REPORT OF THE COMMITTEE

PLACED BEFORE HON'BLE NATIONAL GREEN TRIBUNAL (NGT), NEW DELHI

In the Matter of OA No. 453 of 2019

Anjani Jaiswal Vs Union Of India and Others

Area Covered : District Sonebhadra (UP)

Members Represented by:

Sh Radheyshyam
Regional Officer,
U.P. Pollution Control Board
Sonebhadra U.P.)

Dr (Mrs) Satya
Scientist' D'
(Joint Director)
M/o Environment, Forests
and Climate Change,
Regional Office,
Lucknow (U.P.)

Dr. R.K.Singh
Scientist' E'
Central Pollution Control Board,
Regional Directorate,
Lucknow (U.P.)

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1. Introduction

Hon'ble National Green Tribunal (NGT) vide its order dated May 25, 2019 in OA No. 453 of 2019 in the matter of, Anjani Jaiswal Vs Union of India, ordered for constitution of Committee comprising representatives of the Ministry of Environment, Forests and Climate Change (MoEF&CC), the Central Pollution Control Board (CPCB), the Uttar Pradesh Pollution Control Board (UPPCB) and the Madhya Pradesh Pollution Control Board (MPPCB) to look into pollution caused by Thermal Power Plants and National Coal Fields Limited (NCL) Coal Mining Projects, in bordering district of Sonbhadra in Uttar Pradesh and Singrauli in Madhya Pradesh for assessing status of pollution control compliance. UPPCB and MPPCB are identified as Nodal Agencies in their respective jurisdiction, for coordination and compliance of the order. In strict compliance of the referenced order by Hon'ble NGT and based on respective jurisdictions, Committees were constituted one each for District Sonebhadra in UP and for District Singrauli in MP. The Committee for District Sonebhadra (UP) comprised representatives of the Ministry of Environment, Forests and Climate Change (MoEF &CC) Regional Office, Lucknow; the Central Pollution Control Board (CPCB) Regional Directorate, Lucknow; and the Uttar Pradesh Pollution Control Board (UPPCB) Regional Office, Sonebhadra (UP). The Committee for District Singrauli (MP) comprised representatives of the Ministry of Environment, Forests and Climate Change (MoEF &CC) Regional Office, Bhopal (MP), the Central Pollution Control Board (CPCB) Regional Directorate, Bhopal (MP) and the Madhya Pradesh Pollution Control Board (MPPCB) Regional Office, District Singrauli (MP).

2. The Committee

In compliance with the Hon'ble National Green Tribunal, the Committee for District Sonebhadra (UP), has been represented by :

a. Dr. R.K.Singh
Scientist 'E'
Central Pollution Control Board (CPCB)
Regional Directorate, Lucknow (UP) — Member

b. Dr (Mrs) Satya
Scientist D'
Ministry of Environment, Forests and Climate Change
(MoEF&CC)
Regional Office, Lucknow (UP) — Member

c. Sh Radheyshyam
Regional Officer,
U.P. Pollution Control Board (UPPCB)
Regional Office, Sonebhadra (U.P.) — Member

(Radheyshyam) Member (Dr Satya) Member (Dr R.K.Singh) Member

3. Proceedings of the Committee

Consequent upon the referenced order of Hon'ble NGT, activities assigned to the Committee, it was agreed to visit the area and execute inspection at the earliest. Accordingly, the Committee conducted its field surveillance activity during July 29- August 02, 2019 while camping at Shaktinagar, District Sonbhadra in U.P. State.

After assembling on July 29, 2014, the Committee agreed to examine and undertake inspection in compliance with the directives given by the Hon'ble National Green Tribunal which inter-alia includes:

3.1. Inspection and reconnaissance survey of areas where coal mining and thermal power plants are located in Sonebhadra District of U.P State

3.2. Seeking report from U.P. State Pollution Control Board so as to scrutinize adherence with stipulated Standards by the thermal power plants and NCL Coal mining projects in the district of Sonbhadra in Uttar Pradesh

3.3. Study the aspects particularly relating to compliance of Environmental Clearance Conditions imposed by MoEF &CC and Directions by CPCB and UPPCB.

4. Approach of The Committee

The Committee consistently focused its approach in keeping with the directives of Hon'ble NGT whereby, assessment of compliance of environmental norms were made. Further, in order to assess Environmental Compensation (EC) to be imposed on defaulting industries, the committee observed following strategy :

4.1 Assessment of compliance in terms of notified (Standard) and / or prescribed parameters as per following documents:

a. Consent granted by UPPCB
b. Show Cause notice and / or Direction issued by UPPCB
c. Show Cause notice and or Direction issued by CPCB
d. Environmental Clearance Conditions imposed by MoEF & CC
e. Specific case(s) wherein, industry (ies) found operational without consent

In addition to above, the Committee also referred Hon'ble NGT order dt. 28.08.2018 in OA No. 164/2018. Status of compliance of specific issues relating to Thermal Power Plants and NCL Coal Mines were also considered in estimation of Environmental Compensation.

4.2 Assessment of violation period

Violation period was assessed for each thermal power plant and coal mining project in District Sonebhadra (UP) based on following strategy:

a. In strict accordance to the referenced Order by the Hon'ble NGT, the compensation has been assessed only for the last five years. Accordingly, 01.01.2014 has been considered as the initial date of assessment.

(Radheyshyam) Member (Dr Satya) Member (Dr R.K.Singh) Member

b. During the five-year assessment period, the date of inspection of the industry wherein violation was observed has been considered to be the 'zero date' of Violation period and the 'end date' was the date of compliance submitted by the industry. In case no communication received, the violation period has been considered as continued till the date of inspection by the Committee.

4.3 Environment Compensation (EC) Assessment Strategy

Environmental Compensation (EC) assessment has been in accordance to Hon'ble NGT Order dt 19.02.2019 in OA no. 593/2017 in the matter of Paryavaran Suraksha Samiti and another V/s Union of India and Others.

Accordingly, the Environmental Compensation assessment was based on the following formula:

$$EC = PI \times N \times R \times S \times LF$$

Where, EC is Environmental Compensation in ₹
PI = Pollution Index of industrial sector
N = Number of days of violation took place (Violation Period)
R = A factor in Rupees (₹) for EC
S = Factor for scale of operation
LF= Location factor

The formula incorporates the anticipated severity of environmental pollution in terms of Pollution Index, duration of violation in terms of number of days, scale of operation in terms of micro & small/medium/large industry and location in terms of proximity to the large habitations.

Note:-
a. The industrial sectors have been categorized into Red, Orange and Green, based on their Pollution Index in the range of 60 to 100, 41 to 59 and 21 to 40, respectively. It was suggested that the average pollution index of 80, 50 and 30 may be taken for calculating the Environmental Compensation for Red, Orange and Green categories of industries, respectively.
b. 'N', number of days for which violation took place is the period between the day of violation observed/due date of direction's compliance and the day of compliance verified by PCB/SPCB/PCC.
c. 'R' is a factor in Rupees, which may be a minimum of 100 and maximum of 500. It is suggested to consider R as 250, as the Environmental Compensation in cases of violation.
d. 'S' could be based on small/medium/large industry categorization, which may be 0.5 for micro or small, 1.0 for medium and 1.5 for large units.
e. 'LF', could be based on population of the city/town and location of the industrial unit. For the industrial unit located within municipal boundary or up to 10 km distance from the municipal boundary of the city/town, following factors (LF) may be used:

SNo.	Population (Million)	Location Factor (LF)
1	Less than 1	1.0
2	1 to < 5	1.25
3	5 to <10	1.5
4	10 and above	2.0

f. In any case, minimum Environmental Compensation has been considered as Rs 5000/day.

(Radheyshyam) Member (Dr Satya) Member (Dr R.K.Singh) Member

5. Consultation and Interaction by the Committee

The Committee during its field investigation (July-Aug 2019) reviewed status of following industries and institutions :

a. NTPC Thermal Power Plant, Shaktinagar, Sonebhadra (U.P.)

b. NTPC Thermal Power Plant, Rihandnagar, Sonebhadra (U.P.)

c. U.P. Power Corporation Limited thermal power plant at Anpara and Obra, Sonebhadra (U.P.)

d. Renusagar Thermal Power Plant at Renusasgar, Anpara, Sonebhadra (U.P.)

e. LANCO Thermal Power Plant , Anpara, Sonebhadra (U.P.).

f. Grasim Industries Limited, Captive Thermal Power Plant, Renukoot, Sonebhadra (U.P.)

g. Northern Coal Fields Limited (NCL) Mining Projects namely Dudhichua, Khadia, Krishnashila, Bina and Kakri all in Sonebhadra U.P.

6. Compliance Status of Industries

The Committee studied the records / documents with UPPCB, MoEF &CC, CPCB and made available by concerned industries with regard to adherence of standards, non compliance noted and corrective action.

7. Findings

Salient findings of the Committee based on onsite appraisal carried out during July 29-August 02, 2019 for industries in District Sonebhadra (UP), information available at MoEF&CC, UPPCB, CPCB and as furnished by the industries inspected are summarized as under:

Thermal Power Plants

a. NTPC Thermal Power Plant, at Shaktinagar, Sonebhadra (U.P.)

a.1. The plant has cumulative power generation capacity of 2000 MW.

a.2. It has been granted consent by UPPCB with a validity upto 31.12.2019.

a.3. Ash Water Recirculation System (AWRS) has been established by the industry to recover ash water overflow and recycle in the process.

a.4. Integrated Effluent Treatment Plant is established for treatment of effluent from Boiler blow down, DM Plant, Workshop, Coal handling plant and other process waste water. Treated effluent from ETP is recycled in the process.

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a.5. The Unit has established three Continuous Ambient Air Quality Monitoring Stations (CAAQMS). Two of them established individually by the Unit and one jointly with NTPC Thermal Power Plant, Vindhyanagar.

a.6. On-line system for stack emission monitoring is established and connected to CPCB Server

a.7. The Unit has established motorized aerated lagoon for sewage treatment and the same is operational. As per compliance status available at MoEF&CC treated sewage generally conform to notified / prescribed Standards. Treated sewage is utilized in horticulture.

b. NTPC Thermal Power Plant at Rihandnagar, Sonebhadra (U.P.)

b.1. The plant has cumulative power generation capacity of 3000 MW.

b.2. It has been granted consent by UPPCB with a validity upto 31.12.2019.

b.3. Ash Water Recirculation System (AWRS) has been established by the industry to recover ash water overflow and recycle in the process.

b.4. Integrated Effluent Treatment Plant is established for treatment of effluent from Boiler blow down, DM Plant, Workshop, Coal handling plant and other process waste water. Treated effluent from ETP is recycled in the process.

b.5. Three Continuous Ambient Air Quality Monitoring Station (CAAQMS) have been established by the Plant

b.6 On-line system for stack emission monitoring is established and connected to CPCB Server

b.6. Sewage treatment plant as per Moving Bed Bioreactor technology has been established and operational. As per compliance status available at MoEF&CC treated sewage generally conform to notified / prescribed Standards. Treated sewage is utilized in horticulture.

c. U.P. Power Corporation Limited thermal power plant at Anpara, Sonebhadra (U.P.)

c.1. The Plant has cumulative power generation capacity of 2630 MW.

c.2. The Plant is operational without consent of UPPCB.

c.3. Ash Water Recirculation System (AWRS) has been established by the industry to recover ash water overflow and recycle in the process. It was noted that due to poor ash management by the industry, several ash islands were observed in the overflow

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lagoons. AWRS has been poorly operational with damaged pumping network for recirculation of overflow. A major portion of ash overflow from overflow pond discharging into Rihand reservoir was observed

c.4. Integrated Effluent Treatment Plant is established for treatment of effluent from Boiler blow down, DM Plant, Workshop, Coal handling plant and other process waste water. Treated effluent from ETP is recycled in the process.

c.5. The Plant is yet to establish Continuous Ambient Air Quality Monitoring Station (CAAQMS)

c.6 On-line system for stack emission monitoring is established and connected to CPCB Server

c.6. Sewage treatment plant (STP) based on Activated Sludge Process is established only in Anpara 'D' Plant . As per compliance status available at MoEF&CC treated sewage generally conform to notified / prescribed Standards. STP in others units is not established.

d. U.P. Power Corporation Limited thermal power plant at Obra Sonebhadra (U.P.)

d.1. The plant has cumulative power generation capacity of 1000 MW.

d.2. The Plant is operational without consent of UPPCB.

d.3. Ash Water Recirculation System (AWRS) has been established by the industry to recover ash water overflow and recycle in the process. It was noted that due to poor ash management by the industry, several ash islands were observed in the overflow lagoons. AWRS has been partially operational with damaged pumping network for recirculation of overflow. A portion of ash overflow discharge into Rihand river.

d.4. Integrated Effluent Treatment Plant is established for treatment of effluent from Boiler blow down, DM Plant, Workshop, Coal handling plant and other process waste water. The process effluent management is such that effluent streams are discharged into a municipal drain (Jharia Nala) passing through the industry. After a traverse of appx 800 meters a portion of effluent from the drain is taken to ETP for treatment. Treated effluent from ETP is recycled in the process. Remaining flow in the drain is discharged to river Rihand.

d.5. On-line system for stack emission monitoring is established and connected to CPCB Server

d.6. The plant is yet to establish Continuous Ambient Air Quality Monitoring Station (CAAQMS) and Sewage Treatment Plant.

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e. Renusagar Thermal Power Plant, Renusasgar, Anpara Sonebhadra (U.P.)

e.1. The plant has cumulative power generation capacity of 840 MW.

e.2. The Plant has been granted consent by UPPCB with a validity upto 31.12.2019.

e.3. Ash Water Recirculation System (AWRS) has been established by the industry to recover ash water overflow and recycle in the process.

e.4. Integrated Effluent Treatment Plant is established for treatment of effluent from Boiler blow down, DM Plant, Workshop, Coal handling plant and other process waste water. Treated effluent from ETP is recycled in the process.

e.5. One Continuous Ambient Air Quality Monitoring Station (CAAQMS) is established jointly with LANCO Anpara Power Limited , Anpara Sonebhadra

e.6. On-line system for stack emission monitoring is established and connected to CPCB Server

e.7. Sewage Treatment Plant based on Activated Sludge Process is established and operational. As per compliance status available at MoEF&CC treated sewage generally conform to notified / prescribed Standards. Treated sewage used in process.

f. LANCO Anpara Power Limited , Anpara Sonebhadra (U.P.)

f.1. The plant has cumulative thermal power generation capacity of 1200 MW.

f.2. The Plant has been granted consent by UPPCB with a validity upto 31.12.2019.

f.3. Ash Water Recirculation System (AWRS) has been established by the industry to recover ash water overflow and recycle in the process. The overflow lagoon is common for the industry and Anpara Thermal Power Plant as a result of which quality of ash overflow recycled is adversely impacted. However, the Plant has established treatment system for ash water overflow received and the same is recycled in the process

f.4. Integrated Effluent Treatment Plant is established for treatment of effluent from Boiler blow down, DM Plant, Workshop, Coal handling plant and other process waste water. Treated effluent from ETP is recycled in the process.

f.5. Three Continuous Ambient Air Quality Monitoring Stations (CAAQMS) have been established. Two of them individually by the Plant and one Station is established jointly with Renusagar Thermal Power Plant, Renusasgar, Anpara Sonebhadra.

f.6. On-line system for stack emission monitoring is established and connected to CPCB Server

f.7. Sewage Treatment Plant based on Rotary Biological Chamber (RBC) process is established. As per compliance status available at MoEF&CC treated sewage generally conform to notified / prescribed Standards. Treated sewage is used in horticulture.

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g. Grasim Industries Limited (Power Division), Renukoot, Sonebhadra (U.P.)

g.1. The plant has cumulative thermal power generation capacity of 50 MW.

g.2. It has been granted consent by UPPCB with a validity upto 31.12.2019.

g.3. The industry has 100 % dry ash collection. Dry ash collected is used in Cement industries and making fly ash bricks.

g.4. Integrated Effluent Treatment Plant is established for treatment of effluent from Boiler blow down, DM Plant, Workshop, Coal handling plant and other process waste water. Treated effluent from ETP is recycled in the process.

g.5. One Continuous Ambient Air Quality Monitoring Station (CAAQMS) is established jointly with Hindalco Industries Limited, Renukoot, Sonebhadra

g.6. Online system for stack emission monitoring is established and connected to CPCB Server.

g.7. Sewage Treatment Plant based on Activated Sludge Process is established. As per compliance status available at MoEF&CC treated sewage generally conform to notified / prescribed Standards. Treated sewage is used in horticulture.

Northern Coal Fields Limited (NCL) Coal Mining Projects

h. Northern Coal Fields Limited (NCL) Project Dudhichua, Sonebhadra (U.P.)

h.1. The Coal Mining Project has a cumulative coal production capacity of 15.5 million ton/ year

h.2. It has been granted consent by UPPCB with a validity upto 31.12.2018.

h.3. Integrated Effluent Treatment Plant is established for treatment of effluent from mine (mine water), workshop and other process waste water.

h.4. System for utilization of treated wastewater is established. However, due to improper execution and lack of proper infrastructure, treated effluent is often released back to Rihand reservoir.

h.5. Effluent treatment plant is poorly maintained with operational record gaps and lack of supervision and trained manpower entrusted with operation.

h.6. The project has established one Continuous Ambient Air Quality Monitoring Station (CAAQMS).

h.7. Sewage treatment plant based on Activated Sludge Process has also been established by the project.. As per compliance status available at MoEF&CC treated sewage generally conform to notified / prescribed Standards. Treated sewage is used in horticulture.

(Radheyshyam) Member

(Dr Satya) Member

(Dr R.K.Singh) Member

i. Northern Coal Fields Limited (NCL) Project Khadia, Sonebhadra (U.P.)

i.1. The Coal Mining Project has a cumulative coal production capacity of 14.0 million ton / year

i.2. The project has been granted consent by UPPCB with a validity upto 31.12.2019.

i.3. Integrated Effluent Treatment Plant is established for treatment of effluent from mine (mine water), workshop and other process waste water.

i.4. System for utilization of treated wastewater is established. However, due to improper execution and lack of proper infrastructure, treated effluent is released to Rihand reservoir.

i.5. Effluent treatment plant is poorly maintained with operational record gaps, lack of supervision and lack of trained manpower entrusted with operation.

i.6. The project has established one Continuous Ambient Air Quality Monitoring Station (CAAQMS).

i.7. Motorised Aerated lagoon has been established by the project for sewage treatment and the same is operational. As per compliance status available at MoEF&CC treated sewage generally conform to notified / prescribed Standards. Treated sewage is used in horticulture.

j. Northern Coal Fields Limited (NCL) Project Krishnashila, Sonebhadra (U.P.)

j.1. The Coal Mining Project has a cumulative coal production capacity of 6.25 million ton / year

j.2. It has been granted consent by UPPCB with a validity upto 31.12.2019.

j.3. The Project is yet to establish an integrated Effluent treatment plant. However, it was noted that the project is currently not generating mine water effluent and hence the only prominent source of effluent generation is from workshop wherein, treatment provision has been provided. Treated effluent from workshop is utilized by the Project in dust suppression.

j.4. Sewage treatment is being done jointly through Sewage Treatment Plant established by NCL Bina Project

j.5. One Continuous Ambient Air Quality Monitoring Station (CAAQMS) has been established jointly with NCL Bina Project

(Radheyshyam) Member (Dr Satya) Member (Dr R.K.Singh) Member

k. Northern Coal Fields Limited (NCL) Project Bina Sonebhadra (U.P.)

k.1. The Coal Mining Project has a cumulative coal production capacity of 7.5 million to / year

k.2. It has been granted consent by UPPCB with a validity upto 31.12.2019.

k.3. Integrated Effluent Treatment Plant is established for treatment of effluent from mine (mine water), workshop and other process waste water.

k.4. System for utilization of treated wastewater is established. However, due to improper execution and lack of proper infrastructure, treated effluent is released to Rihand reservoir.

k.5. Effluent treatment plant is poorly maintained with operational record gaps and lack of supervision and lack of trained manpower entrusted with operation.

k.6. Sewage Treatment Plant based on Activated Sludge process is established. As per compliance status available at MoEF&CC treated sewage generally conform to notified / prescribed Standards. Treated sewage is used in horticulture.

k.7. One Continuous Ambient Air Quality Monitoring Station (CAAQMS) has been established jointly with NCL Krishnashila Project

l. Northern Coal Fields Limited (NCL) Mining Project Kakri Sonebhadra (U.P.)

l.1. The Coal Mining Project has a cumulative coal production capacity of 3.0 million to / year

l.2. The project has been granted consent by UPPCB with a validity upto 3112.2019.

l.3. Integrated Effluent Treatment Plant is established for treatment of effluent from mine (mine water), workshop and other process waste water.

l.4. System for utilization of treated wastewater is established. However, due to improper execution and lack of proper infrastructure, treated effluent is released to Rihand reservoir.

l.5. Effluent treatment plant is poorly maintained with operational record gaps and lack of supervision and lack of trained manpower entrusted with operation.

l.6. Sewage Treatment Plant based on Activated Sludge Process is established. As per compliance status available at MoEF&CC treated sewage generally conform to notified / prescribed Standards. Treated sewage is used in horticulture.

l.7. One Continuous Ambient Air Quality Monitoring Station (CAAQMS) has been established

(Radheyshyam) Member 22/8/19 (Dr Satya) Member 22.08.19 (Dr R.K.Singh) Member 22/08/19

8. Assessment of Environmental Compensation (EC)

8.1. **Name of Industry** : NTPC Thermal Power Plant, at Shaktinagar, Sonebhadra (U.P.)

8.1.1 Violation and its Period

The emission in Stack of Unit No. 02 was found exceeding for a period of 90 days as per following detail :

Reference Document	Specific Violation and date of violation noticed	Date of compliance intimated / verified	Period of violation (In Days)
CPCB Direction Dt. 05.10.2017	PM in Stack of Unit # 02; 17.08.2017	14.11.2017	90

8.1.2 Environmental Compensation

PI = Pollution Index of industrial sector (taken as '80' considering 'Red Category')
N = Number of days of violation took place (Violation Period)
R = A factor in Rupees (₹) (taken as '250')
S = Factor for scale of operation ('1.5' considering scale of operation being 'large')
LF = Location factor ('1.0' considering population of area being < 1 million)

EC = PI x N x R x S x LF
= 80 X 90 X 250 X 1.5 X 1.0
= 27,00,000

Net EC Assessed in ₹: Twenty seven lakh (27.00 lakh)

8.2. **Name of Industry** : Northern Coal Fields Limited (NCL) Project Dudhichua, Sonebhadra (U.P.)

8.2.1 Violation and its Period

a. Industry has been operational without consent of UPPCB in 2014 and further for a specific period in 2019
b. Treated effluent characteristics were found non-conforming to Consent (2018) as per below:

Reference Document	Specific Violation and date of violation noticed	Date of compliance intimated / verified	Period of violation (In Days)
UPPCB Consent	01.01.2014*	03.02.2014*	34
	01.01.2019*	Awaited*	212
	TSS, BOD, COD and	13.06.2019	166

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	Oil & Grease at ETP Outlet; 29.12.2018		
	TSS, BOD and COD at By-pass drain 10.07.2019	Awaited	22
	Total		434

* Industry operational without consent

8.2.2 Environmental Compensation

PI = Pollution Index of industrial sector (taken as '80' considering 'Red Category')
N = Number of days of violation took place (Violation Period)
R = A factor in Rupees (₹) (taken as '250')
S = Factor for scale of operation ('1.5' considering scale of operation being 'large')
LF = Location factor ('1.0' considering population of area being < 1 million)

EC = PI x N x R x S x LF
= 80 X 434 X 250 X 1.5 X 1.0
= 1,30,20,000

Net EC Assessed in ₹: One crore thirty lakh and twenty thousand (1,30,20,000)

8.3. **Name of Industry** : Northern Coal Fields Limited (NCL) Project Khadia, Sonebhadra (U.P.)

8.3.1 Violation and its Period

Industry has been operational without consent of UPPCB in 2014 and further for a specific period in 2017

Reference Document	Specific Violation and date of violation noticed	Date of compliance intimated / verified	Period of violation (In Days)
UPPCB Consent	01.01.2014*	01.12.2014*	335
	01.01.2017*	22.03.2017*	81
	Total		416

* Industry operational without consent

8.3.2 Environmental Compensation

PI = Pollution Index of industrial sector (taken as '80' considering 'Red Category')
N = Number of days of violation took place (Violation Period)

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R = A factor in Rupees (₹) (taken as '250')
S = Factor for scale of operation ('1.5' considering scale of operation being 'large')
LF = Location factor ('1.0' considering population of area being < 1 million)

EC = PI x N x R x S x LF
= 80 X 416 X 250 X 1.5 X 1.0
= 1,24,80,000

Net EC Assessed in ₹: One crore, twenty four lakh and eighty thousand (1,24,80,000)

8.4. **Name of Industry** : Northern Coal Fields Limited (NCL) Project Krishnashila, Sonebhadra (U.P.)

8.4.1 Violation and its Period

a. Industry has been operational without implementation of Environmental Clearance Condition (MoEF&CC) with specific reference to commissioning of integrated Effluent Treatment Plant.

b. Industry has been operational without consent of UPPCB for specific period in 2014, 2015, 2016, 2017 and 2018

Reference Document	Specific Violation and date of violation considered w.e.f.	Date of compliance intimated / verified	Period of violation (In Days)
MoEF&CC Environmental Clearance (2005)	01.01.2014	Since inception, effluent generation has been from workshop. On 30.03.2014, the industry commissioned Effluent Treatment Plant for effluent generated from workshop. Treated effluent is recycled in dust suppression. As far as Integrated ETP is concerned, it is currently under construction.	2038
UPPCB Consent	01.01.2014*	05.01.2014*	05
	01.01.2015*	16.01.2015*	16
	01.01.2016*	31.12.2016*	365
	01.01.2017*	28.02.2017*	59
	01.01.2018*	08.05.2018*	128
	Total		2038**

* Industry operational without consent
**Common Period in consideration of MoEF&CC and UPPCB Referenced documents.

(Radheyshyam) Member (Dr Satya) Member (Dr R.K.Singh) Member

8.4.2 Environmental Compensation

PI = Pollution Index of industrial sector (taken as '80' considering 'Red Category')
N = Number of days of violation took place (Violation Period)
R = A factor in Rupees (₹) (taken as '250')
S = Factor for scale of operation ('1.5' considering scale of operation being 'large')
LF = Location factor ('1.0' considering population of area being < 1 million)

EC = PI x N x R x S x LF
= 80 X 2038 X 250 X 1.5 X 1.0
= 6,11,40,000

Net EC Assessed in ₹: Six crore, eleven lakh and forty thousand (6,11,40,000)

8.5. **Name of Industry** : Northern Coal Fields Limited (NCL) Project Bina, Sonebhadra (U.P.)

8.5.1 Violation and its Period

Treated effluent characteristics were found non-conforming to Consent (2018) as per below:

Reference Document	Specific Violation and date of violation noticed	Date of compliance intimated / verified	Period of violation (In Days)
UPPCB Consent	TSS, BOD, COD and Oil &Grease at ETP Outlet; 29.12.2018	Awaited	215
	Total		215

8.5.2 Environmental Compensation

PI = Pollution Index of industrial sector (taken as '80' considering 'Red Category')
N = Number of days of violation took place (Violation Period)
R = A factor in Rupees (₹) (taken as '250')
S = Factor for scale of operation ('1.5' considering scale of operation being 'large')
LF = Location factor ('1.0' considering population of area being < 1 million)

EC = PI x N x R x S x LF
= 80 X 215 X 250 X 1.5 X 1.0
= 64,50,000

Net EC Assessed in ₹: Sixty four lakh fifty thousand (64,50,000)

(Radheyshyam) Member (Dr Satya) Member (Dr R.K.Singh) Member

8.6. **Name of Industry** : Northern Coal Fields Limited (NCL) Project Kakri, Sonebhadra (U.P.)

8.6.1 Violation and its Period

Treated effluent characteristics were found non-conforming to Consent (2018) as per below:

Reference Document	Specific Violation and date of violation noticed	Date of compliance intimated / verified	Period of violation (In Days)
UPPCB Consent	TSS, COD, BOD and Oil & Grease at ETP Outlet; 29.12.2018	Awaited	215
	Total		215

8.6.2 Environmental Compensation

PI = Pollution Index of industrial sector (taken as '80' considering 'Red Category')
N = Number of days of violation took place (Violation Period)
R = A factor in Rupees (₹) (taken as '250')
S = Factor for scale of operation ('1.5' considering scale of operation being 'large')
LF = Location factor ('1.0' considering population of area being < 1 million)

EC = PI x N x R x S x LF
= 80 X 215 X 250 X 1.5 X 1.0
= 64,50,000

Net EC Assessed in ₹: Sixty four lakh fifty thousand (64,50,000)

8.7. **Name of Industry** : NTPC Thermal Power Plant at Rihandnagar, Sonebhadra (U.P.)

8.7.1 Violation and its Period

Treated effluent characteristics were found non-conforming to Consent (2016) and emission characteristics in Stack of Unit No. 02 was found exceeding notified Standards for a period of 90 days as per following detail :

Reference Document	Specific Violation and date of violation noticed	Date of compliance intimated / verified	Period of violation (In Days)
UPPCB Consent	TSS in ETP Outlet 23.06.2016	24.08.2016	63
CPCB Direction Dt 07.12.2017	PM in Stack of Unit # 1,4 16.11.2017	06.04.2018	90
Total			153

(Radheyshyam) Member (Dr Satya) Member (Dr R.K.Singh) Member

8.7.2 Environmental Compensation

PI = Pollution Index of industrial sector (taken as '80' considering 'Red Category')
N = Number of days of violation took place (Violation Period)
R = A factor in Rupees (₹) (taken as '250')
S = Factor for scale of operation ('1.5' considering scale of operation being 'large')
LF = Location factor ('1.0' considering population of area being < 1 million)

EC = PI x N x R x S x LF
= 80 X 153 X 250 X 1.5 X 1.0
= 45,90,000

Net EC Assessed in ₹: Forty five lakh ninety thousand

8.8. **Name of Industry** : U.P. Power Corporation Ltd, Thermal Power Plant, Obra, Sonebhadra (U.P.)

8.8.1 Violation and its Period

a. Industry has been found non-conforming to Environmental Clearance Condition (MoEF&CC) with specific reference to characteristics of Stack Emission and establishment of CAAQMS

b. Industry has been operational without consent of UPPCB since 2014.

Reference Document	Specific Violation and date of violation noticed	Date of compliance intimated / verified	Period of violation (In Days)
MoEF & CC Environmental Clearance	CAAQMS not established; 01.01.2014	Awaited	1135
	PM in Stack of Unit # 02 and 13; 14.07.2017	Awaited	748
UPPCB Consent	01.01.2014*	Awaited	2038
Total			2038**

* Industry operational without consent
**Common Period in consideration of MoEF&CC and UPPCB Referenced documents.

8.8.2 Environmental Compensation

PI = Pollution Index of industrial sector (taken as '80' considering 'Red Category')
N = Number of days of violation took place (Violation Period)
R = A factor in Rupees (₹) (taken as '250')
S = Factor for scale of operation ('1.5' considering scale of operation being 'large')
LF = Location factor ('1.0' considering population of area being < 1 million)

(Radheyshyam) Member (Dr Satya) Member (Dr R.K.Singh) Member

EC = PI x N x R x S x LF
= 80 X 2038 X 250 X 1.5 X 1.0
= 6,11,40,000

Net EC Assessed in ₹: Six crore eleven lakhs and forty thousand
(6,11,40,000)

8.9. **Name of Industry** : U.P. Power Corporation Ltd, Thermal Power Plant, Anpara, Sonebhadra (U.P.)

8.9.1 Violation and its Period

a. Industry has been operational without consent of UPPCB.
b. CAAQMS is yet to be established
c. Exceedance in PM concentration were noted
d. Industry yet to pay Environmental Compensation imposed by CPCB vide its direction Dt. 29.04.2019

Reference Document	Specific Violation and date of violation noticed	Date of compliance intimated / verified	Period of violation (In Days)
MoEF & CC Environmental Clearance (2007)	CAAQMS not established; 01.01.2014	Awaited	2038
UPPCB Consent	01.01.2014*	Awaited	2038
CPCB Direction (2018)	PM in Stack of Unit # 4 & 5; 02.09.2018	Awaited	332
Total			2038**

*Industry operational without consent
**Common Period in consideration of MoEF&CC, UPPCB & CPCB Referenced documents

8.9.2 Environmental Compensation

PI = Pollution Index of industrial sector (taken as '80' considering 'Red Category')
N = Number of days of violation took place (Violation Period)
R = A factor in Rupees (₹) (taken as '250')
S = Factor for scale of operation ('1.5' considering scale of operation being 'large')
LF = Location factor ('1.0' considering population of area being < 1 million)

EC = PI x N x R x S x LF
= 80 X 2038 X 250 X 1.5 X 1.0
= 6,11,40,000

Net EC Assessed in ₹: Six crore eleven lakhs and forty thousand
(6,11,40,000)

(Radheyshyam) Member (Dr Satya) Member 22.08.19 (Dr R.K.Singh) Member

8.10. **Name of Industry** : LANCO Anpara Power Ltd, Thermal Power Plant, Anpara, Sonebhadra (U.P.)

8.10.1 Violation and its Period

Treated effluent characteristics were found non-conforming to Consent (2016)

Reference Document	Specific Violation and date of violation noticed	Date of compliance intimated / verified	Period of violation (In Days)
UPPCB Consent	TSS in Ash Pond overflow; 25.05.2016	12.08.2016	79
	Total		79

8.10.2 Environmental Compensation

PI = Pollution Index of industrial sector (taken as '80' considering 'Red Category')
N = Number of days of violation took place (Violation Period)
R = A factor in Rupees (₹) (taken as '250')
S = Factor for scale of operation ('1.5' considering scale of operation being 'large')
LF = Location factor ('1.0' considering population of area being < 1 million)

EC = PI x N x R x S x LF
= 80 X 79 X 250 X 1.5 X 1.0
= 23,70,000

Net EC Assessed in ₹: Twenty three lakhs seventy thousand

(Radheyshyam) Member (Dr Satya) Member (Dr R.K.Singh) Member

9. Abridged Status of Environmental Compensation (EC)

SNo.	Name of industry (M/s)	EC in ₹
1.	NTPC Thermal Power Plant, at Shaktinagar, Sonebhadra (U.P.)	27,00,000
2.	Northern Coal Fields Limited (NCL) Project Dudhichua, Sonebhadra (U.P.)	1,30,20,000
3.	Northern Coal Fields Limited (NCL) Project Khadia, Sonebhadra (U.P.)	1,24,80,000
4.	Northern Coal Fields Limited (NCL) Project Krishnashila, Sonebhadra (U.P.)	6,11,40,000
5.	Northern Coal Fields Limited (NCL) Project Bina, Sonebhadra (U.P.)	64,50,000
6.	Northern Coal Fields Limited (NCL) Project Kakri, Sonebhadra (U.P.)	64,50,000
7.	NTPC Thermal Power Plant at Rihandnagar, Sonebhadra (U.P.)	45,90,000
8.	U.P. Power Corporation Ltd, Thermal Power Plant, Obra, Sonebhadra (U.P.)	6,11,40,000
9.	U.P. Power Corporation Ltd, Thermal Power Plant, Anpara, Sonebhadra (U.P.)	6,11,40,000
10.	LANCO Anpara Power Ltd, Thermal Power Plant, Anpara, Sonebhadra (U.P.)	23,70,000

10. Constraints

The Committee while executing directives of Hon'ble NGT assigned priority on issues having direct impact on recipient environment. Hence, it primarily laid emphasis on reviewing status of compliance of notified Standards for effluent and emission or as prescribed in the Consent granted by U.P. Pollution Control Board as also in the Environmental Clearance accorded by MoEF & CC. Further, based on environmental surveillance activities carried out by CPCB / UPPCB and specific Direction issued in terms of exceedance by effluent and / or emission parameters with reference to notified Standards for effluent and emission or as prescribed in the Consent granted by U.P. Pollution Control Board have also been considered by the committee for estimation of Environmental Compensation. Status of compliance in terms of other general conditions of Environmental Clearance Conditions with regard to ash management by thermal power plant, reclamation / management of mine over burden by Coal mines have not been taken into consideration for estimation of Environmental Compensation.

The Committee observed restraint on estimation of environmental damage caused in the Singrauli area (UP), as this calls for a comprehensive study beyond the expertise of this committee. The Committee however respectfully submits that estimation of environmental damage must address the issues including but not limited to groundwater quality, soil, crop pattern, flora, fauna, reservoir bottom sediments, human health, cattle health and an organized epidemiological study to establish cause – effect relationship between clinical disorder (if any) and parameter(s) of exceedance found either in effluent or emission from the concerned industries including cost of remedial measures in each case..

(Radheyshyam) Member (Dr Satya) Member (Dr R.K.Singh) Member

11. Recommendations

In order to suitably address the critical issues of potential concerns to environment in the Singrauli Area, the Committee proposes following Recommendations subject to approval of Hon'ble NGT:

a. In keeping with the strict compliance of this referenced Order of Hon'ble NGT, the Statutory Authorities may take note of the findings of this report and ensure appropriate action for recovery of Environmental Compensation due to damage caused to environment.

b. Considering complexity of study components and required expertise in related field / discipline, estimation of environmental damage and cost of remediation be worked out by a consortium of reputed institutions namely National Institute of Hydrology (NIH), Roorkee, National Geophysical Research Institute (NGRI),Hyderabad; National Institute of Occupational Health (NIOH), Ahmedabad; National Botanical Research Institute (NBRI), Lucknow and Indian Institute of Toxicology Research (IITR), Lucknow or such other institutions of repute. U.P. Pollution Control Board and M.P. Pollution Control Board may be nodal agencies for execution of the above activities in their respective jurisdiction.

c. Irrigation Department in U.P. State is required to come out with status of silting in the reservoir impacting adversely on the water holding capacity of the reservoir and possible threat (if any) on the structure of the Rihand dam as the latter was designed to hold water column and is expected to practically holding a significant column of silt due to discharge of industrial effluents.

d. Environmental carrying capacity in Singrauli area must be worked out to take a decision on new / expansion projects and also to devise an environment friendly strategy on pollution control by the industries in the area.

****End of Report***

(Radheyshyam) Member (Dr Satya) Member (Dr R.K.Singh) Member