

REPORT OF OVERSIGHT COMMITTEE IN COMPLIANCE OF ORDER OF HON'BLE NATIONAL GREEN TRIBUNAL PASSED IN O.A. NO. 164/2018 (EARLIER O. A. NO. 276/2013) IN RE: ASHWANI KUMAR DUBEY VS. UNION OF INDIA & ORS.

I. INTRODUCTION

The Hon'ble National Green Tribunal in the matter of OA No. 164/2018 (earlier O.A. No. 276/2013 in re: *Ashwani Kumar Dubey Vs. Union of India & Ors.* has dealt with the issue of pollution being caused by Thermal Power Plants. The grievance of the applicant in the case was against pollution caused in District Singrauli in the State of Madhya Pradesh and District Sonbhadra in the State of Uttar Pradesh. The issue for consideration is that there are thermal power plants in the above districts and on account of their activities, acute pollution is caused resulting in continued destruction of environment. The industries are discharging mercury beyond prescribed norms affecting the nervous system causing disorders and other ailments to inhabitants. The mentioned areas are critically polluted as per the '**Comprehensive Environmental Polluted Index Report**'. According to the studies, fly ash stored by the industries creates high pollution. High pollution is also caused in the process of transportation of coal by the trucks from the coal companies.

Various issues as pointed out in the orders of Hon'ble National Green Tribunal orders dated 06.04.2018, 28.05.2018, 12.07.2018, 28.08.2018, 03.01.2019, 21.05.2019 and 05.11.2019 passed in OA No. 164/2018 in re: *Ashwani Kumar Dubey Vs. Union of India & Ors.* were discussed and status of the action taken by the concerned authorities in compliance of the orders reviewed.

II. ORDERS OF THE HON'BLE NGT IN O.A. NO. 164/2018 (EARLIER O. A. NO. 276/2013)

1. **Vide order dated 24.05.2016**, Hon'ble NGT sought a factual and action taken report from the Joint Committee comprising of MOEF & CC, CPCB, UPPCB and MPPCB with reference to the allegation that Thermal Power Stations operating in the Districts of Singrauli and Sonbhadra in the States of Madhya Pradesh and Uttar Pradesh being Northern Coalfields Limited Singrauli, Northern Coalfields Limited Kakri Project, Post-Kakri, District-Sonbhadra, Uttar Pradesh, Northern Coalfields Limited, Bina Project Post-

Bina District Sonbhadra, Northern Coalfields Limited Krishna Shila Project, Northern Coalfields Limited Khadia Project, Post Khadia District Sonbhadra, Northern Coalfields Limited, Dudhichuwa Project, Post Khadia District-Sonbhadra, UP were causing damage to the environment.

The violation of environmental norms resulted in damage to water bodies, including Rihand Reservoir. Surface and underground water was polluted affecting rivers like Son, Renu, Bijul, Kanhar, Gopad, Pankagan, Kathauta Kachan, etc. and streams/nalas like Ballia Nala, Chatka Nala, Kahuwa Nala, Tippa Jharia, Dongia Nala, etc. Water had been contaminated by toxic effluents discharged, chemicals and fly ash and was not fit for consumption.

2. **Vide order dated 28.05.2018**, Hon'ble NGT directed CPCB to serve Notice in O.A. No. 164 of 2018 which was registered upon the report filed by the Core Committee regarding monitoring of potential hazards of industrial development in Singrauli area in compliance to the directions as per order dated 06.12.2017 passed in O.A. No. 276 of 2013.

3. **Vide order dated 12.07.2018**, the report filed was registered as O.A. No. 164/2018 (earlier O.A. No. 276/2013). The Hon'ble NGT directed various polluting industries vide order dated 06.12.2017, to comply with the recommendations of the report of the Core Committee. Moreover, two Committees were directed to be constituted for the purpose. It was also directed that supply of potable water for drinking purpose should be ensured and online monitoring system be introduced.

Hon'ble NGT directed the Stone Crushers to shut down in absence of the valid consent.

The operative part of the order dated 06.12.2017 was as follows:

"1. Hon'ble NGT accepts the interim report dated 07-07-2014 and final report dated 20-08-2015 filed by the Core Committee before the Tribunal as there are no objections raised by any of the stakeholders before us to the acceptance to the said reports. Consequently, we accept the reports.

2. Keeping in view of the facts and circumstances of the case, the Core Committee shall conduct a fresh inspection within four weeks from today and all the industries located in the area in question as well as localities around those industries. It will

examine whether the recommendations made by the Core Committee already in its report dated 14-02-2014, 07-07-2014 and 20-08-2015 have been implemented or not and how they need to be. If any stakeholders to be found deficient in compliance in taking action, what action should be taken against that industries or authorities or State Government for that default.

3. We hereby constitute two separate committees for appropriate implementation of the recommendations made by the Core Committee in their reports and these committees in their respective States shall be responsible for implementation of those directions without any further delay. The Committee shall consist of the followings in each States:-

- i) Secretary Environment of the respective States*
- ii) Member Secretary of the Pollution Control Board of the concerned States*
- iii) District Magistrate of the concerned district who shall be conveners of the meeting.*
- iv) Zila Panchyat Adyayksh of the District in which the village falls inspection of which is being conducted by the Team.*
- v) Nominee of the Mayor in the case of urban areas.*
- vi) Senior Officer from the Coal Mine Department of the States*

4. This Supervisory Committee shall perform dual functions. First, is with regard to supervision of the implementation and recommendations issued by the Core Committee. Secondly, would also suggest to the Core Committee such further steps that have to be taken in the interest of environment, ecology and public health.

5. The Supervisory Committee shall submit a monthly report of the Core Committee and the Core Committee in turn shall submit the report to the Tribunal every three months.

6. We direct that the Member Secretary of the respective State Pollution Control Boards, the District Magistrate of the concerned district and the Director/Partner/Executive Officer of the industry-thermal plant shall ensure that every village in the region of Singrauli region including coal mining area, every village is provided with an RO plant and if the population of the village so demands at least two or even more plants shall be provided in that village to ensure that residents of the village get potable water for drinking purposes at any cost. All the industries shall be liable to bear the cost in discharge of their corporate social responsibility as well as on the fact that the existing pollution is attributable to them in one way or the other. The Principle of polluter pays has to be invoked but we make it clear that at this stage we are not returning the findings that these industries are causing pollution, as of now. We will leave it to the inspection team to return their findings in that behalf with complete analysis report.

7. Since this region falls both in the State of Uttar Pradesh and in the State of Madhya Pradesh, both the State Pollution Control Boards along with the Department of Environment of the State Government shall fix on-line air monitoring system. They

shall also ensure that water quality monitoring system is also provided wherever the water body or the river is there near to village/industrial complexes etc.

8. We further order and direct that Core Committee upon recommendations of the Supervisory Committee may consider and providing of further time for compliance or directions provided that it is shown that effective steps have already been taken by the industries and they are in the process of compliance of the directions may be like installation of ETP or any other anti- pollution devises that has been recommended or directed.

9. For installation of RO plant, land would be provided by the Government/Gram Panchayat and entire cost for installation or maintenance would be borne by the industries.

10. The Supervisory Committee would be at liberty to take input/advise or opinion of any authority or body including Director General of Mines Safety.

11. All the stone crushers which are operating in these regions without obtaining consent of the Board and permission from the competent authority shall be shut down without further notice. The stone crushers which are permitted to operate would also be responsible for installation of RO system at the place where there are number of stone crushers running and they would be guided by the same directions as we have aforerecorded in the case of industries.”

4. Vide order dated 28.08.2018, Hon’ble NGT constituted a Core Committee and four Sub-Committees. The Core Committee (headed by Justice Rajesh Kumar, a former Judge of the Allahabad High Court) to prepare a time bound action plan to deal with the problem and to monitor the hazards of industrial development in Singrauli area comprising of the representatives from different departments viz:

- a.** Central Pollution Control Board, Madhya Pradesh Pollution Control Board, Uttar Pradesh Pollution Control Board
- b.** Director of Indian Agricultural Research Institute
- c.** Director of Indian Council of Forestry Research and Education
- d.** Director of National Institute of Hydrology
- e.** Director of Indian Institute of Toxicology Research
- f.** Dr. I. M Mishra, Chemical Engineering, Department, IIT Roorkee
- g.** Dr. Vinod Tare, Professor Environmental Engineering, IIT Kanpur
- h.** Dr. T. Chakrabarti, Visvesvaraya National Institute of Technology, Nagpur
- i.** Porf. Kanchan Chopra, Institute of Economic Growth

- j. Nominee of Director, All India Institute of Medical Sciences
- k. Nominee of Director, National Institute of Occupational Health, Ahmedabad.
- l. Joint Director, EIA Division, Ministry of Environment and Forests.

a) A Sub-committee for assessing the potential impact of pollution on water resources:

- a. Representative of the Central Ground Water Authority- having experience in Water Quality
- b. Representative of the Ministry of Water Resources- having experience in Water Quality
- c. Representative of State Irrigation Department- having experience in Water Quality
- d. Representative of National Institute of Hydrology from Water Quality Laboratory

b) A Sub-Committee for assessing impact on land resources:

- a. Representative of Indian Institute of Toxicology Research, Lucknow.
- b. Representative of Central Pollution Control Board, Madhya Pradesh State Pollution Control Board and Uttar Pradesh State Pollution Control Board not below the rank of Regional Officer.
- c. An Expert of Soil Science from Indian Institute of Soil Science, Bhopal.
- d. An Expert on Forest Soil from Indian Council of Forestry Research and Education, Dehradun.

c) A Sub-Committee to assess impact on air quality:

- a) Representative of the Central Pollution Control Board
- b) Representative of the Madhya Pradesh Pollution Control Board
- c) Representative of the Uttar Pradesh Pollution Control Board
- d) An expert on Air Quality from National Environmental Engineering Research Institute, Nagpur.
- e) An expert on Air Quality from IIT, Kanpur.

d) A Sub-Committee to assess impact on health:

- a) Committee to have at least one Doctor each from Uttar Pradesh and Madhya Pradesh
- b) One Social Scientist from each of the state and involve Panchayati Raj Institutions for collection of primary data.

The Committee (headed by Justice Rajesh Kumar) submitted its report on 06.12.2017 to the Hon'ble NGT, but Hon'ble NGT directed the Committee for a fresh inspection. Two Supervisory Committees were constituted for implementation of recommendations of the Core Committee Report. The two Supervisory Committees included the following members:

- i) Secretary Environment of the respective States
- ii) Member Secretary of the Pollution Control Board of the concerned States
- iii) District Magistrate of the concerned district who shall be conveners of the meeting.
- iv) Zila Panchyat Adyayksh of the District in which the village falls inspection of which is being conducted by the Team.
- v) Nominee of the Mayor in the case of urban areas
- vi) Senior Officer from the Coal Mine Department of the States.

In the same order, the Supervisory Committees were directed to submit monthly report to the Core Committee and the Core Committee was required to submit the report to the Tribunal quarterly. Directions passed by Hon'ble Tribunal to the committee were as follows:

- To ensure that every village is provided with a RO plant and if necessary two or more plants so that every resident can get potable water for drinking (the cost to be borne by the industries).
- To fix on-line air monitoring systems as well as water quality monitoring systems. (Land was to be provided by the Government or the Gram Panchayat and the cost of installation or maintenance was to be borne by the industries)

- The stone crushers working without permission were directed to be closed down. They were permitted to operate with RO system and install the same wherever required.

Accordingly, a report dated Feb., 2018 was filed before the Hon'ble NGT on 03.04.2018 by the Core Committee headed by former Director, NEERI, Dr. Tapan Chakraborty and also comprising representatives of other expert bodies. The recommendations included installation of Ash Water Recycling System (AWRs) and Electrostatic Precipitators (ESPs) in the thermal power plants, renovation of ash dykes, better utilization of fly ash, safeguards in transportation and maintenance of pipelines. Further recommendations in reference with individual industries related to reduction of emission levels, regulating seepage of leachates from red mud dumps in the groundwater, proper operation of ETP, utilizing fly ash for back-filling the abandoned mines and pollution control measures to be taken by the stone crushers in the area.

It was also suggested that carrying capacity of region be assessed before any expansion of existing industries and also to have proper monitoring systems for air quality monitoring at appropriate locations. The District Administrations were advised to take measures to neutralize the adverse effect of coal transportation, to take steps for restoration of the Rihand reservoir, to take care of the demand for potable water and also to take steps to deal with the health issues of the inhabitants.

5. **Vide order dated 28.08.2018**, as per the above directions, the Hon'ble NGT constituted an Oversight Committee comprising the following:

- a) Justice Rajesh Kumar, Allahabad High Court and former Chairman of Debt Recovery Appellate Tribunal - Chairman
- b) Representative of Central Pollution Control Board- Member.
- c) A representative each from the Madhya Pradesh Pollution Control Board and Uttar Pradesh Pollution Control Board – Members.
- d) District Magistrates of Districts Sonbhadra and Singrauli - Members.

The Committee was directed to take the following steps:

- Take stock of all actions taken so far
- Prepare time bound action plan to deal with the problem and ensure its implementation.

6. **Vide order dated 03.01.2019**, report dated 14.12.2018 was received from the Chairman of the Oversight Committee. The Committee gave the status of compliance of the recommendations of the Core Committee. It observed that-

- AWRs and ESPs were reported to be functional.
- Online Continuous Emission Monitoring Systems (OCEMS) were connected to the CPCB/SPCB servers.
- Three Continuous Ambient Air Quality Monitoring System (CAAQMS) were to be installed.
- Ash ponds were overflowing in the Rihand reservoir which was illegal.
- TPPs were advised to explore use of fly ash in road constructions.
- TPPs to supply fly ash free of cost or as per prescribed norms.
- Steps be taken to explore transportation by railway and until then precaution be taken in the transportation by road.
- Precautions were required in disposal of the red mud. Steps were required to be taken for achieving ZLD by M/s. Hindalco Industries Ltd. M/s. Aditya Birla Chemicals to maintain hazardous waste in safe manner.
- M/s. Northern Coalfields Limited to consider the issue of Gorbi mine for filling of fly ash. The conclusion of the Committee is as follows which was accepted by Hon'ble NGT:

“Conclusion: The Committee has deliberated all the issues with Private stake holders (Industries), Public Sector Units (TPPs, NCL), NGOs and local District Administrations. The status of outcome of meetings and field visits are tabulated above. Time line has been defined for compliance of each direction issued by Hon'ble NGT. The follow-up is needed by the Oversight Committee with stake holders through meetings and field visits for timely implementation of various directions.”

The Oversight Committee was directed to continue to oversee the execution of directions of Hon'ble NGT. The Committee had suggested that there are other thermal power plants and stone crushers in other districts of the State of Uttar Pradesh where similar problems exist and where due attention is not being paid, including Bara Thermal Power, Allahabad; Meja Thermal Plant, Allahabad; Dadri Thermal Power Plant, Dadri District, Allahabad and stone crushers at Meja, District, Allahabad. Hon'ble NGT directed that the District Magistrates of the concerned districts will be the co-ordinators. The SPCB and CPCB have statutory powers to take remedial steps to check air and water pollution. Moreover, the units which had been found to be polluting were to take steps within the prescribed timelines and to ensure adherence to such timelines, the said units must furnish Performance Guarantees to the extent assessed by the Committee. The Performance Guarantee is furnished to the satisfaction of the CPCB.

7. **Vide order dated 21.05.2019**, the applicant referred to the observations of the Oversight Committee. The applicant while seeking permission to continue coal transportation made no mention about any mitigation measures and did not indicate the extent of coal to be transported.

8. **Vide order dated 19.07.2019**, Grasim Industries Limited (earlier Aditya Birla Chemical Industries Limited) filed **I.A. No. 155/2019** for modification of the order dated 28.08.2018, *inter alia* directing to shift the hazardous waste to the TSDF. According to the applicant it generated hazardous waste in the course of its activities of manufacturing Caustic Soda which was stored in its premises since 2010. The waste had Mercury bearing brine sludge which was to be disposed of as per Rule 16 of the Hazardous Waste Management Rules, 2016. However, the waste continued to be stored in the premises.

Hon'ble NGT had constituted a Core Committee and Sub-Committees on 24.08.2014 to assess the potential impact of pollution and further action. The Core Committee gave its report on 03.04.2018 which was considered and accepted by the order dated 28.08.2018. In respect of the applicant, it was *inter-alia* observed:

“(iii) M/s Aditya Birla Chemicals, Renukoot

a) *Industry shall ensure proper operation of effluent treatment plant so as to ensure the compliance of the effluent discharge standard. The industry shall also ensure that no untreated/partially treated effluent finds its way in to the Nallah leading to the Rihand Reservoir. The channel leading to Rihand Reservoir has to be intercepted, diverted and treated within the industry. The nallah presently passing through the factory should be isolated so that the industry cannot discharge any treated/partially/treated/untreated effluent which is being done now.*

b) ***There is also an urgent need for the preparation of an action plan by the industry to shift the mercury bearing brine sludge and the muck contaminated with chlorinated chemicals from the factory premises to the TSDF in consultation with the UP State Pollution Control Board. It may be stated here that storage of hazardous mercury bearing brine sludge and the muck contaminated with chlorinated chemicals inside the premises is not permitted by the prevailing Hazardous Waste Management Rules, 2016 and, therefore, to be shifted to a suitable TSDF immediately.***

The Committee in its meeting dated 07.06.2019 considered the compliance of the said direction in respect of the applicant unit as follows:

“Shifting of Mercury bearing brine sludge:

M/s Grasim Industries Ltd. is manufacturing Caustic Soda. Admittedly, in the manufacturing of Caustic Soda, Mercury was one of the items which were obtained as sludge in the process of the manufacturing. On the objection being raised, it is the case of the Company that they have completely changed the process of manufacturing of Caustic Soda, in which no Mercury is coming out as a bye product in the form of sludge since 2012. However, admittedly a huge stock of the mercury bearing brine sludge/waste which was obtained as a bye product during the course of manufacturing prior to 2012, has been stored in the premises of the Company. Mercury is hazardous goods. The Hon’ble NGT in its order dated 28.08.2018 directed the industry to shift the mercury from the factory premises to TSDF immediately. The direction was as follows:

“There is also an urgent need for the preparation of an action plan by the industry to shift the mercury bearing brine sludge and the muck contaminated with chlorinated chemicals from the factory premises to the TSDF in consultation with the UP State Pollution Control Board. It may be stated that storage of hazardous mercury bearing brine sludge and the muck permitted by the prevailing Hazardous Waste Management Rules, 2016 and, therefore, to be shifted to a suitable TSDF immediately”.

Admittedly, the aforesaid direction has not been complied with. In some of the meetings, the Company requested time to take steps but subsequently its representative stated that they have stored the mercury sludge properly in a place. He further stated that it would be difficult to shift the mercury from the premises to the TSDF. He also stated that TSDF will also store mercury sludge in the same manner in which they have stored. Today, the representative of the Company stated that they have moved an Application before the Hon’ble NGT for the modification of the order dated 28.08.2018 and the said application is on the board for hearing on 19.07.2019. He requested that the matter may be taken up after 19th July, 2019.

It may be stated that in the meeting dated 23.11.2018 held by Oversight Committee the Company expressed their difficulty in shifting the mercury waste/ sludge from the premises to TSDF. The Committee categorically stated that they have no power to modify the order and the Company can approach the NGT for the modification of the order. It may be mentioned here that in the earlier meetings the R.O. Sonbhadra was directed to get the sample of the Dongia nallah and also find out the source of the water.

*The sample of the Dongia nallah was analysed by the Central Pollution Control Board in their lab in which mercury was found. The mercury level was .0452 mg per litre while the permissible limit is .01 mg per litre as per the E/Rules 1986. In the **survey report of Dongianullah** prepared by Shri Rajesh Singh, Scientific Assistant, Senior Engineer, Dr.S.C. Shukla Assistant Scientific Officer and submitted by Shri Radhey Shyam, R.O. Sonbhadra, it was reported that **the waste water discharge was found to be taking place from M/s Grasim Industries Ltd.***

The Committee was of the view that most probably the discharge of mercury in the Dongia- nullah may be from Grasim Industries wherein the mercury sludge is stored. The Committee observed that considering the facts and circumstances the Hon'ble NGT had categorically directed the industry to shift the mercury waste brine sludge from the premises to TSDF, Kanpur. The order of the NGT remained non-complied. The company was not able to show that NGT had modified its order and in such circumstances, the Committee concluded that the Company had clearly violated the order of the Hon'ble NGT. Thus, it proposed to levy penalty/ compensation of rupees one crore which shall be subject to the approval by the Hon'ble NGT

9. **Vide order dated 17.10.2019**, I.A. No. 558/2019 was filed for taking up I.A. No. 384/2019 filed by M/s Hindalco Industries Limited, Renukoot on 30.04.2018 to the effect that the emission from boilers be reduced to the level of 50 mg/Nm³ from the existing norms of 150 mg/Nm³ by December 31, 2019, retrofitting of existing ESPs and also meet emission limit of SO₂ & NO_x notified for industrial boilers. The report prepared by an Expert Committee regarding the recommendations and objections raised by the applicant was duly accepted and considered by the Tribunal vide order dated 28.08.2018.

10. **Vide Order dated 05.11.2019**, Second report of the Committee dated 28.06.2019 was considered on 19.07.2019. The report recommended ban on manufacturing of red bricks by use of clay/soil and by burning of coal so that more fly ash in brick manufacturing could be utilized. This aspect was directed to be looked into by the MoEF&CC and the CPCB. The Committee was to give further report setting out recommendations cumulatively at one place. The Hon'ble NGT directed compliance of observations of the CPCB with reference to operation of STP, establishment of Piezometers and remote calibration as well as other deficiencies. CPCB was also directed to assess compensation for the damage to the environment.

11. The MPPCB and UPPCB filed reports dated 21.08.2019 and 23.08.2019. In *O.A. No. 453/2019*, a direction was sought for implementation of the reports on the issue of environmental compensation regarding **11 units in the State of Madhya Pradesh** and **10**

units in the State of Uttar Pradesh. The Hon'ble NGT also directed the SPCB to proceed in accordance with law to recover the compensation assessed.

12. The report was filed on 29.10.2019 by Justice Rajesh Kumar dealing with the issue of management of fly ash by thermal power stations, the damage caused to Rihand reservoir which is a source of water for operation of thermal power plants, other industries and also for drinking purposes by the inhabitants. As per the observation, the capacity of the reservoir was reduced due to draining of effluents and fly ash which required desilting. Fly ash dykes of Essar Power were breached on 07.08.2019 and of NTPC on 06.10.2019. Slurry was flowing on the ground causing damage to the crops. Slurry also travelled upto Rihand reservoir. On an urgent basis, the Committee prepared its agenda on the subject as follows:

"Generation and storage of Fly-ash in Thermal Power Plants is becoming a great cause of concern affecting the environment. Due to the regular storage of Fly-ash in Flyash Dykes since long, affecting air pollution, has led the Ministry of Environment, Forest and Climate Change, Government of India to declare the Sonbhadra and Singrauli area as a most critically polluted area. No proper roadmap has been presented for its proper disposal by the Thermal Power Plants.

It has been noticed that in recent times there had been breach of Ash Dykes of two Thermal Power Plants in Singrauli district of Madhya Pradesh, which has resulted in discharge of Ash slurry to the river as well as to Rihand Reservoir adversely affecting their water quality. These Ash Dyke pertains to Thermal Power Plants (TPPs) namely M/s Essar Power Ltd and NTPC, Vindhya Nagar. This incidence is of serious concern and indicates improper and non-scientific design of Ash Dykes. The Oversight Committee constituted by Hon'ble NGT has taken this matter very seriously and also discussed in the previous meeting. In this regard, a meeting of the Committee is convened on October 22, 2019 at 11:00 AM in Circuit House at Prayagraj to discuss various issues related to handling of Ash and their disposal. The agenda of the meeting is as below: -

All Thermal Power Plants have to talk about the structural design of their Ash Dykes to prove that their Ash Dykes are proper and scientifically designed.

- 1. To discuss with all the Thermal Power Plants about structural details of their Ash Dykes and their adequacy for handling of Fly Ash generated. Whether submitted the details of ash dykes to SPCBs and taken permissions from SPCB.*

2. *All Thermal Power Plants have to talk about the structural design of their Ash Dykes to prove that their Ash Dykes are proper and scientifically designed.*
3. *Submission of affidavit by TPPs in compliance of decisions taken in the last meeting of Committee regarding adequacy of Fly Ash Dyke. The status will also be shared about the action taken by TPPs for third party assessment of Ash Dyke of their plants through expert institutions like NEERVIITs.*
4. *Thermal Power Plants may submit their roadmap for the future disposal of the stored Fly-Ash as well as the currently generated Fly-Ash.*
5. *What effort has been made to fill up the Fly-Ash in the abandoned Coal Mines and Stone Mines?*
6. *Whether any letter has been written to the Mine owners or to the concerned Authority in this regard, seeking permission in light of the discussion in the earlier meeting(s)?*
7. *To provide opinion about option of developing mounts of Ash Dyke as done by NTPC Thermal Power Plant, Dadri, where green cover has been developed by covering it with the top soil.*
8. *Submission of status by NTPC Vindhya Nagar about necessary clearance from Madhya Pradesh Pollution Control Board about Gorbi mines and disposal of Fly Ash.*
9. *Preparation of DPR for project of desilting the Rihand Reservoir and bearing of such expenditure by Thermal Power Plants of the area on polluter pay principle.*

All the Thermal Power Plants situated in the State of U.P. and M.P., Members of the Committee, District Magistrate of concerned districts may be informed to attend the meeting with relevant information as per Agenda."

13. **Vide order dated 05.11.2019**, the deliberations of the Committee were as following:

"Thermal Power Plants- Ash Utilization:

NTPC-Vindhyanagar: *Shri V.K. Maurya, Deputy General Manager (Civil Design) NTPC, New Delhi along with Shri Debashis Sen, Executive Director (Vindhyanagar) states that they could not comply the direction given by the Committee in the earlier meeting and could not submit the affidavit till today. They could not file any reply to the points raised in the Agenda of notice. However, Shri V.K. Maurya tried to explain that their Fly Ash Dyke was constructed in accordance to the norms and time to time, when the height of the Dyke was raised, the technical advices were also taken from the experts. However, no evidence in this regard has been produced before us.*

Despite asking from us that whether they have brought any reply to the points detailed in the agenda, Mr. Jain another officer states that they have everything. The periodical inspection has been made by the various internal department officers but he admitted that no assessment or report by third party agency has been obtained with regard to Fly Ash Dyke. Prima facie, the Committee is of the view that the officers of the NTPC are still not serious. They have not complied with the direction given by the Committee in the earlier meeting. The affidavit has not been filed. Recently, we came to know that there was a breach of Flyash Dyke on 06.10.2019 due to which huge quantity of fly ash slurry travelled along with the ground causing damage to crops and the fly ash travelled up to the Rihand Reservoir. If as per the version of Mr. Jain and Mr. Maurya everything was perfectly all right and time to time dykes have been checked why this incident happened. The incident itself shows that there was some deficiency in the construction of Fly Ash Dyke. The whole purpose for asking the affidavit in the earlier meeting was to get their dykes checked properly from the third party experts inasmuch as these dykes were originally constructed much earlier, in the present case in the year 1981. Plant is notable to produce any roadmap for the disposal of the stocked Flyash and the currently generated Fly Ash. A continuous process of stocking the Fly Ash is going on, which is causing environmental effect every day. In this view of the matter, the Committee is of the view that the Plant is liable for the compensation/penalty for causing environmental damage everyday.

Later on, at the end, they have provided an affidavit. The averments made in the affidavit are vague and casual. The paragraphs are sworn on the 'personal knowledge' and not on the basis of documents. We are not satisfied with the averments made in the affidavit. Sri Jain submitted that sometime may be allowed to get the Fly Ash Dyke inspected by the third party agencies. He prays and is allowed one month time to get the Fly Ash Dyke inspected by the third party agencies like IIT or any other agencies, who are experts on the subject. He further submitted that he may be allowed a week's time thereafter to give the reply of each and every point of the agenda of the meeting.

NTPC Shaktinagar: *Shri Debashish Chattopadhyay, Chief General Manager submitted an affidavit in respect of the Fly Ash Dyke. From perusal of the affidavit it appears that the averments are vague and general in nature. The averments are sworn on the basis of personal knowledge and not on the basis of the documents. The Committee is not satisfied with the affidavit. Let the Plant may file a fresh affidavit after getting the report from the third party technical agency. He further submitted that due to the breach of the Fly Ash Dyke of NTPC Vindhyanagar and on account of the heavy pressure, their recycled water pipeline has been damaged resulting overflow of the water from the Dyke. He fairly admitted that some quantity of the over-flown water is going to Rihand Reservoir. He, however, assured that within a week the recycled water pipeline will be repaired and they may also get the technical structural stability report about their Fly Ash Dyke from third party agencies namely IIT etc. He submitted that he will submit the Affidavit within a period of one month giving reply of each and every point raised in the agenda.*

NTPC Rihand: Shri Ranjan Kumar, G.M. NTPC Rihand submitted an affidavit. The averments made in the affidavit are vague and casual. The paragraphs are sworn on the 'personal knowledge' and not on the basis of documents. We are not satisfied with the averments made in the affidavit. He states that their Plant has already engaged IIT, Kanpur for the inspection and report in respect of the Fly Ash Dykes. The report may likely be obtained within one month. The Committee is of the view that let one opportunity may be given to the Plant to file a better affidavit along with the documents to demonstrate the action taken by the Plant in this regard and also the report of the third party agency in regard to the structural stability of the Fly Ash Dykes.

Lanco Anpara & U.P. State Power Corporation Ltd.: An affidavit has been submitted by the Anpara Thermal Project, a Unit of U.P. State Power Corporation Ltd. The affidavit is vague and general in nature. In support of the averments in the affidavit, no document has been annexed. There is no report of the third party technical agency. They are directed to give a better and detailed affidavit. It is stated that they have only one Fly Ash Dyke in which their fly ash as well as the fly ash of Lanco are being drained. The maintenance of the said Fly Ash

Dyke is the responsibility of the Anpara Thermal Project, U.P. State Power Corporation Ltd. In this way, so far as the construction, stability and maintenance of the Fly Ash Dyke is concerned, Lanco is not responsible. The entire responsibility is upon U.P. State Power Corporation Ltd. The officer of U.P. State Power Corporation Ltd. submitted a report of 2018 wherein the structural stability of the Fly Ash Dyke has been examined. In the said report, it is approved that their Fly Ash Dyke is suitable for further raising of height up to 5 meters. The copy of the said report has been submitted before us. The Committee is of the view that after raising the height, the Plant may get a further report in respect of structural stability in order to overrule any possibility of technical flaw. Shri A.K. Rai, Executive Engineer states that in the Fly Ash Dyke the rainy water of the catchment area also flows and in such a situation during the rainy season when the Fly Ash Dyke is full of water due to heavy rainfall etc. Sometimes the fly ash along with the water also flows to Rihand Reservoir. The Management of the Plant is very serious about this issue and has asked the District Administration to divert the Nala of the catchment area to somewhere to avoid any flow of fly ash in the Rihand Reservoir. The District Magistrate, Sonbhadra states that the Administration is very serious and taking all possible steps to get the Nala diverted. The work is likely to be completed within two months. Both Lanco and U.P. State Power Corporation Ltd. are directed to furnish their reply by filing a fresh affidavit in regard to each and every point of the agenda of the meeting.

Hindalco Industries — Mahan Aluminium Project: The Company is engaged in the manufacturing of Aluminium from Alumina and has a Power Plant of 900 MW capacity. It is submitted that they have 02 Fly Ash Dykes, one dyke has been completely filled to the capacity and the other is being used now. For the purposes of raising height of the Fly Ash Dykes they have engaged the BHU for technical advice and on the basis of the advice they will proceed further in the matter. The Committee is of the view that they may also get the report from the third party agency about the

initial structural stability of the two Flyash Dykes. The Company has submitted an affidavit. The averments in the affidavit are general in nature. They are also directed to file a fresh affidavit giving reply of each and every point raised in the agenda within one month.

A consolidated Paper Book has been submitted in respect of all the Units. However, they have not submitted any Affidavit with regard to the Fly Ash Dykes and also the Certificate of the third party agency who are the Technical expert. The officers of the Company pray for one month time to submit the affidavit and the certificate. They have also submitted a roadmap for the disposal of the Fly Ash. A perusal of the roadmap reveals that in comparison to the other Power Plants, their Unit-wise disposal is quite satisfactory.

However, they admit that even after more than 90% disposal, the stock of Fly Ash still remains and they are making efforts to dispose it by negotiating with the Cement Plants and approaching the Government for permission to fill the Fly Ash in the abandoned Mines. It is submitted that they are hopeful to achieve the target shortly. Let the Company may file the affidavit and the certificate in respect of the structural stability of the FlyAsh Dykes within one month.

Obra Thermal Power Plant, Obra: *The representative of the Plant submitted an affidavit in pursuance of the direction given by the Committee in the earlier meeting. We have perused the affidavit. The manner in which the affidavit has been submitted is not acceptable. It is, in fact, not an affidavit and nothing has been stated properly, supported by any document, as required by the Committee. Let the Company may file a fresh affidavit stating that their Fly Ash Dykes are structurally stable and there is no possibility of any breach, and also annexing the certificate in respect of the structural stability of the Fly Ash Dykes from a third party technical agency. The representative submitted that the Plant is raising the height of the Fly Ash Dykes after taking the advice from the IIT Roorkee. Committee directs that after the completion of the work, they will further get their Dykes inspected by the third party technical agency, namely, NEERI to get the certificate that the Dyke is fully structurally stable and there is no possibility of any breach. He submitted that although, at present, the Fly Ash Dykes is not operational but the Plant has negotiated with the NHAI and also got allotment of abandoned mines from the concerned Authorities. After getting the N.O.C. from the Department, they will fill the Fly Ash in the abandoned mines. In this way, they will be able to dispose off sufficient quantity of the Fly Ash. Let the Company may file a fresh affidavit, supported by documents, stating their Fly Ash Dykes are structurally stable and technically sound and also submit reply of the issues raised in the agenda within one month.*

Prayagraj Thermal Power Plant: *The representative states that although they have two Fly Ash Dykes but since their disposal of Fly Ash is at present 100%, there is no occasion to store the Fly Ash. The Plant is not facing any problem with regard to the Fly Ash Dyke. The Plant is, however, not operating in full capacity due to lack of coal in adequate quantity. Since their disposal of Fly Ash is to the nearby Industries, there may not be much problem of storage of fly ash in the Dykes.*

Jaypee Bina Thermal Power Plant: *The representative of the Company filed an affidavit. We have perused the affidavit. Let the Company may file a fresh affidavit within one month enclosing the certificate from the third party technical agency that their Fly Ash Dykes are structurally stable and there is no possibility of any breach. They may also submit the reply to each and every point of the agenda in the said affidavit.*

NTPC Meja: *The representative of the Plant stated that their Plant has been commissioned in the year 2019. After commissioning of the Plant, the production of the Plant has not been properly carried on initially, for the shortage of the coal and at present due to technical fault. The production may likely to start very soon. Therefore, they are not facing any problem relating to the Fly Ash.*

NTPC Dadri: *The representative of the Plant states that there is no Fly Ash Dyke in their Plant. In the Plant premises, they have developed a huge Fly Ash Mount wherein they are directly sending dried fly ash from the Plant to the Fly Ash Mount through the pipeline. The permissible height of the Fly Ash Mount is 55 Meters. The Fly Ash Mount is full of trees which works as a binding of fly ash and avoids any damage during the rainy season. The creation of the Fly Ash Mount is a continuous process. There is no effect of Fly Ash effluents and affecting any air pollution and environment. On the contrary, due to heavy growth of plantation, which is about 2,00,000, over the Fly Ash Mount, the entire area is full of greenery and creates a better environment.”*

In the above matter, the Committee observed that fly ash could be managed by developing a fly ash mound.

14. **Vide order dated 14.07.2020**, the Committee gave its reports including reports dated **14.12.2018 (Ist Report), 28.06.2019 (IInd Report), 21.08.2019 & 23.08.2019 (IIIrd Report) and 29.10.2019 (IVth Report)**. The IVth report focused on the **damage to the Rihand Reservoir on account of breach of fly ash dykes of Essar Power and NTPC on 07.08.2019 and 06.10.2019 respectively**. Slurry travelled up to the reservoir giving rise to emergent situation and ultimately requiring remedial measures.

Hon’ble NGT directed CPCB to prepare an action plan for de-silting of the reservoir and improvement of the dykes. The issue of recovery of compensation was deferred to the extent that there was stay by the Hon’ble Supreme Court. In pursuance of the above, Hon’ble NGT considered the matter further in the light of following:-

- I) Report of Justice Rajesh Kumar dated 20.12.2019

- II) Report of the CPCB dated 28.02.2020
- III) Objections to the report by the Vindhyachal Super Thermal Power Station, R-10
- IV) Comments to the observations of the OC report dated 20.12.2019 by the UPVUN.

With regard to the NTPC, the Committee observed that on account of the breach of its ash dyke, the fly ash travelled up to the reservoir for which interim compensation of Rs. 10 Crore was liable to be deposited. NTPC was also required to take remedial measures. UPVUN was also found to be liable as follows:

“On the spot inspection, the Committee found that a large portion of Ash Dyke had been breached with the result huge quantity of fly ash had spread all over the land. It has travelled up to the Rihand reservoir. Prima facie, the interim environmental compensation demanded by the MPPCB at Rs. 10.00 Crore cannot be said to be excessive. The said amount ought to be deposited. We are of the view that the furnishing of bank guarantee of Rs. 1.00 Crore is not sufficient. MPPCB may issue the notice asking the Plant to deposit the entire Rs. 10.00 Crore. Bank guarantee cannot be said to be deposit, it can only be treated as the security.

The committee is of the view that to strengthen the ash dyke the plant should consider developing RCC wall around the fly ash dyke. The structure should be of RCC having a layer of PVC, 4 tiles to ensure the stability of the dyke. At present the dyke is being made out of the fly ash putting boulder pitching outside wall and brick lining inside the dyke. The storage of fly ash is very important aspect in the context of Environment. Improper storage of fly ash results in air pollution and water pollution affecting the Environment.

In the last meeting we have asked the thermal power plants to explore the possibility of developing the fly ash mount as has been developed by NTPC Dadri. Neither any interest has been shown in this regard nor has any step been taken to develop the fly ash mount. In the face of status stated above, we direct NTPC-Vindhyachal to be very sincere and implement the directions given by the committee and by the Hon'ble NGT in a shorter time.”

UPVUN, Anpara: *On the information being received from the various sector that there is a continuous flow of the water carrying fly ash from two sides towards Rihand*

Reservoir since more than one year. On 15.12.2019 night at about 6:30 PM committee visited the spot and found that the information given is true. There is continuous flow of water coming from plant along with the fly ash filling in Rihand Reservoir. On a query being made that why this is happening, Shri Pratul Gupta, Senior Engineer states that this flow is not continuous, it is mainly during the rainy season and this happened because of fulfilment of the ash dyke therefore the water is overflowing. It also carries catchment water. It is stated that they are raising the height of the dyke which may likely to take one year at least. He further submitted that they are also developing another compartment which may likely to take six months and they are also making effort to divert the nala which carries natural water to reduce the quantity of water.

We do not find explanation satisfactory. The fact is that the water carrying fly ash are continuously flowing towards the Rihand Reservoir, the volume of the flowing water is very high and it carries fly ash, it is continuous since last more than one year. Discharge of fly ash to the Rihand Reservoir pollutes the water of reservoir which is the only source of water of the area. We find that the information about the flow of huge water along with fly ash had not been conveyed to SPCB authorities and they have deliberately concealed the facts. It is mentioned here that these two areas are in a very interior and we have to reach these places after travelling about 18 KM kaccha road through forest. **Act of pollution amounts to violation of various laws and polluter is liable to be punished.** The committee is of the view that since the flow of water along with fly ash is continuous, and there is no possibility for its immediate stoppage. The only way to stop the flow is to close operation of the unit and their unit is liable to be closed until they make arrangements and ensure that no water with ashes may go to the Rihand Reservoir. **The committee is also of the view that they are liable for the environment compensation as well as cost of desilting of the ashes from the reservoir on the principle of polluter pay. The UPPCB is directed to assess environmental compensation and take all stringent actions under the provision provided in the various Acts."**

15. Report of the CPCB on the issue of de-silting and restoration of Rihand Reservoir refers to pre-existing guidelines of CPCB on **ash disposal in mounds and backfilling of ash**

in abandoned mines. With regard to the cost apportionment for de-silting/restoration of Rihand Reservoir, the CPCB had concluded:

*“In absence of verified records in these respects, an assessment of contribution of each plant by this approach is difficult. Therefore, **the contribution of each power plant might also be revealed by the proposed study to assess sediment volume at various places in the reservoir.***

*To begin with, the total ash slurry volume generated by each plant on the periphery of Rihand reservoir can be considered as the basis of sharing of the cost of the study to assess sediment volume at various places in the reservoir. For this purpose, the information on annual power generation and coal consumption, average ash content, and annual ash generation as well as annual ash slurry generation based on ash to water ratio power plants and collated (Report of CPCB: Annexure-III). **Total ash quantity and ash slurry volume generated over the years by individual thermal power plants located on the periphery of Rihand reservoir on the basis of information collected is presented below:***

Table 1

Thermal Power Plant	Capacity (MW)	Total ash disposed in Ash Pond till 31.03.2019 (MMT)	Total ash slurry disposed in Ash Pond till 31.03.2019 (MMT)	Relative share in total Ash of plants (multiple of least)	Relative share in total Ash Slurry of plants (multiple of least)	Share in total Ash of plants (% of total)	Share in total Ash Slurry of plants (% of total)
Anpara TPS UPRVUNL	2630	81.313	569.225	31.7	66.3	22.9%	19.6%
Lanco Anpara	1200	10.870	46.395	4.2	5.4	3.0%	1.6%
Renusagar, Hindalco	820	2.564	8.584	1	1	0.7%	0.3%
Singrauli NTPC	2000	89.295	803.654	34.8	93.6	25.1%	27.6%
Vindhyachal NTPC	4760	104.937	953.855	40.9	111.1	29.6%	32.8%
Rihand NTPC	3000	66.136	529.008	25.8	61.6	18.6%	18.2%
Total / combined	12610	355.115	2910.801	138.4	339	100%	100%

It is submitted that U.P. Irrigation Department may be directed to coordinate the study to assess sediment volume at various places in the reservoir.

It is further submitted that Anpara TPS and Lanco-Anpara power plants may be directed to stop ash pond overflow discharge into Rihand reservoir.”

16. Some important recommendations by the Oversight Committee taking into account the inspection report by the joint Committee of the CPCB and the State PCB were as following:

- 1. M/s NTPC Shaktinagar to repair the AWRS desloped pipeline within 07 days & to stop discharge of decant water of S1 & S2 dyke immediately by pumping in M/s NTPC Vindhagar AWRS 03 system immediately.*
- 2. M/s NTPC Vidhnagar shall collect back the spread over ash from 53 Ha area with minimal fugitive emission & dispose it in operating dyke. Unit shall submit the time bound action plan in this regard.*
- 3. M/s NTPC Vindhagar to stop the probable mixing of slurry in Rihand reservoir & Surya drain near decanting pond with no further delay.*
- 4. M/s NTPC Vindhagar may be asked to deposit 01 Crore to CPCB or MPPCB towards an interim environmental compensation w.r.t Aryavart Foundation v. M/s Vapi Green Enviro Ltd & Ors. Hon’ble NGT O.A 95/2018 orders dated 11.1.2019.*

17. Hon’ble NGT considered the stand of the NTPC Vindhyachal Super Thermal Power Station as well as the UPUVN. Hon’ble NGT noted that issue of compliance of Notification dated 31.12.2018 issued by the MoEF&CC requiring 100% utilization of fly ash vide order dated 12.02.2020 in OA No.117/2014, *Shantanu Sharma v. Union of India & Ors.* The directions of Hon’ble NGT were as follows:-

- a. The TPPs may take prompt steps for scientific disposal of fly ash in accordance with the statutory notification issued by the MoEF&CC under the provisions of EP Act requiring 100% utilization and disposal of fly ash.*
- b. For the non-compliant TPPs, environmental compensation needs to be determined w.e.f. the cut-off date of 31.12.2017 as stipulated in the Notification dated 27.01.2016.*
- c. CPCB may accordingly compute and levy Environmental Compensation in accordance*

with the formula referred to above w.r.t. individual TPPs in accordance with law and submit compliance report to this Tribunal before the next date.

d. CPCB Guidelines of May 2019 for Utilization/Disposal of Fly ash for Reclamation of Low Lying Areas and in Stowing/Back filling of Abandoned Mines/Quarries may be complied.

e. Task Force of Ministry of Power and Ministry of Coal may recommend list of abandoned mines/quarries for mine back filling purposes to the CPCB. CPCB may notify the same accordingly for use by the TPPs as per applicable guidelines and permission from State PCBs/PCCs.

f. A Committee comprising of CPCB and IIT Roorkee may assess the environmental damage with regard to the breach sites at Vidhyanchal TPP an Essar TPP in Singrauli area and submit its recommendation within three months. CPCB shall be at liberty to engage any other technical expert for this purpose.

g. The Committee comprising of Collector, CPCB and Member Secretary of MP State Pollution Control Board may assess the damage with regard to the breach sites at Vindhyachal TPP and Essar TPP in Singrauli area to the crop and agricultural productivity and ensure effective restoration/remediation of affective sites within three months.

h. CPCB may ensure implementation of action plans approved by it in accordance with timeline as provided in the statute.

i. A joint Committee comprising of MoEF&CC, CPCB, IIT Roorkee and any other member considered necessary may submit quarterly progress report on recommendations of Expert Committee of Niti Aayog for enhanced utilization of fly ash in various sectors: mines, roads, cement, industries and bricks etc., along with its implementation status.

j. The present order is subject to proceedings pending before the Hon'ble Supreme Court and where stay is operative, this order will not operate till stay continues and thereafter abide by orders of Hon'ble Supreme Court."

18. In view of the above, Hon'ble NGT **vide order dated 14.07.2020** directed the following:

i. Fly ash disposal may be undertaken as per the directions in the order of this Tribunal dated 12.02.2020.

- ii. Fly ash disposal in mounds and backfilling of ash in abandoned mines may be undertaken as per the CPCB guidelines. If necessary, Indian Bureau of Mines, Dhanbad may also be consulted so that latest technology is utilized and all necessary safeguards are adopted.
- iii. Report of CPCB regarding Cost apportionment for desilting/restoration of Rihand Reservoir is accepted and further steps, including further study be undertaken as recommended by CPCB. The U.P Irrigation Department may coordinate such study.
- iv. Anpara TPS and Lanco-Anpara power plants may stop ash pond overflow discharge into Rihand Reservoir to the extent the work remains unexecuted.
- v. NTPC, Vindhyachal may deposit amount of Rs. 10 Crores as recommended by the Oversight Committee with the State PCB towards interim compensation, deducting the amount already deposited. The plant may also develop RCC wall around the plant in the matter recommended.
- vi. The liability for environmental compensation in respect of UPVUN, Anpara and NTPC Vindhyachal may be assessed by joint Committee of CPCB and State PCB within two months. The nodal agency will be the State PCB for coordination and compliance.
- vii. The transportation measures may be adopted as per suggestions of the Committee and directions of the Hon'ble Supreme Court.

III. THE GEO- COORDINATES OF DIFFERENT POWER PLANTS

(A) Geo Coordinates of A&B Power Plant, Anpara, Sonbhadra

Sl. No.	Latitude	Longitude	Remarks
1	24°12'30.69"	82°47'32.38"	Near BTPS Switchyard
2	24°12'32.26"	82°46'50.30"	In between Switchyard and Kashi more
3	24°12'30.08"	82°46'43.07"	Near Kashi more
4	24°12'4.57"	82°46'45.00"	Near Power house entry Gate
5	24°11'49.14"	82°46'42.81"	Near Urja dwar
6	24°11'42.79"	82°46'40.96"	Near Railway bridge
7	24°11'40.56"	82°46'44.30"	In between Railway bridge and Lanco track hopper
8	24°11'44.02"	82°47'34.91"	Near Lanco Track Hopper
9	24°11'38.62"	82°47'43.93"	In between Lanco track hopper and exit gate of MGR

10	24°11'34.79"	82°47'45.66"	In between Lanco track hopper and exit gate of MGR
11	24°11'39.57"	82°47'46.42"	In between Lanco track hopper and exit gate of MGR
12	24°11'29.69"	82°47'48.81"	Near exit gate of MGR
13	24°11'29.05"	82°47'47.25"	In between exit gate of MGR and Intake Channel
14	24°11'34.61"	82°47'51.66"	In between exit gate of MGR and Intake Channel
15	24°11'38.31"	82°47'52.26"	In between exit gate of MGR and Intake Channel
16	24°11'45.60"	82°47'81.31"	Near Intake Channel
17	24°11'49.66"	82°47'57.97"	In between Intake Channel and outer side auxiliary pond
18	24°11'47.54"	82°48'0.60"	In between Intake Channel and outer side auxiliary pond
19	24°11'49.09"	82°48'16.15"	Near outer side auxiliary pond
20	24°12'8.27"	82°48'13.81"	In between outer side auxiliary pond and BTPS Chimney
21	24°12'6.17"	82°47'34.59"	Near BTPS Chimney

(B) Geo Coordinates of "D" Power Plant, Anpara, Sonbhadra

Sl. No.	Latitude	Longitude	Remarks
1	24°12'8.34"	82°48'13.93"	Near Permanent WTP
2	24°11'58.69"	82°48'14.53"	In between Permanent WTP and Entry gate of DTPP
3	24°11'49.08"	82°48'16.34"	In between Permanent WTP and Entry gate of DTPP
4	24°11'47.21"	82°48'0.78"	In between Permanent WTP and Entry gate of DTPP
5	24°11'48.49"	82°48'14.09"	Near entry gate of DTPP
6	24°11'42.61"	82°48'1.87"	Near Intake channel
7	24°11'8.72"	82°48'22.05"	In between Intake channel and Track hopper DTPP
8	24°11'5.32"	82°48'27.10"	Near Track hopper DTPP
9	24°11'5.29"	82°48'33.75"	In between Track hopper DTPP and Admn Building
10	24°11'9.90"	82°48'41.95"	In between Track hopper DTPP and Admn Building
11	24°11'14.33"	82°48'43.46"	In between Track hopper DTPP and Admn Building
12	24°11'20.53"	82°48'43.51"	Near Admn Building
13	24°11'36.54"	82°48'48.15"	In between Admn Building and time office

14	24°11'47.17"	82°48'42.31"	In between Admn Building and time office
15	24°11'50.44"	82°48'48.90"	In between Admn Building and time office
16	24°12'0.14"	82°48'41.16"	Near time office
17	24°12'2.72"	82°48'35.65"	In between time office and Permanent WTP
18	24°12'4.65"	82°48'34.08"	In between time office and Permanent WTP
19	24°12'5.59"	82°48'23.15"	In between time office and Permanent WTP

(C) Geo Coordinates of Residential Colony of Power Plant, Anpara, Sonbhadra

Sl. No.	Latitude	Longitude	Remarks
1	24°12'29.71"	82°46'42.32"	Near Kashi more
2	24°12'26.77"	82°46'23.63"	In between Kashi more and Police Station
3	24°12'25.96"	82°46'12.66"	Near Police Station
4	24°12'30.54"	82°46'5.46"	Near Auri more
5	24°12'0.54"	82°45'58.54"	Near Shopping gate
6	24°11'41.11"	82°46'7.34"	Near Church
7	24°11'43.01"	82°46'14.77"	In between Church and market Railway bridge
8	24°11'39.59"	82°46'33.90"	In between Church and market Railway bridge
9	24°11'41.76"	82°46'40.05"	Near market Railway bridge
10	24°12'3.46"	82°46'44.27"	Near Anpara market gate

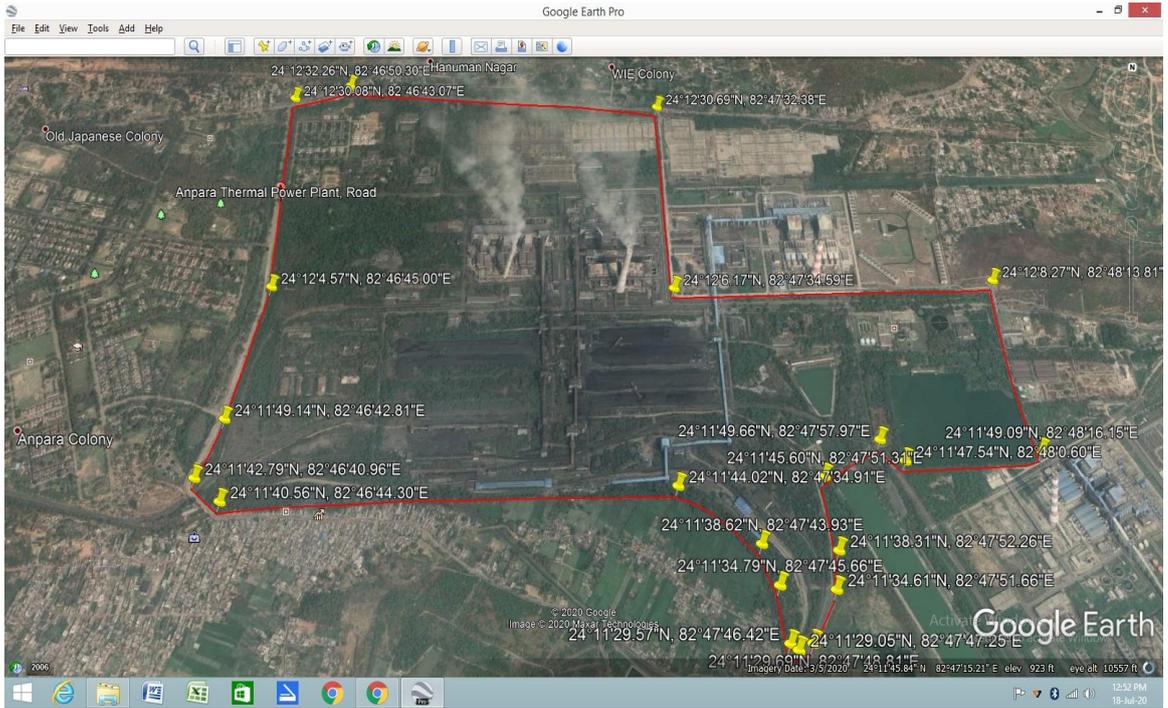


Fig-1: Map of Anpara- A & B Thermal Power Stations, Sonbhadra

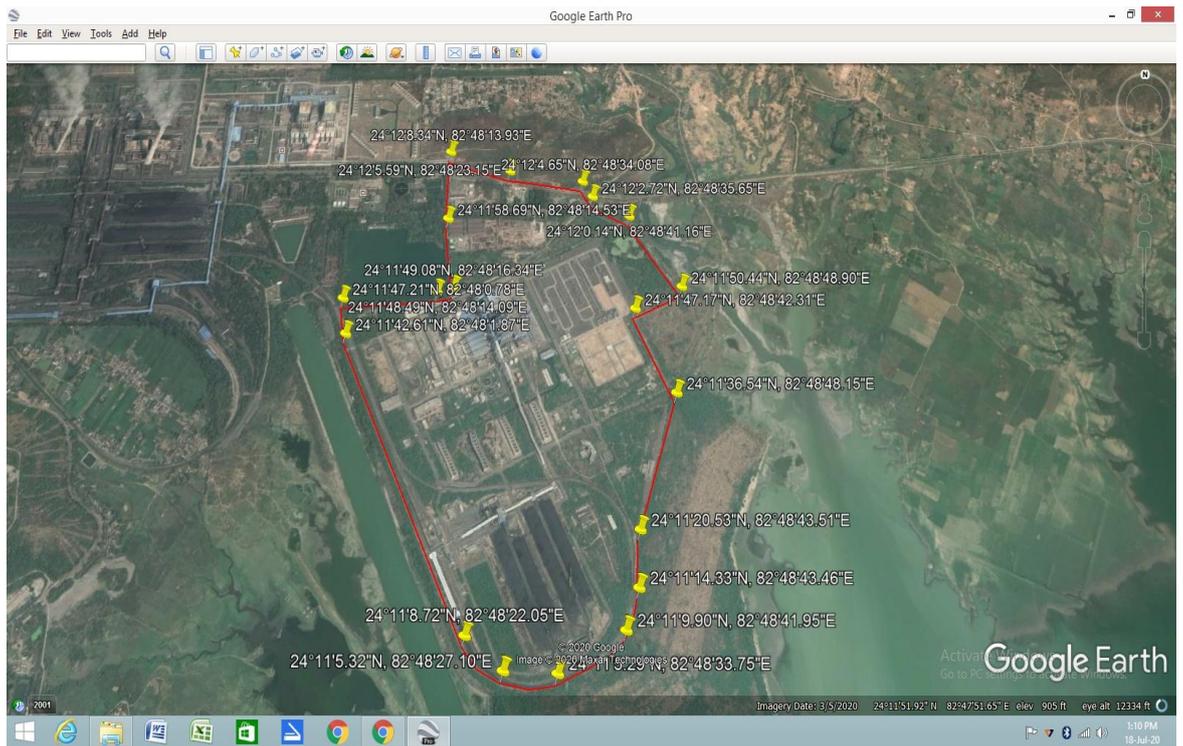


Fig-2: Map of Anpara- D Thermal Power Stations, Sonbhadra

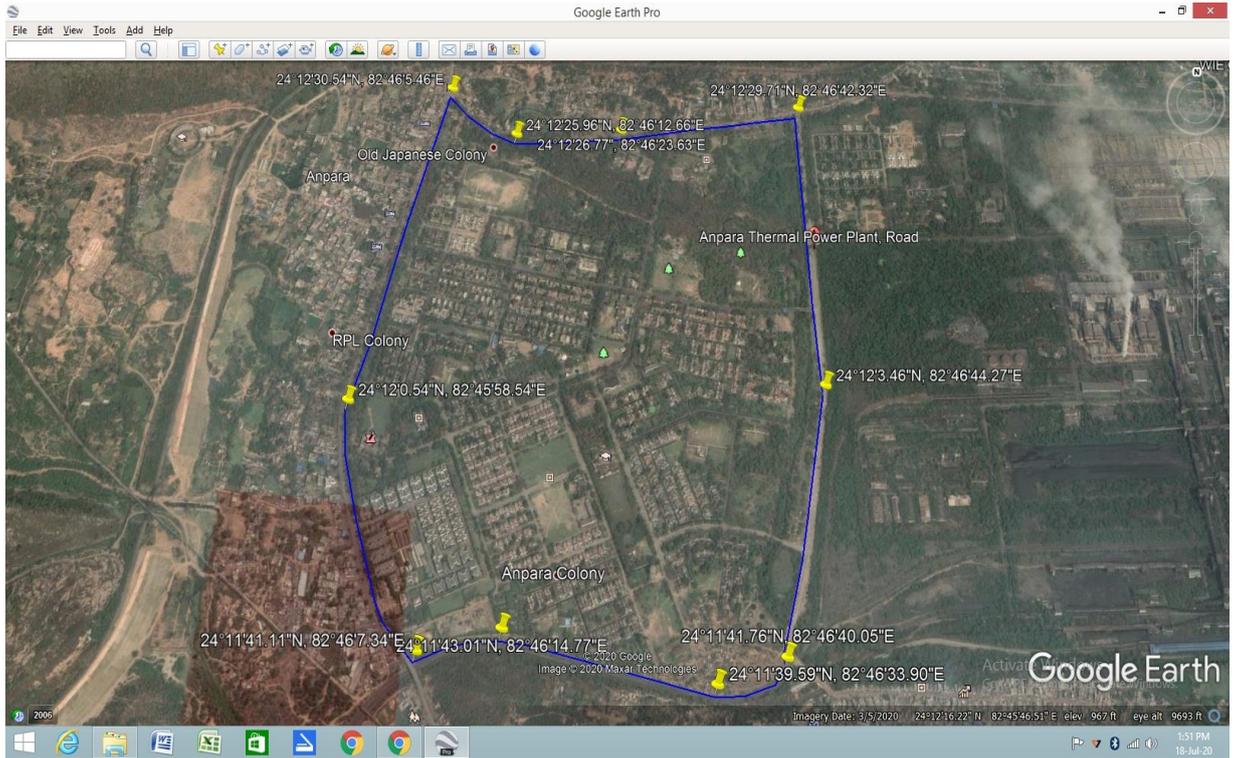


Fig-3: Map of Anpara Colony, Sonbhadra

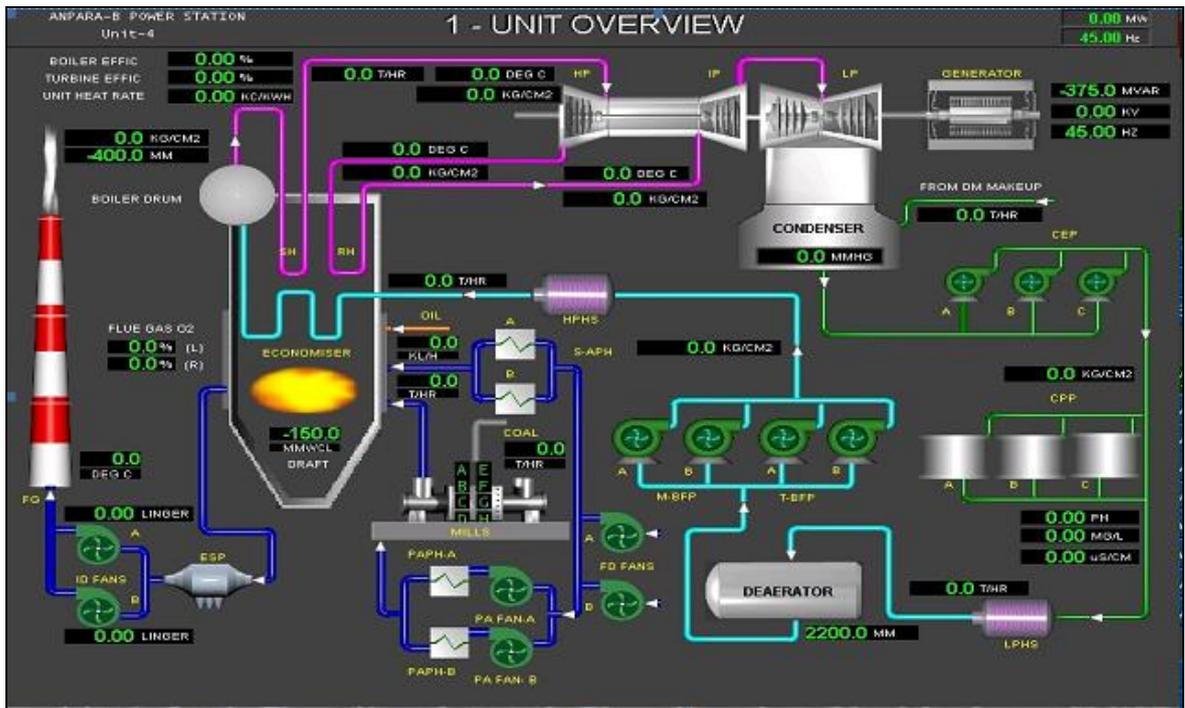


Fig-4: Flow Diagram of working Principle of Anpara- B-TPS

(D) Geo Coordinates of "Lanco" Power Plant, Anpara, Sonbhadra

Sl. No.	Latitude	Longitude	Remarks
1	24°12'30.68"	82°47'32.78"	Near Switchyard Lanco
2	24°12'6.33"	82°47'34.69"	Near WTP Lanco

3	24°12'8.23"	82°48'9.39"	Near Cooling Tower
4	24°12'22.03"	82°48'8.38"	Near Cooling Tower
5	24°12'21.38"	82°47'57.48"	Near Cooling Tower
6	24°12'28.82"	82°48'1.46"	Near entry gate of Lanco Power house
7	24°12'31.49"	82°48'1.21"	Near entry gate of Lanco Power house

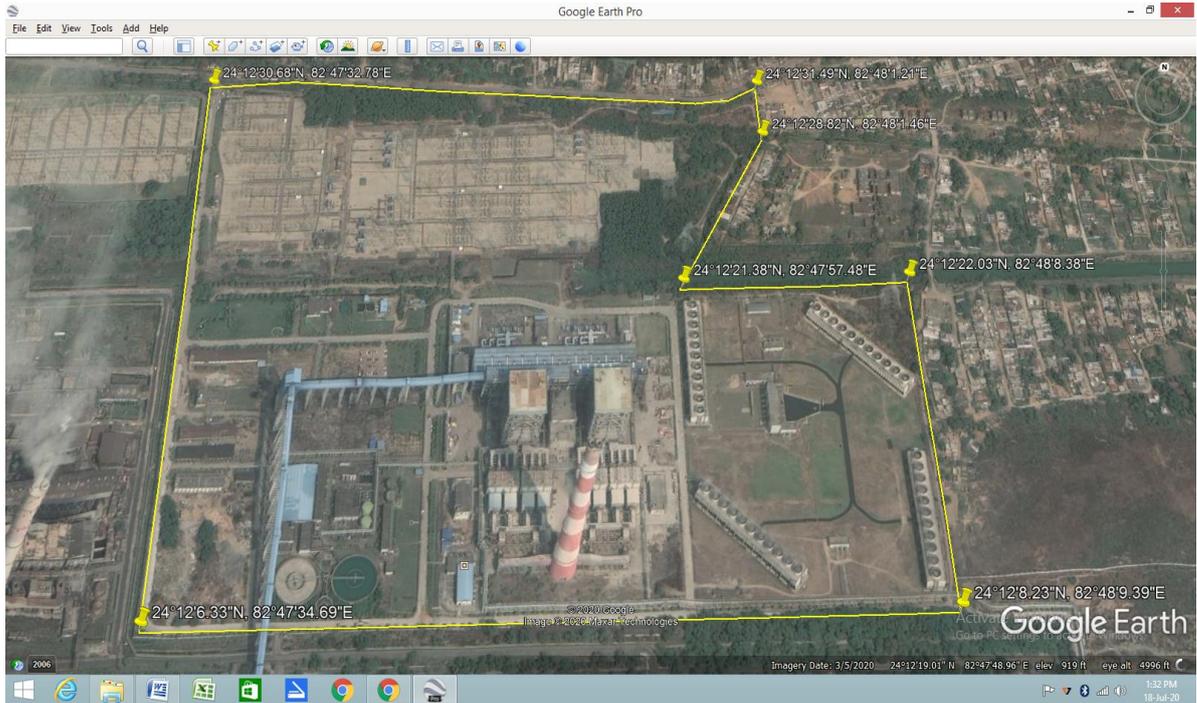


Fig-5: Map of Lanco-Anpara Thermal Power Station, Sonbhadra

(E) Geo Coordinates of Hindalco Industries Ltd., Renusagar (Power Division)

1	Longitude	82° 47'05" E to 82° 47'25" E
2	Latitude	24° 10'41" N to 24° 11' 06" N

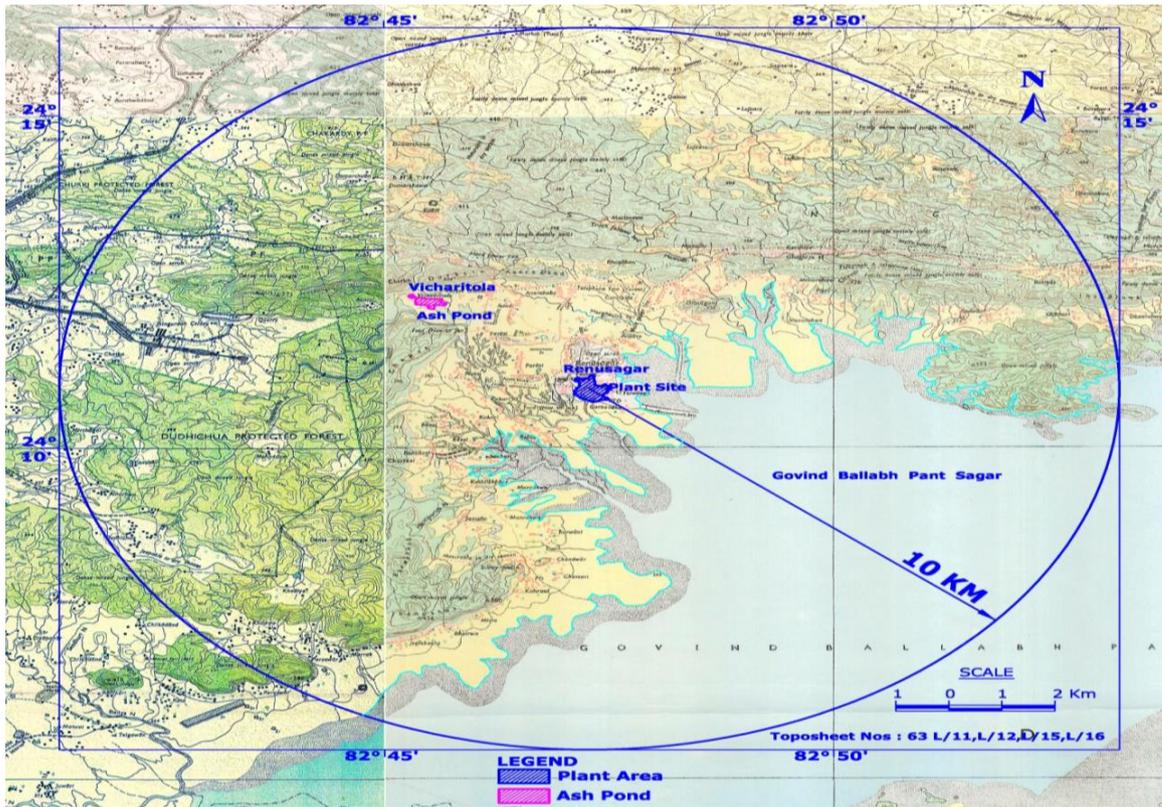


Fig-6: 10 km radius map of Hindalco Industries Ltd., Renuagar (Power Division)

(F) Geo Coordinates of Hindalco Industries Ltd., Renukoot

1	Longitude	83.032263° E
2	Latitude	24.220725° N



Fig-7: Location Map of Hindalco Industries Ltd., Renukoot

IV. MINUTES OF THE MEETING IN OA NO. 164/2018

A) Various issues and directions were discussed in orders of the Hon’ble NGT under **Chairmanship of Hon’ble Justice (Retd.) Shri Rajesh Kumar, Allahabad High Court** held at Circuit House, Prayagraj in Compliance of Hon’ble NGT order dated 28.08.2018 in O.A. No. 164/2018 in re: *Ashwani Kumar Dubey Vs. Union of India and others* on **31.01.2019 (Appendix- I); 15.03.2019 (Appendix- II); 29.03.2019 (Appendix- III); 12.09.2019 (Appendix-IV) & 08.01.2020 (Appendix- V).**

B) A **brief report dated 02.02.2020** was received from UPPCB. The report details out the minutes of meetings on 25.10.2018; 23.11.2018; 27.12.2018; 31.01.2019; 01.03.2019; 07.06.2019; 31.07.2019; 09.09.2019; 22.10.2019; 25.11.2019 and 17.12.2019. **(Refer Appendix- VI).**

C) **Vide Meeting dated 07.02.2020**, various issues and directions were discussed in orders of the Hon’ble NGT under Chairmanship of Hon’ble Justice (Retd.) Shri Rajesh Kumar, Allahabad High Court held at Circuit House, Prayagraj in Compliance of Hon’ble NGT order dated 28.08.2018 in O.A. No. 164/2018 in re: *Ashwani Kumar Dubey versus*

Union of India and others and order dated 12.02.2019 passed in O.A. No. 670/2018 in re: *Atul Singh Chauhan versus MoEF & CC and others* (**Appendix- VII**).

D) The First meeting regarding O.A. No. 164/2018 was held **on 23.07.2020** by new Oversight Committee, NGT, UP through Video-Conferencing. Various issues and directions were discussed in orders of the Hon'ble NGT in Compliance of order dated 28.08.2018 in O.A. No. 164/2018 (**Appendix-VIII**). The salient features of minutes of meeting are as follows:

- Mr. A. C. Sahu, CGM, NTPC Rihand informed that 56% of flyash was utilised till August 2020. The Plant has four semi-automatic flyash brick plants and two fully automatic flyash brick plants. They manufacture 30000 to 40000 bricks in a day. They have established a flyash park at Varanasi where they transport flyash through railway rakes.
- For cement industries and asbestos industries at Satna and Katni, they are approving incentive packages. They have installed three Ambient Air Quality Monitoring Systems and connected them with the server of CPCB. He suggested that the Central Government may be directed to issue notification to make use of fly ash bricks mandatory in their projects and also for use of fly ash for the purpose of filling of lands.
- He also requested that Hon'ble NGT may issue appropriate orders to ban manufacturing of red bricks within 300 km radius of a Power Plant so that fly ash bricks can be used in these areas.
- Furthermore, ash mound should also be accepted as a method of fly ash utilization. He mentioned that National Highway Authority of India (NHAI) has agreed to utilize their fly ash and they are supplying it free of cost upto the range of 300 kms.
- Shri A. K. Tiwari, Director Technical, UPRVUNL Anpara, informed that they have utilized 38% of fly ash this year as compared to 7.7% last year. The district administration has assured to provide 07 nos. of mines, out of which 02 mines are undisputed. UPRVUNL will start filling flyash after the allotment of mines to TPS and after obtaining NOC from CPCB/UPPCB.

- Regarding overflow from Anpara ash pond towards Rihand reservoir, he mentioned that they are planning to increase the height of fly ash dyke and also planning to divert Morchanullah so that there is no overflow from fly ash dyke.
- It was mentioned by Shri Ajay Sharma of UPPCB that there is a provision of HDPE liner and detailed guidelines of MoEFF&CC exist on the subject.
- Regarding desilting/restoration of Rihand reservoir, it was mentioned by Secretary Irrigation that they have already coordinated with UPRVUNL and given the study to Central Water and Power Research Station, Pune.
- It was directed that the Irrigation Department shall coordinate with CPCB and UPPCB to apportion the cost of the study and further remedial action between various polluting power plants.
- It was mentioned that stay order has been received from Hon'ble Supreme Court by NTPC on 21.07.2020.

E) The Second meeting regarding O.A. No. 164/2018 was held on **25.09.2020** by Oversight Committee (headed by Justice SVS Rathore), NGT, UP through Video-Conferencing. Various issues and directions were discussed in orders of the Hon'ble NGT in Compliance of order dated 28.08.2018 in O.A. No. 164/2018 (**Appendix-IX**).

V. INSPECTION REPORTS IN OA NO. 164/2018

The Oversight Committee directed Regional Officer of Jhansi, Raebareli and Sonbhadra to conduct an inspection survey immediately. The questionnaire for inspection survey with reference to OA No. 164 of 2018 was sent to them on 07.08.2020.

1. Parichha Thermal Power Project, Jhansi (Report received on 21.07.2020)

The inspection of Jhansi was done by Mr. Niranjana Sharma, RO, UPPCB, Jhansi. The report shows 920 MW of total installed capacity (2 x 210MW + 2 x 250 MW= 920 MW).The total flyash generation is 2253 MT per day. The disposal of flyash is done by dry flyash extraction system. Flyash is also utilized for manufacturing of bricks, cement and filling in road construction. In the NTPC, coal is used as a fuel and it is transported by railway. The detailed inspection report is given in **Appendix- XXXIV**.

2. NTPC Unchahar, Raebareli (Report received on 21.07.2020)

The inspection report of NTPC Unchahar, Raebareli shows total six units which has total installed capacity i.e. 1550 MW (5 x 210MW + 1 x 500 MW= 1550 MW). The total flyash generation is 5932.63 MT per day. The disposal of flyash is done by dry flyash evacuation system. The flyash is also utilized for manufacturing of ash bricks/ blocks/ tiles, cement and asbestos. In NTPC, coal & oil are used as a fuel and is transported by railway. The detailed inspection report is enclosed as **Appendix- XXXIV**.

3. NTPC Sonbhadra (Report received on 22.07.2020) (Refer Appendix- XXXIV)

The inspection report of NTPC Sonbhadra was done jointly by Mr. Radhey Shyam, RO, UPPCB; Dr. Mrs. Satya, Scientist- D, MOEF&CC, Regional Office, Lucknow and Dr. R. K. Singh, Scientist- E, CPCB, Regional Directorate, Lucknow from 29.07.2020 to 02.08.2020. The inspection survey was done in six different NTPCs viz., M/s NTPC Ltd. Shaktinagar, Sonbhadra (2000 MW); M/s NTPC Ltd. Rihandnagar (Stage- I, II & III), Sonbhadra (3000 MW); M/s UPRVUNL Anpara- A, B & D, Sonbhadra (2630 MW); M/s Hindalco Industries Ltd. (Power Division), Renusagar, Sonbhadra (840 MW); M/s Lanco- Anpara Power Ltd. Anpara, Sonbhadra (1200 MW) and M/s UPRVUNL Obra Unit-B, Sonbhadra (1000 MW). All the power plants have installed CAAQMS except M/s UPRVUNL Anpara- A, B & D and M/s UPRVUNL Obra. All the power plants have AWRs and ESPs along with compliance status and EC imposed.

As far as flyash generation is concerned, NTPCs viz., M/s NTPC Ltd. Shaktinagar generated 5800 TPD flyash followed by M/s NTPC Ltd. Rihandnagar (Stage- I, II & III) (12000 TPD); M/s UPRVUNL Anpara- A, B & D (11000TPD); M/s Hindalco Industries Ltd. (Power Division), Renusagar (4240 TPD); M/s Lanco Anpara Power Ltd. Anpara (5000 TPD) and M/s UPRVUNL Obra Unit-B (4580 TPD). All the power plants have installed CAAQMS except M/s UPRVUNL Anpara- A, B & D and M/s UPRVUNL Obra. The system for disposal of flyash in all the power plants is weight disposal in ash dyke and dry ash disposal by silo. All the power plants have utilized flyash for manufacturing of bricks and cement plants. Diesel is used as a fuel and transported by railway and/ or road.

The status and condition of utilization/ disposal of Red Mud and Shifting of Mercury bearing brine sludge are observed only in M/s Hindalco Industries Ltd. (Aluminium

Division), Renukoot and M/s Grasim Industries Ltd. (Chemical Division), Renukoot.M/s Hindalco Industries Ltd. (Aluminium Division), Renukoot has utilized about 30215.5 Ton Per Month (TPM) but unit has stored huge quantity of red mud in open and there is no disposal mechanisms. M/s Grasim Industries Ltd. (Chemical Division), Renukoot was based on membrane cell technique and mercury bearing brine sludge. Now unit have changed the manufacturing process and there is Regional Office, U.P. Pollution Control Board, Sonbhadra where no generation of mercury bearing brine sludge. Some important points are-

- Mercury bearing brine sludge generated earlier is disposed in safe manner inside the premises.
- EC of Rs 1.0 Cr. had been imposed and unit has deposited it in CPCB account.
- CPCB has recommended for EC of Rs. 155,42,85,300.00 Hon'ble NGT have deferred the proceedings till the matter is decided by Hon'ble Supreme Court vide order dated 05.11.2019.

4. The Oversight Committee directed UPRVUNL, NTPC, UPPCB and CPCB to conduct an inspection survey as per given questionnaire. The questionnaire for inspection survey with reference to OA No. 164 of 2018 was sent to them on 28.10.2020.

❖ **Inspection Report Received from UPRVUNL on 09.11.2020 (Appendix- XXXV)**

The inspection survey done by UPRVUNL are as follows:

- There are four TPPs viz., Anpara TPS, Obra TPS, Parichha TPS and Harduaganj TPS under the UPRVUNL.
- UPRVUNL is enhancing the generation capacity by installation & construction of following TPPs i.e. Harduganj, Aligarh (1 x 660 MW); Panki, Kanpur (1x 660 MW); Obra, Sonbhadra (2 x 660 MW) and Jawaharpur, Etah (2 x 660 MW). Apart from above following TPP is being establish in Joint ventures of UPRVUNL:-

Sl. No.	Project	Ownership	Location	Capacity	Capacity share of UPRVUNL
1	Meja TPS	NTPC and	Meja	2 x 660 MW	990 MW (75% of

		UPRVUNL	Allahabad		installed capacity)
2	Ghatampur TPS	NLC and UPRVUNL	Ghatampur Kanpur	3 x 660 MW	1275MW (64.39% of installed capacity)

- The current status of implementation of Joint report of MoEF&CC, CPCB, IIT-Roorkee for enhanced utilization of fly ash in various sectors: mines, roads, cement, industries and bricks etc. are summarized in Point- 3 of **Appendix- XXXV**.
- As far as flyash generation is concerned, in all the four TPS viz., Anpara TPS, Obra TPS, Parichha TPS and Harduaganj TPS, there is 80 % generation of TPS and 20% is bottom ash & coarse ash. But out of these, only Parichha TPS has 100% ash utilization.
- The current status of unit-wise EC levied on TPS under the UPRVUNL is put on by Hon'ble Supreme Court and also summarized in Point- 5 of **Appendix- XXXV**.
- The unit-wise status of implementation of CPCB Guidelines, 2019 for Utilization/Disposal of Fly Ash for Reclamation of Low Lying Areas and in Stowing/ Back filling of Abandoned Mines/ Quarries are summarized as follows:
 - a) **Anpara TPS**- Applied for NOC from UPPCB which is still awaited
 - b) **Obra TPS**- Applied for NOC from UPPCB which is still awaited
 - c) **Parichha TPS**- Tender for disposal of 5.0 lac MT Pond ash for stowing/backfilling in 04 Nos. abandoned mines/quarries near Jhansi is in process
 - d) **Harduaganj TPS**- Pond ash is being issued for filling of low level areas as per requirement firms free of cost.
- The status of CPCB's Action Plan implemented under the UPRVUNL are as follows:
 - a) **Anpara TPS**- Partially implemented
 - b) **Obra TPS**- Partially implemented
 - c) **Parichha TPS**- Implemented
 - d) **Harduaganj TPS**- Implemented
- The status of Fly ash disposal in mounds and/or backfilling of ash in abandoned mines as per the CPCB Guidelines are as follows:

- a) **Anpara TPS & Obra TPS-** Anpara TPS is initiating proposal for developing ash mound in its vicinity for landscaping work. UNL has requested MoEF&CC to direct NCL for allotment of abandoned coal mines to pit head stations. 7 nos. abandoned stone quarries in Billi Markundi area (Area 8.4 Acre) out of which 04 mines (Area 3.6 acre) are undisputed. In these four mines approximately 3.0 Lac MT ash can be filled. NOC from revenue, mining and forest department has been taken. Applied for NOC from UPPCB which is still awaited.
 - b) **Parichha TPS-** Mining department Jhansi has allotted four nos. abandoned stone quarry to Parichha at Village Dangariya Kund, Jhansi for filling of 5.0 lac MT Pond ash. Tender for disposal of 5.0 lac MT Pond ash for stowing/backfilling in 04 Nos. abandoned mines/quarries near Jhansi is in process.
 - c) **Harduaganj TPS-** Pond ash is being issued for filling of low level areas as per requirement firms free of cost.
- The status of Structural Safety of Fly ash dykes in TPPs are as follows:
 - a) **Anpara TPS-** The fly ash dyke is structurally safe. The soil investigation of ash dyke was done by MNIT Allahabad and on the basis of investigation report IIT Roorkee has design the ash dyke raising work using Gabion Wall. All safety measures such as Sand filter, Chimney Filter, Geo grid, Geo textile, Brick pitching with pointing, grass turfing on outer slope, decantation well etc has been taken to ensure that no breach will take place.
 - b) **Obra TPS-** The fly ash dyke is structurally safe. The soil investigation of ash dyke was done by IIT BHU and on the basis of investigation report IIT Roorkee has designed the ash dyke using Gabion Wall. All safety measures such as Sand filter, Chimney Filter, Geo grid, Geo textile, Brick pitching with pointing, grass turfing on outer slope, decantation well etc has been taken to ensure that no breach will take place.
 - c) **Parichha TPS-** The fly ash dyke is structurally safe. For raising of ash dyke consultancy has been obtained from IIT-Roorkee and according to their direction raising work was executed.
 - d) **Harduaganj TPS-** The fly ash dyke is structurally safe. At present work for raising of ash dyke is under progress along with raising width of ash dyke is also increased

for safety of ash dyke. The consultancy for dyke raising has been obtained from IIT Roorkee

- All the TPPs under the UPRVUNL are used coal as a fuel and transported it by Railway. All the power plants have installed CCTV camera but there is no any reduction in coal transportation as the coal is being transported by railway wagon.

- The steps taken for Ash dyke management in TPPs are as follows:
 - a) **Anpara TPS & Obra TPS**- At present raising of ash dyke is being done. Regular maintenance of mother dyke is being done.
 - b) **Parichha TPS**- Regular maintenance of mother/ base dyke is being done.
 - c) **Harduaganj TPS**- At present raising of ash dyke is being done. Regular maintenance of mother/ base dyke is being done.

- All the TPPs under UPRVUNL have zero discharge but do not have their own reservoir. Water is being utilized from Rihand Reservoir (Anpara & Obra TPS), Betwa River (Parichha TPS) and from upper Ganga Canal (Harduaganj TPS).

- Regarding the air and water quality of the reservoir and other water bodies including ground water, monthly third party test is being conducted for air and water quality in Anpara and Harduaganj TPS. Likewise, monthly third party test is being conducted by IITR Lucknow in Obra and Parichha TPS. All the TPPs under the UPRVUNL have installed AWRS and ESPs but only Harduaganj TPS do not have AWRS.

- Efforts to fill up the Fly-ash in the abandoned coal mines and stone mines are as follows:
 - a) **Anpara TPS**- UNL has requested MOEF & CC to direct NCL for allotment of abandoned coal mines to pit head stations.
 - b) **Obra TPS**- District Administration has allocated 7 nos. abandoned stone quarries in Billi Markundi area (Area 8.4 Acre) out of which 04 mines (Area 3.6 acre) are undisputed. In these four mines approximately 3.0 Lac MT ash can be filled. NOC from revenue, mining and forest department has been taken. After taking NOC from UPPCB, UNL will start backfilling these mines with flyash.

- c) **Parichha TPS-** Tender for disposal of 5.0 lacs MT Pond ash for stowing/backfilling in 04 Nos. abandoned mines/quarries near Jhansi is in process.
- d) **Harduaganj TPS-** Harduaganj TPP almost achieved the target of 100% ash utilization

❖ **Inspection Report Received from NTPC on 18.11.2020 (Appendix- XXXVI)**

NTPCs situated in U.P. under administrative control of Northern Region Head Quarter (NRHQ) are NTPC Singrauli, NTPC Rihand, NTPC Tanda and NTPC Unchahar. MUNPL (Meja Urja Nigam Private Limited) is one of the Joint Venture Company of NTPC Ltd; and Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd. (UPRVUNL). The inspection report of NTPCs is received on 18.11.2020. The flyash is also utilized for manufacturing of bricks, cement and filling in road construction. Furthermore, coal is used as a fuel and it is transported by rail route. The detailed inspection report is given in **Appendix- XXXVI**.

VI. SUMMARY OF THE COMPLIANCE STATUS AS PER THE DIRECTIONS GIVEN BY HON'BLE NGT IN O.A. NO. 164/ 2018

The Oversight Committee constituted by Hon'ble NGT held a meeting with concerned administrative officials on 23.07.2020. Various issues as pointed out in the orders of Hon'ble National Green Tribunal were discussed and status of the action taken by the concerned authorities was reviewed. The details are as follows:

1. Vide letter dated 28.04.2019, various issues and directions were reported in Compliance of the Hon'ble NGT order dated 28.08.2018 in O.A. No. 164/2018 in re: *Ashwani Kumar Dubey versus Union of India and others* under Chairmanship of Hon'ble Justice Shri Rajesh Kumar (Retd.), Allahabad High Court held at Circuit House, Prayagraj. The Progress Report dated 28.06.2019 are attached with minutes of meeting dated 07.06.2019 (**Refer Appendix- X**).

2. The report regarding TPP had been received from UPPCB on 27.06.2020, it is noticed that there are 24 total Thermal Power Plant which are monitored by the concerned department. Out of 24 TPPs, only 3 TPPs do not have flyash management system and

other 3 TPPs have problem of ESP establishment. The details of TPPs, its capacity and management system are given in **Appendix- XI**.

3. A detailed report had been received from DM, Sonbhadra on 24.08.2020. Letter no. G-114651/C-58/SBD/2020 dated 07.08.2020, includes the detailed compliance status with different letters regarding varied aspects of OA No. 164/2018 and the condition of 22 stone crusher units in district Sonbhadra.

No. of Stone Crusher Units which have submitted document after due time and are covered in 264 list, submitted in Hon'ble High Court	10
No. of Stone Crusher Units which have submitted document after due time and are not covered in 264 list, submitted in Hon'ble High Court	12
Total Units	22
No. of Stone Crusher Units which have submitted document after due time and are established before 05.08.2000 and documents are verified	22
No. of Stone Crusher Units which have submitted document after due time and are claiming to be established before 05.08.2000 and but documents are not verified	00
Total Units	22

The other details are enclosed as **Appendix- XII**.

4. The Compliance Status in OA No. 164/2018 on different issues was received from Regional Office, UPPCB, Sonbhadra on 22.07.2020 and 25.09.2020 as per given questionnaire. The details are summarized in the table given below and also enclosed as **Appendix- XIII**.

5. The compliance status of the different issues in OA No. 164/2018 has been reported by CPCB. The details are enclosed as **Appendix- XIV**.

6. The SOP for fly ash filling as per MOEF & CC and CPCB Guidelines has been submitted by SE, UPRVUNL Anpara on 24.09.2020 and annexed as **Appendix- XV**.

7. The Guideline for use of Fly ash, bottom ash or pond ash in the manufacture of bricks and other construction activities for utilization of ash by the Thermal Power Plants are enclosed as **Appendix- XVI**.

8. The present status regarding concerned TPPs is annexed as following:

- a) Report of Anpara TPS as **Appendix- XVII**
- b) Report of Obra TPS as **Appendix- XVIII**
- c) Report of NTPC Rihand as **Appendix- XIX**
- d) Report of NTPC Shaktinagar as **Appendix- XX**
- e) Report of M/s Lanco Anpara Power Ltd. as **Appendix- XXI**
- f) Report of M/s Grasim Industries as **Appendix- XXII**
- g) The action plan for supply of Coal to Thermal Power Plant through Railway wagons/ MGRs/ Belt Pipe Conveyors submitted by General Manager, Krishnashila Area, Northern Coal fields Limited is enclosed as **Appendix- XXIII**.
- h) The Report on Raising of Ash Dykes in Anpara Thermal Power Stations submitted to Oversight Committee by Krishna Mohan, Chief Engineer (Administration), Sonbhadra on 01.10.2020 is enclosed as **Appendix- XXIV**.
- i) The Report regarding steps being taken for reduction of coal transportation of Khadia Project through road mode submitted by CGM, Khadia Project, NCL is received on 05.10.2020 and enclosed as **Appendix- XXV**.
- j) The Report regarding overflow site of fly ash was inspected by RO, Sonbhadra. The inspection of the main ash dam at Belvadah of Anpara Thermal Project was done by the officers on 29.09.2020 as per the direction given by Oversight Committee. The detailed inspection report of Ash Dyke is enclosed as **Appendix- XXVI**.
- k) The inspection report of M/s Hindalco Industries Ltd. regarding zero discharge was submitted by Regional Officer, UPPCB, Sonbhadra and the detailed inspection report is enclosed as **Appendix- XXVII**.
- l) The copy of the **Civil Appeal Diary no. 15397/ 2020** to grant stay against EC in Hon'ble Supreme court is enclosed as **Appendix- XXVIII**.

9. **Minutes of the meeting regarding Stone Quarry on 30.09.2020 under the Chairmanship of DM, Sonbhadra** with representatives of M/s NTPC Ltd., Shaktinagar; M/s

NTPC Ltd., Rihand Nagar; M/s Hindalco Industries Ltd.; M/s Hindalco Industries Ltd. (Power Division), Renusagar; M/s UPRVUNL, Anpara; M/s UPRVUNL Obra; M/s Lanco-Anpara, Sonbhadra **(Report received on 14.10.2020) (Refer Appendix- XXIX)**

- a) It was informed by DM, Sonbhadra that in the meeting held on 25.09.2020, the Oversight Committee had directed to safely dispose off the flyash originating from thermal plants in the Stone Quarry.
- b) It was directed to the District Officer to appraise the actual position on the subject related to the issue of NOC from Divisional Forest Officer, Obra, Sonbhadra. The Divisional Forest Officer, Obra informed that the industry does not require NOC of Forest Department to safely dispose off flyash on their own land as per SOP by CPCB.
- c) Representatives from different Thermal Power Plants present in the meeting requested DM, Sonbhadra to allot stone quarries for disposal of flyash. M/s NTPC Ltd., Rihand Nagar; M/s Hindalco Industries Ltd., Renukoot, Sonbhadra submitted a report to the District Magistrate, Sonbhadra in writing for allocation of stone quarry. District Magistrate, Sonbhadra informed that UPRVUNL Obra has been allotted 4 stone quarries for the safe disposal of flyash.
- d) Mr. Anil Singh, AGM (Env.) M/s Hindalco Industries Ltd., Renukoot, Sonbhadra informed that he has sought permission for conducting study work regarding disposal of red mud from the Stone Quarry located in the boundary of the Forest Department. The Divisional Forest Officer, Obra was informed that the study work can be done without causing any damage to the forest wealth, but no change in the basic structure of the forest land will be allowed.
- e) District Magistrate, Sonbhadra suggested that the stone quarry outside the land of the Forest Department can be used for flyash disposal. It was informed by the Divisional Forest Officer, Obra that it is mandatory to obtain permission under the provisions of the Forest (Conservation) Act, 1980 before disposal of flyash in the stone quarries available on the land owned by Forest Department. District Magistrate, Sonbhadra sought information from the mining officer about the stone quarries currently available outside the forest department land. It was informed by the District Mines Officer that there are 05 such mines, which are within 100 meters of the forest department land but no mining work is possible on them in future. District Magistrate, Sonbhadra directed the Mining Officer to survey all such stone quarries and submit a

list within one week, so that the allotment of the said stone quarries can be done for flyash disposal to the entrepreneurs. After receiving the list of the above 05 stone quarries from the Mining Department, the District Magistrate, Sonbhadra gave oral approval. The details are presented below:

Sl. No.	Name of the Industry	No. of Stone Quarries allotted to the Industry
1	M/s NTPC Ltd., Shaktinagar, Sonbhadra	02
2	M/s NTPC Ltd., Rihand Nagar, Sonbhadra	01
3	M/s Hindalco Industries Ltd. (Power Division), Renusagar, Sonbhadra	01
4	M/s Lanco- Anpara, Sonbhadra	01

- f) The District Magistrate, Sonbhadra also informed that after getting proper information about other stone quarries, allotment will be done to the industries. Considering the process of issuing NOC for the allocation of stone quarries DM, Sonbhadra directed representatives from Forest department, Mining department and Deputy Collector, Obra to take joint action. This would facilitate the entrepreneurs to obtain NOC from all the three departments as per **Single Window System**.
- g) The Divisional Forest Officer, Obra apprised that under the provisions of the Forest (Conservation) Act, 1980, the stone quarries available on the land of the Forest Department were allocated for disposal of flyash. Entrepreneurs were not interested in the said case.
- h) Mr. A. K. Rai, Executive Engineer, UPRVUNL Anpara, Sonbhadra informed that the stone quarry made from mining work done at the time of construction of Rihand Dam can be used for disposal of flyash and the said stone quarry is at a short distance from Anpara, Sonbhadra to whom it is allotted to be done. It was informed by the Divisional Forest Officer, Obra that the said stone quarry is on the land of the Forest Department. Therefore, its allocation can be done as per the procedure laid down in the Forest (Conservation) Act, 1980.
- i) It was informed by the Regional Officer that the CPCB's letter dated 12.05.2020 promulgated CTO mechanism for permission for the Stone Quarry, a copy of which will be sent to all entrepreneurs by e-mail.

j) District Magistrate, Sonbhadra directed the representatives of all industries to submit a detailed description of the drinking water supply being made in the area under CSR in compliance with the instructions given by the Oversight Committee regarding drinking water supply. The representative of M/s Hindalco Industries Ltd., Renukoot (Mr. Anil Singh) informed that R.O. plants were set up by the industries for supply of drinking water, but keeping in view the problem of disposal of rejected water of R. O. plant; entrepreneurs were required to supply drinking water through tankers as per earlier directives. Currently, this system is being followed.

Based on the above reports, the present compliance status in **OA No. 164/2018** is as follows:

S.No.	Directions by Hon'ble NGT	Compliance Status (Yes/No)	Current Status																								
1.	Flyash Disposal as per order dated 12.02.2020																										
1.a	Status of steps taken by the TPPs for scientific disposal of fly ash in accordance with the statutory notification issued by the MoEF &CC under the provisions of EP Act requiring 100% utilization and disposal of fly ash.	Partially Complied	<p>1. M/s NTPC Rihandnagar (Refer Appendix-XIX) had utilized 31.04% fly ash in year 2017-18, 37.1% in year 2018-19 & 41.76% in year 2019-20 up to May, 2019.</p> <p>➤ The ash generation and ash utilization at NTPC Rihand is as following (Refer Appendix-XIX):</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Ash Generated (MT)</th> <th>Ash Utilized (MT)</th> <th>Ash Utilization %</th> </tr> </thead> <tbody> <tr> <td>2016-2017</td> <td>4854028</td> <td>750825</td> <td>15.47 %</td> </tr> <tr> <td>2017-2018</td> <td>4345599</td> <td>1348941</td> <td>31.04 %</td> </tr> <tr> <td>2018-2019</td> <td>3515893</td> <td>1304383</td> <td>37.10 %</td> </tr> <tr> <td>2019-2020</td> <td>3901727</td> <td>1684947.10</td> <td>43.18 %</td> </tr> <tr> <td>April, 2020 to Aug., 2020</td> <td>1792562</td> <td>1007699</td> <td>56.22 %</td> </tr> </tbody> </table>	Year	Ash Generated (MT)	Ash Utilized (MT)	Ash Utilization %	2016-2017	4854028	750825	15.47 %	2017-2018	4345599	1348941	31.04 %	2018-2019	3515893	1304383	37.10 %	2019-2020	3901727	1684947.10	43.18 %	April, 2020 to Aug., 2020	1792562	1007699	56.22 %
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April, 2020 to Aug., 2020	1792562	1007699	56.22 %																								

		<p>Following actions are being taken at NTPC Rihand for enhancing ash utilization:</p> <p>i. NTPC Rihand has installed 04 nos. of semi-automatic flyash brick plants and 02 nos. of fully automatic flyash brick plants. Presently, approximately 26000 flyash bricks/day are being manufactured at NTPC Rihand. These bricks are fully utilized in plant, townships, ash dykes and CSR works undertaken by NTPC Rihand. All buildings of NTPC Rihand are being constructed using flyash bricks only.</p> <p>➤ Procurement of 03 nos. of BTAP rakes: To promote offtake of dry flyash, NTPC Rihand has procured three BTAP rakes for transportation of flyash in bulk quantity by cement industries and other potential users in economical and environment friendly manner. 1st rake comprising of 53 BTAP wagons has been delivered by the manufacturer in July, 2020. MoU had been signed with M/S Reliance Cement (RCCPL) on 12.06.2020 for supply of approximately 1.2 lac MT flyash per annum through BTAP rakes. Supply of flyash through BTAP is expected from 15.10.2020. Delivery of 2nd and 3rd BTAP rake is expected by 31.12.2020 & 31.03.2021 respectively. For use of Fly Ash in Cement Industries/ Asbestos Industries at Satna and Katani regions, rates of incentive are under approval.</p> <p>ii. Supply of pond ash to road construction projects: Following initiatives have been taken for utilization of pond ash of Rihand in road construction works. The entire cost of ash transportation is borne by NTPC Rihand for road projects.</p> <ul style="list-style-type: none"> • MoU has been signed with NHAI for supply of 02 lac CuM, of pond ash to NH-56 bypass road at Varanasi. Supply of flyash under MoU has been started from 26.06.2020. • Approval has been obtained from NHAI
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		<p>for supply of 15.5 lac CuM, of pond ash to NHAI road projects at Varanasi in NH-29 & NH-56. Contract proposals for ash transportation is under tendering process..</p> <ul style="list-style-type: none"> • Contract awarded for supply of 0.5 lac CuM, of pond ash to PWD Chhattisgarh for its utilization in construction of bypass road near Wadrafnagar. <p>iii. Pilot project for transportation of wet flyash in BOXN railway wagons: In order to establish a new avenue of ash utilization, NTPC Rihand has given permission to M/S ACC Ltd. for transportation of flyash in 10 rakes of tarpaulin covered BOXN wagons. This initiative of NTPC Rihand is first of its kind and 02 rakes of flyash were dispatched on 10.08.2020 & 13.08.2020. Approx. 35000 MT of ash utilization is envisaged in above pilot project. Based on the outcome of pilot project, regular permission will be given to cement industries for transportation of wet flyash through BOXN wagons.</p> <p>iv. Providing flyash to brick manufacturer upto 300 kms radius: To promote manufacturing and utilization of flyash bricks in the region, NTPC Rihand has already moved proposals for supply of flyash to brick manufacturer located within 300 kms from NTPC Rihand. Above proposal is under re-tendering.</p> <p>v. Low lying area filling using pond ash: As per the provision of Flyash Notification of MOEF & CC, NTPC Rihand is undertaking the works of low lying area filling on NTPC land as well as Private Land using pond ash and making earth cover on ash filled area. In order to enhance flyash utilization levels, NTPC Rihand has proposed for low lying area filling upto the distance of 100 kms from the Plant with entire cost of ash filling to be borne by NTPC Rihand. It was further submitted that District Administration may also provide the list of wasteland available</p>
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		<p>within 100 kms of NTPC Rihand.</p> <p>vi.Backfilling of abandoned stone quarries: In compliance of directives of Oversight Committee, an application dated 11.09.2019 submitted to Hon'ble District Collector, Sonbhadra for allocation of abandoned stone quarries of Dalla area. Follow up meeting was held with District Collector on 20.09.2019 and 27.02.2020 regarding abandoned stone quarry of NTPC Rihand. No stone quarry has been allocated to NTPC Rihand till date. Hence, it is requested once again to allocate abandoned stone quarries of Dalla region for its backfilling with pond ash at the cost of NTPC Rihand.</p> <p>vii.Development of Ash Park at Varanasi: NTPC Rihand has developed an Ash Park at Varanasi from where flyash is supplied in 40 kgs bag to Ash Bricks manufacturing units of Varanasi region so that use of flyash bricks can be promoted.. First lot of flyash packed in bags was dispatched to Varanasi on 06.06.2019 and Ash Park Depot-Varanasi has been formally inaugurated and made functional on 13.06.2019. However, no substantial flyash offtake from the ash brick manufacturers of Varanasi region due to which it was forced to close the Ash Park Contract.</p> <p>II. <u>NTPC Shaktinagar</u> had utilized 30.38% Fly Ash in year 2017-18, 35.21% Fly Ash in year 2018-19 & 39.24% Fly Ash in Year 2019-20 & 17.45% fly ash in year 2020-21 (till Aug.) Generation: 32.06 LMT (19-20) Utilisation : 12.58 LMT (19-20)</p> <p>➤ NTPC Shaktinagar started supply of pond ash to NHAI road project NH-7 (between Varanasi to Hanumana) and cost borne by NTPC. Ash bricks being manufactured with 05 ash brick machines. Remaining ash is being disposed in ash dyke in scientific manner in wet form.</p>
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➤ NTPC Shaktinagar has installed five ash brick manufacturing plants in its own premises. Contract is under tendering process for two more ash brick plants. **(Refer Appendix- XX)**

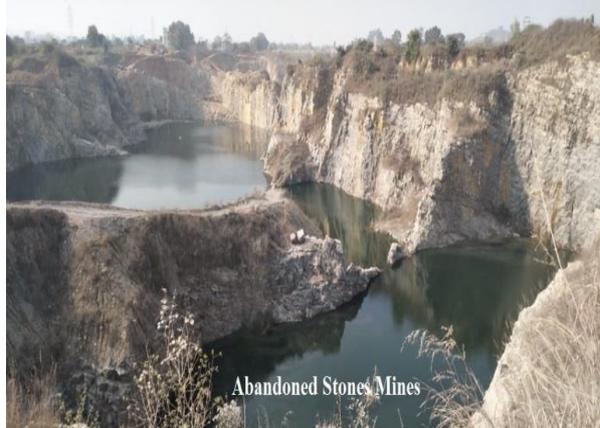
III. M/s UPRVNL, Anpara has utilized fly ash about 5.59% in year 2018-19. The industry has utilized fly ash in the Month of April, 2019 about 18.33%, May, 2019 about 4.19%, June, 2019 is 3.24%, July, 2019 is 2.73%, August, 2019 is 3.23%, September, 2019 is 1.603%, Oct., 2019 is 1.73%, Nov., 2019 is 2.43%, June, 2020 is 38.1%, July, 2020 is 29.9% and August, 2020 is 24.98% as per information given by the industry.

ANPARA TPP (Appendix-XVII)

Year	Total Ash Generated Lac MT	Total Ash Utilized Lac MT	Remaining ash disposed in ash pond	Percentage Ash Utilization
2015-16	38.67	0.12	38.55	0.32%
2016-17	40.30	0.30	40	0.75%
2017-18	42.13	0.73	41.4	1.74%
2018-19	43.99	2.23	41.76	5.07%
2019-20	36.24	1.41	34.83	3.69%
2020-21 (up to June, 2020)	8.63	3.35	5.28	38.81%
2020-21 (up to July,	11.79	3.45	8.34	29.90%

			2020)				
			2020-21 (up to Aug, 2020)	14.58	3.59	10.98	24.98 %
		<p>i. Average ash generation during 2019-20 is about 36.24 Lac ton i.e. approx. 9928 MT/day. (3.02 Lac MT/month)</p> <p>ii. Average annual utilization of fly ash in year 2019-20 is 1.41 Lac Ton</p> <p>iii. Remaining ash is being safely disposed in the Ash dyke in the form of Ash slurry.</p> <p>Apart from above it is informed that Anpara TPS is situated in power hub area where 20,000MW (approx.) electricity is being generated through different Power Stations resulting in huge production of ash. At present in the vicinity of Anpara Thermal Power Station there is no cement factory as well as no major road project running due to which the fly ash utilization from Anpara TPS is on lower side (Refer Appendix- XVII). However, following efforts have been made by Anpara TPP for achieving 100 % fly ash utilization:-</p> <p>i. After getting NOC from Mining department, UPPCB, Forest department and Revenue department tender be filled for fly ash filling in the stone quarries and that area may be developed.</p> <p>ii. Ash Utilization in stone quarry of Anpara TPS: District Administration has assured to provide 07 nos. abandoned stone quarries in Billi Markundi area (8.4 Acre) out of which 02 mines is undisputed in which UNL in which UNL will start filling ash after allotment. In these two mines approximately 2.0 Lac MT ash can be fill. Other 05 mines has dispute of ownership between Revenue department</p>					

and Forest department after resolving the dispute UPRVUNL will fill the ash approx. 5.0 Lac MT in these mines **(Refer Appendix- XVII).**



- 04 nos. abandoned stone quarries in Dalla-Bari area have been identified for filling of ash. Clearances for above stone quarries have been obtained from Revenue, Forest and Mining Department. For obtaining NOC from UPPCB an online application has been filed on 03.09.2020. After getting the clearances from UPPCB, the Anpara and Obra TPS will start filling of ash in these mines.

Comments by UPPCB: District Magistrate, Sonbhadra has allotted 07 stone quarries to M/s UPRVUNL Anpara and Obra for utilization of fly ash. There was dispute between forest department and revenue department of title of abandoned mines, which have been resolve.

iii. Ash filing in Low lying area- of Anpara TPS: A low lying area was identified in Dibulganj village near Anpara TPS to dispose off about 7.0 Lac MT ash for which online application was filed to UPPCB in March, 2020 for obtaining NOC. The same is pending for approval at the end of UPPCB. **(Refer Appendix- XVII)**

		<p>iv. They have established a fly ash park at Varanasi where they transport fly ash through railway rakes.</p> <p>v. For cement industries and asbestos industries at Satna and Katni, they are approving incentive packages. There are three Ambient Air Quality Monitoring Systems already installed.</p> <p>vi. Ash mound should also be accepted as a method of fly ash utilisation. National Highway Authority of India (NHAI) has agreed to utilise their fly ash and they are supplying it free of cost upto the range of 300 kms.</p> <p>vii. In Anpara, there are 38% of fly ash utilization as compared to 7.7% last year. There are seven abandoned stone quarries and started filling fly ash. Regarding overflow from Anpara ash pond towards Rihand reservoir, there are planning to increase the height of fly ash dyke and also planning to divert Morchanullah so that there is no overflow from fly ash dyke.</p> <p>Comments by UPPCB: M/s UPRVUNL Anpara, Sonbhadra has applied one application for disposal of fly ash for reclamation of low lying area and M/s UPRVUNL Obra, Sonbhadra have applied 03 applications for disposal for fly ash for reclamation of low lying area. All applications are under consideration.</p> <p><u>Other avenues for ash disposal/utilization- of Anpara TPS (Refer Appendix- XVII)</u></p> <p>i. Anpara TPS is also initiating proposal for developing ash mounds in its vicinity for</p>
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		<p>landscaping work.</p> <p>ii. Anpara TPS has invited Expression of Interest in July, 2020 for lifting of fly ash from the users.</p> <p>iii. The capacity DFAES of BTPS is to be enhanced along with augmentation with ATPS.</p> <p>iv. About 3.0 Lac MT Pond Ash has been utilized in raising of ash dyke and nearly 7.0 Lac MT pond ash shall be utilized within 6 months.</p> <p>v. Selling of Cenosphere from ash pond is being done and about 150 MT Cenosphere shall be collected in one year.</p> <p>vi. Anpara TPS is situated in power hub area where 20,000MW (approximately) electricity is being generated resulting in huge quantity of ash being produced. At present in the vicinity of Anpara Thermal Power Project there is no cement factory and no major road project is under construction due to which the fly ash utilization from Anpara TPS is poor.</p> <p>Anpara TPS will go for construction of ash mounds nearby the ash dyke area.</p> <p><u>IV. M/s Hindalco Industries Ltd. Renukoot and Renusagar, Sonbhadra</u> utilized about 100% fly ash in financial year 2019-20. Currently, fly ash generation is 1280536 TPA and bottom ash is 320134 TPA for FY20. This quantity may vary depending on the coal quality and running of units. The details of current flyash generation is as under:</p> <p>a) Flyash is being utilized by Cement making companies (M/S Jaypee Cement, M/S Prism Cement, M/S Shree Cement, M/S Eco Cement, M/S Ultratech Cement, Dalla; M/S Birla Corporation and some other cement making companies) in closed bulkers/ capsules to avoid any environmental pollution.</p> <p>b) Pond ash is being supplied to Brick-kiln</p>
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		<p>making Companies (M/S Suresh Enterprises, M/S Power Engg. Associates & M/S Manish Enterprises) to use it in place of sand for making red bricks.</p> <p>c) Fly ash and Bottom ash is also utilized in Brick making plant for making flyash bricks.</p> <p>d) Enhancement of capacity of own brick making plant from 30,000 to 60,000 bricks per day.</p> <p>e) Supply of Fly ash and Bottom ash to external Brick making plant in the surrounding area.</p> <p>f) Fly ash and Bottom ash is also being utilized in Techplast Plant for making Ready mix plaster materials.</p> <p>g) Flyash is being supplied and used by Cement sheet making Companies (M/S Ramco Industries, M/S UAL, Jaunpur & M/S Hyderabad Industries) and also used internally in Cement plastering on a regular basis for civil jobs.</p> <p>h) Flyash is also being supplied to Road Projects- Rewa to Varanasi and Purvanchal Expressway projects.</p> <p>Actions taken by Hindalco Industries Ltd. Renukoot and Renusagar to increase utilization of fly ash in the Future:</p> <p>i. Enhanced capacity of own brick making plant from 60,000 bricks per day.</p> <p>ii. Enhance the Fly ash and Bottom ash supply quantity to external Brick making plant.</p> <p>iii. Use in reclamation of low lying areas for which permission shall be granted by the UPPCB.</p> <p>iv. Use Fly ash to backfill mines/ stone quarry for which application has been made to the Department of Mines to carry out feasibility study. Steps will be taken upon receipt of due approvals.</p> <p>➤ Scientific Management of Ash Dyke:</p> <ul style="list-style-type: none"> • Ash Dyke at Bichari is around 8 kms from Renusagar Power Plant which was constructed in the year 2004 as per the approved design of CBRI, Roorkee and is
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		<p>maintained strictly as per the standard operating procedure with round the clock monitoring.</p> <ul style="list-style-type: none"> • The stability analysis of the Ash Dyke is being constructed by reputed agencies i.e. CBRI, Roorkee/ IIT BHU/ MIT Moradabad. • In compliance with the conditions of Consent to Operate granted to us by the UPPCB and the industries have a robust process of storing the fly ash in ash dyke which is monitored on a regular basis. <p>The industries are compelled to acquire the land, create scientifically designed ash dykes and continue to store. There are several productive uses of fly ash including building and construction, highways etc. (Refer Appendix- XXX)</p> <p>V. M/s Lanco Anpara Power Ltd., Anpara, Sonbhadra utilized 28.39% in financial year 2019-20 and 27.07% till June, 2020. The industry also approach to NCL and NHA1 for fly ash utilization. (Refer Appendix- XXI)</p> <p>The ash generation and ash utilization at M/s Lanco Anpara-C TPS</p> <table border="1" data-bbox="798 1205 1428 1697"> <thead> <tr> <th>Year</th> <th>Ash Generation (MT)</th> <th>Fly Ash Generation (MT)</th> <th>Fly Ash Utilization (MT)</th> <th>% Ash Utilization</th> <th>% Fly Ash Utilization</th> </tr> </thead> <tbody> <tr> <td>2019 - 2020</td> <td>1577909</td> <td>1262327</td> <td>358340</td> <td>22.71</td> <td>28.39</td> </tr> <tr> <td>2020 - 2021</td> <td>434104</td> <td>347283</td> <td>94000</td> <td>21.65</td> <td>27.07</td> </tr> </tbody> </table> <p>Hon'ble NGT directed that the fly ash disposal in mounds and filling of ash in abandoned mines should be undertaken as per the CPCB guidelines. Anpara TPS may stop ash pond overflow discharge into Rihand reservoir to the extent that the work remains unexecuted. For utilisation of 56%</p>	Year	Ash Generation (MT)	Fly Ash Generation (MT)	Fly Ash Utilization (MT)	% Ash Utilization	% Fly Ash Utilization	2019 - 2020	1577909	1262327	358340	22.71	28.39	2020 - 2021	434104	347283	94000	21.65	27.07
Year	Ash Generation (MT)	Fly Ash Generation (MT)	Fly Ash Utilization (MT)	% Ash Utilization	% Fly Ash Utilization															
2019 - 2020	1577909	1262327	358340	22.71	28.39															
2020 - 2021	434104	347283	94000	21.65	27.07															

of fly ash, there are four semi-automatic fly ash brick plants and two fully automatic fly ash brick plants and they manufacture 30000 to 40000 bricks in a day.

VI. M/s Obra Thermal Power Plants, Obra, Sonbhadra (Refer Appendix- XVIII) informed that average utilization of fly ash through M/s Ultratech Cement Ltd., Dala, Sonbhadra is about 12000 MT/Month. Remaining ash is being safely disposed in the ash dyke in the form of ash slurry. Moreover, MoU for lifting 4500 MT/Day fly ash is almost in final stage with M/S ACC Ltd. Industry has also informed that average ash generation during last 04 months is about 1,14000 MT/month, about 8.6 % fly ash is being supplied to M/s Ultratech Cement Ltd., Dala, Sonbhadra.

The ash utilization of Obra TPS is as per table below:

Year	Total Ash Generated Lac MT	Total Ash Utilized Lac MT	Remaining ash disposed in ash pond	Percentage Ash Utilization
2015-16	14.77	2.92	11.85	19.77%
2016-17	13.85	3.83	10.02	27.66%
2017-18	13.26	2.25	11.01	16.97%
2018-19	7.80	0.90	6.9	11.58%
2019-20	11.14	0.86	10.28	7.71%
2020-21 (upto June, 2020)	2.99	0.18	2.81	6.02%
2020-21 (upto	5.687	0.30	5.387	5.28%

			<p>Aug., 2020)</p>				
<p>i. Presently only 4 units of 200 MW of Obra BTPS are under operation.</p> <p>ii. Average ash generation during last 4 months has been 3800 MT/day. (114000 MT/month)</p> <p>iii. Average utilization of fly ash through UltraTech cement factory is 400 MT/day (12000 MT/month)</p> <p>iv. Average utilization through Brick manufacturer is 4 MT/day (120 MT/month)</p> <p>v. Remaining ash is being safely disposed in the Ash dyke in the form of Ash slurry.</p> <p>Following efforts have been made by Obra TPP for achieving 100 % fly ash utilization:-</p> <ul style="list-style-type: none"> • MoU for lifting 4500 MT/day fly ash is almost in final stage with M/s ACC Limited. After agreement, ash lifting will be done from 5X200MW Obra BTPS (4 Units of which are under operation) as well as from 2X660 MW Obra C.. M/s ACC Limited is going to establish its cement plant at Salai Banwa which is approx. 8-10 km away from Obra Thermal Power Station. • District Administration had marked 7 nos. abandoned stone quarries in Billi Markundi area (Area 8.4 Acre) out of which 4 mines of Area 3.6 Acre have been allotted by Mining department and NOC from Revenue department and Forest department has been obtained for filling dry fly ash/ Pond ash. For obtaining NOC from UPPCB an online application was applied through Nivesh Mitra on 3 Sep 2020, in which UNL will start filling ash after NOC and tendering process. In these 4 mines approximately 3.0 Lac MT ash can be filled. • District Administration has provided a low lying area near Lodhi Toll Plaza near Circuit House for reclamation and development by filling fly ash. For obtaining 							

			<p>NOC from UPPCB an online application was applied through Nivesh Mitra on 6th Aug., 2020 and NOC will be obtained soon. After getting NOC from UPPCB, tendering process for filling ash will start.</p> <ul style="list-style-type: none"> • Obra Colony has low lying area in Sector 2 and 3. Approx 2.4 Lakh cum ash filling will be done in first phase. For obtaining NOC from UPPCB an online application was applied through Nivesh Mitra on 5 Aug 2020 and the same will be obtained soon. After getting NOC and tendering process for backfilling this area with about 5-10 Lakh cum ash shall be done. <p>Action Taken by CPCB: CPCB vide letter dated 09.09.2020 requested UPPCB & MPPCB to take appropriate action for ensuring compliance of these directions of Hon'ble NGT by the concerned power plants.</p> <p>Note: Refer Appendix- XIII, XIV, XVII, XVIII, XXX</p>
1.b	Status of EC imposed or realized on the non-compliance TPPs	Partially Complied	<p>Details of EC Imposed on TPPs:-</p> <ul style="list-style-type: none"> ▪ <u>M/s NTPC Rihandnagar (Stage-I, II, III), Sonbhadra (U.P.)</u> <p>EC of Rs 45,90,000/- imposed on NTPC Rihand due to non-compliance of Air (Prevention & Control of Pollution) Act, 1981 & Water (Prevention & Control of Pollution) Act, 1974.</p> <p>With reference to the NGT order dated 12.02.2020 in OA No. 117/2014 in the matter of Shri Shatanu Sharma Vs. Union of India & Ors., CPCB vide letter dated 02.07.2020 has imposed EC of Rs 15.39 crores. In this regard, it is submitted that NTPC Ltd. has filed Civil Appeal No. 2713/2020 in Hon'ble Supreme Court against the order dated 12.02.2020 of Hon'ble NGT. Hon'ble Supreme Court vide order dated 21.07.2020 has granted stay for submission of EC as directed by Hon'ble NGT. (Refer Appendix- XIX)</p>

		<ul style="list-style-type: none"> ▪ <u>M/s NTPC Ltd. Shaktinagar, Sonbhadra</u> EC of Rs 27,00,000/- imposed due to non-compliance of Air (Prevention & Control of Pollution) Act, 1981. A levy of Rs. 10.76 crore has been imposed as EC and CPCB have asked to submit vide letter dated 02.07.2020. NTPC raised an appeal against which stay has been granted by Hon'ble Supreme Court vide order dtd. 21.7.2020. (Refer Appendix- XX) ▪ <u>M/s UPRVUNL Anpara-A, B, D, Anpara, Sonbhadra (Refer Appendix- XVII)</u> (a) EC of Rs 6,11,40,000/- imposed due to 1986, Air (Prevention & Control of Pollution) Act, 1981 & Water (Prevention & Control of Pollution) Act, 1974 (b) On the basis of inspection made by Hon'ble Chairman and Member of Oversight Committee dated 15.12.2019, show cause notice was issued on 16.01.2020 for imposing Environmental Compensation of Rs 41,10,000 to Thermal Power Plants. ▪ <u>M/s Lanco Anpara Power limited, Anpara, Sonbhadra</u> EC of CPCB share of Rs 14,22,000/- (Rs. Fourteen Lakhs and Twenty Two Thousand Only) imposed due to non-compliance of Water (Prevention & Control of Pollution) Act, 1974 on 02.01.2020. The details are enclosed as Appendix- XXXI. ▪ <u>M/s UPRVUNL Obra Unit-B, Sonbhadra</u> EC of Rs 6,11,40,000/- imposed due to non-compliance of EPA 1986, Air (Prevention & Control of Pollution) Act, 1981 & Water (Prevention & Control of Pollution) Act, 1974. ▪ <u>M/s Hindalco Industries Ltd. (Power division) Renuagar, Sonbhadra:</u> Utilization/disposal of fly ash for reclamation of Low Lying area and Stowing/ back filling of abandoned Mines/ Quarries is under process. M/s Hindalco Industries Ltd. (Aluminum division), Renukoot & M/s UPRVUNL Anpara,
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			Sonbhadra have applied for CTE from UPPCB for filling of Low Lying Area.				
			Note: Refer Appendix- XIII.				
1.c	CPCB may levy Environmental Compensation in accordance with the formula referred to above w.r.t. individual in accordance with law	Partially Complied	Action taken by CPCB: In compliance of the Hon'ble NGT order dated 12.02.2020, CPCB computed the amount of Environmental Compensation for individual TPPs for non-utilization of 100% fly ash for years 2018 (2018-19) and 2019 (2019-20), respectively, and informed EC amount to the concerned TPPs vide letter dated 02.07.2020. The details of Environmental Compensation amount computed w.r.t. the 05 TPPs located in Sonbhadra, U.P. namely NTPC Singrauli STPS, NTPC Rihand STPS, UPRVUNL Anpara A, B & D TPS, Lanco Anpara C TPS and UPRVUNL Obra TPS are presented below:				
Name of TPPs	Capacity 2018-19 (MW)	% Ash Utilization in 2018-19	EC for 2018 (2018-19), (in Rs.)	Capacity 2019-20 (MW)	% Ash Utilization in 2019-20	EC for 2019 (2019-20), (in Rs.)	Total EC for 2018 (2018-19) & 2019 (2019-20), (in Rs.)
NTPC Singrauli STPS	2000	35.21	5,55,37,327	2000	39.24	5,20,78,177	10,76,15,504
UPRVUNL Anpara A, B & D TPS	2630	5.29	10,67,54,945	2630	3.90	10,83,17,861	21,50,72,805
NTPC Rihand STPS	3000	37.10	8,08,71,807	3000	43.18	7,30,48,312	15,39,20,119
UPRVUNL Obra TPS	1000	11.59	3,78,90,660	1000	7.94	3,94,54,554	7,73,45,215
Lanco Anpara C TPS	1200	22.03	4,00,99,031	1200	22.71	3,97,49,245	7,98,48,276
1.d	Implementation of CPCB Guidelines of May, 2019 for Utilization/Disposal of Fly Ash for Reclamation of Low Lying Areas and in Stowing/Back filling of Abandoned Mines/Quarries	Partially Complied	<ul style="list-style-type: none"> ▪ NTPC approached Hon'ble Supreme Court against the imposition of EC on its Plants and stay order has been granted to all. Several other plants, including UPRVNL also approached Supreme Court. ▪ <u>M/s NTPC Anpara</u> <p>A low lying area was identified in Dibulganj village near Anpara TPS to dispose off about 7.0 lac MT ash for which online application was filed in the month of March, 2020 to</p>				

		<p>UPPCB for obtaining NOC. The same is pending for approval from UPPCB. (Refer Appendix- XVII)</p> <p>District Administration has assured to provide 07 nos. abandoned stone quarries/mines in Billi Markundi, Sonbhadra area (Area 8.4 Acre) out of which 04 mines are undisputed in which UNL will start filling ash after allotment. In these four mines approximately 4.0 Lac MT ash can be filled. Other 03 mines has dispute of ownership between Revenue department and Forest department after resolving the dispute UPRVUNL will fill the ash approx. 3.0 Lac MT in these mines.</p> <p>▪ <u>M/s NTPC Obra</u></p> <p>According to CPCB Guidelines NOC from Concerned departments i.e. Mining, Forest and Revenue had been obtained for Abandoned Stone mines and an online application had been applied through Nivesh Mitra on 3 Sep 2020. For filling ash in low lying area at location near Lodhi Toll plaza and low lying area of Obra Sector 2 and 3 an online application had been applied through Nivesh Mitra on 6 Aug 2020 and 5 Aug 2020 respectively. (Refer Appendix- XVIII)</p> <p>▪ <u>M/s NTPC Rihand</u></p> <p>It is submitted that an application submitted to Hon'ble District Collector, Sonbhadra on 11.09.2020 for allocation of abandoned stone quarries of Dalla region. However, no abandoned mines were allocated to NTPC Rihand for stowing/ backfilling with pond ash/ flyash. (Refer Appendix- XIX)</p> <p>▪ <u>M/s NTPC Shaktinagar</u></p> <p>Mine or voids filling work have not materialised. Pond ash being utilised in road construction work NHAI (Varanasi to Hanuman road part). (Refer Appendix- XX)</p> <p>➤ <u>M/s Hindalco Industries Ltd., Renukoot, Sonbhadra</u></p>
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			<p>An abandoned mine in a forest land means that the land is devoid of any forest growth while the title of the land in the revenue records is forest. In this regard, the industry seeking permission to backfill abandoned mines; put a top soil cover, plant saplings for future, which would result in creation of a forest. There is no requirement of deforestation for such purpose and it does not attract the provisions of Forest (Conservation) Act. The Government could consider issuing only permission to carry out the backfilling process under due supervision of the UPPCB/ Forest Department. (Refer Appendix-XXX)</p> <p>Comments by UPPCB: M/s UPRVUNL Anpara, Sonbhadra and M/s Hindalco Industries have applied one application each for disposal of fly ash for reclamation of low lying area. Similarly M/s UPRVUNL Obra, Sonbhadra have applied 03 applications for disposal of fly ash for reclamation of low lying area. All applications are under consideration. (Refer Appendix- XIII).</p> <p>Comments by CPCB: MoEF&CC issued Office Memorandum dated 28.08.2019 to all SPCBs/PCCs regarding “Guidelines for disposal/utilisation of Fly Ash for reclamation of Low Lying Areas and in stowing of Abandoned mines/ Quarries” (Refer Appendix- XIV).</p>
1.e	Task Force of Ministry of Power and Ministry of Coal may recommend list of abandoned mines/quarries	-	-
1.f	Implementation of CPCB Action Plan	Partially Complied	Action Plan has been submitted to joint committee. Utilization/disposal of fly ash for reclamation of Low Lying area and in Stowing/ Back filling of abandoned Mines/ Quarries are under process. M/s Hindalco Industries Ltd. (Aluminum division), Renukoot & M/s UPRVUNL Anpara, Sonbhadra have applied for CTE from UPPCB, for filling of Low

		<p>Lying Area which is under process.</p> <ul style="list-style-type: none"> ➤ <u>M/s NTPC Anpara</u> ➤ NOC from UPPCB for filling of ash in abandoned stone quarries is still awaited. After getting the approval from UPPCB the filling of ash shall be done in accordance with guideline issued by CPCB in March, 2019. (Refer Appendix- XVII). ➤ A CTE application has been submitted for scientifically disposed of flyash generated by the industry in the low-lying area of Arazi no. 16238, Dibulganj, Sonbhadra. According to RO, the proposed site is located near Rihand Reservoir. The industry has been directed for online clarification to provide the Irrigation Department information regarding the distance of the proposed site from HFL, which is still awaited. (Refer Appendix- XIII) ➤ The Anpara Action Plan is being implemented and is enclosed as Appendix- XIII. ➤ <u>M/s NTPC Obra</u> <p>NOC from UPPCB for filling of ash in abandoned stone quarries/ Lodhi Toll plaza/ low lying area of Obra Sector 2 and 3 is still awaited. After getting the approval from UPPCB the filling of ash shall be done in accordance with guideline issued by CPCB in March 2019. (Refer Appendix- XVIII)</p> <p>For Sector- 2 & 3, the online clarification is to be required for the following points:</p> <ul style="list-style-type: none"> a) Industry has not uploaded the land use certificate issued by competent authority. b) As per Regional Office Report, Renuka River is situated as a distance of approximately 400 meter in North-west direction from the proposed site. Report regarding HFL of water body of irrigation department is not submitted by the industry. c) Industry has not submitted the detail
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		<p>design drawing and Technical Report for disposal of dry ash at proposed site.</p> <p>d) The technical feasibility report of reputed technical institution is required for scientific disposal of dry ash as per the MOEF&CC Notification dated 28.08.2020 regarding ash disposal.</p> <p>e) Detailed proposal of APCS for controlling emission from the disposal of dry ash in low lying area.</p> <p>On receipt of the above information from the industry, the application can be disposed off on the basis of quality defect. (Refer Appendix- XIII)</p> <p>A CTE application has been submitted by the industry to be scientifically disposed off in the low ash area of Dry ash near Lohari toll plaza and Circuit House, Sonbhadra. The online clarification is to be required for the following points:</p> <ul style="list-style-type: none"> ▪ Proposed site is at a distance of about 500 meter from Bhilahi Dam and about 100 meter from school and forest land. Proponent has not submitted NOC of Forest department and land records. ▪ Technical study report from any reputed organization about safely disposal of flyash is required to ensure that there is no possibility of leaching of the contaminant into the Bhilahi Dam and Ground Water. ▪ Detailed proposal of APCS for controlling emission from the disposal of dry ash in low lying area. ▪ Industry has not uploaded the land use certificate issued by competent authority. ▪ As per Regional Office Report, Bhilahi Reservoir (water body) is situated as a distance of approximately 500 meter in North-west direction from the proposed site. Report regarding HFL of water body of irrigation department is not submitted by the industry. ▪ Industry has not submitted the detail design drawing and Technical Report for disposal of dry ash at proposed site. <p>On receipt of the above information from</p>
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			<p>the industry, the application can be disposed off on the basis of quality defect. (Refer Appendix- XIII)</p> <p>➤ <u>M/s NTPC Rihandnagar</u></p> <p>Ash utilization action plan submitted to joint committee in the subject case is being implemented. (Refer Appendix- XIX)</p> <p>➤ <u>M/s Hindalco Industries Ltd., Renukoot, Sonbhadra</u></p> <p>A CTE application has been submitted for scientific disposal of industry generated dry ash/ bottom ash in low-lying area of Arazi no. 445 & 447 village- Murdha Tehsil- Duddhi, Sonbhadra. According to the RO, NOC has been sent from the Forest Department for disposal of dry ash at the proposed site. The industry has been directed to make online verification of the NOC of the Forest Department, which is currently unavailable.</p> <p>Comments by CPCB: This points pertain to action plans to achieve 100% ash utilization within 2 years i.e. 2019-20 and 2020-21. However NGT also decided to levy penalty after the cut off date 31.12.2017. Accordingly, CPCB computed the EC for two years 2018-19 and 2019-20.(Refer Appendix- XIV)</p> <p>Note: Refer Appendix- XIII, XIV & XIX.</p>
1.g	Status of a joint committee quarterly progress report on recommendation of Expert Committee of Niti Aayog for enhanced utilization of fly ash in various sectors	-	-
1.h	Fly ash disposal in mounds and backfilling of ash in abandoned mines as	Partially Complied	<p>As per information given by the UPPCB, the status is as follows:</p> <p>➤ Information has not been provided by any industry under jurisdiction of UPPCB</p>

	<p>per the CPCB Guidelines and also cost apportionments for desilting and restoration of Rihand reservoir</p>	<p>regarding filling of fly ash in Gorbi mines.</p> <ul style="list-style-type: none"> ➤ District Magistrate, Sonbhadra have allotted 05 abandoned stone quarries to M/S UPRVUNL, Anpara and Obra for filling of fly ash. ➤ Ministry of Water Resources River Development and Ganga Rejuvenation Central Water & Power Research have assess amount of Rs. 69.09 lac for the Hydrographic/ capacity survey of Rihand Reservoir (Note: Refer Appendix- XIII). Latest information is required from EE, Irrigation Department, Rihand Reservoir. <p><u>I. M/s NTPC Anpara</u></p> <p>Following action has been taken for ash disposal in the abandoned mines/stone quarries:</p> <ol style="list-style-type: none"> i. 7 nos. abandoned stone quarries in Billi Markundi area of Sonbhadra have been assured to UNL by District Administration for backfilling and development of area. ii. Total area of 7 mines is 8.4 Acre and average depth is about 20m having capacity of approx 7 lakh cum. iii. NOC from Revenue, Mining, Forest and UPPCB for backfilling is under process. iv. Anpara TPS has initiated proposal for developing ash mounds in its vicinity for landscaping work. v. Anpara TPS has requested IIT-BHU for feasibility study and preparation of DPR for development of ash mound at the vicinity of ash dyke. Work on preparation of design, drawing and estimate of mound is under progress (Refer Appendix- XVII). <p><u>II. M/s NTPC Obra</u></p> <p>District Administration had marked 7 nos. abandoned stone quarries in Billi Markundi area (Area 8.4 Acre) out of which 4 mines of Area 3.6 Acre has been allotted by Mining</p>
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		<p>department and NOC from Revenue department and Forest department has been obtained for filling dry fly ash/Pond Ash. For obtaining NOC from UPPCB an online application was applied through Nivesh Mitra on 3 Sep 2020, in which UNL will start filling ash after NOC and tendering process. In these 4 mines approximately 3.0 Lac MT ash can be filled. (Refer Appendix- XVIII)</p> <p>III. <u>M/s NTPC Rihandnagar</u> (Refer Appendix- XIX)</p> <p>NTPC Rihand conducted third party audit of its all ash dykes by IIT- Roorkee. As per the report of IIT- Roorkee the ash dykes are 'Safe and Stable'. Identification of land for creation of ash mound is in progress. It is submitted that for developing ash mound detailed scientific and engineering studies are required in addition to the additional land requirement and huge capital expenditure. Hence, it is requested that development of Ash mounds may also be considered as ash utilization by MOEF and Hon'ble NGT. CPCB may issue guidelines for creation of ash mound.</p> <p>Application dated 11.09.2019 submitted to Hon'ble District Collector, Sonbhadra for allocation of abandoned stone quarry. Presently no stone quarry is available for backfilling with pond ash.</p> <p>IV. <u>M/s NTPC Shakti Nagar:</u> NIL</p> <p>Gorbi mine allotted to NTPC, NTPC Vindhyachal has taken steps for study. Studies like EIA, Flora, fauna in progress. (Refer Appendix- XX)</p> <p>Action Taken by CPCB: CPCB vide letter dated 09.09.2020 requested UPPCB & MPPCB to take appropriate action for ensuring compliance of these directions of Hon'ble NGT by the concerned power plants. The comments are as follows (Refer Appendix- XIV):</p>
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			<p>i) Cost apportionment formula for siltation study for possible desilting and restoration of Rihand reservoir accepted by NGT</p> <p>ii) Backfilling of the abandoned mines: MoEF&CC has issued Office Memorandum dated 28.08.2019 to all SPCBs/PCCs regarding "Guidelines for disposal/utilisation of Fly Ash for reclamation of Low Lying Areas and in stowing of Abandoned mines/Quarries".</p>
1.i	Status of RCC wall around the flyash dyke	Partially Complied	The ash made by UPRVUNL Anpara, Sonbhadra is situated in the village-Baldevah. The fly ash generated from the thermal project is disposed off in the said Ash Dyke Pond. The RR Wall with gate has been constructed to prevent overflow of ash slurry from the secondary spill-way of Ash dyke pond.
1.j	Flyash mound as has been developed by NTPC Dadri	-	-
2.	Report of the CPCB regarding Cost-apportionment	Not Complied	<p>U.P. irrigation (Report Awaited)</p> <p>A letter has been sent to Executive Engineer/ Suptd. Engineer, Rihand Dam, Civil division, Irrigation Department, Pipari, Sonbhadra on 24.12.2019 for its compliance. No reply is received by State Board till now from Irrigation Department. (Refer Appendix- XIII)</p>
2.a	Status of contribution of each power plant to assess sediment volume at various places in the reservoir	Partially Complied	As per the information given by Executive Engineer/ Suptd. Engineer, Rihand Dam, Civil Division, Irrigation Department, Pipari, Sonbhadra vide letter no. 297/R.C.D./camp-16 dated 18.06.2019, an estimate Rs. 69,09,000/-is received from Ministry of Water Resources, River Department & Ganga Rejuvenation Central Water & Power Research Station, Pune dated 06.06.2019 to Executive Engineer, Rihand Dam, Sonbhadra for acceptance and approval. Letter has been issued on 18.06.2019 by Executive Engineer, Rihand Dam, Sonbhadra to Executive Engineer, Electricity Generation Division, U.P. Hydro Power Nigam Ltd., Pipari, Sonbhadra

			for its full payment.
2.b	Status of the Total ash slurry volume generated by each plant on the periphery of Rihand Reservoir	Partially Complied	<p>Overflow site of fly ash was inspected by RO, Sonbhadra. The inspection of the main ash dam at Belvadah of Anpara Thermal Project was done by the officers on 29.09.2020 as per the direction given by Oversight Committee. Shri A. K. Rai, Executive Engineer and Shri P.K. Gupta, Superintending Engineer was present at the time of inspection. The detailed inspection report of Ash Dyke is as follows (Refer Appendix- XXVI):</p> <ol style="list-style-type: none"> 1. The fly ash generated from the thermal project is disposed off in the said Ash Dyke Pond. The RR Wall with gate has been constructed to prevent overflow of ash slurry from the secondary spill-way of Ash dyke pond. 2. A total of 09 water pumps of water of 750 kl/hour capacity have been installed in unit number A and B to reuse water from ash dyke pond, one of which is used as a stand by pump. Unit No. D has 02 water pumps installed of 1350 kl/hour capacity, one of which is used as a standby pump. The total capacity of the water pump installed in the above three units is 7350 kl/hour. 3. At the time of inspection, the slurry effluent from the ash dam was not found to be discharged into the Rihand Reservoir. It was informed by the industry representatives that between 24.09.2020 to 26.09.2020, there was heavy rainfall in the region, due to which large amount of rainwater in the ash dam was overflowed and disposed off overflowing in Rihand reservoir. The slurry flow overflow was soon controlled by operating the AWRS at full capacity. It was also informed by the industry representative that two natural drains (i.e. Morcha Nala and Mokha Nala) meet at Ash dyke pond. Through these two drains, a large area of rainwater falls into the ash dam, which sometimes makes it impossible to recirculate

the water from the ash dam.





Fig-8: Ash Slurry overflows into Rihand Dam (1. Huge amount of water of Morcha Nala is flowing inside the ash dyke. AWRS system is capable of recycling only slurry water. Excess water overflowing is due to rain water coming from Morcha Nala; 2. Rain water in huge quantity of very large catchment area of ash dyke and many small & big natural nallah coming in ash dyke in rainy season is uncontrollable due to ash dyke raising work.)



			 <p> Latitude: 24.189701 Longitude: 82.88768 Elevation: 278.36 m Accuracy: 7.5 m Time: 09-26-2020 12:40 Note: spillway </p>
			 <p> Latitude: 24.189641 Longitude: 82.887636 Elevation: 264.87 m Accuracy: 9.6 m Time: 09-26-2020 12:38 Note: spillway </p>
			 <p> Latitude: 24.189662 Longitude: 82.887667 Elevation: 264.02 m Accuracy: 10.7 m Time: 09-26-2020 12:38 Note: spillway </p>



Fig-9: Scene of 29.09.2020: During Normal days i.e. without Rain water condition of zero discharge (water from natural drains discharging water into the ash dyke reduced to minimum. As a result, zero discharge was re-attained.)

4. At the time of inspection, it was informed by the industry representatives that construction work of new and improved gate is being done on the spill-way to restrict saline flow in Rihand reservoir, which is expected to be complete Oct., 2020.. It was also informed that two new decantation well were also present in Lagoon- 2. Construction of the pipeline up to the secondary pond at dictation well will be complete by the month Dec., 2020, after which it will be possible to stop any kind of impact in the Rihand Reservoir.

5. It was informed by the industry representative that the work of upgradation of Lagoon-3 is being done, which has been set to be completed by March, 2021.

			<p>6. According to the information received from the industry representative, the study of changing the direction of natural drain has been done from IIT, BHU, Varanasi. The said institute has presented a detailed design and drawing to change the direction of the drain, according to which the total cost of the work of changing the direction of the drain has been estimated as Rs.32.18 crore. Assessment report received from IIT, BHU has been sent to Corporation HQ. Action is being taken by the Corporate HQ to wait for the said proposal from the Irrigation Department.</p> <p>7. CCTV cameras were found installed near the spill way gate at the time of inspection. The industry representative informed that CCTV cameras have not been linked to online servers due to network problems in the area. With the CCTV camera made online, the overflow in flyash Rihand Reservoir can be effectively monitored.</p>
2.c	Share in Total Ash Slurry of plants (% of total)	Partially Complied	<u>Status of Total Ash Slurry:</u>

<i>Thermal Power Plant</i>	<i>Capacity (MW)</i>	<i>Total ash disposed in Ash Pond till 31.03.2019 (MMT)</i>	<i>Total ash slurry disposed in Ash Pond till 31.03.2019 (MMT)</i>	<i>Relative share in total Ash of plants (multiple of least)</i>	<i>Relative share in total Ash Slurry of plants (multiple of least)</i>	<i>Share in total Ash of plants (% of total)</i>	<i>Share in total Ash Slurry of plants (% of total)</i>
Anpara TPS UPRVUNL	2630	81.313	569.225	31.7	66.3	22.9%	19.6%
Lanco Anpara	1200	10.870	46.395	4.2	5.4	3.0%	1.6%
Renu-sagar, Hindalco	820	2.564	8.584	1	1	0.7%	0.3%
Singrauli NTPC	2000	89.295	803.654	34.8	93.6	25.1%	27.6%
Vindhya-chal NTPC	4760	104.937	953.855	40.9	111.1	29.6%	32.8%
Rihand NTPC	3000	66.136	529.008	25.8	61.6	18.6%	18.2%

3.	Status of Anpara TPS and Lanco-Anpara power plants to stop ash pond overflow discharge into Rihand Reservoir	Partially Complied	<p><u>M/s NTPC Anpara</u></p> <p>a) Show cause notice vide letter no. dated 16.01.2020 have been issued by UPPCB to M/S UPRVUNL Anpara, Sonbhadra to stop ash pond overflow discharge into Rihand Reservoir and imposed EC of Rs 41.10 Lakh. Confirmation has been sent to Head Office, UPPCB, Lucknow vide letter no. G114035/Anpara Thermal/ 2020 dated 29.02.2020 to take action against aforesaid TPP under section 33A of Water (Prevention & Control of Pollution) Act. 1974 with imposing EC for Rs. 41.10 Lac. (Refer Appendix- XIII)</p> <p>Ash Dyke is being raised to the extent of 5 meter for disposal of wet ash. One compartment of ash dyke is likely to be complete by November, 2020. About 75-</p>
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			<p>80% work has been completed for one lagoon/compartment. Over flow from ash dyke into the reservoir has been arrested w.e.f. 17th Feb., 2020. AWRS of Anpara TPS and Lanco TPS are under full operation. Moreover, a big natural drain is discharging huge quantity of water in ash pond which is to be diverted by irrigation department, UP (drainage and water management is in the scope of irrigation department) (Refer Appendix- XVII & XXI).</p> <p>Action Taken by CPCB: CPCB vide letter dated 09.09.2020 requested UPPCB & MPPCB to take appropriate action for ensuring compliance of these directions of Hon'ble NGT by the concerned power plants. (Refer Appendix- XIV)</p>
3.a	Status of another compartments to divert the nala	Not Complied (Under Process)	<p>According to the information received from the industry representative, the study of changing the direction of natural drain has been done from IIT, BHU, Varanasi. The said institute has presented a detailed design and drawing to change the direction of the drain, according to which the total cost of the work of changing the direction of the drain has been estimated as Rs.32.18 crore. Assessment report received from IIT, BHU has been sent to Corporation HQ. Action is being taken by the Corporate HQ to wait for the said proposal from the Irrigation Department.</p>
3.b	Status of way to stop the unit and liable for the environmental compensation	-	-
3.c	The Liability for Environmental Compensation in respect of UPRVUN, Anpara may be assessed by Joint Committee of CPCB and the State PCB	Partially Complied	<p>Anpara, Sonbhadra filed a Civil Appeal before Hon'ble Supreme Court against imposed EC and Hon'ble Supreme Court has granted stay on the same. (Refer Appendix- XVII)</p> <p>Comment by UPPCB: Show cause notice dated 16.01.2020 had been issued by UPPCB to M/S UPRVUNL Anpara, Sonbhadra to stop</p>

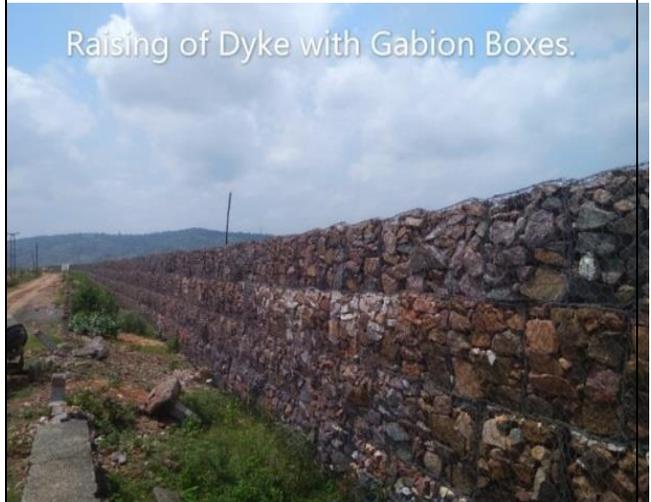
			ash pond overflow discharge into Rihand Reservoir and imposed EC of Rs 41.10 Lakh. Confirmation letter vide letter no. G114035/Anpara Thermal/ 2020 dated 29.02.2020 had been sent to UPPCB, Head Office, Lucknow for imposing EC of Rs 41.10 Lakh. Earlier EC of Rs 6,11,40,000/- had been imposed in compliance of Joint Committee recommendations.
4.	Transportation measures as per Suggestions of the Committee and directions of the Hon'ble Supreme Court.	Partially Complied	<p>➤ M/s NTPC Rihandnagar and M/s NTPC Shaktinagar- NTPC Rihand is transporting coal from the linked mines of Northern Coalfield Ltd. (NCL) through Merry-Go-Round (MGR) Railway system. NTPC Rihand is not transporting any coal through road. (Refer Appendix- XIX & XX)</p> <p>➤ M/s Anpara TPP (Unit-A, B & D) Anpara, Sonbhadra- Coal transportation is being done by railway wagon (MGR system). Anpara Thermal Power Project never transported coal through road. (Refer Appendix- XVII)</p> <p>➤ M/S Obra TPP (Unit-C) Obra, Sonbhadra- Coal transportation is being done by railway wagon. Obra thermal power project never transported coal through road. (Refer Appendix- XVIII)</p> <p>➤ M/S Lanco Anpara Power Ltd., Anpara, Sonbhadra- Approximately 90% Coal is being transported by railway wagon and balance 10% coal is being transported through road. (Refer Appendix- XXI)</p> <p>➤ M/S Hindalco Industries (Power Division) has installed belt pipe conveyer (BPC) system from Krishnashila coal mine of about 4.65 km for coal transportation. Industry is transporting approximate 80% Coal through BPC and balance 20% transported through road.</p> <p>➤ NCL has approached Hon'ble Supreme Court for obtaining relaxation in transportation of coal by road against NGT order dated 28.0.2018 and 24.01.2019.</p>

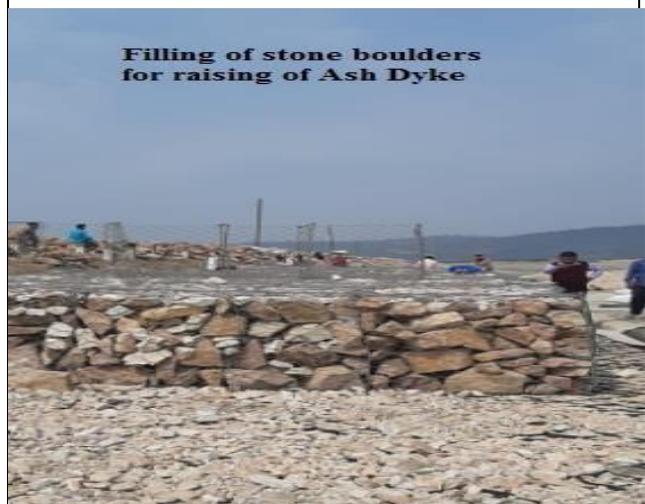
		<p>➤ Hon'ble Supreme Court has passed the following order:</p> <p>".....Status quo, as of today, shall be maintained in the meantime."</p> <p>➤ Deadline given by Oversight Committee was dated 30.04.2019 and in the meantime vide order dated 22.04.2019 Hon'ble Supreme Court has ordered for status quo.</p> <p>➤ Notices were issued to NCLs & RTO, Sonbhadra vide Regional Office, UPPCB, Sonbhadra letter dated 30.04.2019 & DM, Sonbhadra letter dated 02.05.2019 for compliance of orders passed by Hon'ble Supreme Court and Hon'ble NGT.</p> <p>➤ NCLs had stopped the transportation of coal by road after the Oversight Committee meeting on 07.06.2019.</p> <p>➤ Coal transportation has been restarted by NCL's in compliance of order passed by Hon'ble Supreme Court in Civil Appeal Diary No.(s) 17015/2019 dated 01.07.2019 (Refer Appendix- XXIII). Content of the order is as follows:</p> <p>"Status quo order passed by this court on 22.04.2019 is verified to mean that transportation by road will continue in the meanwhile."</p> <p>Action Plan for supply of Coal to Thermal Power Plant through Railway Wagons/ MGR/ Belt Pipe Conveyors: Krishnashila Project of M/s Northern Coalfields Limited has sufficient capacity to supply/ dispatch of coal to Thermal Power Plant through Railway Wagons and Belt Pipe Conveyors. The present dispatch capacity for Krishnashila Project through different modes against the annual production capacity of 7 MTPA is given below (Refer Appendix- XXIII):</p> <table border="1" data-bbox="810 1921 1407 2038"> <thead> <tr> <th data-bbox="810 1921 927 2038">Sl. No.</th> <th data-bbox="927 1921 1241 2038">Mode of Despatch other than Road</th> <th data-bbox="1241 1921 1407 2038">Annual Capacity (MTY)</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Sl. No.	Mode of Despatch other than Road	Annual Capacity (MTY)			
Sl. No.	Mode of Despatch other than Road	Annual Capacity (MTY)						

			<table border="1"> <tr> <td>1</td> <td>Through Railway Wagons</td> <td>3 MTY</td> </tr> <tr> <td>2</td> <td>Through Belt Pipe Conveyors</td> <td>3.5 MTY</td> </tr> <tr> <td colspan="2" style="text-align: right;">Total</td> <td>6.5 MTY</td> </tr> </table> <p>Further, coal handling plant of 4 MTY capacity is under construction and will be completed by December, 2020. It will further enhance the dispatch capacity by Rail Mode. Presently, coal is being supplied through road mode (less than 10%) under e-auction scheme to small consumers which are unable to get coal through rail mode and are only dependent/rely on road mode. (Refer Appendix- XXIII)</p> <p>Action Taken by CPCB: CPCB vide letter dated 09.09.2020 requested UPPCB & MPPCB to take appropriate action for ensuring compliance of these directions of Hon'ble NGT by the concerned power plants. (Refer Appendix- XIV)</p> <p>Note: Refer Appendix- XIII.</p>	1	Through Railway Wagons	3 MTY	2	Through Belt Pipe Conveyors	3.5 MTY	Total		6.5 MTY			
1	Through Railway Wagons	3 MTY													
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Total		6.5 MTY													
5.	Ash dyke management of Anpara TPS	Partially Complied	<p>Ash dyke management of Anpara TPS (Appendix-XVII)</p> <p>Table- Installed Capacity of Anpara TPS</p> <table border="1"> <thead> <tr> <th>S. No.</th> <th>Capacity of Units</th> <th>Date of Commercial Generation of Electricity</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Anpara 'A' TPP (3 x 210 MW)</td> <td>Unit 01- (01.01.1987) Unit 02- (01.08.1987) Unit 03- (01.04.1989)</td> </tr> <tr> <td>2</td> <td>Anpara 'B' TPP (2 x 500 MW)</td> <td>Unit 04- (01.03.1994) Unit 05- (01.10.1994)</td> </tr> <tr> <td>3</td> <td>Anpara 'D' TPP (2 x 500 MW)</td> <td>Unit 06- (08.05.2016) Unit 07- (18.10.2016)</td> </tr> </tbody> </table>	S. No.	Capacity of Units	Date of Commercial Generation of Electricity	1	Anpara 'A' TPP (3 x 210 MW)	Unit 01- (01.01.1987) Unit 02- (01.08.1987) Unit 03- (01.04.1989)	2	Anpara 'B' TPP (2 x 500 MW)	Unit 04- (01.03.1994) Unit 05- (01.10.1994)	3	Anpara 'D' TPP (2 x 500 MW)	Unit 06- (08.05.2016) Unit 07- (18.10.2016)
S. No.	Capacity of Units	Date of Commercial Generation of Electricity													
1	Anpara 'A' TPP (3 x 210 MW)	Unit 01- (01.01.1987) Unit 02- (01.08.1987) Unit 03- (01.04.1989)													
2	Anpara 'B' TPP (2 x 500 MW)	Unit 04- (01.03.1994) Unit 05- (01.10.1994)													
3	Anpara 'D' TPP (2 x 500 MW)	Unit 06- (08.05.2016) Unit 07- (18.10.2016)													

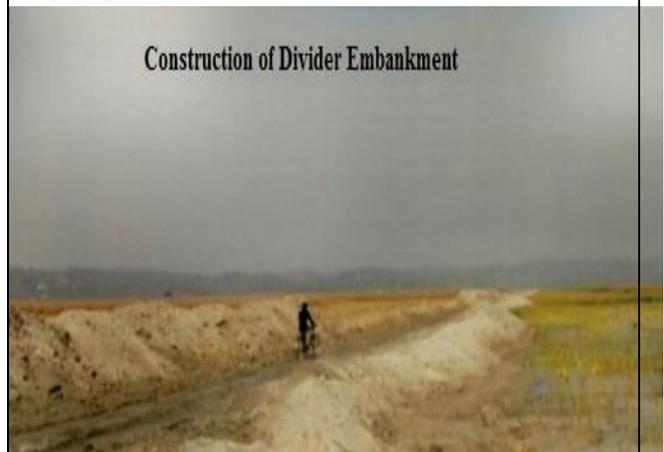
- Fly ash generated from the above units are partly utilized by issuing fly ash free of cost to cement industries/ash brick industries and balance quantity is discharged to ash dyke where ash accumulated in pond and settled water is being recirculated by AWRS to plant for its reuse in Ash handling system.
- Ash collected in the ash pond is partly utilized in raising of ash dyke in scientific manner.
- Area of the ash dyke is approx. 1200 acres. The above dyke was constructed in 2003.
- To enhance the capacity of ash dyke its first raising work has been started from August, 2019. Raising of the dyke is being done as per the technical specification/drawing/scope of work finalized by expert Civil Engg. of IIT Roorkee (Renowned Institute of India for Civil Engineering).

Raising of Dyke with Gabion Boxes.



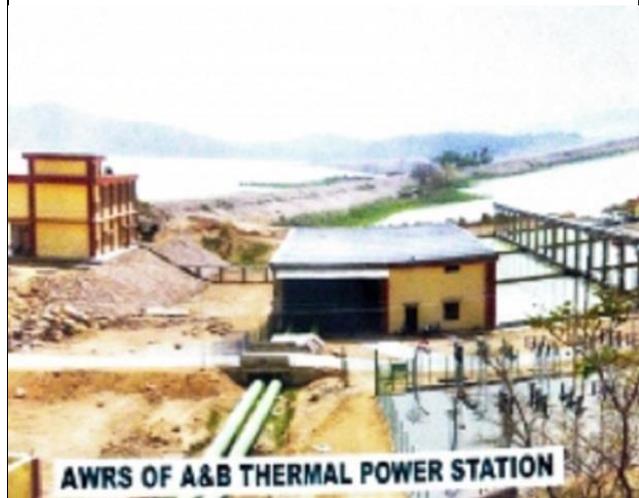


- The pond has been divided into two lagoons; one is under raising and other in service. This shall facilitate timely raising of the ash dyke and to operate it in scientific manner.



- Ash water recirculation system (AWRS) facilitates for recirculation of ash pond water. Ash from the plant is mixed with water to

form ash slurry which with help of pumps and piping system is being discharge to ash pond where ash is settled in the pond and water with the help of decanted well is transferred to auxiliary pond/overflow lagoon. Auxiliary pond is functioning as a sump for ash water pumps of AWRS system, from the above pumps water is being transferred to plant with help of pumps and pipes for its reuse in ash handling system.



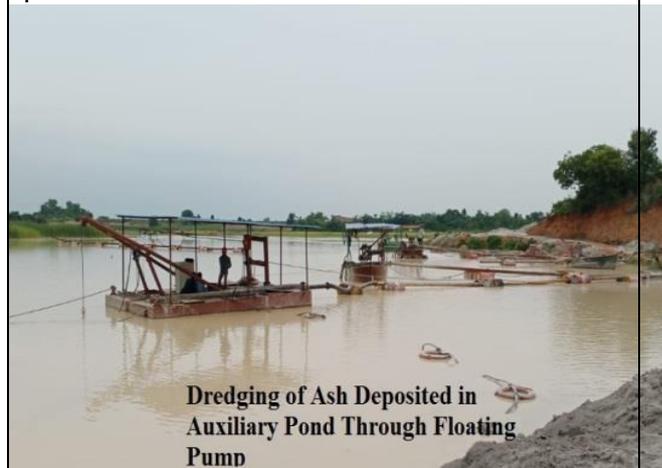
Decantation well with R.C.C. hume pipe.





Decantation well under construction

- Auxiliary pond is also being maintained by using dredging machine for removal of settled ash which partially comes through ash pond water.



Dredging of Ash Deposited in Auxiliary Pond Through Floating Pump



Dredging of deposited ash in secondary pond by poclain

- To maintain zero discharge from ash dyke all the system i.e. ash slurry pump, ash dyke

			<p>and AWRS System all should work well.</p> <ul style="list-style-type: none"> To maintain all three systems regular work is being done.
6.	<p>Status on ban of manufacturing of red bricks by use of clay/soil and by burning of coal with a view to facilitate more disposal of fly ash in brick manufacturing</p>	<p>Partially Complied</p>	<ul style="list-style-type: none"> As per given by M/S Hindalco industries Ltd. (Power Division) Renusagar, Sonbhadra they are supplying fly ash free of cost to brick kiln owners, brick making plant and low lying areas ash filling and road projects. M/S NTPC Shaktinagar has installed five brick manufacturing plants in its own premises. Further contract is under process of tendering for two more ash brick plant for enhance production capacity of fly ash bricks. (Refer Appendix- XX) M/S NTPC Rihandnagar has four semi automatic fly ash bricks manufacturing plants and two fully automatic fly ash brick manufacturing plants. About 30000-40000 Fly ash bricks are manufactured in a day by the industry and utilized in their own plans and other construction activities under C.S.R. (Refer Appendix- XIX) <p>Note: Refer Appendix- XIII.</p> <p>Comments by CPCB: Draft notification dated 25.02.2019 is under finalization in MoEF&CC (Refer Appendix- XIV).</p>
7.	<p>Zero discharge from ash dyke and constraints in Anpara TPS</p>	<p>Partially Complied</p>	<p>Anpara TPS: For safety of ash dyke there is a spillway which facilitate the ash dyke to discharge water when level of water raises above free board level. This happens in two cases:-</p> <ol style="list-style-type: none"> If AWRS is not working. If outside water comes in the dyke. <p>To ensure AWRS System functional UPRVUNL is doing preventive overhauling work time to time but at Anpara ash dyke water is coming from its nearby catchment area (Through Morcha Nala) due to its geographical location. This excess water sometimes results</p>

in overflow from the ash pond through spillway. The owner of Morcha Nala is irrigation department. Matter has been taken up with irrigation department for its diversion and if it is diverted/ prevented to flow water into ash pond then UPRVUNL can ensure 100% zero liquid discharge from ash pond. For the diversion of Morcha Nala a letter no. 965/UNL/E&S dated 27.07.2020 has been written to Additional Chief Secretary , Irrigation and Water resources U.P. from Additional Chief Secretary, Energy, U.P. **(Refer Appendix-XVII)**





Ash Dyke is being raised to the extent of 5 meter for disposal of wet ash. One compartment of ash dyke is likely to be completed up to November 2020. About 75-80% work has been completed for one lagoon/compartment. Over flow from ash dyke into the reservoir has been arrested w.e.f. 17th Feb – 2020. AWRS of Anpara TPS and Lanco TPS are under full operation. A team of Regional Officer, Sonbhadra UPPCB have also inspected the site on 17.02.2020 for checking of zero discharge from Anpara TPS. **(Refer Appendix- XVII)**

Constraints- Apart from above a big natural drain are discharging huge quantity of water in ash pond which is to be diverted by irrigation department, UP as the drainage and

			<p>water management is in the scope of irrigation department.</p> <p>Comments by UPPCB: As per the latest inspection, unit is not maintaining Zero discharge from ash dyke.</p>
8.	<p>Zero discharge at M/s Hindalco Industries Ltd. (Aluminium Division), Renukoot, Sonbhadra</p>	<p>Partially Complied</p>	<p>In compliance with the above, the industry was inspected by the officials on 29.09.2020. Mr. Mukesh Mittal, Vice President (Environment & Safety) and Mr. Anil Singh, AGM (Environment) was present as the industry representative at the time of inspection. Detailed inspection report is as follows (Refer Appendix- XXVII):</p> <p>1. Industrial Flow: 7000 kl/day</p> <p>a) ETP: An 11500 kl/day capacity ETP is set up in the industrial complex to purify the effluent generated by the industrial process. The following units are installed in the ETP Plant set up in the industry premises- (i) Collection Tank, (ii) pH correction cum oil removal tank, (iii) Coagulation Tank, (iv) Clarifier, (v) Clarified Water Storage Tank, (vi) Dual media filter, (vii) Fluoride Adsorption Column, (viii) Treated Water Storage Tank & (ix) Centrifuge. All ETP units were found to be operational at the time of inspection.</p> <p>b) PWRP (Process Water Recycling Plant): A 4000 kl/day capacity PWRP is installed in the industry for purification of process water. The following units are installed in the PWRP in the industry premises- (i) Equalization Tank, (ii) pH correction tank, (iii) Reaction Tank, (iv) Clarifier, (v) Multigrade Filter, (vi) Activated Carbon Filter, (vii) RSF Resin Sand Filter & (viii) Treated Water Storage Tank. All PWRP units were found to be operational at the time of inspection.</p> <p>According to the industry representatives PWRP's Resin Sand Filter is experiencing problems with effluent due to technical fault, due to which partial rectified effluent is not being reused. Resin cleaning is done on average five days a month and in that period,</p>

		<p>the industry has to be disposed of outside the purified effluent drainage. Resin regeneration plant is being set up for regular cleaning of resins by M/s Ion Exchange Company to solve the above problem coming to the purification plant which has been reported to be completed by March, 2021. According to the industry representatives, after the operation of the said unit, the entire rectified industrial effluent can be reused and a system of zero discharge can be ensured.</p> <p>The partial effluent treated in the ETP and PWRP established in the industry is reused in the process, ash slurry, irrigation of plants, dust suppression etc. in the industry.</p> <p>2. Domestic Effusion: 12000 kl/day</p> <p>A 24 MLD capacity STP is installed in the residential colony of the industry for purification of effluents generated as a result of water used in domestic purpose. The following units are installed in the industry premises- (i) Collection Tank, (ii) Bar Screen/ Grit Chamber, (iii) F. A. B. Reactor- I & II, (iv) Clari Tube Settler, (v) Dual Media Filter, (vi) Treated Water Storage Tank & (vii) Centrifuge. All STP units were found to be operational at the time of inspection.</p> <p>At the time of inspection, the rectified effluent in the STP was found to be transmitted through the pump for reuse in the industry. According to the Logbook organized on STP, the quantity of inlet and outlet outflow in the last 24 hours at STP was found to be 4750 KL and 4561 kl respectively, which is clear that STP is not being operated at full capacity.</p> <p>According to the industry representative, the rectified effluent in STP (approx. 5000 kl/day) is used in the processes of cooling, gardening, flushing etc. and the residual effluent (approx. 6000 kl/day) is discharged through the drain after treatment.</p>
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			<p>At the time of inspection, two safety valves were found installed at the inlet and outlet points of STP. Safety valve is used to discharge the effluent through a drain in unavoidable conditions.</p> <p>At present, the disposal of zero effluent is not being followed by the industry. There are some recommendations by the industry are enclosed as Appendix-</p>
9.	Status of the breach of Flyash dyke in UPRVUN Anpara, Lanco Thermal Power Plant and its measures	Partially Complied	<p>➤ <u>M/s NTPC Anpara</u></p> <p>There is no breach of ash dyke in Anpara TPS of UPRVUNL and Lanco Anpara Thermal Power Plant has ever taken place. (Refer Appendix- XVII)</p> <p>➤ <u>M/s UPRVUNL Anpara-A, B, D, Anpara, Sonbhadra</u></p> <p>EC of Rs 6,11,40,000.00 imposed due to non-compliance of EPA 1986, Air (Prevention & Control of Pollution) Act, 1981 & Water (Prevention & Control of Pollution) Act, 1974. On the basis of inspection made by Hon'ble Chairman and Members of Oversight committee on dated 15.12.2019 show cause notice has been issued on dated 16.01.2020 for imposing of Environmental Compensation of Rs 41,10,000 to Thermal Power Plants.</p> <p>➤ <u>M/s Lanco Anpara Power limited, Anpara, Sonbhadra</u> has already paid EC of Rs. 23,70,000/- for both UPPCB and CPCB shares:</p> <ul style="list-style-type: none"> • The payment of CPCB share of Rs. 14,22,000/- @ 60% of Rs. 23,70,000/- as EC has been done on 02.01.2020. The details are enclosed as Appendix-XXXI. • The payment of Rs. 9,48,000/- @ 40% of Rs. 23,70,000/- as EC has been done to UPPCB on 30.12.2019. The details are enclosed as Appendix- XXXI. <p>➤ <u>NTPC Shaktinagar:</u> No dyke breach in NTPC Shaktinagar. Dyke stability study got</p>

			<p>conducted from IIT Roorkee Report submitted to UPPCB. (Refer Appendix- XX)</p> <p>Comment by UPPCB: The overflow of fly ash dyke pond of M/s Anpara as not been fully stopped.</p>
10.	The maintenance of the capacity and quality of the water of Rihand Reservoir along with its preservation	Partially Complied	<p>I. <u>M/s NTPC Anpara (Refer Appendix- XVII)</u></p> <p>i. At Anpara TPS there is no breach of ash pond.</p> <p>ii. ETP has been installed at DTPS Power House. After treatment of effluent the treated water is being reused.</p> <p>iii. AWRS for A, B and D TPS has been installed and recirculation of decanted water is being used for making ash slurry.</p> <p>Hence in view of above Anpara TPS is not polluting the water body/Rihand Reservoir.</p> <p>II. <u>M/s NTPC Rihand</u></p> <p>It is submitted that NTPC Rihand is not discharging any pollutant to Rihand reservoir and ZLD is being maintained. (Refer Appendix- XIX)</p>
11.	Status of the Performance Guarantee to furnish the existing status of ambient air quality and water quality of Rihand reservoir and other water bodies including groundwater and status of CAAQMS installed/under process by Thermal Power Plants	Partially Complied	<p>Performance Guarantee: Following Bank Guarantee have been deposited by the TPPs as a Performance Guarantee regarding ambient air quality and water quality of Rihand Reservoir and other water bodies including ground water are as:</p> <ul style="list-style-type: none"> • Bank Guarantee of Rs. 30 lacs have been submitted by M/s UPRVUNL, Anpara- A, B & D for utilization of fly ash & installation of OCEMS etc. • Bank Guarantee of Rs. 18.4 lacs have been submitted by M/s NTPC Rihand Nagar for compliance of CTO condition of the total compensation amount of Rs. 45.90 lacs imposed by Hon'ble NGT vide order dated 11.10.2019 in OA No. 453/2019. NTPC Rihand has also filed a petition in Hon'ble Supreme Court vide diary no. 1197/2020 dated

		<p>09.01.2020 against above order dated 11.10.2019 of Hon'ble NGT. (Refer Appendix- XIX)</p> <ul style="list-style-type: none"> • Bank Guarantee of Rs. 10.8 lacs have been submitted by M/s NTPC Shakti Nagar for compliance of CTO condition. (Refer Appendix- XX) <p><u>Status of CAAQMS installed/under process by Thermal Power Plants situated in district- Sonbhadra are as follows:-</u></p> <p>I. M/s NTPC Rihandnagar has already been installed three numbers of CAAQMS & connected with server of CPCB. (Refer Appendix- XIX)</p> <p>II. M/s NTPC Shaktinagar has already been installed two CAAQMS in U.P. and one CAAQMS in M.P. which is common for SSTTPS and VSTPP.</p> <p>III. M/s Lanco Anpara Power Ltd., Anpara has already been installed two CAAQMS & one CAAQMS is commonly installed by M/s Lanco Power Project Limited and M/s Hindalco Industries (Power division) Renusagar. (Refer Appendix- XXI)</p> <p>IV. M/s UPRVUNL Anpara & M/s UPRVUNL Obra has sent proposal to their HQ, Lucknow for installation of CAAQMS as informed by the industries. After that, CAAQMS has already been installed at Anpara TPS and online continuous data are linked to the CPCB server. Anpara TPS is maintaining the ambient air quality parameters as notified by MOEF & CC. A survey has been conducted by officials of UPPCB, Sonbhadra regarding installation of two additional CAAQMS each in Anpara (near railway station/ Hanuman mandir/ old Japani Colony) and another in Renusagar residential Area by Hindalco Industries Ltd. (Power Division), Renusagar, Sonbhadra. Regarding this context recommendation has already been sent to Hon'ble Justice (Rtd.) Shri Rajes Kumar, Chairman, Oversight</p>
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Committee. EQMS has already been installed at ETP of DTPS and Water Quality is being maintained. **(Refer Appendix- XVII)**

In Obra, industrial effluent is being treated in ETP to ensure the quality of water and parameters such as Ph, TSS and temperature are being continuously monitored through EQMS. **(Refer Appendix- XVIII)**

The Ambient Air Quality around Anpara, Sonbhadra is as below (Data from manual monitoring system):-

Month	PM 10 (µg/MN M ³)	NO ₂ (µg/MNM ³)	PM 10 (µg/MN M ³)
March, 2020	162	27.40	17.58
April, 2020	126.5	21.35	13.45
May, 2020	129	24.48	14.76
June, 2020	122.5	24.20	14.76
July, 2020	115	23.67	14.49
August , 2020	107.58	23.46	14.01
Average volume	127	24.09	14.84

The Water Quality of Rihand Reservoir and Water bodies are as enclosed as **Appendix- XIII**.

UPPCB, Sonbhadra officials has collected water samples from Rihand Reservoir on 10.06.2020 and deposited to Central Lab. UPPCB, Lucknow for analysis. Analysis report is enclosed. Regular monitoring of Rihand Reservoir is conducted by UPPCB under NWMP on monthly basis and data uploaded on NWMP Portal of CPCB. **(Refer Appendix- XIII)**

V. M/s Hindalco Industries Limited (Aluminium Division), Renukoot, M/s Grasim Industries Ltd., Renukoot and M/s Birla Carbon (India) Pvt. Ltd., Renukoot have

			<p>commonly installed one CAAQMS at Renukeshwar temple, Renukoot and link with server of CPCB.</p> <p>VI. M/s Ultratech Cement Ltd. has installed one CAAQMS in residential premises.</p> <p>Note: Refer Appendix- XIII.</p>
12.	<p>Report of the CPCB regarding Cost apportionment for desilting/restoration of Rihand Reservoir (the study to assess sediment volume at various places in the reservoir as per the direction given by Hon'ble NGT)</p>	<p>Not Complied</p>	<p>As per information given by Executive Engineer/ Suptd. Engineer, Rihand Dam, Civil Division, Irrigation Department, Pipari, Sonbhadra vide letter no. 297/R.C.D./camp-16 dated 18.06.2019, an estimate Rs. 69,09,000/- is received from Ministry of Water Resources, River Department & Ganga Rejuvenation Central Water & Power Research Station, Pune dated 06.06.2019 to Executive Engineer, Rihand Dam, Sonbhadra for acceptance and approval. Letter has been issued on dated 18.06.2019 by Executive Engineer, Rihand Dam, Sonbhadra to Executive Engineer, Electricity Generation Division, U.P. Hydro Power Nigam Ltd., Pipari, Sonbhadra for its full payment. As per MOM of Oversight Committee held on dated 27.12.2018, it has been directed to polluters that expenses should be afforded by the polluters which are mainly surrounding companies. (Refer Appendix- XIII)</p> <p>Action Taken by CPCB: CPCB vide letter dated 09.09.2020 requested the Irrigation & Water Resources Department, U.P. to take appropriate action for ensuring compliance of the direction of Hon'ble NGT. (Refer Appendix- XIV)</p>
13.	<p>Status of Health of citizens of the affected areas and the trend of diseases related to pollution</p>	<p>-</p>	<p>Report awaited from Health Department</p>
14.	<p>Status of the liability for environmental compensation in</p>	<p>Partially Complied</p>	<p>I. <u>M/s NTPC Anpara</u></p> <p>On the basis of inspection made by Hon'ble Chairman and Members of Oversight</p>

	<p>respect of UPRVUNL Anpara</p>		<p>committee on dated 15.12.2019 show cause notice has been issued to UPRVUNL, Anpara on 16.01.2020 for imposing of Environmental Compensation of Rs 41,10,000 on Thermal Power Plants. The units have given explanation of show cause notice that overflow took place due to heavy rain in the area and they have started raising the height of the ash dyke walls.</p> <p>It was submitted that Anpara TPS filed a Civil Appeal before Hon'ble Supreme Court against imposed EC and Hon'ble Supreme Court has granted stay on the same.</p> <p>Action taken by CPCB: CPCB vide letter dated 09.09.2020 requested the Irrigation & Water Resources Department, U.P. to take appropriate action for ensuring compliance of the direction of Hon'ble NGT. (Refer Appendix- XIV)</p>
<p>15.</p>	<p>Status of utilization of Bauxite Residue (BR)(Red Mud)/ Flyash in Hindalco Industries Ltd., Renukoot and Renuagar</p>	<p>Partially Complied</p>	<p>As per the information given by the Vice President (Safety & Environment), Hindalco Industries Ltd., Bauxite Residue- BR is capable of being used for mine backfilling. The industry already initiated the process with CPCB and NEERI in one of its units in Odisha.</p> <p>At Hindalco, during Alumina Refining Process, a high volume low effect waste known as Bauxite Residue- BR gets generated. Over the years, the industry has been storing BR in identified disposal/ storage sites. These sites are constructed at the earmarked area following the guidelines. The industry is running out of space for storage of BR and had been exploring various alternatives for disposal/ storage as well as use of BR. One such solution is exploring backfilling of BR in mine voids/ stone quarries as against using virgin land for storage of BR.</p> <p>In Renukoot as well as in Belagavi (Karnataka), the industry has taken expert help and has successfully created green</p>

		<p>patch/ vegetation over BR reclaimed land.</p> <p>The industry has also explored the possibility of utilizing BR in cement industry in place of Laterite which is obtained by mining. However, in relation to the quantity of BR generated and current consumption levels by the cement industries, the industry still needs to find ways for large scale use of BR.</p> <p>Flyash from Renukoot and Renusagar is being sent to various cement industries and brick manufacturing units. The remaining flyash/ bottom ash is being stored at the existing ash pond situated at Bichari around 8 kms from Renusagar which is almost full. The request for acquisition of additional land is in process with the State Government.</p> <p>At Renusagar, the industry has efficient ESPs in which Flyash collected in the hopper is evacuated into ash silos in dry form. To facilitate the loading of flyash into the bulkers of cement manufacturers, the industry has Dry Fly Ash Transporting System (DFAT System) within the plant premises which comprises of 8 ash silo from where ash is loaded in closed ash bulkers through telescopic chutes. From silos, cement manufacturers are taking it for making of Potland Pozzolana cement. Dry Flyash is available free of cost to nearby cement manufacturers, ash brick manufacturers and other bulk users. The bottom ash coming out of the boiler bottom hopper is pumped to ash dyke in the form of slurry through long distance ash disposal system (LDAD).</p> <p>The Company has made all efforts and in fact has achieved significantly high percentage of Flyash utilization through supplying Fly ash to various cement companies in closed Bulklers/ Capsules and production of flyash Bricks/ Blocks in its own Brick Making Plant. The industry is also supplying fly ash bricks to all the sister concerns in the vicinity and various other projects. Fly ash utilization and disposal at Renusagar for FY 20 and April to August</p>
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			2020 is 100%. Note- Refer Appendix- XXX.
16.	Status of Industry to achieve emission limit of 50 mg/nm ³ for particulate matter in respect of all Baking Furnaces for HIL Renukoot & Renusagar	Partially Complied	It is submitted that the Industry has achieved emission limit of 50mg/Nm ³ for particulate matter in respect of all Baking Furnaces. (Refer Appendix- XXX)
17.	To reduce emission level to 50 Mg/nm ³ from the existing norms of 150 Mg/nm ³ by December 31, 2019 by retrofitting of existing ESPs and also meet emission limit of SO ₂ and NO _x notified for industrial Boiler for HIL Renukoot & Renusagar	Partially Complied	As the said recommendation was not in consonance with EPA notified standard of Boiler emission, the Company challenged it before Hon'ble Supreme Court on December 07, 2019 which is registered as dairy no. 44191- 2019 and the Hon'ble Supreme Court of India vide order dated 17.12.2019 stayed the operation of order and matter is pending before the Hon'ble Supreme Court of India. However, for SO _x & NO _x , third party monitoring is in place on quarterly basis. Moreover, they have already installed online SO _x & NO _x analyzers at Boilers. The equipments have been commissioned. The connectivity with CPCB server has not been established yet, due to postponement of engineer visit as per Covid -19 precautions. (Refer Appendix- XXX)
18.	Utilization of Red Mud in nearby cement industries including those located in MP	Partially Complied	The industry stored red mud (65-70% solid) as per CPCB guidelines surrounded by earthen dam. Company took a challenge and made intensive efforts to advocate its gainful use in various cement industries even in far away location. The Company has also developed its rail head and other infrastructure to support time bound logistic. With the above mentioned efforts company was able to supply 362275 MT red mud during April 2019 to March 2020 to various Cement manufacturers including that of Madhya Pradesh by rail/road. (Refer Appendix- XXX)
19.	ZLD to be established for HIL Renukoot & Renusagar	Partially Complied	The industry has commissioned PWRP for establishing ZLD. Plant is in operation and they informed that they are able to maintain ZLD for around 25 days in a month. However, in

			<p>spite of the best efforts, they are not getting consistent result of desired treated water quality, this may be due to teething problem in PWRP & unforeseen fluctuation in manufacturing process.</p> <p>Presently, R&D team of M/s Ion Exchange is working extensively to establish 100% ZLD concept by overcoming teething problem for the remaining days also by suitably modifying the process. It was targeted to establish by June, 2020 but progress in this direction have been halted due to Covid -19 precautions. Now, some of the balancing equipment are expected to arrive in Nov, 2020 and same to be erected & commissioned by Feb'2021.</p> <p>(Refer Appendix- XXX)</p>
20.	<p>Road transportation of coal by covering with metal sheet on vehicle. Subject to decision of Hon'ble Supreme Court.</p>	<p>Partially Complied</p>	<p>In transportation of coal by road, the industry ensured that all trucks are completely covered by water proof thick tarpaulin tagged with heavy rope, sealed and fix with Dalla in such a manner that it will not fly so that coal is not scattered on road. The industry has filed a CA before the Hon'ble Supreme Court of India and Hon'ble Supreme Court vide its order dated 08.11.2019 has directed the Oversight Committee to hear all the stakeholders in this regard and submit the report in sealed cover to Hon'ble Supreme Court and in the meantime stay was given on transportation of trucks containing steel plates. The matter is pending before the Hon'ble Supreme Court of India. (Refer Appendix-XXX)</p>
21.	<p>Utilization of Fly Ash/Red Mud for backfilling low lying areas and mine voids in HIL Renukoot & Renusagar</p>	<p>Partially Complied</p>	<p>The industry has consistently been engaging with the State Government as well as Central Government for guidelines regarding backfilling of mine voids as well as of low lying areas. In fact, the industry has successfully executed several projects in the State of Odisha with all due permissions from the relevant authorities. The list of permissions as well as the policy issued by the Odisha State Pollution Control Board has been shared with the State Government with a request for a similar policy for the State of Uttar Pradesh so that utilization of fly ash and/or Red Mud can be accentuated. The</p>

			<p>industry has also given a request to the State Government for permission to carry out a suitability study in the open mine voids particularly stone quarry. The study would be conducted by an IIT BHU / NEERI and on the basis of their report further steps for approval to backfill the mine voids could be initiated. The industry continues to wait for clearance regarding evaluation of suitability of the site. In fact, a similar study by the Company is currently underway in the State of Odisha. Expeditious approval for the same would go a long way in freeing up precious land which is otherwise used for safe storage of fly ash and red mud. Another submission that would merit consideration of the Hon'ble Committee is absence of any statutory obligation on the industries that could potentially utilize the fly ash/red mud. While obligation is being cast on the industries operating coal based power plant to ensure utilization, in the absence of any collateral obligation, the industry face immense practical and financial difficulty in ensuring such utilization. The industry had submitted its representation on reclamation of void mines/queries/low lying areas to DM, Sonbhadra on September 30, 2020 during the meeting held at DM Office, Sonbhadra. At Renukoot, they have applied to UPPCB on April 29, 2020 to develop low-lying area approx. 1.25 hectare by filling of ash/pond ash in Village Murdhawa. Approval is still pending. (Refer Appendix- XXX)</p>
22.	RO Plant installed and operational in Sonbhadra	Partially Complied	<p>The industry has installed 13 RO Plants at allotted villages and providing pure drinking water from January 2015 onwards in compliance of NGT order dated 13.05.2014. All plants are currently operational. The industry has also started supplying of drinking water through SS Tanker at allotted village Kushma/ Kirvani as per letter issued by SDM Dudhi, Sonbhadra on January 13, 2018. (Refer Appendix-XXX)</p>
23.	Status of shifting of Mercury brine	Partially Complied	<p>▪ As per information given by the industry in compliance of Hon'ble NGT order dated 19.08.2019 in OA No. 164/2018, the industry</p>

	<p>sludge and muck</p>	<p>has deposited Rs. 1.0 Crore to CPCB vide letter dated 29.07.2019.</p> <ul style="list-style-type: none"> ▪ As per information given by the industry regarding shifting of hazardous waste mercury bearing brine sludge stay order have been taken from Hon'ble Court on 05.11.2019. The main content of the order is as below: ".....The CPCB has given report dated 26.09.2019 in compliance to order dated 19.07.2019. The CPCB has recommended payment of compensation of Rs. 155,42,85,300/- (One hundred fifty five crore forty two lac eighty five thousand three hundred). Since it is pointed out that vide order dated 04.11.2019 the Hon'ble Supreme Court has directed deferment of the proceedings, the industry defer the proceedings till the matter is detected by the Hon'ble Supreme Court....." (Refer Appendix-XIII) <p>Further information given by M/S Grasim Industry, Renukoot, Sonbhadra are as follows (Refer Appendix- XXII):</p> <ul style="list-style-type: none"> ▪ As per information given by M/S Grasim Industry, Renukoot, Sonbhadra "plant is presently operating on the latest environment friendly proven latest Membrane Cell Technology is being used or production of caustic in which Mercury is not used". ▪ Mercury Cell Technology from the plant was completely phased out from Sep., 2011 which was conveyed to CPCB/ UPPCB. ▪ The hazardous waste stored was capped as per the guidelines and is properly maintained. Regular monitoring in the vicinity of capped storage site is done and as per the results there is no mercury contamination detected in the ground water and surface water samples. Regular analysis is done by IITR, Lucknow and the reports are submitted to UPPCB offices. As per the reports, no mercury is detected in the
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			<p>samples drawn in the vicinity of the secured landfill for brine sludge storage.</p> <ul style="list-style-type: none"> ▪ Sample of Dongia Nala is regularly collected and analysed. No mercury has been found in the near past. ▪ Regarding capped hazardous waste, after receiving the advice for shifting of mercury in view of order of Hon'ble NGT. Regarding that a letter sent to CPCB on 15th Sep., 2018 for explaining the concern and requesting to advise action to be taken by the industry since no guideline is available for opening the capped SLF.
24.	<p>Industry shall ensure proper operation of effluent treatment plants so as to ensure the compliance of the effluent discharge standard. The industry shall also ensure that no untreated/partially treated effluent find its way into the nallah leading to Rihand reservoir. The channel leading to Rihand Reservoir has to be intercepted, diverted and treated within the industry. The nallah presently passing through the factory should be isolated so that the industry cannot discharge any treated/partially treated/untreated effluent.</p>	<p>Partially Complied</p>	<p>Industry has already installed ETP, RO, MEE and STP to treat effluent as well as sewage to achieve Zero Liquid Discharge as per directive of Board of CPCB/UPPCB and Core Committee. This has already been communicated through letter no. GIL/ENV/17-18/204 dated 17th November, 2017 which was also verified by Core Committee on 9th Jan., 2018 during their visit to the plant. Thus, the industry is not discharging any effluent whatsoever into the Dongia nallah and is a ZLD unit.</p> <p>Furthermore, as per the guideline, it has already installed cameras at the point where the drainage of the ETP meets the nallah. Cameras capture and transmit photographs to CPCB/UPPCB on 24 hrs basis. Accordingly, the CPCB and UPPCB are also able to monitor the discharge point of the ETP at all times and verify that the industry is ensuring that no discharge whatsoever is made by the industry into Dongia Nallah.</p> <p>Moreover, it is very unlikely that any discharge into the Dongia Nallah is happening from the Aditya Birla Chemicals own residential colony (where its employees live) and other residential settlements located nearby, but outside the industry premises. The Core Committee's past recommendations have only pertained to the recommendation with respect to Aditya Birla Chemicals own residential colony.</p>

		<p>However, as a responsible corporate citizen, the Aditya Birla Chemicals has already installed STP having capacity of 1000 m³/day for its own residential colony (i.e. where its employees live and which have also been Commissioned in 24th Nov., 2019).</p> <p>Thus, it needs to be further evaluated if diversion of the Dongia nallah would be required. Further, it should be noted that the recommendation of the Core Committee regarding diversion of the Dongia nallah is a new recommendation, and was not there either in the Core Committee's interim Report dated January, 2015 or its Final Report dated July, 2015.</p> <p>But, if the Core Committee, UPPCB and or the CPCB are still of the view that it would be beneficial to divert the Dongia nallah, the same be done after conducting ecological and environmental studies.</p> <p>This is because the diversion of the nallah may lead to many environmental and ecological problems. The reason is that this nallah has been present much before the plant came into existence. It acts as a drain for flow of storm water during the monsoon season. Given that Renukoot is a hilly terrain and the plant is at the height of 316 Mtr. (1036.74 feet), this nallah acts as an outlet for carrying storm water to the Rihand Dam, which is at a height of 252.98 Mtr. (830 feet). If the course of the nallah is disturbed then the same will cause grave flooding in the area around the industry, including the nearby residential settlements and the railways- because it is a natural nallah not only for the complex, but to complete nearby vicinity including the residential settlements and Dept. of Railways. Presently, the nallah is not being used by Grasin Industries Limited- Chemical Division (Formerly named as Aditya Birla Chemicals) for discharging any water to Dam, however</p>
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			<p>being a natural nallah, it may not be feasible to stop it as it may lead to flooding during Monsoon which will be dangerous for railway lines and the nearby residential settlements and will lead to closure of the plant.</p> <p>It is pertinent to note that the Core Committee itself, in its report dated Feb., 2018, has recommended that studies be carried out in connection with interception and diversion of all streams joining the Rihand reservoir. (Refer Appendix- XXXII)</p>
25.	<p>There is also an urgent need for the preparation of an action plan by the industry to shift the mercury bearing brine sludge and the muck contaminated with chlorinated chemicals from the factory premises to the TSDF in consultation with the UPPCB. It may be stated that storage of Hazardous Mercury bearing brine sludge and the muck contaminated with chlorinated chemicals inside the premises is not permitted by the prevailing Hazardous Waste Management Rules, 2016 and therefore, to be shifted to suitable TSDF immediately.</p>	Partially Complied	<p>Aditya Birla Chemicals has not generated any mercury bearing brine sludge since 22.09.2011, when it implemented its membrane cell technology. The mercury bearing brine sludge generated prior to 22.09.2011 has been placed in a secured landfill having proper lining and monitoring facility by the Aditya Birla Chemicals as per then prevailing Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2008 ("2008 Hazardous Waste Management Rules"), instructions and guidelines of CPCB and the order of the Hon'ble Supreme Court dated 14.10.2013 in W.P.(C) No. 657 of 1995 titled "<i>Research Foundation for Science, Technology Natural Resource Policy vs. Union of India</i>". This is also noted by the Core Committee at paragraph 4(I)(2) of the minutes of meeting of Core Committee dated 16.10.2014 annexed as Annexure II (a) of Volume II of the July 2015 Report. Also, even Rule 16 of the Hazardous Waste Management Rules, 2016, permits disposal of Hazardous Waste in a secured landfill inside the factory premises. Furthermore, the said landfill has been recognized to be a safe and secured landfill by the Core Committee itself in its July, 2015 Report and is also being monitored by CSIR-IITR Lucknow and CPCB/UPPCB on a regular basis. But, if the Core Committee, UPPCB and/or the CPCB are still of the view that it would be more beneficial to shift the mercury bearing brine sludge</p>

		<p>and the muck contaminated with chlorinated chemicals from the factory premises to the TSDF. The industry assure that the industry take up this job after having instruction/ guidance of CPCB/ UPPCB and with their support. The industry requested CPCB and UPPCB, vide attached letter dated 15.09.2018, to provide guidelines to shift the quantity from the plant to TSDF, as the quantities are huge and when it will be opened it should not damage the environment since shifting will require longer period.</p> <p>Regarding transfer of capped mercury bearing brine sludge stored, the industry approached NEERI for site of capped secured landfill to study in details the feasibility and practicability for transferability from captive SLF to TSDF with relevant information. NEERI team has conducted Environmental Risk Assessment and provided a detailed study report with comments. The NEERI report concludes that:</p> <p>“In conclusion the Mercury is not leaching from the secured landfill and also not contaminating the ground water. This is evident from the comprehensive analysis. In view of the above facts and figures, it is not recommended to decommission the stabilized SLF for shifting the mercury contaminated sludge disposed in the closed SLF. Decommissioning the capped, stabilized, and compacted not only unnecessary but also pose some safety risks. As a precautionary measure storm water drainage may be constructed around the SLF. This water may be treated in the existing ETP, even though the possibility of mercury leaching is not evident”.</p> <p>Based on the above report from NEERI, Hon’ble Supreme Court had deferred the NGT instructions for shifting the capped mercury bearing brine sludge from the site. (Refer Appendix- XXXII)</p>
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26.	All Thermal Power Plants have been directed by Hon'ble NGT to discuss about the structural design of their Ash Dykes to prove that their Ash Dykes are proper and scientifically designed.	Partial Complied	<p>I. <u>M/s NTPC Anpara</u></p> <p>Anpara Thermal Power Station has coordinated with IIT-Roorkee to prepared the design and drawing of raising of ash dyke (Refer Appendix- XVII).</p> <p>II. <u>M/s NTPC Obra</u></p> <p>Obra Thermal Power Station has got prepared the design and drawing of raising of ash dyke by IIT Roorkee. Affidavit regarding stability of Ash dyke has also been submitted to UPPCB (Refer Appendix- XVIII).</p> <p>Note: Refer Appendix- XIII.</p>
a)	Structural details of Ash Dykes and their adequacy for handling of Fly Ash generated	Partially Complied	<p>I. <u>M/s NTPC Anpara</u></p> <p>At present the construction work of raising of ash dyke is in progress. The raising is being done by placing stone filled up gabion box in layered manner on outer face of dyke and inner slope of dyke is being done by filling of ash in 1:3 slope with the cover of earth over it. Apart from this horizontal filter, sand chimney, toe drain, spillway, decantation well etc. are also being provided for the safety of dyke. The structural design and drawing of dyke have been prepared by IIT Roorkee. (Refer Appendix- XVII)</p> <p>II. <u>M/s NTPC Obra</u></p> <p>At present the construction work of raising of ash dyke is in progress. The raising is being done by placing stone filled up gabion box in layered manner on outer face of dyke and inner slope of dyke is being done by filling of good earth in 1:2.5 slopes. Apart from this horizontal filter, sand chimney, toe drain, decantation well etc. are also being provided for the structural safety of dyke. Upstream slope of dyke is protected by brick lining over the layer of sand. The structural design and drawing of dyke have been prepared by IIT Roorkee. (Refer Appendix- XVIII)</p>

			<p>III. <u>M/s NTPC Rihand</u></p> <p>The details of structural details and adequacy for handling of fly ash generated are enclosed as Appendix- XIX.</p> <p>Note: Refer Appendix- XIII.</p>
b)	Status of the action taken by TPPs for third party assessment of Ash Dyke of their plants through expert institutions like NEERI, IITs.	Partially Complied	<p>I. <u>M/s NTPC Anpara</u></p> <p>The soil investigation of ash dyke has been done by MNIT Allahabad. On the basis of this investigation report, IIT Roorkee has completed their study for raising work of ash dyke. (Refer Appendix- XVII)</p> <p>II. <u>M/s NTPC Obra</u></p> <p>A request letter has been sent to NEERI for assessment of Ash Dyke and provided technical data as desired by them. It was informed telephonically by NEERI that they will send offer after 26 Sep 2020 when their Director will come back from abroad. (Refer Appendix- XVIII)</p> <p>III. <u>M/s NTPC Rihand</u></p> <p>NTPC Rihand conducted third party audit of our all ash dykes by IIT- Roorkee. As per the report of IIT- Roorkee the ash dykes are 'Technically Sound and Structurally Sustainable'. Copy of the Certificate issued by IIT-Roorkee is enclosed as Appendix- XIX.</p> <p>Comment by UPPCB: Information regarding third party assessment of ash dyke is requiring from industries.</p> <p>Note: Refer Appendix- XIII.</p>
c)	Roadmap of Thermal Power Plants for the future disposal of the stored Fly-Ash as well as the currently generated Fly-Ash	Partially Complied	<p>I. <u>M/s NTPC Anpara</u></p> <p>Anpara TPS will go for construction of ash mounds nearby ash dyke area. (Refer Appendix- XVII)</p> <p>II. <u>M/s NTPC Obra</u></p> <p>Presently about 8-10 % ash has been utilized</p>

			<p>from Cement/Brick manufacturers. Rest ash is safely disposed into Ash Dyke. Obra TPS has planned to dispose fly ash in low lying areas as well as in abandoned stone mines. This will help to increase the utilization of flyash about 20-25%. Further, they are in the final stage of agreement with ACC limited for lifting of flyash for their proposed manufacturing plant. After installation of Cement manufacturing plant in about 2 years they shall be in position to achieve the ash utilization upto 100%. (Refer Appendix-XVIII)</p> <p>III. M/s NTPC Rihand (Refer Appendix- XIX)</p> <p>Supply of pond ash to road construction projects: Following initiatives has been taken for utilization of pond ash of Rihand in road construction works. The entire cost of ash transportation shall be borne by NTPC Rihand for these road projects.</p> <ul style="list-style-type: none"> • MoU has been signed with NHAI: Varanasi for supply of 02 lac CuM, of pond ash to NH-56 bypass road at Varanasi. Supply of flyash under MoU has been started from 26.06.2020. • Approval has been obtained from NHAI-Varanasi for supply of 15.5 lac CuM, of pond ash to NHAI road projects at Varanasi in NH-29 & NH-56. Contracts proposals for pond as transportation is under tendering and award. • Contract awarded for supply of 0.5 lac CuM, of pond ash to PWD Chhattisgarh for its utilization in construction of bypass road near Wadrafnagar. <p>Comment by UPPCB: Information regarding roadmap for the future disposal of the stored fly ash as well as the currently generated fly ash is require from industries.</p> <p>Note: Refer Appendix- XIII.</p>
d)	Efforts made to fill up the Fly-Ash in the abandoned Coal	Partially Complied	<p>I. M/s NTPC Anpara</p> <p>For the allotment of abandoned stone mines</p>

	<p>Mines and Stone Mines? Whether any letter has been written to the Mine-owners or to the concerned Authority</p>		<p>many letters have been written to DM, Sonbhadra. 04 nos. abandoned stone mines allotted by district administration to UNL for which NOC from Revenue, Mining and Forest department has been taken. NOC from UPPCB is still awaited. (Refer Appendix- XVII)</p> <p>II. M/s NTPC Obra</p> <p>The NOC from various departments i.e. Mines, Revenue and Forest has been obtained for 04 abandoned stone mines of area 3.6 acre. An online application for getting NOC from UPPCB has also been submitted through Nivesh Mitra on 3rd Sep., 2020. (Refer Appendix- XVIII)</p> <p>It is informed that the District administration has applied online application at Obra Project for getting NOC for 04 abandoned stone mines allotted to Obra Project. (Refer Appendix- XXIV)</p> <p>III. M/s NTPC Rihand</p> <p>NTPC Rihand is continuously pursuing District Administration for allocation for abandoned stone quarries for backfilling with fly ash. It is also submitted that the application dated 11.09.2020 to Hon'ble District Collector, Sonbhadra for allocation of abandoned stone quarry. Presently, no stone quarry is available with us for backfilling with pond ash. (Refer Appendix- XIX)</p> <p>Comment by UPPCB: Information has not provided by any industry of Sonbhadra regarding filling of fly ash in Gorbi mines. District Magistrate, Sonbhadra has allotted 05 abandoned stone quarries to M/s UPRVUNL Anpara and Obra for filling fly ash.</p> <p>Note: Refer Appendix- XIII.</p>
e)	<p>Preparation of DPR for project of desilting the Rihand Reservoir and</p>	<p>Not Complied</p>	<p>Comment by UPPCB: As per information given by Executive Engineer, Rihand Dam, Civil Division, Irrigation Department, Pipari, Sonbhadra vide letter no. 297/R.C.D./camp-</p>

	<p>bearing of expenditure by TPPs of the area on polluter pay principle</p>		<p>16 dated 18.06.2019, an estimate Rs. 69,09,000/-is received from Ministry of Water Resources, River Department & Ganga Rejuvenation Central Water & Power Research Station, Pune dated 06.06.2019 to Executive Engineer, Rihand Dam, Sonbhadra for acceptance and approval. Letter has been issued on dated 18.06.2019 by Executive Engineer, Rihand Dam, Sonbhadra to Executive Engineer, Electricity Generation Division, U.P. Hydro Power Nigam Ltd., Pipari, Sonbhadra for its full payment.</p> <p>Note: Refer Appendix- XIII.</p>										
<p>f)</p>	<p>Whether the dispute of title of abandoned mines between Forest Department and Revenue Department has been resolved due to which its allotment is being delayed? Please mention the name of vacant mines.</p>	<p>Partially Complied</p>	<p>I. <u>M/s NTPC Anpara</u></p> <p>The issue of ownership dispute for the 04 nos. abandoned stone quarries has been resolved. (Refer Appendix- XVII)</p> <p>The technical study for the main ash dam of the Anpara Thermal Project by IIT Roorkee and an affidavit for the complete safeguarding of the ash dyke structure are sent to the committee. The 09 R. O. Plants established and operated by Anpara Thermal Project is located at following stations (Refer Appendix- XXIV):</p> <table border="1" data-bbox="817 1283 1428 1563"> <tr> <td>Audi turn near permanent colony</td> <td>01</td> </tr> <tr> <td>Kashi turn</td> <td>01</td> </tr> <tr> <td>Anpara Village near temporary colony</td> <td>01</td> </tr> <tr> <td>Village Belvadah</td> <td>03</td> </tr> <tr> <td>Village Kundabhati</td> <td>03</td> </tr> </table> <p>Work for making ash mount, invoice, drawing etc. has been sent to IIT, BHU, Varanasi to be constructed in Village- Belvadah.</p> <p>II. <u>M/s NTPC Obra</u></p> <p>04 mines in Dala- Bari area had been identified as undisputed and District Administration has allotted these mines to UPRVUNL in which Obra TPS of UPRVUNL will start filling ash after obtaining NOC from UPPCB. Dispute of ownership between</p>	Audi turn near permanent colony	01	Kashi turn	01	Anpara Village near temporary colony	01	Village Belvadah	03	Village Kundabhati	03
Audi turn near permanent colony	01												
Kashi turn	01												
Anpara Village near temporary colony	01												
Village Belvadah	03												
Village Kundabhati	03												

			<p>Revenue department and Forest department for other mines is still to be resolved. (Refer Appendix- XVIII)</p> <p>Comment by UPPCB: As per information of Forest & Mine Department, after publication of Section- 20 of Forest Act in the month of March, 2020, the dispute of abandoned mines (located at Arazi no. 7536 having area about 60 hectare) between Forest Department and Revenue Department has been resolved. Now all 52 abandoned stone quarries are under the jurisdiction of Forest department (Appendix – UPPCB). DFO Obra informed that NOC has been issued to M/s UPRVUNL Obra for filling ash dyke into abandoned stone quarries. M/s UPRVUNL Obra has applied 3 CTE applications on Nivesh Mitra Portal for filling ash dyke into abandoned stone quarries and applications are under consideration.</p> <p>Note: Refer Appendix- XIII.</p>
27.	Steps being taken for reduction of coal transportation of Khadia Project through road mode submitted by CGM, Khadia Project, NCL	Partially Complied	<p>With regard to coal transportation through road mode, a stay order has been issued vide order dated 22.04.2019 by Hon'ble Supreme Court stating "<i>Status quo, as of today, shall be maintained, in the meantime</i>" (Refer Appendix- XXIII).</p> <p>Further, vide order dated 01.07.2019, it was clarified that "<i>Status quo order passed by this court on 22.04.2019 is clarified to mean that transportation by road will continue in the meanwhile</i>" (Refer Appendix- XXIII).</p> <p>Further, in order to reduce the coal transportation through road mode by Khadia Project of NCL, it was informed that Khadia Project of NCL has already installed two nos. of Coal handling Plants having capacity of 04 million tone per annum and 06 million tonne per annum through which coal is being dispatched through Merry-Go-Round (MGR) System. For further increase in the dispatch capacity of Khadia Project through rail mode, a wharf wall (railway siding) of 04 million</p>

			tonne per annum capacity is proposed and Letter of Award for the same has already been issued on 26.09.2020. It is likely to be made operational by December, 2021. (Refer Appendix- XXV)				
28.	Status of 384 stone crusher units established in district Sonbhadra	Partially Complied	Status of 384 stone crusher units established in district Sonbhadra are as follows:				
			Total no. of Stone Crusher Units identified	384			
			Total no. of Stone Crusher Units have installed proper APCS & have CTO from UPPCB	236			
			Total no. of Stone Crusher Units which have not installed proper APCS & are sealed	76			
			Total no. of Stone Crusher Units not in working conditions & plant/ industry are damaged	09			
			Total no. of Stone Crusher Units dismantled	19			
			Total no. of Stone Crusher Units self since long time	36			
			Total no. of Stone Crusher Units Applied for CTO	08			
			The other details are enclosed as Appendix- XXXIII.				
29.	Status of the reports on the issue of environmental compensation regarding 10 units in the State of Uttar Pradesh The committee seeks information from SPCB in accordance with law to recover the compensation assessed	Partially Complied	EC regarding 10 units in the State of Uttar Pradesh are as follows (Refer Appendix- XXVIII):				
			Sr. no	Name of Industry	EC Imposed (in Rs.)	EC amount received	Remarks
			1.	M/s NTPC Ltd. Shaktinagar, Sonbhadra	Rs 27,00,000	Not received	The Industry has filed a civil appeal vide diary no. 1197/2020 seeking

							stay order against imposing EC, in Hon'ble Supreme Court on 09.01.2020. Order is awaited. Rs. 10.8 lac Bank Guarantee (BG) submitted to UPPCB.
			2.	M/s NTPC Ltd. Rihand nagar (Stage-I, II, III), Sonbhadra	Rs. 45,90,000	Not received	The Industry has filed a civil appeal vide diary no. 1197/2020 to grant stay against EC in Hon Supreme Court on 09.01.2020. Order is awaited.

			3.	M/s UPRVU NL Anpara- A, B, D, Anpara, Sonbha dra	Rs. 6,11,40,000	Not receiv ed	--
			4.	M/s Lanco Anpara Power limited, Anpara, Sonbha dra	Rs. 23,70,000	UPPC B share of EC for Rs. 9,48,0 00/- is depos ited on dated 30.12. 2019.	--
			5.	M/s UPRVU NL Obra Unit-B, Sonbha dra	Rs. 6,11,40,000	Not receiv ed	In this regard it is submit ed that Obra TPS filed a Civil Appeal before Hon'ble Supreme Court against impos ed EC and Hon'ble Supreme Court has granted stay on

						the same.	
			6.	M/s NCL Khadia Project, khadia, Sonbha dra	Rs. 1,24,80,000	Not receiv ed	Hon'ble Supreme Court has passed follow- ing order in civil appeal no. 9035/2 019 on 06.12.2 019 "..... There shall be stay of recove- -ry in the mean time..."
			7.	M/s NCL, Bina Project, Bina, Sonbha dra	Rs. 64,50,000	Not receiv ed	Hon'ble Supreme Court has passed the follow- ing order in civil appeal no. 9035/2 019 on 06.12.2 019 "..... There shall be

						stay of recovery in the mean time....."	
			8.	M/s NCL Duddhi chua Project, Duddhi chua, Sonbha dra	Rs. 1,30,20,000	Not receiv ed	Hon Supreme Court has passed the follow -ing order in civil appeal no. 9035/ 2019 on 06.12. 2019 "..... There shall be stay of recovery in the mean time..."
			9.	M/s NCL Kakari Project, Kakari, Sonbha dra	Rs. 64,50,000	Not receiv ed	Hon Supreme Court has passed the followi ng order in civil appeal

							no. 9035/2019 on 06.12.2019 "..... There shall be stay of recovery in the mean time... .."
			10.	M/s NCL Krishn hila Project, Krishn hila, Sonbhadra	Rs. 6,11,40,000	Not received	Hon Supreme Court has passed the following order in civil appeal no. 9035/2019 on 06.12.2019 "..... There shall be stay of recovery in the mean time... .."

			Total	23,14,80,000		
			Refer Appendix- XIII & XIV.			
<ul style="list-style-type: none"> CPCB vide letter dated 09.09.2020 requested UPPCB & MPPCB to ensure timely submission of quarterly reports by reconstituted OCs to Hon'ble NGT, with first such report giving status as on 31.10.2020 by 15.11.2020. 						

VII.RECOMMENDATIONS

1. There is an urgent need to augment the utilization and disposal of flyash in the State of Uttar Pradesh. The State Government must fix responsibility and also explain as to how they would address this issue. Moreover, the Committee recommended that the Government take steps for incentivizing use of flyash in Cement and Brick making industrial units.
2. It is suggested by the Committee that UPPCB should take appropriate action for ensuring compliance of the directions given by Hon'ble NGT regarding the concerned power plants and make a plan for continuous monitoring. A monthly report regarding the TPPs in this case is submitted to the Committee.
3. To promote offtake of dry fly ash, the concerned NTPCs should address the problem of transportation of fly ash in bulk quantity to potential users in economical and environment friendly manner.
4. It is also recommended by the Committee that supply of pond ash for road construction projects and brick making should be promoted. NTPCs should

take necessary action for supply of fly ash to brick manufacturers located within 300 kms radius from NTPCs in the State of Uttar Pradesh. Furthermore, in order to establish a new avenue of ash utilization, there is need for transportation of wet fly ash in railway wagons.

5. As per the Provisions of Notification of MOEF & CC regarding fly ash, NTPCs should take action for filling of low-lying areas on NTPCs land as well as private land using pond ash. Therefore, in order to enhance fly ash utilization levels, General Manager, NTPCs; Director, UPRVUNL and District Administration be directed to provide the list of wasteland available within 100 kms of NTPCs in the State.
6. The Committee recommends NTPC Shaktinagar to repair the AWRS dislodged pipeline and to stop discharge of decant water of the dykes.
7. Thermal Power Plants should collect back the spread over ash with minimal fugitive emission and dispose it in operating dyke. The Committee also suggested that TPPs should submit a time bound action plan in this regard within one month.
8. Task Force of Ministry of Power and Ministry of Coal should prepare list of abandoned mines/quarries for mine back filling purpose and CPCB notifies the same for use by the TPPs as per applicable guidelines and permission from UPPCB.
9. The Committee recommends that all Power Plants should develop RCC wall around the power plants.

10. The Committee recommends that the entire cost of transportation for the construction of road and assets creation programs of the Government not to be borne only by thermal power plants but also by the users i.e. NHAI, PWD, CPWD etc.
11. Filling of abandoned coal mines is a major avenue of ash utilization however due to mandatory conditions of multiple inspections, studies there is significant delay in the work. It is also suggested that a simple and well defined procedure be followed to facilitate, allot and start work within shortest possible time.
12. There is need to develop infrastructure and establishment of cement factories in Sonbhadra region. Initiation of road infrastructure projects such as ring road/ by-pass road shall facilitate both connectivity of the region as well as it will create avenues for utilization of fly ash/ fly ash based products.
13. The Committee observed that EC had been imposed on 10 industrial units but UPPCB's share has been recovered only from one unit. Rest all the industries have filed an appeal in Hon'ble Supreme Court and are pending and stay has been granted in all such cases. It is necessary that UPPCB and CPCB should follow up the matter.
14. The Committee also noted that 04 mines in Dalla-Bari area had been identified as undisputed and District Administration has allotted these mines to UPRVUNL in which Obra TPS of UPRVUNL will start filling ash after

obtaining NOC from UPPCB. Dispute of ownership between Revenue department and Forest department for other mines is still to be resolved. It is recommended that UPPCB issues NOC to UPRVUNL within 15 days so that work may start. Furthermore, regarding other mines a meeting to be conducted in chairmanship of concerned District Magistrates and officials from Forest and Revenue Department in this month.

15. The DPR for project of de-silting the Rihand Reservoir and bearing of expenditure by TPPs of the area on Polluter Pay Principle still has not been prepared. The Committee also directed the concerned authorities to prepare and submit the same within a month.

16. Third party assessment of ash dyke is necessary in case of all Thermal Power Plants of the State of Uttar Pradesh. As per the reports received by the Committee from the TPPs in the State of U.P., only NTPC Rihand had submitted a detailed and compliant report while from others it is awaited. The Committee directed that all the TPPs to submit third party assessment report within a month.

17. CPCB vide letter dated 09.09.2020 requested the Irrigation and Water Resources Department, Uttar Pradesh to take appropriate action for ensuring compliance of the direction of Hon'ble NGT regarding liability for Environmental Compensation in respect of UPRVUNL Anpara. No information has been received till date. The Committee recommends that the concerned department submit an action taken report within 15 days.

18. Hon'ble NGT had directed the Health Department, U. P. to assess the status of health of citizens of affected areas and the trend of diseases related to pollution arises from the TPPs. In view of this direction, no compliance report has been submitted by the Department till date. It is recommended that a health survey is conducted in the affected areas within next three months and a detailed report is submitted to the Committee.
19. It was noticed that a natural drain (Morcha Nala) is discharging huge quantity of water in ash pond at Anpara TPP which is to be diverted by Irrigation Department, U.P. According to the information received by the Committee, the study of changing the direction of natural drain has been done from IIT-BHU, Varanasi. The institute presented a detailed design and drawing to change the direction of the drain, according to which the total cost of the work has been estimated as Rs.32.18 crore. Assessment report received from IIT- BHU has been sent to Corporation HQ. Corporate HQ is waiting for action on the said proposal from the Irrigation Department. The Committee recommends that action be taken on the project on priority basis by the Irrigation Department.
20. The Committee has observed after the inspection report received from NTPC and UPRVUNL that there are similar kind of problems in the TPPs out the purview of this case. Therefore, it is necessary to expand the scope of direction in order to make all TPPs compliance with the said guidelines. In view of the committee by this exercise we shall be able to check the

shortcomings and problems and the initial stage so that the same can be cured easily.

The Member Secretary, UPPCB is directed to send this report to the Registrar General, National Green Tribunal, Principal Bench, New Delhi for placing the same before the Hon'ble Tribunal with a copy to the Chief Secretary, Government of UP for necessary action. The report be uploaded on the website of the committee.

23-11-2020

23-11-2020

X Anup Chandra Pandey

Dr Anup Chandra Pandey
Member, Oversight Committee
Signed by: ANUP CHANDRA PANDEY

X SVS Rathore

Justice SVS Rathore
Signed by: SURENDRA VIKRAM SINGH RATHORE

November 23, 2020

Annexures: As above

Please visit our website: ***oscngt.upsdc.gov.in*** for more information.