), dated 28th June, 2012; G.S.R. 02(E) dated 2nd January, 2014; S.O. 3305 (E), dated 7th December, 2015; G.S.R. 593(E), dated 28th June, 2018 and S.O. 236 (E), dated 16th January, 2020.

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F. No.J-13012/8/2009-IA.II (T)
Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

Indira Paryavaran Bhawan
Aliganj, Jorbagh Road
New Delhi-110 003

Dated 11th November, 2020

Office Memorandum

Sub: Amendment in Environmental Clearance for change in coal source by Thermal Power Plants- reg.

The Environment Impact Assessment (EIA) Notification dated 14th September, 2006 under the Environment (Protection) Act, 1986 mandates the requirement of prior Environmental Clearance to the projects/activities listed in the schedule to the said Notification. The Environmental Clearances are granted for Thermal Power Projects as per the capacities mentioned in the Schedule of the EIA Notification, 2006.

2. The Environmental Clearance (EC) has been granted based on a specific coal source such as a specific coal mine (domestic coal), or Imported coal, or blend of Imported coal and domestic coal. The Environmental Clearance has stipulated a condition that an amendment in EC is to be sought from the Ministry in case of change in fuel source.

3. The Ministry has been receiving several proposals regarding change in coal source, viz. change in domestic coal due to change in fuel linkages/auctions, and switching from imported coal to domestic coal. The linkage period granted through short-term linkage and e-auctions vary from 3 months to 1 year, making Project Proponents to approach the Ministry for granting amendment in EC each time there is change in coal source. In each amendment process, new conditions are being stipulated by making old conditions redundant.

4. The Ministry of Power (MoP) vide Policy Advisory dated 28.4.2020 encouraged all the power generating companies who are using imported coal (part/full) to switch over to domestic coal to the extent possible. The MoP has also set up a mechanism to deal with difficulties faced by the power companies in obtaining required quantity, quality of domestic coal including logistic bottlenecks.

5. The present process of dealing with change in coal source is to apply at PARIVESH, subsequent appraisal by the Expert Appraisal Committee (EAC), processing of EAC recommendations and granting the amendment to the EC. The whole process would approximately take about 2-3 months.

6. The various environmental impacts due to change in coal source viz. increased ash quantity and its management, increased emissions, and impacts of transportation have already been addressed and adequate mitigation measures have been stipulated by the Ministry vide Notifications dated 7.12.2015, 28.6.2018 and 21.5.2020.

7. 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 recognised 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 concerned Regional Office. The quantity of coal transported from 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 far as possible, Coal transportation shall be done by rail/conveyor or other eco-friendly modes. However, road transportation is allowed with tarpaulin 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 & 25.1.2016 and amended time to time or extant regulations on Fly ash Utilisation.

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

f) The details regarding monthly generation, utilisation and disposal of flyash (including bottom ash) shall be submitted to the Ministry and its Regional Office.

This issues with the approval of the Competent Authority.

(Dr. S. Kerketta)
Director, IA Division

To

1. All the Thermal Power Plants.

2. The Chairman/Member Secretaries of all the Expert Appraisal Committees.
3. The Chairman /Member Secretaries of all the SEIAAs/SEACs.
4. The Chairman/Member Secretaries of all SPCBs/UTPCCs.
5. The Deputy Director General of Forest of all ROs of MoEF&CC.
6. All the Officers of I.A. Division.

Copy for information to:

1. PS to Hon'ble Minister for Environment, Forest and Climate Change.
2. PS to Hon'ble MoS (EF&CC).
3. The Joint Secretary, Ministry of Coal.
4. The Joint Secretary, Ministry of Power.
5. Sr. PPS to Secretary (EF&CC).
6. Sr. PPS to AS (RA) / AS (RSP).
7. Sr. PPS to JS (GM)/ JS (SKB)/JS (AKN).
8. Website of MoEF&CC/ Guard file.

NTPC Limited
NETRA
Analytical Lab
Plot no.3E Ecotech-II, Udyog Vihar ,Greater Noida, UP
CHEMICAL ANALYSIS OF DEPOSIT SAMPLE

1. Nature of sample : Coal-Ash Sample
2. Test Report No : Netra/9304/AC/2019/**11446 - 48**
3. Test Report Date : 06/11/19
4. IOM/Letter Ref.No : CC:ESE:9518:2019:GEN:7D dt.11-9-2019
5. Name of the client : Dr.P.R.Rao, AGM & GH(Env.Engg.)
6. Sampling Station/ location : Mandakini –B coal block
7. Receipt date : 24.09.19
8. Nature of test : Heavy Metals
9. No of Pages : 1
10. Test Method : ASTM D3683-04

S.No.	Sample Name	Results on air-dried coal ppm(ug/g)						
		Cadmium as Cd Ug/g	Chromium as Cr Ug/g	Lead as Pb Ug/g	Zinc as Zn Ug/g	Copper as Cu Ug/g	Nickel As Ni Ug/g	Manganese as Mn Ug/g
01	CNTM ASH 102	1.8	30.2	24.3	93.3	33.7	48.3	114
02	CNTM ASH 104	1.5	28.7	26.9	49.1	38.1	49.1	61.1
03	CNTM ASH 106	1.7	37.0	23.5	96	38.2	51.6	132.2

- Results calculated on coal-ash received.

Note:

A Test results are related only to the samples received.
B Reports shall not be reproduced, except in full, without the written approval of R&D Centre, NTPC.
C. Corrections / erasing invalidates the test report.
D Any anomalies / discrepancies in the test report should be brought to our notice within 30 days from the date of issue of test report and thereafter the samples will be disposed off.

TARUN ROY
Dy. Manager(Netra)

H.K.SIKRI
AGM(Netra)

Test Results carried out by NTPC Mandakini-B Coal Mining Project Site

PART-1

SEAM OVERALL AND SPECIAL TEST RESULTS IN MANDAKINI-B (SOUTH) BLOCK , TALCHER COALFIELD, ODISHA

BH. NO.	DEPTH		SEAM THICKNESS	SEAM NAME	TYPE OF SAMPLES	PROXIMATE ANALYSIS AT 60% RH & 40°C				GCV in kcal/kg	ULTIMATE ANALYSIS (on dmmf basis)					VM (dmmf)	PHOSPHORUS	CO_2 (Carbonate)	HGI
	FROM	TO				M	ASH	VM	FC		C	H	N	S	O (diff)				
	(m)	(m)	(m)			%	%	%	%		%	%	%	%	%	%	%	%	
CTBK037	26.45	31.00	4.55	III MID (TOP)	BCS	6.3	35.9	29.5	28.3	3935	42.00	2.60	0.90	0.40			0.11	0.27	
CTBK037	26.45	31.00	4.55	III MID (TOP)	DMMF					7285	77.70	4.80	1.70	0.60	15.20				
CTBK037	26.45	31.00	4.55	III MID (TOP)	I100	6.1	39.7	27.6	26.6	3620									69
CTBK037	33.25	36.13	2.88	III MID (BOT)	BCS	6.7	33.5	26.8	33.0	4195	44.20	2.60	1.00	0.40			0.10	0.36	
CTBK037	33.25	36.13	2.88	III MID (BOT)	DMMF					7465	78.60	4.60	1.80	0.60	14.40				
CTBK037	33.25	36.13	2.88	III MID (BOT)	I100	6.0	39.1	24.5	30.4	3790									73
CTBK037	80.50	84.80	4.30	IA TOP	BCS	6.0	32.5	26.8	34.7	4355	46.40	2.60	0.90	0.30			0.09	0.60	
CTBK037	80.50	84.80	4.30	IA TOP	DMMF					7530	80.20	4.50	1.60	0.40	13.30				
CTBK037	80.50	84.80	4.30	IA TOP	I100	5.4	41.3	27.5	25.8	3645									77
CTBK037	114.43	115.54	1.11	ID	BCS	7.0	18.1	30.1	44.8	5695	58.90	3.80	1.20	0.50			0.03	0.36	
CTBK037	114.43	115.54	1.11	ID	DMMF					7735	80.90	5.20	1.60	0.50	11.80				
CTBK037	114.43	115.54	1.11	ID	I100	7.0	18.1	30.1	44.8	5695									
CTBK037	126.74	130.82	4.08	IE TOP	BCS	6.3	29.2	24.4	40.1	4775	50.00	2.90	1.10	0.40			0.06	0.37	
CTBK037	126.74	130.82	4.08	IE TOP	DMMF					7785	81.50	4.70	1.80	0.60	11.40				
CTBK037	135.60	137.30	1.70	IE BOT	BCS	6.2	18.5	28.0	47.3	5855	60.20	3.60	1.30	0.70			0.04	0.35	
CTBK037	135.60	137.30	1.70	IE BOT	DMMF					8000	82.20	4.90	1.80	0.70	10.40				
CTBK037	135.60	137.30	1.70	IE BOT	I100	6.2	18.5	28.0	47.3	5855									
CTBK037	162.03	163.60	1.57	IF	BCS	6.6	18.3	28.4	46.7	5925	60.80	3.80	1.60	0.50			0.03	0.31	
CTBK037	162.03	163.60	1.57	IF	DMMF					8110	83.20	5.20	2.20	0.50	8.90				
CTBK037	162.03	163.60	1.57	IF	I100	5.8	28.3	25.4	40.5	5020									72
CTBK037	174.18	175.28	1.10	IG	BCS	5.9	25.2	26.8	42.1										
CTBK037	177.82	179.25	1.43	IH	BCS	5.7	23.2	30.7	40.4										
CTBK076	40.12	41.70	1.58	IA TOP	BCS	6.4	34.7	30.4	28.5										
CTBK076	40.12	41.70	1.58	IA TOP	I100	5.8	40.1	27.3	26.8										
CTBK076	67.11	68.94	1.83	IB	BCS	5.8	39.5	21.8	32.9										
CTBK076	67.11	68.94	1.83	IB	I100	5.8	39.5	21.8	32.9										
CTBK076	100.35	101.58	1.23	IE	BCS	5.1	41.8	23.1	30.0										
CTBK076	100.35	101.58	1.23	IE	I100	4.3	50.8	20.1	24.8										
CTBK076	133.98	135.14	1.16	IG	BCS	5.7	27.6	30.2	36.5										

PART-2

SPECIAL TEST RESULTS IN MANDAKINI-B (SOUTH) BLOCK , TALCHER COALFIELD, ODISHA

BH. NO.	DEPTH		SEAM THICKNESS	SEAM NAME	ASH FUSION RANGE (at MRA)				ASH ANALYSIS												TOTAL SULPHUR	ORGANIC SULPHUR	INORGANIC SULPHUR
	FROM	TO			ST	IDT	HT	FT	SiO_2	Al_2O_3	Fe_2O_3	TiO_2	MgO	P_2O_5	SO_3	Total Alakali	CaO	MnO	UNDETERMINED	Total			
	(m)	(m)	(m)		°C	°C	°C	°C	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
CTBK037	26.45	31.00	4.55	III MID (TOP)																	0.37	0.27	0.10
CTBK037	26.45	31.00	4.55	III MID (TOP)																			
CTBK037	26.45	31.00	4.55	III MID (TOP)		1258	>1400	>1400	52.600	29.700	9.200	1.100	2.100	0.600	TRACES		3.200			100.000			
CTBK037	33.25	36.13	2.88	III MID (BOT)																	0.38	0.28	0.10
CTBK037	33.25	36.13	2.88	III MID (BOT)																			
CTBK037	33.25	36.13	2.88	III MID (BOT)		1381	>1400	>1400	56.200	32.000	4.000	1.100	1.200	0.600	TRACES		3.000			100.000			
CTBK037	80.50	84.80	4.30	IA TOP																	0.30	0.14	0.16
CTBK037	80.50	84.80	4.30	IA TOP																			
CTBK037	80.50	84.80	4.30	IA TOP		>1400	>1400	>1400	55.600	33.600	3.200	0.800	2.000	0.600	TRACES		2.800			100.000			
CTBK037	114.43	115.54	1.11	ID																	0.51	0.21	0.30
CTBK037	114.43	115.54	1.11	ID																			
CTBK037	114.43	115.54	1.11	ID																			
CTBK037	126.74	130.82	4.08	IE TOP																	0.43	0.10	0.34
CTBK037	126.74	130.82	4.08	IE TOP																			
CTBK037	135.60	137.30	1.70	IE BOT																	0.70	0.34	0.36
CTBK037	135.60	137.30	1.70	IE BOT																			
CTBK037	135.60	137.30	1.70	IE BOT																			
CTBK037	162.03	163.60	1.57	IF																	0.47	0.33	0.14
CTBK037	162.03	163.60	1.57	IF																			
CTBK037	162.03	163.60	1.57	IF		>1400	>1400	>1400	61.500	26.400	6.400	0.500	1.300	0.300	TRACES		1.800			100.000			
CTBK037	174.18	175.28	1.10	IG																	0.41	0.32	0.09
CTBK037	177.82	179.25	1.43	IH																	0.46	0.33	0.13
CTBK076	40.12	41.70	1.58	IA TOP																			
CTBK076	40.12	41.70	1.58	IA TOP																			
CTBK076	67.11	68.94	1.83	IB																			
CTBK076	67.11	68.94	1.83	IB																			
CTBK076	100.35	101.58	1.23	IE																			
CTBK076	100.35	101.58	1.23	IE																			
CTBK076	133.98	135.14	1.16	IG																			

F.No.J-13012/112/2010-IA.I(T)
Government of India
Ministry of Environment, Forest and Climate Change

3rd Floor, Vayu Block,
Indira Paryavaran Bhawan, Jor Bagh Road,
Aliganj, New Delhi-110003

Dated: 21.10.2020

To

Dr. Vijay Prakash, General Manager
M/s NTPC Ltd., Environmental Engineering Department
Engineering Office Complex, Plot No. A-8A, Sector – 24
Noida – 201 301.

Tel. No. 0120-2410331; E-mail: environment.ntpc@gmail.com

Sub: **2x800 MW (Stage-IV, Telangana STPP, Phase-I) at Village & Mandal Ramagundam, District Karimnagar, Telangana by M/s NTPC Ltd.-reg. amendment in EC.**

Sir,

The undersigned is directed to refer your online application Nos. IA/TG/THE/113457/2019 dated 05.08.2019 for amendment in Environmental Clearance (EC) condition regarding monitoring of Radio activity.

2. It has been noted that the Environmental Clearance to 2x800 MW Ramagundam Thermal Power Project was accorded vide Ministry's letter dated 20.1.2016. The specific condition No.xv of the said EC is as below:

"Condition No.xv: A long term study of radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute and results thereof analysed every two year and reported along with monitoring reports. Thereafter mechanism for an in-built continuous monitoring for radio-activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place."

3. It has been noted that you have requested for amendment in the above mentioned conditions. It has been informed that the continuous online instruments are not available for monitoring Radio-activity and heavy metal analysis in the Coal and heavy metals.

4. The above proposal for amendment in EC have been considered by the EAC (Thermal Power) in its meeting held on 23.8.2019. In acceptance of the recommendations of the EAC (Thermal Power), ***the Ministry hereby grants the amendment in EC dated 20.1.2016 with the following additional conditions***:

i. The General condition No.xv of EC dated 20.1.2016 is modified as:

"Radio activity and heavy metals' contents in coal and fly ash (including bottom ash) shall be carried out through a reputed institute once in a year and the analysis reports to be submitted to the Ministry and its Regional Office."

ii. The total Radio-activity in the working areas such as coal stock yard, flyash pond shall be calculated based on the analysis results per unit weight of coal/ash. The total radio-activity in the atmosphere is to be compared with the maximum permissible dosage levels of each person working in those areas. This is to be conducted once in a year.

iii. While commissioning the proposed unit, the compliance of revised emission norms issued vide Notification dated 07.12.2015 and as amended time to time shall be achieved along with specific water consumption as per the notification dated 28.06.2018. The FGD System and NOX control measures such as SCR/SCNR/De-NOX burners shall be installed to achieve the revised emission norms.

iv. As per the Revised Tariff Policy notified by Ministry of Power vide dated 28.01.2016, project proponent shall explore the use of treated sewage water from the Sewage Treatment Plant of Municipality/ local bodies/ similar organization located within 50 km radius of the proposed power project to minimize the water drawl from surface water bodies. The details of Sewage Treatment Plants located within 50 km radius along with the capacities shall be submitted.

5. All other conditions stipulated in the EC letter vide No.J-13012/112/2010-IA.I(T) dated 20.01.2016 and amendment dated 06.03.2017 shall remain the same, as applicable.

This issues with the approval of the Competent Authority.

Yours faithfully,

(Dr. S. Kerketta)
Director (IA.I)

Copy to:

1. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
2. The Deputy Director General of Forests (C), Ministry of Environment, Forests and Climate Change, Regional Office (SEZ), Ist and IInd Floor, Handloom Export Promotion Council, 34, Cathedral Garden Road, Nungambakkam, Chennai-600034.
3. The Chairman, Telangana State Pollution Control Board, Paryavaran Bhawan, A-3, Industrial Estate, Sanathnagar, Hyderabad-500018.
4. Guard file/Monitoring file.
5. Website of MoEF&CC.

Director (IA.I)

Telangana Vaidya Vidhana Parishad
GOVT AREA HOSPITAL
GODAVARIKHANI
Peddapalli District

TO WHOM SO EVER IT MAY CONCERN

THIS IS TO CERTIFY THAT THERE IS NO OUTBREAK OF EPIDEMIC AND ENDEMIC IN THIS AREA FOR LAST 5 YEARS. FURTHER IT IS CLARIFIED THAT WE HAVE NOT REGISTERED OR TREATED ANY SUCH CASES EXCEPT GENERAL DISEASES FROM THIS MEDICAL FACILITY SO FAR.

OUR GOVERNMENT AREA HOSPITAL, GODAVARIKHANI IS CATERING OVER 6 LAKH POPULATION AND SITUATED NEAR TO LARGE INDUSTRIES LIKE NTPC LTD., RAMAGUNDAM, SINGARENI COLLEARIES COMPANY LTD.GODAVARIKHANI, KESORAM CEMENT INDUSTRY ETC. HENCE IT IS CERTIFIED.

2/11/20

Medical Superintendent
Govt. Area Hospital (TVVP)
GODAVARIKHANI, (RDM)
Dist. Peddapalli-505209.