

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI
ORIGINAL APPLICATION NO. 240 OF 2024

In the matter of:

Singrauli Pradooshan Mukti
 Vahini & Ors.

Applicants

Vs.

Union of India & Ors.

Respondents

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Filed by Adv. Amit Singh Chauhan
(on behalf of Central Pollution Control Board)

Place: Delhi
Dated: 10.09.2024

Report in compliance of
Hon'ble NGT order in O.A No. 240/2024 in the matter of
Singrauli Pradooshan Mukti Vahini & Ors. Vs Union of India & Ors.

1. Hon'ble NGT has passed the Order dated 15.03.2024 on Original Application No. 240/2024 in the matter of Singrauli Pradooshan Mukti Vahini & Ors. Versus Union of India & Ors. , the operative part of the order is as follows: -

"1. In this original application, residents of Sonbhadra District of Singrauli had claimed the compensation on account of the health issues faced by them due to pollution caused by the industrial units in that area. The plea of the Applicant is that there are 359 industries including highly polluting industries such as thermal power plants, coal mines, etc. and the industries have been set up beyond the carrying capacity as a result of which the residents have faced serious health hazards. Applicant has summarized following five main issues:

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2. Further issues which are required to be remediated are stated by the applicant as under:

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6. Respondent No. 2 will file a comprehensive report disclosing the extent of pollution in the area concerned and its effect on the health of the residents and also the truthfulness of the allegations made in the present OA. Let the reply/report be filed by the respondents at least one week before the next

date of hearing by e-mail at judicialngt@ gov.in preferably in the form of searchable PDF/OCR Support PDF and not in the form of Image PDF.....”.

In compliance of the above order an interim progress report was filed by CPCB on 20.05.2024 which was considered by Hon'ble NGT (PB) on 22.05.2024

2. Issues raised by Applicant, as stated in Hon'ble NGT Order:

Applicant has summarized following five main issues:

- 2.1. The main source of water, the Rihand reservoir is severely polluted with the discharge of fly ash and other effluents from the industries. The water is unfit for consumption.
- 2.2. Detailed environmental studies have concluded that Singrauli was one of the Critically Polluted Areas identified by the Central Pollution Control Board.
- 2.3. There is a high prevalence of fluorosis in the region, in addition to indications of lead and mercury toxicity.
- 2.4. There is a need to assess the carrying capacity of the region and to halt further industrialization/expansion of existing industries.
- 2.5. There is a need for industries to contribute towards compensation for damage to victims of the pollution in the region as well as restoration of the environment.

Further issues which are required to be remediated are stated by the applicant as under:

- 2.6. There is heavy metal pollution in the region including toxic heavy metals such as mercury, chromium, lead and arsenic, which are attributable to the thermal power plants and coal mining in the region.
- 2.7. Singrauli experiences at least 95 days of very poor or critical air quality throughout the year.
- 2.8. The lung function of the residents is severely affected, being on average 42.7% less than the average Indian.
- 2.9. There is a high prevalence of fluorosis, yellowing of teeth, blue line on gums (indicating exposure of heavy metals) and a higher rate of miscarriages in the region.

In compliance of Hon'ble NGT order, as per direction of CPCB Delhi, team from Regional Directorate, Lucknow (Sh. Kamal Kumar, Sc-E & Sh.Dharmnath Prajapati, RA) visited Sonbhadra area during March 06-07, 2024 and collected the samples from surface and groundwater sources as well as other relevant information from concern departments.

Further, to obtain the information from different concern sources a letter dt. 03.05.24 has been written to Regional Officer, UPPCB to provide the data on ambient air quality, carrying capacity study, if carried out and health status of local residents particularly with reference to lung disease and fluorosis from Chief Medical Officer (CMO) of district Sonbhadra.

1. General Description about Area:

The area in the northeastern part of Singrauli district in the state of Madhya Pradesh and the adjoining southern part of Sonebhadra district of Uttar Pradesh is collectively known as Singrauli Area. Approximately 4328 sq. km. in district Sonebhadra in U.P. and 5672 sq. km. in district Singrauli in M.P. contributes to Singrauli Area. Geographically, the study area is located between Longitude 82° 34' 27" to 83° 09' 11" E and Latitude 23° 56' 16" to 24° 17' 50" E. Hydrologically, the study area is a part of the Rihand River basin, a tributary of Sone River, which in turn is a tributary of River Ganga.

In surrounding of Rihand reservoirs, major industries are M/s Shakti Nagar NTPC, M/s Rihand NTPC, M/s Anpara Thermal Power Plant, M/s Anpara 'C' Lanco, M/s Northern Coalfield Ltd., M/s Renukoot Thermal Power Plant, M/s Hindalco Aluminium Industries, M/s Grasim Chemicals, and M/s Birla Hi-tech Carbon are situated.

Singrauli Area is the major power hub in the country due to availability of coal and water. Besides Thermal Power Plants, Aluminium industry, chemical industry, mining industry, Cement plants, and Stone crushers are major industries in Singrauli Area.

The area south and immediately north of the reservoir is formed on low-lying hills of granite gneiss, granite and migmatite of Dudhi Group which are separated from hills of phyllite, schist and quartzite of Bijawer Super Group on the northern side by a E-W trending fault (Dudhi Tectonic Lineament).

In the late fifties, a large dam was constructed on the River Rihand known as Govind Vallabh Pant Sagar, inaugurated by Pt. Jawahar Lal Nehru in 1962. The dam proved to be the life line for the fast development of the area. As a result, the region has emerged as energy hub of India due to availability of coal and water. At present Approx. 18000 MW/day power is being generated by the Thermal Power Plants in the whole Singrauli Area out of which 8760 MW installed capacity in MP and rest in UP.

Rihand River has catchment area of 13,400 km² and originates in Rewa hills in M.P.. Rihand reservoir, with a storage capacity of 10.60 BCM (billion cubic meter), was commissioned in the year 1962 near village Pipri, District Mirzapur, Uttar Pradesh. The catchment area of Rihand reservoir is 13263 km² and Full Reservoir Level is 268.22 m. The Submergence Area of the reservoir is 4608 hectares. This reservoir is the source of domestic and industrial water in industries and irrigation.

River travels a total distance of 322 km before joining Sone river near chopan. It's catchment area lies between latitude 22° 39' to 24° 33' N and longitude 82° 22' E 83° 42' E. The Rihand River rises in the region south west of Mainpat plateau and has its source in Matringa hills at an elevation of 900 m above mean sea level. The river flows north roughly through the central part of Surguja district in Chattisgarh for 160 km. Its principal tributaries in upper part are Mahan, Ghungata, Moran, Geur, Gagar, Gobri, Piparkachar, Ramdia

and Galphuli. In upper reaches the river flows through narrow channels with stable course. In lower reaches, the river flows through thick forests with isolated hilly ranges and patches of inhabited areas.

2. Background information of Study:

As per the Hon'ble NGT order, CPCB official teams visited the areas in Sonbhadra district which represents the Singrauli Area in terms of pollution scenario and collected the samples. The team decided to divide the Sonbhadra area into two regions namely Chopan and surrounding of Rihand reservoirs for representative sampling.

In Chopan area, major industries are M/s Obra Thermal Power Plant, M/s Ultratech Dalla Cement Work and numbers of Stone Crushers are situated.

3. Ground Water Sampling and Analysis:

- i. CPCB team has also collected total 11 nos. of Ground water for the analysis physico-chemical parameters including metals from different locations of Sonbhadra covering the industrial area to examine the issues raised by complainant. (Fig-1, 2 & 3)
- ii. The ground water samples collected from 11 locations were analysed at CPCB and SPCB laboratories for physico-chemical & metal analysis. Details of the sampling locations for Groundwater are tabulated at Table-1.
- iii. RO, UPPCB, Sonbhadra has also provided information vide letter dt. 02.03.2024 related to 04 no. ground water samples. Analysis for chemical parameters and metals, sampling was carried out by UPPCB, RO on dt.14.02.2024. (Annexure-1)

Table 01.: Groundwater sampling locations		
S. No.	Name of the Locations	Latitude/Longitude
1.	Near Chopan Bridge, Chopan	24.530725N/83.019553E
2.	Near Vaishno Devi Temple, Dalla	24.481449N/83.034387E
3.	Obra Town	24.457449N/82.992121E
4.	Near Renukut Railway Station	24.204053N/83.039139E
5.	Anpara Nagar Palika – 01	24.214517N/82.809616E
6.	Anpara Nagar Palika – 02	24.194592N/82.783588E
7.	Near Audi Mode, Anpara	24.207599N/82.769847E
8.	Near Kakari Pariyojna	24.179846N/82.768764E
9.	Near Krishnashila/Bina Mines	24.168016N/82.76689E
10.	NTPC Colony Shaktinagar	24.113068N/82.685224E
11.	NTPC Rihand Market	24.017733N/82.807298E

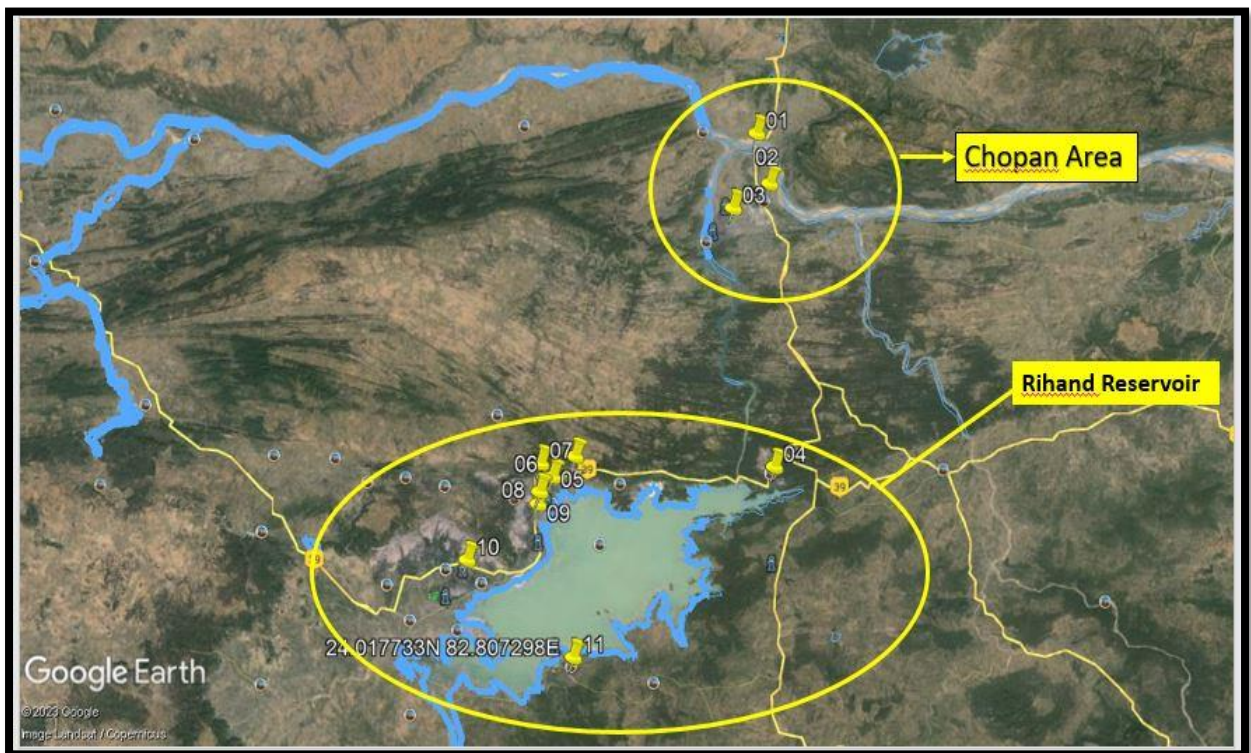


Fig.01. Sampling locations of Groundwater in Sonbhadra.

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Table 02.: Groundwater Analysis -Results

S. No.	Name of the Locations	pH (mg/l)	Color (Hazen)	Conductivity (µs/cm)	TDS (mg/l)	Total Hardness (mg/l)	Chloride (mg/l)	Fluoride (mg/l)	Sulphate (mg/l)	Nitrate (mg/l)	Alkalinity (mg/l)	COD (mg/l)
BIS Drinking water specification (IS 10500:2012)												
Requirement Limit:		6.5-8.5	5	-	500	200	250	1.0	200	45	200	-
Permissible Limit:		6.5-8.5	15	-	2000	600	1000	1.5	400	45	600	-
1.	Near Chopan Bridge, Chopan	7.01	<5	972	400	327	34	<0.5	15.5	25.7	236	<5
2.	Near Vaishno Devi Temple, Dalla	7.07	<5	1272	344	273	18	0.722	31.5	<2.2	226	<5
3.	Obra Town	7.21	<5	852	403	296	52	0.551	39.2	16.0	232	<5
4.	Near Renukut Railway Station	7.20	<5	373	108	118	22	<0.5	25.5	8.81	80	<5
5.	Anpara Nagar Palika- 01	7.41	<5	596	326	260	24	1.72	20.4	6.31	217	<5
6.	Anpara Nagar Palika-02	6.73	<5	615	714	365	79	<0.5	57.2	35.8	141	<5
7.	Near Audi Mode, Anpara	6.78	<5	1208	201	172	87	1.14	28.8	3.54	103	<5
8.	Near Kakari Pariyojna	6.98	<5	620	458	209	31	<0.5	74.9	<2.2	171	<5
9.	Near Krishnashila/Bina Mines	7.10	<5	945	545	221	82	0.929	43.7	<u>70.6</u>	192	<5
10.	NTPC Colony Shaktinagar	7.26	<5	633	290	215	28	0.987	20.0	4.42	138	<5
11.	NTPC Rihand Market	7.89	<5	292	943	445	155	<u>2.67</u>	149	<u>183</u>	124	<5

3.1. Result analysis of Ground water samples:

Results of the parameters analyzed in 11 ground water samples are presented in Table 02 and salient findings based on comparison with BIS Drinking Water Specifications (IS 10500:2012) are summarized as under:

- i. Fluoride in Ground water at one place was higher than the Permissible limit of 1.5 mg/l (Max) and at two other places it was found between the Requirement limit of 1.0 mg/l (Max) and Permissible limit of 1.5 mg/l (Max) specified in BIS Drinking water specification (IS 10500:2012).
- ii. Nitrates in Ground water at two places was higher than the Permissible limit of 45 mg/l (Max) specified in BIS Drinking water specification (IS 10500:2012).
- iii. Total Hardness, Total Alkalinity and Total Dissolved Solids are found within the Permissible limit of 600 mg/l (Max), 600 mg/l (Max), and 2000 mg/l (Max) respectively, and at some places the values are even within the Requirement limit of 200 mg/l (Max), 200 mg/l (Max) and 500 mg/l (Max) respectively, specified in BIS Drinking water specification (IS 10500:2012)
- iv. The other analysed parameters are within the limits specified in BIS Drinking water specification (IS 10500:2012).

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Table 03.: Groundwater Metals Analysis Result

S. No.	Name of the Locations	Total Chromium (mg/l)	Cadmium (mg/l)	Lead (mg/l)	Iron (mg/l)	Arsenic (mg/l)	Mercury (mg/l)
BIS Drinking water specification (IS 10500:2012)		0.05	0.003	0.01	0.03	0.01	0.001
1.	Near Chopan Bridge, Chopan	ND	ND	ND	3.70	0.0045	0.0008
2.	Near Vaishno Devi Temple, Dalla	ND	ND	ND	0.18	0.0093	--
3.	Obra Town	ND	ND	ND	0.78	0.0043	0.0005
4.	Near Renukut Railway Station	ND	ND	ND	0.224	0.0062	ND
5.	Anpara Nagar Palika – 01	ND	ND	ND	1.82	0.0045	0.0007
6.	Anpara Nagar Palika – 02	ND	ND	ND	7.40	0.0042	0.0014
7.	Near Audi Mode, Anpara	ND	ND	ND	0.21	0.0058	ND
8.	Near Kakari Pariyojna	ND	ND	ND	1.19	0.0062	0.0007
9.	Near Krishnashila/Bina Mines	ND	ND	ND	3.33	0.0054	0.0011
10.	NTPC Colony Shaktinagar	ND	ND	ND	0.16	0.0056	ND
11.	NTPC Rihand Market	ND	ND	ND	2.0646	0.005	0.0009
Note: Detection range of AAS for Pb (0.09-1000 mg/l) & Cd (0.01-1000 mg/l)							

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- v. The analysis results of metals in ground water samples are tabulated at Table-03.
- vi. The concentration of iron in ground water samples exceeded the limits specified in BIS Drinking water specification (IS 10500:2012) at eight places.
- vii. Arsenic (As) Metal was in conformity with limit specified in BIS Drinking water specification (IS 10500:2012) in all drinking water samples whereas Mercury (Hg) is found slightly exceeding the specified limit in two samples. Three other metals (Total chromium, Cd and Pb) were not detected in any samples.

4. Surface Water Sampling and Analysis:

- i. CPCB team collected total 07 nos. of Surface water samples (including one drain sample) for the analysis physico-chemical parameters including metals from different locations of Sonbhadra covering the industrial area to and address the issues raised by complainant. (Fig-2). The collected samples were processed at CPCB and SPCB laboratories for relevant parameters.
- ii. In Chopan sample were collected at two locations i.e. from Son river near bridge and other at Obra Dam, near Railway Bridge. Around the Rihand reservoir sample has been collected at 04 locations, Pipri Picnic Spot (U/s), Renu River (D/s), Near Khadia Ash Dyke and Near NTPC Rihand Ash Dyke. Details of the sampling locations for Surface Water and Groundwater are tabulated at Table-04.

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- iii. To know the status of surface water quality of this region, water quality data from UPPCB has been also obtained and CPCB team also collected surface water samples.

Table 04.: Surface water sampling locations Sonbhadra area		
S. No.	Name of the Locations	Latitude/Longitude
1.	Son River, Near Chopan Bridge, Chopan	24.53132N/83.019559E
2.	Obra Dam, Obra	24.434791N/82.965532E
3.	Rihand Reservoir, Pipri Picnic Spot (U/s)	24.192059N/83.02648E
4.	Rihand Dam, Renu River (D/s)	24.209949N/83.002443E
5.	Rihand Reservoir, Near Khadia Ash Dyke	24.107941N/82.758467E
6.	Rihand Reservoir, Near NTPC Rihand Ash Dyke	24.048755N/82.817377E

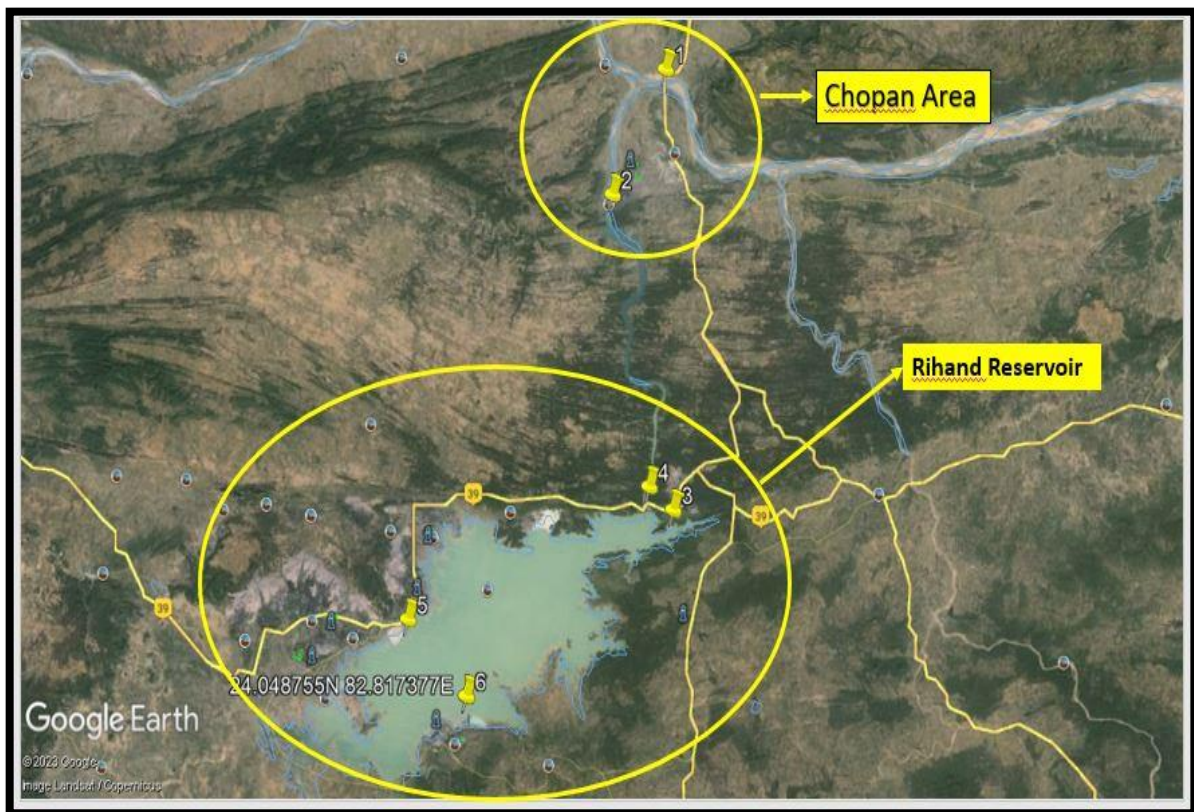


Fig.02. Surface water Sampling locations in Sonbhadra area

Table 05.: Surface water Analysis Result

S. No.	Name of the Locations	pH (mg/l)	Color (Hazen)	Conductivity (μ s/cm)	Chloride (mg/l)	Phosphate (mg/l)	Ammonical Nitrogen (mg/l)	Nitrate (mg/l)	Fluoride (mg/l)	DO (mg/l)	COD (mg/l)	BOD (mg/l)
BIS Drinking water specification (IS 10500:2012):												
Requirement Limit		6.5-8.5	5	-	250	200	0.5	45	1.0	-	-	-
Permissible Limit		6.5-8.5	15	-	1000	600	0.5	45	1.5	-	-	-
1.	Son River, Near Chopan Bridge, Chopan	7.22	<5	235	26	<0.06	<0.1	<2.2	1.16	7.5	<5.0	<1.0
2.	Obra Dam, Obra	8.03	<5	294	13	<0.06	<0.1	<2.2	<0.5	7.3	15.0	<1.0
3.	Rihand Reservoir, Pipri Picnic Spot (U/s)	7.94	<5	199	12	<0.06	<0.1	<2.2	<0.5	7.3	<5.0	<1.0
4.	Rihand Dam, Renu River (D/s)	7.36	<5	170	11	<0.06	<0.1	<2.2	<0.5	6.4	<5.0	<1.0
5.	Rihand Reservoir, Near Khadia Ash Dyke	8.73	<5	182	11	<0.06	<0.1	<2.2	0.528	6.3	<5.0	<1.0
6.	Rihand Reservoir, Near NTPC Rihand Ash Dyke	8.98	<5	193	14	<0.06	<0.1	<2.2	<0.5	7.5	5.28	<1.0

4.1. Result Analysis of Surface water samples:

- I. The result of the chemical parameters of surface water samples are presented at Table-5.
- II. Fluoride at on place (1.16 mg/l) is found between the Requirement limit of 1.0 mg/l (Max) and Permissible limit of 1.5 mg/l (Max) specified in BIS Drinking water specification (IS 10500:2012)
- III. At 02 locations pH values (8.73 & 8.98) slightly exceeded the limit specified in BIS Drinking water specification (IS 10500:2012)
- IV. Other analyzed water quality parameters were in conformity with Requirement limit specified in BIS Drinking water specification (IS 10500:2012).

Table 06.: Surface water Metals Analysis Result

S. No.	Name of the Locations	Total Chromium (mg/l)	Cadmium (mg/l)	Lead (mg/l)	Iron (mg/l)	Arsenic (mg/l)	Mercury (mg/l)
BIS Drinking water specification (IS 10500:2012)		0.05	0.003	0.01	0.03	0.01	0.001
1.	Son River, Near Chopan Bridge, Chopan	ND	ND	ND	0.60	0.0066	ND
2.	Obra Dam, Obra	ND	ND	ND	0.167	0.0047	ND
3.	Rihand Reservoir, Pipri Picnic Spot (U/s)	ND	ND	ND	0.16	0.0051	ND
4.	Rihand Dam, Renu River (D/s)	ND	ND	ND	0.16	0.0056	ND
5.	Rihand Reservoir, Near Khadia Ash Dyke	ND	ND	ND	0.32	0.0062	0.0006
6.	Rihand Reservoir, Near NTPC Rihand Ash Dyke	ND	ND	ND	0.65	0.005	0.0006
Note: Detection range of AAS for Pb(0.09-1000 mg/l) & Cd (0.01-1000 mg/l)							

- iv. The results of metals in surface water samples are presented at Table-06.
- v. The concentration of iron in ground water samples exceeded the limits specified in BIS Drinking water specification (IS 10500:2012) at three places.
- vi. Arsenic (As) and Mercury (Hg) are found within the limits specified in BIS Drinking water specification (IS 10500:2012) in all drinking water samples. Three other metals (Total chromium, Cd and Pb) were not detected in any samples.

5. *One sample from Ballia Drain, Singrauli* has collected. This drain is originating from the NCL Dudhichuwa Mines, which carries wastewater of the area and directly meet to Govind Ballabh Pant Sagar (Rihand Reservoir) near Telgawan Bazar (24.091472N, 82.709950E) (Fig.-3). the result of lab analysis is presented at Table-7.

Table 07: Ballia Nala Analysis Result

Ballia Nala, Singrauli	pH	Color (Hazen)	SS (mg/l)	Chloride (mg/l)	Fluoride (mg/l)	Sulphate (mg/l)	Phosphate (mg/l)	COD (mg/l)	BOD (mg/l)
Result:	7.72	30	176	52	0.995	19.8	5.05	164	58.2

5.1. Result analysis:

- i. Ballia Nallah flowing in between Shaktinagar (UP) and Vindhyachal Super Thermal Plants (MP) of NTPC carries sewage of nearby residential /market area outside NTPC Shaktinagar (UP). This drain finally meets to Rihand reservoir.
- ii. The samples from Balia Nalla were high in BOD and COD are exceeding even the effluent standards notified vide G.S.R 422(E) dated 19.05.1993 under Environment (Protection) Act, 1986 for discharge of effluents into inland surface water.



Fig.03. Origin and Confluence point of Ballia Nala

Ambient Air Quality Status:

- i. The ambient air quality data has been collected from the UPPCB, Regional Office Sonbhadra for the period of April-2023 to March-2024. These 02 no. of stations are installed under the National Ambient Air Quality Monitoring Programme (NAMP) at Nagar Palika Parishad, Anpara and Renusagar.
- ii. The CAAQMS data has been collected from the 08 locations of operated by units viz. M/s NTPC Shaktinagar (02 nos. CAAQMS), M/s NTPC Rihand (03 no. CAAQMS), M/s UPRVUNL, Obra (03 nos. CAAQMS) which are operating CAAQMS in the Sonbhadra area for ambient air quality monitoring (AAQM) data.
- iii. During visit it was observed that a lot of dust is deposited on the both sides of roads. This road dust is emitted during vehicle movements and creates ambient air dust pollution. Due to dry geographical conditions natural dust emits from open barren lands also. The crushers units and mining activities are also source of dust emission in this region.

The analysis of the ambient air quality data of the 10 various locations of the monitoring stations are presented at below Tables-8 to 18:

Table-8: NAMP Station- Ambient Air Quality Data						
Month	Monitoring Station: Anpara			Monitoring Station: Renusagar		
	SO ₂ (µg/m ³)	NO ₂ (µg/m ³)	PM 10 (µg/m ³)	SO ₂ (µg/m ³)	NO ₂ (µg/m ³)	PM 10 (µg/m ³)
Apr-23	18.91	26.55	174	18.20	26.51	170
May-23	19.09	27.47	184	18.48	27.35	177
Jun-23	16.97	23.49	164	17.07	22.92	166
Jul-23	16.75	22.53	165	16.05	22.38	158
Aug-23	14.99	21.4	124	14.12	20.58	122
Sep-23	15.77	21.09	114	15.43	20.51	109
Oct-23	17.54	22.56	129	17.15	22.46	120
Nov-23	18.29	24.98	159	17.96	24.15	153
Dec-23	19.14	26.98	198	19.03	26.77	188
Jan-24	19.05	27.04	209	18.45	26.80	197
Feb-24	17.92	27.85	188	17.15	26.79	177
Mar-24	18.36	27.96	193	17.40	27.09	179
Annual Average	17.73	24.99	<u>166.75</u>	17.21	24.53	<u>159.67</u>
Annual Standard	50	40	60	50	40	60

5.2. The NAMP monitoring stations (02 no.) are operated by Regional Office, UPPCB, Robertsganj. From Table-08, it can be concluded that the Annual average value of PM10 (i.e., 166.75 µg/m³ & 159.67 µg/m³ at NAMP monitoring stations at Anpara and Renusagar respectively) exceeded w.r.t prescribed National Ambient Air Quality Annual Standard for Industrial Area i.e., 60 µg/m³, However, the Annual average value of SO₂ and NO₂ are within the prescribed limits.

Location: 1	Table-9: CAAQMS, M/s NTPC Rihand, PUNERVAS- April-23 to March-24			
	PM10 ($\mu\text{g}/\text{m}^3$)	PM2.5 ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)
Apr-23	75	20	22	26
May-23	77	21	23	29
Jun-23	70	18	21	28
Jul-23	59	29	19	25
Aug-23	50	25	25	23
Sep-23	46	23	31	26
Oct-23	59	29	33	29
Nov-23	81	22	28	32
Dec-23	73	20	23	36
Jan-24	71	23	32	33
Feb-24	55	26	33	54
Mar-24	51	19	31	57
Annual Average	<u>64</u>	23	27	33
Annual Standard	60	40	50	40

5.3. The CAAQ monitoring station is operated by NTPC Rihand at "Punervas." From the above Table-09, it can be concluded that the Annual average value of PM10 (i.e., 64 $\mu\text{g}/\text{m}^3$ exceeded w.r.t prescribed National Ambient Air Quality Annual Standard for Industrial Area i.e., 60 $\mu\text{g}/\text{m}^3$, However, the Annual average value of PM2.5, SO₂ and NO_x are within the prescribed limits.

Location: 2	Table-10: CAAQMS, NTPC Rihand, MGR			
	PM10 ($\mu\text{g}/\text{m}^3$)	PM2.5 ($\mu\text{g}/\text{m}^3$)	SO2 ($\mu\text{g}/\text{m}^3$)	NOx ($\mu\text{g}/\text{m}^3$)
Apr-23	63	13	18	24
May-23	44	13	27	24
Jun-23	49	21	25	27
Jul-23	55	29	35	24
Aug-23	45	22	52	34
Sep-23	52	29	31	21
Oct-23	59	28	26	25
Nov-23	69	15	29	29
Dec-23	55	21	30	26
Jan-24	78	23	31	26
Feb-24	70	26	30	32
Mar-24	40	12	46	29
Annual Average	57	21	32	27
Annual Standard	60	40	50	40

5.4. The CAAQ monitoring station is operated by NTPC Rihand at "MGR." From the above Table-10, it can be concluded that the Annual average value of PM10, PM2.5, SO2 and NOx are within the prescribed limits.

Location: 3	Table-11: CAAQMS, NTPC Rihand, SHIV MANDIR			
	PM10 ($\mu\text{g}/\text{m}^3$)	PM2.5 ($\mu\text{g}/\text{m}^3$)	SO2 ($\mu\text{g}/\text{m}^3$)	NOx ($\mu\text{g}/\text{m}^3$)
Apr-23	39	25	22	23
May-23	57	29	15	28
Jun-23	44	20	17	24
Jul-23	48	22	16	23
Aug-23	45	21	19	23
Sep-23	47	24	40	25
Oct-23	53	33	41	39
Nov-23	84	44	27	52
Dec-23	64	36	24	31
Jan-24	71	42	32	24
Feb-24	59	34	25	37
Mar-24	55	26	40	38
Annual Average	56	30	27	31
Annual Standard	60	40	50	40

- 5.5. The CAAQ monitoring station is operated by NTPC Rihand at "Shiv Mandir." From the above Table-11, it can be concluded that the Annual average value of PM10, PM2.5, SO2 and NOx are within the prescribed limits.

Location-1	PM10 ($\mu\text{g}/\text{m}^3$)	PM2.5 ($\mu\text{g}/\text{m}^3$)	SO2 ($\mu\text{g}/\text{m}^3$)	NOX ($\mu\text{g}/\text{m}^3$)
Apr-23	73.8	23.5	14.9	31.6
May-23	76.0	25.8	15.1	25.7
Jun-23	62.6	20.1	19.1	21.3
Jul-23	29.3	10.9	22.2	24.5
Aug-23	44.0	17.9	18.8	17.3
Sep-23	36.4	26.2	14.0	21.4
Oct-23	61.9	22.2	11.4	35.1
Nov-23	90.2	31.8	11.7	30.0
Dec-23	77.2	29.1	12.5	28.1
Jan-24	91.8	38.0	16.7	34.8
Feb-24	59.9	21.8	13.1	20.7
Mar-24	67.0	24.4	14.9	19.6
Annual Average	<u>64.2</u>	24.3	15.4	25.8
Annual Standard	60	40	50	40

5.6. The CAAQ monitoring station is operated by NTPC Shakti Nagar at "Inside Plant." From the above Table-12, it can be concluded that the Annual average value of PM10 (i.e., 64.2 $\mu\text{g}/\text{m}^3$ exceeded w.r.t prescribed National Ambient Air Quality Annual Standard for Industrial Area i.e., 60 $\mu\text{g}/\text{m}^3$, However, the Annual average value of PM2.5, SO2 and NOx are within the prescribed limits.

Table-13: CAAQMS, NTPC Shaktinagar, Township area				
Location-2	PM10 ($\mu\text{g}/\text{m}^3$)	PM2.5 ($\mu\text{g}/\text{m}^3$)	SO2 ($\mu\text{g}/\text{m}^3$)	NOX ($\mu\text{g}/\text{m}^3$)
Apr-23	93.7	14.6	23.1	18.2
May-23	97.6	14.3	17.4	18.0
Jun-23	77.0	11.9	17.6	19.5
Jul-23	30.1	7.6	19.2	24.6
Aug-23	42.8	15.8	15.3	24.8
Sep-23	39.1	17.6	15.1	26.5
Oct-23	82.8	36.0	18.2	20.6
Nov-23	98.7	55.2	20.0	31.5
Dec-23	92.5	52.5	24.1	30.6
Jan-24	95.4	58.0	27.7	33.7
Feb-24	93.9	51.2	19.7	25.1
Mar-24	89.2	44.9	18.7	24.0
Annual Average	<u>77.7</u>	31.6	19.7	24.8
Annual Standard	60	40	50	40

5.7. The CAAQ monitoring station is operated by NTPC Shakti Nagar at "Township area." From the above Table-13, it can be concluded that the Annual average value of PM10 (i.e., 77.7 $\mu\text{g}/\text{m}^3$ exceeded w.r.t prescribed National Ambient Air Quality Annual Standard for Industrial Area i.e., 60 $\mu\text{g}/\text{m}^3$, However, the Annual average value of PM2.5, SO2 and NOx are within the prescribed limits.

Location 1	Table-14: CAAQMS, UPRVUNL, Obra, Coal Handling Area- April- 23 to March-24			
	PM2.5 ($\mu\text{g}/\text{m}^3$)	PM10 ($\mu\text{g}/\text{m}^3$)	SO2 ($\mu\text{g}/\text{m}^3$)	NOX ($\mu\text{g}/\text{m}^3$)
Apr-23	45.14	69.73	30.14	15.15
May-23	45.01	69.71	30.1	15.01
Jun-23	44.47	70.29	30.02	15.12
Jul-23	44.87	69.99	30.18	14.84
Aug-23	44.81	69.57	30.21	15.01
Sep-23	44.81	70.25	29.8	14.88
Oct-23	44.91	69.72	30.06	14.96
Nov-23	44.91	70.24	30.2	15.05
Dec-23	44.79	70.2	29.9	14.89
Jan-24	44.9	71.3	29.66	14.91
Feb-24	44.81	69.57	30.21	15.01
Mar-24	44.81	69.57	30.21	15.01
Annual Average	<u>44.85</u>	<u>70.0</u>	30.1	15.0
Annual Standard	40	60	50	40

5.8. The CAAQ monitoring station is operated by UPRVUNL, Obra at "Coal Handling Area." From the above Table-14, it can be concluded that the Annual average value of PM10 & PM2.5, (i.e., 70.0 $\mu\text{g}/\text{m}^3$ & 44.85 $\mu\text{g}/\text{m}^3$ exceeded w.r.t prescribed National Ambient Air Quality Annual Standard for Industrial Area for PM10 & PM2.5, i.e., 60 $\mu\text{g}/\text{m}^3$ & 40 $\mu\text{g}/\text{m}^3$ respectively, However, the Annual average value of SO2 and NOx are within the prescribed limits.

Location 2	Table-15: CAAQMS, UPRVUNL, Obra, ETP Area			
	PM2.5 ($\mu\text{g}/\text{m}^3$)	PM10 ($\mu\text{g}/\text{m}^3$)	SO2 ($\mu\text{g}/\text{m}^3$)	NOX ($\mu\text{g}/\text{m}^3$)
Apr-23	50.16	80.23	12.5	17.47
May-23	50.04	80.16	12.45	17.49
Jun-23	49.72	79.89	12.55	17.49
Jul-23	50.12	79.56	12.5	17.49
Aug-23	50.3	79.9	12.55	17.52
Sep-23	49.71	80.03	12.48	17.50
Oct-23	50.02	79.91	12.52	17.48
Nov-23	49.67	79.78	12.45	17.57
Dec-23	50.10	80.40	12.51	17.51
Jan-24	49.92	79.71	12.56	17.49
Feb-24	50.08	79.37	12.53	17.49
Mar-24	50.68	79.4	12.42	17.42
Annual Average	<u>50.04</u>	<u>79.86</u>	12.50	17.50
Annual Standard	40	60	50	40

- 5.9. The CAAQ monitoring station is operated by UPRVUNL, Obra at "ETP Area." From the Table-15, it can be concluded that the Annual average value of PM10 & PM2.5, (i.e., 79.86 $\mu\text{g}/\text{m}^3$ & 50.04 $\mu\text{g}/\text{m}^3$ exceeded w.r.t prescribed National Ambient Air Quality Annual Standard for Industrial Area for PM10 & PM2.5, i.e., 60 $\mu\text{g}/\text{m}^3$ & 40 $\mu\text{g}/\text{m}^3$ respectively, However, the Annual average value of SO2 and NOx are within the prescribed limits.

Location - 3	Table-16: CAAQMS, UPRVUNL, Obra, VIP Guest House			
	PM2.5 ($\mu\text{g}/\text{m}^3$)	PM10 ($\mu\text{g}/\text{m}^3$)	SO2 ($\mu\text{g}/\text{m}^3$)	NOX ($\mu\text{g}/\text{m}^3$)
Apr-23	15.79	55.28	25.57	17.54
May-23	14.07	42.36	26.14	18.51
Jun-23	17.53	32.72	26.34	13.43
Jul-23	2.94	73.69	55.54	26.56
Aug-23	44.19	51.99	26.83	16.27
Sep-23	56.76	71.99	26.63	18.45
Oct-23	47.56	72.83	20.45	19.42
Nov-23	47.75	73.02	7.83	18.58
Dec-23	46.33	78.1	9.5	18.88
Jan-24	51.99	76.78	6.93	18.27
Feb-24	63.83	51.99	26.92	18.11
Mar-24	55.72	58.04	55.71	22.61
Annual Average	38.71	<u>61.57</u>	26.20	18.89
Annual Standard	40	60	50	40

5.10. The CAAQ monitoring station is operated by NTPC Shakti Nagar at "VIP Guest House." From the Table-16, it can be concluded that the Annual average value of PM10 (i.e., 61.57 $\mu\text{g}/\text{m}^3$ exceeded w.r.t prescribed National Ambient Air Quality Annual Standard for Industrial Area i.e., 60 $\mu\text{g}/\text{m}^3$, However, the Annual average value of PM2.5, SO2 and NOx are within the prescribed limits.

Results & Discussion:

The Singrauli Area spreads across Sonebhadra district of Uttar Pradesh and Singrauli district of Madhya Pradesh and has been promoted as India's energy capital. It is South Asia's biggest industrialised area. It hosts 10 thermal power plants, 16 coal mines, 12 chemical units, 8 explosive units, 2 Aluminium units, 1 cement plant, 1 sponge iron mill, and approx. 350 stone crushers.

The Singrauli Area comprising areas of both Sonbhadra and Singrauli districts was identified as a Critically Polluted Area by CPCB during 2010 based on Comprehensive Environmental Pollution Index (CEPI) based assessment of the combined area. Subsequently, CPCB carried out CEPI score assessment of Singrauli area and Sonebhadra area separately during 2018, 2022, and recently in February 2024 based on environmental monitoring through third party laboratory under supervision of officials from CPCB and concerned SPCB. Both these areas presently fall under Severely Polluted Area category as per these assessments.

- i. The ambient air quality data shows that PM10 and PM2.5 are the main pollutants of the ambient air in this region. The main source of dust emission are roads, natural barren land, stone crushers and mining activities and emission from power plant / industries in this region.
- ii. The industries have installed treatment plants to treat the effluent generated during process. The industries are recycling part of the treated

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effluent for secondary/tertiary applications, and remaining effluent is discharging in the natural drains which finally meets Rihand reservoir.

- iii. The quality of water in the region is susceptible to contamination from industrial sources directly or indirectly.
- iv. Analysis results of water samples collected during this study show that the concentration of iron, fluoride, and nitrates in ground water in some parts of the area are above the prescribed limit. In two sample concentration of Hg is found slightly above the BIS drinking water quality specifications. The ground water quality of the area needs to be extensively and regular monitored by ground water department and investigation carried out about the causes of occurrences of these elements.

Health related issues in Sonbhadra:

As per the information received from CMO, Sonbhadra (Vide Letter No. CMO/Suchna/2024-25/1763, dated 24.05.2024) through RO, Sonbhadra is attached as Annexure-3 The information is tabulated as below Table-17:

Table -17: Health Status of Community Health Centre (CHC) Mayorpur, Sonbhadra, for the year 2023-24

(Total population covered is about 41,000)

S. No.	Description of Diseases	Number of Patients in 2023-24	Remarks
1.	Lung related Diseases e.g., Tuberculosis	14	All the cases were referred for Sputum check and for treatment
2.	Fluorosis cases	48	Recommendations for de-fluorination
3.	Bone involvement	06	Referred to specialist
4.	Yellowish Teeth/Blueline on Gums	10	Suspected the cause of heavy metals referred to district hospital
5.	Rate of Miscarriage in this region	0	Not dealing with gynecology cases

5.11. Based on the above health data provided by CMO Sonbhadra, for the year 2023-24 the total number of patients related to lung diseases are 14 and the highest number of cases (48) observed in fluorosis.

Table-18: Health Status of this Locality surrounding Duddhi & Nearby areas in District Sonbhadra for the year 2022-23 & 2023-24

S. No.	Description of Diseases	No of Patient in 2022-23	No of Patient in 2023-24	Remarks
1.	Lung related Diseases e.g., Tuberculosis	271	102	All the cases were referred to Govt. Hospital for Sputum check and for treatment
2.	Fluorosis cases	95	56	Deformities not seen and all the skeletal fluorosis is presented with bone pain and Arthralgia
3.	Bone involvement	0	0	Referred to specialist
4.	Yellowish Teeth/Blueline on Gums	0	0	--
5.	Rate of Miscarriage in this region	0	0	Not dealing with gynecology cases

5.12. Based on the above Table-18 as data provided by CMO Sonbhadra, for the year 2022-23 & 2023-24 the total number of patients related to lung diseases are 271 & 102.

5.13. The cases observed in fluorosis are 95 & 96 in year 2022-23 & 2023-24.

Table-19: Health Status of this Locality surrounding Birla Carbon Industry, Murdhawa, Renukoot District Sonbhadra, for the year 2022-23 & 2023-24
(Total Population covered about 30,000)

S. No.	Description of Diseases	No of Patient in 2022-23	No of Patient in 2023-24	Remarks
1.	Lung related Diseases e.g., Tuberculosis	06	04	All the cases were referred to Govt. Hospital for Sputum check and for treatment
2.	Fluorosis and Bone Involvement	02	00	Deformities not seen and all the skeletal fluorosis is presented with bone pain and Arthralgia
3.	Yellowish Teeth/ Blueline on Gums	0	0	--
4.	Rate of Miscarriage in this region	0	0	Not dealing with gynae cases

5.14. Based on the above Table-19 data provided by CMO Sonbhadra, for the year 2022-23 & 2023-24 the total number of patients related to lung diseases are 06 & 04.

5.15. The cases observed in fluorosis are 02 in year 2022-23.

Table-20: Acute Respiratory Illness Cases for District Combined Hospital Sonbhadra		
S. No.	Month	Total no. cases reported
1.	Apr – 22	0
2.	May – 22	33
3.	Jun – 22	63
4.	Jul – 22	38
5.	Aug – 22	43
6.	Sep – 22	83
7.	Oct – 22	46
8.	Nov – 22	48
9.	Dec -22	62
10.	Jan – 23	74
11.	Feb – 23	66
12.	Mar – 23	93
13.	Apr – 23	0
14.	May – 23	93
15.	Jun – 23	74
16.	Jul – 23	0
17.	Aug – 23	90
18.	Sep – 23	89
19.	Oct – 23	116
20.	Nov – 23	105
21.	Dec – 23	109
22.	Jan – 24	103
23.	Feb – 24	109
24.	Mar – 24	118
25.	Apr – 24	56
Total		1692

5.16. Based on the above Table-20 information from April 2022 to April 2024 total 1692 patients are registered in Acute Respiratory Illness Cases for District Combined Hospital Sonbhadra.

Table-21: Chronic obstructive pulmonary disease (COPD) Cases Status Distt. Sonbhadra		
S. No.	F. Y.	Total No. of Cases
1.	2022-23	13
2.	2023-24	26
Total		39
1.	Mar – 24	118
2.	Apr – 24	56
Total		1692

- 5.17. Based on the above Table-21 information for FY 2022-23 total 13 patients are registered in Chronic obstructive pulmonary disease (COPD) cases at District Hospital Sonbhadra and further number of patients increased in FY 2023-24 i.e. 26. During March and April- 2024 total 118 and 56 COPD cases registered.

7.0 Comprehensive Environmental Pollution Index (CEPI):

During 2009, CPCB formulated Comprehensive Environmental Pollution Index (CEPI), which is a rational number (ranging from 0 to 100) to characterize environmental quality at a given industrial area following algorithm of pollution source, pathway and receptor. The industrial areas having aggregated CEPI scores 70 and above are considered as Critically Polluted Areas (CPAs), whereas CEPI scores between 60 and 70 are considered as Severely Polluted Areas (SPAs) and CEPI scores less than 60 are considered as Other Polluted Areas (OPAs). The CEPI framework was amended by CPCB in April 2016 with concurrence of MoEF&CC, considering representations received from various stake holders, State Governments and SPCBs. CPCB directed concerned SPCB/PCC to prepare and implement action plan for CPA/SPA areas. CPCB has developed CEPI portal to facilitate SPCBs/PCC to upload the progress of action plan and ease to review the progress of action plan by CPCB/SPCBs/PCC.

Singrauli Area, having areas of Sonbhadra and Singrauli districts, was one of the Critically Polluted Industrial Areas/Clusters (CPA) on the basis of CEPI score during 2010. CPCB has carried out fresh CEPI assessment of Singrauli and Sonebhadra Area separately during February'2024 based on environmental monitoring through third party laboratory under supervision of officials from CPCB and concerned SPCB. Based on the recent monitoring both the area fall under Severely Polluted Area. The CEPI score evaluated is given in table below.

	SONBHADRA, (U.P.)	SINGRAULI, (M.P.)
Period of CEPI monitoring	17 th – 21 st Feb. 2024	23 rd – 27 th Feb. 2024
Demarcation of boundaries	Dala-Tola, Obra, Renukoot, Anpara, Renusagar, Kakri, Dudhichuwa, Bina, Khadia, Shakti Nagar, Rihand Nagar, Bijpur	Vindhya Nagar and Jayant, Nigahi, Dudhichua, Amlohri & Jhingurdah townships
Area of industrial clusters in sq. km.	238.4 Km ²	114 Km ²
Criteria Pollutants	Air: PM10, PM2.5, CO	Air: PM10, PM2.5, CO
	Surface Water: BOD, Sulphide, Total Phosphorus	Surface Water: BOD, Mercury, Total Phosphorus
	Groundwater: Iron, Manganese, Boron	Groundwater: Iron, Total Chromium, Manganese
Air EPI	52.00	50.00
Surface Water EPI	58.25	48.50
Groundwater EPI	44.25	43.75
CEPI Score (2024 Monitoring)	67.86 (Severely Polluted Area)	60.49 (Severely Polluted Area)
CEPI Score (2022 Monitoring)	67.88 (Severely Polluted Area)	61.38 (Severely Polluted Area)

As per the progress on CEPI portal, action plan completion status of Sonbhadra is 63% and Singrauli is 86%. CPCB has reviewed progress of action plan on 26.06.2024 with officials of MPSPCB and UPSPCB.

Comments on the issues stated by the applicant:

- Heavy metal pollution in the region:

CPCB team collected the samples of Groundwater and surface water for heavy metals analysis. Analysis results of water samples collected during this study show that the concentration of iron, fluoride and nitrates in ground water in some parts of the area are above the BIS Drinking water quality specification.

The Arsenic (As) Metal was in conformity with limit specified in BIS Drinking water specification (IS 10500:2012) in all drinking water samples whereas in two sample concentration of Hg is found slightly above the BIS drinking water quality specifications. The Metals (Total chromium, Cd and Pb) were not detected in samples. The ground water quality of the area needs to be extensively and regularly monitored by the ground water department and investigation carried out about the causes of occurrences of these elements.

- Region is experiencing at least 95 days of poor or critical air quality in a year.

The ambient air quality data has been collected from the UPPCB, Regional Office Sonbhadra for the period of April-2023 to March-2024 and also where air quality is being monitored by industries. The result shows that the Annual average concentration for gaseous pollutants (SO₂ & NO_x) are within the standard. However, Annual average concentration of Particulate matter (PM₁₀

& PM2.5) has been exceeded w.r.t prescribed National Ambient Air Quality Annual Standard for Industrial Area, i.e., 60 µg/m³ & 40 µg/m³ respectively.

- Lungs of the residents being severely affected and high prevalence of fluorosis, yellowing of teeth, blue line on gums and higher rate of miscarriages.

The health data provided by CMO Sonbhadra, as tabulated in Table No-19, 20 & 21, shows that cases have been registered about fluorosis and other ailments by medical health department, Sonbhadra.

Suggestions / Recommendations:

- a) The ground water quality of the area needs to be extensively and regularly monitored by the ground water department and investigation be carried out about the causes of occurrences of elements (Iron, Fluoride, Nitrates and Mercury) in concentration higher than BIS drinking water quality specifications.
- b) The concerned department must provide safe drinking water in areas where water quality is not fit for drinking, either through water treatment plants or by supplying from other sources.
- c) To control the emission in air through industries, SPCBs should periodically check and ensure the compliance of stipulated emission norms. To reduce dust pollution caused by transportation of coal and ash, the concerned industries should ensure that transportation is done in environmentally safe manner by their contractor transporters and the transport authorities also need to strengthen enforcement in this regard.
- d) The Ballia drain which joins Rihand reservoir must be tapped for effluent being discharged and the tapped effluents be subjected to adequate treatment.
- e) The health department should ensure periodic health checks in the area specially in respect of health impacts of air pollution and diseases related to higher concentration of Fluoride, Nitrate and Iron in drinking water.
- f) Under nation clean air program (NCAP), air pollution control plan is being implemented in Nagar Panchayat, Anpara area. Similar plans be prepared and

implemented for entire Severely Polluted Areas. Source apportionment study for the area may be conducted from a reputed technical institute by the concerned SPCBs and the same be taken into account for preparation of the said air pollution control plans.

- h) SPCBs to expeditiously complete the implementation of CEPI action points prepared and submitted by them and identify additional action points to mitigate the air pollution due to industries/mines/transportation in the CEPI and surrounding area to reduce the CEPI scores.
- i) SPCBs to organize inter-state meetings with the District Administrations and other concerned stakeholders like RTO, mining department etc. to address and resolve the inter-state issues and share the minutes of the inter-state as well as intra-state meetings on the CEPI portal.


(Kamal Kumar)

Scientist - 'E'
CPCB-RD-Lucknow

Surface water & Groundwater Sampling Photographs taken during inspection



Pic.01: NTPC Shopping Complex, Sonbhadra



Pic.02: Kakri 2, Shaktinagar Road, Sonbhadra



Pic.03: Kakri, Singrauli, Sonbhadra



Pic.04: Anpara Bazar, Sonbhadra



Pic.05: Opposite Police Station, Anpara, Sonbhadra



Pic.06: Anpara 1, Sonbhadra



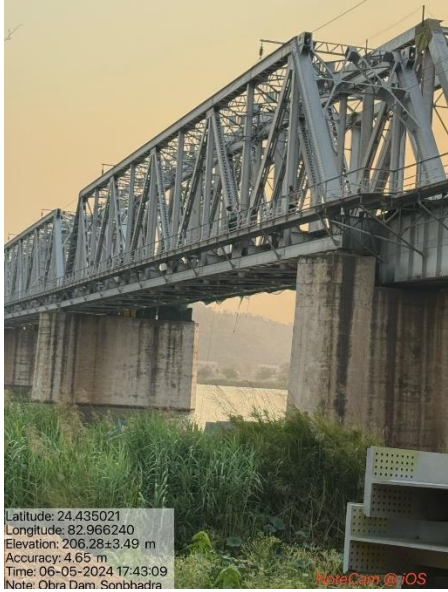
Pic.07: Ward 6, Anpara, Sonbhadra



Pic.08: Pipri, Rihand Dam U/s, Sonbhadra



Pic.09: Submersible, Renukoot, Sonbhadra



Pic.09: Obra Dam, Sonbhadra

Pic.09: Rihand Dam D/s, Sonbhadra



Pic.10: Renukoot, Sonbhadra



Pic.10: Obra Sonbhadra

F. No. ZOL/Tech/ NGT/341/ 79

May 03, 2024

सेवा में,

क्षेत्रीय अधिकारी,

उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड

मकान संख्या - 162, उत्तर मोहाल

रॉबर्टसगंज, सोनभद्र -231216

विषय: OA No. 240/2024 के मामले में माननीय एनजीटी के आदेश का अनुपालन- संबंध में

Ref.: E-mail communication from HO dated 02.05.2024

This office received CPCB HO communication vide email dated 02.05.2024 vide in reference to Hon'ble NGT matter under O. A. No. 240/2024, were forwarded (copy attached). If any analysis/studies have been carried out by UPPCB Regional office, Sonbhadra on following is required:

1. Surface and Groundwater Quality data/status of the area, specially which may include Heavy Metals Analysis such as: Mercury, Chromium, Lead and Arsenic
2. Ambient air quality data/status of the area
3. Health status of local residents of the area as per healthcare facilities, specially which may include lungs related diseases, fluorosis, lead and mercury toxicity, yellowing of teeth, blue line on gums (indicating exposure of heavy metals) and rate of miscarriage in the region
4. Status of carrying capacity studies being carried out by SPCBs, if any

Therefore, it is requested to please provide the information as mentioned above on priority basis to this office latest by 10.05.2024

Encl: As above

Yours Faithfully


(Devendra K. Soni)

Regional Director

Copy to: Divisional Head, IPC-II, CPCB Delhi – for kind information please

Regional Director



44
क्षेत्रीय कार्यालय,
REGIONAL OFFICE,
उ०प्र० प्रदूषण नियंत्रण बोर्ड
U.P. POLLUTION CONTROL BOARD
सोनभद्र
SONBHADRA

Annexure-1 705



संदर्भ संख्या:-

Ref.No.: GOST2/OA NO-240/2024

दिनांक:-

Date: 25/05/2024

To,

Regional Director,
Central Pollution Control Board,,
"PICUP Bhawan", Vibhuti Khand, Gomti Nagar,
LUCKNOW-226 010(U.P.).

Sub:- Submission of Information in the matter of O.A. No. 240/2024 Singrauli Pradooshan Mukti Vahini & Ors. Versus Union of India & Ors.

Dear Sir,

Kindly refer to your letter F.No. ZOL/ Tech/NGT/341/79 dated 03.05.2024 which was received in this office through E-mail. You were directed to submit the information on following points:-

- (i) Surface and Groundwater Quality data/status of the area, specially which may include Heavy Metals Analysis such as: Mercury, Chromium, Lead and Arsenic.
- (ii) Ambient air quality data/status of the area.
- (iii) Health status of local residents of the area as per healthcare facilities, specially which may include lungs related diseases, fluorosis, lead and mercury toxicity, yellowing of teeth, blue line on gums (indicating exposure of heavy metals) and rate of miscarriage in the region.
- (iv) Status of carrying capacity studies being carried out by SPCBs, if any.

In compliance of your direction, as per record the point-wise reply are as follows:-

1. The analysis report of Ground Water Samples (mainly metals analysis report) are attached herewith and marked as **Annexure-I**.
2. Ambient Air Quality Monitoring Data i.e. of FY 2023-24, of NAMP stations established under NAMP Programme is attached as **Annexure no.II**.
3. Health status information provided by CMO, Sonbhadra vide its letter dated 24.05.2024 are attached as **Annexure No. III**.
4. Nil.

Above information put up for further necessary action please.

Yours faithfully,

Encl.: As above.


(U.K. Gupta)
Regional Officer
Sonbhadra.

Regional Office, U.P. Pollution Control Board, Sonbhadra

Annexure No.I**Ground Water Quality Data of Different Sampling Points including Heavy Metals Paramaters**

S.No.	Sample No	Sample Type	Sampling Point	Address	District	Sample Date	Parameters	
							Params	Value
1	24895268	GroundWater	Ground water sample of Hand Pump near Shiv Temple	Ground water sample of Hand Pump near Shiv Temple, Vill-Padarachh Tola, Kone, Chopan Sonbhadra (24.453741, 83.185234)	SONBHADRA	14-02-2024	Nitrate	4.25
							Phosphate	0.032
							Sulphate	27.75
							Fluoride	ND
							Potassium	0.63
							Sodium	64.09
							Nickel	ND
							Chloride	29
							Magnesium	11.95
							Total Solids	519
							Dissolved Solids	502
							Color	5
							BOD	BDL
							COD	BDL
							Zinc	0.1384
							Iron	1.1392
							Cadmium	ND
Copper	ND							
Calcium	50.48							
Total Hardness	176							
Conductivity	821.6							
Turbidity	1.6							
pH	7.11							

S.N o.	Sample No	Sample Type	Sampling Point	Address	District	Sample Date	Parameters	
							Params	Value
2	24895251	GroundWater	Ground water sample of Hand Pump-Primary School	Ground water sample of Hand Pump near Primary School, Padarachh Tola, Chopan, Sonbhadra (24.448188, 83.187602)	SONBHADRA	14-02-2024	Nitrate	1.54
							Phosphate	0.043
							Sulphate	45.6
							Fluoride	1.99
							BOD	BDL
							COD	BDL
							Potassium	1.21
							Chloride	39
							Magnesium	42.914
							Sodium	43.83
							Calcium	59.12
							Total Hardness	324.4
							Dissolved Solids	472
							Total Solids	488
							Conductivity	701.2
							Color	5
							Turbidity	1.2
							pH	6.81
Zinc	0.1146							
Nickel	ND							
Iron	0.2891							
Lead	ND							
Copper	ND							
Cadmium	ND							

S.No.	Sample No	Sample Type	Sampling Point	Address	District	Sample Date	Parameters	
							Params	Value
3	24895259	GroundWater	Ground water sample of Hand Pump near Primary School	Ground water sample of Hand Pump near Primary School, Kudawa(Padarachh) Kone, Chopan, Sonbhadra (24.419077, 83.161599)	SONBHADRA	14-02-2024	Nitrate	2.29
							Phosphate	0.092
							Sulphate	22.8
							pH	6.79
							Turbidity	2.4
							Fluoride	0.752
							Color	10
							Conductivity	387
							Dissolved Solids	238
							Sodium	26.39
							Total Solids	256
							BOD	BDL
							COD	BDL
							Total Hardness	140
							Calcium	37.6
							Magnesium	11.04
							Chloride	26
							Potassium	1.56
Zinc	2.1781							
Nickel	ND							
Iron	18.6614							
Lead	ND							
Cadmium	ND							
Copper	ND							

S.No	Sample No	Sample Type	Sampling Point	Address	District	Sample Date	Parameters	
							Params	Value
4	24895320	GroundWater	Ground water sample of Borewell, Padarachh, Kone, Chopan, Sonbhadra(24.438445, 83.156285)		SONBHADRA	14-02-2024	Zinc	0.0938
							Nickel	ND
							Iron	0.3084
							Lead	ND
							Cadmium	ND
							Copper	ND
							BOD	BDL
							COD	BDL
							Cloride	17
							Magnesium	23.04
							Calcium	67.2
							Total Hardness	264
							Nitrate	3.94
							Phosphate	0.039
							Total Solids	501
							Dissolved Solids	484
							Sulphate	26.16
							Conductivity	769.8
Color	5							
Fluoride	0.53							
Turbidity	1.8							
Potassium	0.91							
Sodium	59.27							
pH	6.75							

S.No.	Sample No	Sample Type	Sampling Point	Address	District	Sample Date	Parameters	
							Params	Value
5	20984901	GroundWater	Tubewell at Singrauli Industrial Area, U.P. Renuko	Tubewell at Singrauli Industrial Area, Near Railway Station Area Renukoot, Sonbhadra, Uttar Pradesh	SONBHADRA	29-04-2023	Lead	0.011
							Zinc	0.068
							Arsenic	ND
							Mercury	ND
							Cadmium	ND
							TotalCr	0.0393
							Nickel	ND
							Iron	0.0681
							Copper	ND
							Alpha BHC	ND
							Beta BHC	ND
							Dieldrin	ND
							Aldrin	ND
							Gamma BHC	0.013
							PP DDT	0.131
							Malathion	ND
							Alpha Endosulphan	ND
							Methyl Parathion	ND
							OP DDT	ND
							Beta Endosulphan	0.013
							Color	5
							Conductivity	495.3
							pH	6.77
							Turbidity	2.8
							BOD	BDL
							COD	BDL
							Alkalinity	306
							Total Hardness	172
							Calcium	35.56
							Magnesium	20.1
							Chloride	19
							Dissolved Solids	310
							Suspended Solids	16
FDS	250							
P Alknty	8							
Ammoniacal N	0.063							
Nitrate	0.022							
Phosphate	ND							
Sulphate	51.54							
Fluoride	0.018							
Potassium	0.96							
Sodium	24.09							
Boron	0.02							
Total Coliform								
Fecal Coliform								

S.No.	Sample No	Sample Type	Sampling Point	Address	District	Sample Date	Parameters	
							Params	Value
6	20984862	GroundWater	Borewell-Kanoria Chemicals, Renukoot, Sonbhadra	Borewell-Kanoria Chemicals, Renukoot, Sonbhadra (New Name Grassim Industries Limited)	SONBHADRA	29-04-2023	Zinc	0.1488
							Nickel	ND
							Iron	0.2896
							Lead	0.011
							Lead	0.011
							Cadmium	ND
							Cadmium	ND
							Copper	ND
							TotalCr	0.0435
							Arsenic	ND
							Mercury	0.0009
							Alpha BHC	ND
							Gamma BHC	ND
							OP DDT	ND
							PP DDT	ND
							Malathion	ND
							Methyl Parathion	ND
							Beta BHC	ND
							Dieldrin	ND
							Aldrin	ND
							Beta Endosulphan	ND
							Alpha Endosulphan	ND
							Ammoniacal N	0.03
							Nitrate	0.026
							Phosphate	ND
							Sulphate	16.22
							Fluoride	0.006
							Potassium	3.46
							Sodium	17.1
							Boron	ND
							BOD	BDL
							COD	BDL
							Alkalinity	196
Chloride	175							
Total Hardness	182							
Dissolved Solids	488							
Conductivity	742.8							
Color	5							
Turbidity	2.6							
Suspended Solids	18							
pH	6.85							
P Alknty	6							
FDS	362							
FDS	362							
Calcium	44							
Magnesium	17.28							
Fecal Coliform								
Total Coliform								

7	11797573	GroundWater	Borewell-Kanoria Chemicals, Renukoot, Sonbhadra	Borewell-Kanoria Chemicals, Renukoot, Sonbhadra (New Name Grassim Industries)	SONBHADRA	16-03-2021	pH	7.05
							Turbidity	28.6
							Conductivity	5354
							Total Solids	3302
							Suspended Solids	34

S.No.	Sample No	Sample Type	Sampling Point	Address	District	Sample Date	Parameters	
							Params	Value
8	11797133	GroundWater	Hand Pump-Near Shayam House, Chetwa, Myorpur	Hand Pump-Near Shayam Kartik Sharma House, Village-Chetawa, Myorpur, Sonbhadra. U.P.	SONBHADRA	17-03-2021	Copper	0.04
							Zinc	2.65
							Lead	0.061
							Fluoride	0.217
							Conductivity	712.2
							Total Hardness	196
							Total Solids	253
							Dissolved Solids	427
							Turbidity	6.2
pH	7.35							

S.No.	Sample No	Sample Type	Sampling Point	Address	District	Sample Date	Parameters	
							Params	Value
9	11796946	GroundWater	Hand Pump-Babhandiha, Myorpur Block, Sonbhadra	Hand Pump-Babhandiha, Near asharfilal House, Vikash Khand-Myorpur, Sonbhadra, U.P.	SONBHADRA	17-03-2021	Zinc	2.145
							Lead	0.065
							Copper	0.064
							Fluoride	0.423
							pH	6.98
							Total Hardness	202
							Dissolved Solids	346
							Conductivity	566.7
							Total Solids	318
Turbidity	5.5							

S.No.	Sample No	Sample Type	Sampling Point	Address	District	Sample Date	Parameters	
							Params	Value
10	11797200	GroundWater	Hand Pump-Near Kota Gate, SSTPPS, Shaktinagar	Hand Pump-Near Kota Gate of Singrauli Super Thermal Power Plant, Shaktinagar, Sonbhadra, U.P.	SONBHADRA	17-03-2021	Turbidity	29.2
							pH	7.54
							Total Hardness	242
							Total Solids	386
							Conductivity	552.3
							Dissolved Solids	348
							Copper	0.03
							Zinc	0.714
							Lead	0.063
Fluoride	0.38							

S.No.	Sample No	Sample Type	Sampling Point	Address	District	Sample Date	Parameters	
							Params	Value
11	11797042	GroundWater	Hand Pump-Murdhawa Industrial Area, Renukoot	Hand Pump-Murdhawa Industrial Area, Near M/s Birla Carbon Ltd, Gate Renukoot, Sonbhadra	SONBHADRA	16-03-2021	pH	6.96
							Turbidity	3.2
							Total Hardness	448
							Conductivity	1584
							Total Solids	1012
							Dissolved Solids	986
							Zinc	3.395
							Lead	0.089
							Copper	0.041
Fluoride	0.41							

Annexure- 2

Regional Office, U.P. Pollution Control Board, Sonbhadra

Ambient Air Quality Data of Monitoring Station under NAMP Programme
(from April-2023 to May-2024)

Monitoring Station & Year/Parameters	Anpara Colony, Anpara, Sonbhadra			Renusagar Colony, Renusagar, Anpara, Sonbhadra		
	SO ₂ (µg/m ³)	NO ₂ (µg/m ³)	PM 10 (µg/m ³)	SO ₂ (µg/m ³)	NO ₂ (µg/m ³)	PM 10 (µg/m ³)
April-2023	18.91	26.55	174	18.20	26.51	170
May-2023	19.09	27.47	184	18.48	27.35	177
June-2023	16.97	23.49	164	17.07	22.92	166
July-2023	16.75	22.53	165	16.05	22.38	158
August-2023	14.99	21.4	124	14.12	20.58	122
September-2023	15.77	21.09	114	15.43	20.51	109
October-2023	17.54	22.56	129	17.15	22.46	120
November-2023	18.29	24.98	159	17.96	24.15	153
December-2023	19.14	26.98	198	19.03	26.77	188
January-2024	19.05	27.04	209	18.45	26.80	197
February-2024	17.92	27.85	188	17.15	26.79	177
March-2024	18.36	27.96	193	17.40	27.09	179

प्रेषक,

मुख्य चिकित्साधिकारी,
सोनभद्र ।

सेवा में,

क्षेत्रीय अधिकारी,
उ०प्र० नियंत्रण बोर्ड, सोनभद्र ।

पत्रांक-मु०चि०अ० / सूचना / 2024-25 / 1763

दिनांक-24-05-24

विषय:-मा० राष्ट्रीय हरित अधिकरण, नई दिल्ली में योजित ओ०ए० सं०-240/2024
सिंगरौली प्रदूषण मुक्ति वाहिनी एवं अन्य बनाम भारत संघ एवं अन्य में पारित आदेश
दिनांक 15.03.2024 के सम्बन्ध में मांगी गयी सूचना का प्रेषण ।

महोदय,

उपरोक्त विषयक आपके पत्रांक सं०-G-0477/ओ०ए०सं०-240/2024, दिनांक 09.05.
2024 के द्वारा मांगी गयी वांछित सूचना इस पत्र के साथ संलग्न कर प्रेषित है ।

कृपया प्राप्ति स्वीकार करें ।

संलग्नक-उपरोक्तानुसार पेज सं०-1 से 6 तक

भवदीय

मुख्य चिकित्साधिकारी
सोनभद्र ।

पत्रांक-मु०चि०अ० / सूचना / 2024-25 /

प्रतिलिपि-निम्नलिखित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित ।

1. जिलाधिकारी महोदय, सोनभद्र ।
2. मुख्य पर्यावरण अधिकारी (वृत्त-2), उत्तर प्रदेश नियंत्रण बोर्ड, लखनऊ ।

तददिनांक-

मुख्य चिकित्साधिकारी
सोनभद्र ।

To
the Regional Officer

Date 24/05/2024

U.P. Pollution Control Board
Sonebhadra

Ref: G-0477/OA No-240/2024 Dated 08/05/2024

Sir,

Please find the details below as per your requirements:-

Health Status of CHC Myorpur Sonebhadra, for the year 2023-24
(Total Population Covered about 410000)

Sr No	Description of Diseases	Number of Patients in 2023-24	Remarks
1	Lung Related Diseases e.g Tuberculosis	14	All the cases ware for Sputum check and for treatment
2	Fluorosis cases	48	Recommendation for Defloridation Technique
3	Bone Involvement	6	Referred to Specialist
4	Lead & Mercury Toxicity	0	We are not Dealing with Heavy Metals
5	Yellowish Teeth/Bluelines on Gums	10	Suspected the cause of Heavy Metals Referd to District Hospital
6	Rate of Miscarriages in this region	0	We are not dealing with Gynae Cases therefore we do not have any Document

Thanking You, sincerely yours

P.S.
अधीक्षक
सामु० स्वा० केन्द्र
म्योरपुर, सोनभद्र

TO

The Regional Officer
UP Pollution Control Board
Sonebhadra

Date-24-05-2024
Duddhi, Sonebhadra

Ref:G-0477/OA no-240/2024 Dated 08/05/2024


Sir,

Please find the details below as per your requirements:-

Health Status of this Locality surrounding Duddhi & Nearby areas District-
Sonebhadra, for the Year 2022-23 & 2023-24

Total Population Covered about 2,15,000

SN	Description of Diseases	Number of Patient in 2022-23	Number of Patient in 2023-24	Remarks
1	Lung Related Diseases e.g. Tuberculosis	271	102	All the cases were referred to Govt Hospital for sputum check and for treatment
2	Fluorosis	95	56	deformities not seen and all the Skeletal Fluosis is Presented with bone pain and Arthralgia
3	Bone involvement	0	0	Referred to specialist
4	lead & Mercury Toxicity	0	0	We are not dealing with Heavy Metals
5	Yellowish Teeth/Bluelines on Gums	0	0	
6	Rate of Miscarriage in this region	0	0	We are dealing with Gynae Cases


MOIC
CHC-DUDDHI

The Regional Officer
U.P. Pollution Control Board
Sonebhadra

Ref: G-0477/OA No.-240/2024 Dated 08/05/2024

Sir,

Please find the details below as per your requirements :-

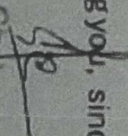
**Health Status of this Locality surrounding Birla Carbon Industry, Murdhawa, Renukoot District -
Sonebhadra, for the year 2022 - 23 & 2023-24**

(Total Population covered about 30,000)

Date: 22/05/2024
Murdhawa, Renukoot

Sr No	Description of Diseases	Number of Patients in 2022-23	Number of Patients in 2023-24	Remarks
1	Lung Related Diseases e.g. Tuberculosis	6	4	All the cases were referred to Govt Hospital for Sputum check and for treatment
2	Fluorosis and Bone Involvement	2	0	Deformities not seen and all the Skeletal Fluorosis is presented with Bone Pain and Arthralgia.
3	Lead & Mercury Toxicity	0	0	We are not dealing with Heavy Metals.
4	Yellowish Teeth/ Bluelines on Gums	0	0	
5	Rate of Miscarriages in this region	0	0	We are not dealing with Gynae Cases therefore we do not have any Document

Thanking you, sincerely yours


Dr. M.R. Chakraborty
M.B.B. Birla Carbon
M.S., F.C.C.P.
Regd. No.- 18130/UP

10/01/2019
10/01/2019

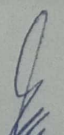
Chc - Chaparr

SN	Name	Address	Age	Sex	Phone	Threats	Reliability	Notes	Report
25	Aracelis	Aracelis	25	F	505201627089	Yes	No		
26	Edgar Serna	Edgar Serna	26	F	87628765559	Yes	No		
27	Yolanda Devi	Yolanda Devi	27	F	523275612298	Yes	No		
28	Aracelis	Aracelis	28	F	562793980253	Yes	No		
29	Aracelis	Aracelis	29	F	505201627089	Yes	No		
30	Aracelis	Aracelis	30	F	786620282270	Yes	No		
31	Aracelis	Aracelis	31	F	803779277709	Yes	No		
32	Aracelis	Aracelis	32	F		Yes	No		
33	Aracelis	Aracelis	33	F		Yes	No		
34	Aracelis	Aracelis	34	F		Yes	No		
35	Aracelis	Aracelis	35	F		Yes	No		
36	Aracelis	Aracelis	36	F		Yes	No		
37	Aracelis	Aracelis	37	F		Yes	No		
38	Aracelis	Aracelis	38	F		Yes	No		
39	Aracelis	Aracelis	39	F		Yes	No		
40	Aracelis	Aracelis	40	F		Yes	No		
41	Aracelis	Aracelis	41	F		Yes	No		
42	Aracelis	Aracelis	42	F		Yes	No		
43	Aracelis	Aracelis	43	F		Yes	No		
44	Aracelis	Aracelis	44	F		Yes	No		
45	Aracelis	Aracelis	45	F		Yes	No		
46	Aracelis	Aracelis	46	F		Yes	No		
47	Aracelis	Aracelis	47	F		Yes	No		
48	Aracelis	Aracelis	48	F		Yes	No		
49	Aracelis	Aracelis	49	F		Yes	No		
50	Aracelis	Aracelis	50	F		Yes	No		
51	Aracelis	Aracelis	51	F		Yes	No		
52	Aracelis	Aracelis	52	F		Yes	No		
53	Aracelis	Aracelis	53	F		Yes	No		
54	Aracelis	Aracelis	54	F		Yes	No		
55	Aracelis	Aracelis	55	F		Yes	No		
56	Aracelis	Aracelis	56	F		Yes	No		
57	Aracelis	Aracelis	57	F		Yes	No		
58	Aracelis	Aracelis	58	F		Yes	No		
59	Aracelis	Aracelis	59	F		Yes	No		
60	Aracelis	Aracelis	60	F		Yes	No		
61	Aracelis	Aracelis	61	F		Yes	No		
62	Aracelis	Aracelis	62	F		Yes	No		
63	Aracelis	Aracelis	63	F		Yes	No		
64	Aracelis	Aracelis	64	F		Yes	No		
65	Aracelis	Aracelis	65	F		Yes	No		
66	Aracelis	Aracelis	66	F		Yes	No		
67	Aracelis	Aracelis	67	F		Yes	No		
68	Aracelis	Aracelis	68	F		Yes	No		
69	Aracelis	Aracelis	69	F		Yes	No		
70	Aracelis	Aracelis	70	F		Yes	No		
71	Aracelis	Aracelis	71	F		Yes	No		
72	Aracelis	Aracelis	72	F		Yes	No		
73	Aracelis	Aracelis	73	F		Yes	No		
74	Aracelis	Aracelis	74	F		Yes	No		
75	Aracelis	Aracelis	75	F		Yes	No		
76	Aracelis	Aracelis	76	F		Yes	No		
77	Aracelis	Aracelis	77	F		Yes	No		
78	Aracelis	Aracelis	78	F		Yes	No		
79	Aracelis	Aracelis	79	F		Yes	No		
80	Aracelis	Aracelis	80	F		Yes	No		
81	Aracelis	Aracelis	81	F		Yes	No		
82	Aracelis	Aracelis	82	F		Yes	No		
83	Aracelis	Aracelis	83	F		Yes	No		
84	Aracelis	Aracelis	84	F		Yes	No		
85	Aracelis	Aracelis	85	F		Yes	No		
86	Aracelis	Aracelis	86	F		Yes	No		
87	Aracelis	Aracelis	87	F		Yes	No		
88	Aracelis	Aracelis	88	F		Yes	No		
89	Aracelis	Aracelis	89	F		Yes	No		
90	Aracelis	Aracelis	90	F		Yes	No		
91	Aracelis	Aracelis	91	F		Yes	No		
92	Aracelis	Aracelis	92	F		Yes	No		
93	Aracelis	Aracelis	93	F		Yes	No		
94	Aracelis	Aracelis	94	F		Yes	No		
95	Aracelis	Aracelis	95	F		Yes	No		
96	Aracelis	Aracelis	96	F		Yes	No		
97	Aracelis	Aracelis	97	F		Yes	No		
98	Aracelis	Aracelis	98	F		Yes	No		
99	Aracelis	Aracelis	99	F		Yes	No		
100	Aracelis	Aracelis	100	F		Yes	No		

Sl. No.	Name	Age	Sex	Father's Name	Address	Dental History	Disability	Year	Remarks
1	Prady	18	M	Logpal	-	Yes	No	-	-
2	Pradywan	18	F	Logpal	-	Yes	No	-	-
3	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
4	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
5	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
6	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
7	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
8	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
9	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
10	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
11	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
12	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
13	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
14	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
15	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
16	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
17	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
18	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
19	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
20	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
21	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
22	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
23	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
24	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
25	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
26	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
27	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
28	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
29	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
30	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
31	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
32	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
33	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
34	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
35	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
36	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
37	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
38	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
39	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
40	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
41	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
42	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
43	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
44	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
45	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
46	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
47	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
48	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
49	Pradywan	18	F	Kompanthi	-	Yes	No	-	-
50	Pradywan	18	F	Kompanthi	-	Yes	No	-	-

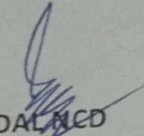
**Acute Respiratory Illness Cases for District Combind Hospital
Sonbhadra**

S.no	Month	Total No cases reported
1	Apr-22	0
2	May-22	33
3	Jun-22	63
4	Jul-22	38
5	Aug-22	43
6	Sep-22	83
7	Oct-22	46
8	Nov-22	48
9	Dec-22	62
10	Jan-23	74
11	Feb-23	66
12	Mar-23	74
13	Apr-23	0
14	May-23	93
15	Jun-23	74
16	Jul-23	0
17	Aug-23	90
18	Sep-23	89
19	Oct-23	116
20	Nov-23	105
21	Dec-23	109
22	Jan-24	103
23	Feb-24	109
24	Mar-24	118
25	Apr-24	56
Total		1692


 NODAL NPCCHH
 Sonbhadra

COPD Cases Status Distt. Sonbhadra

S.no	F.Y.	Total No cases
1	2022-23	13
2	2023-24	26
Total		39


NODAL NCD
Sonbhadra

Annexure-4

Item No. 03

Court No. 1

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

Original Application No. 240/2024

Singrauli Pradooshan Mukti Vahini & Ors.

Applicant(s)

Versus

Union of India & Ors.

Respondent(s)

Date of hearing: 15.03.2024

**CORAM: HON'BLE MR. JUSTICE PRAKASH SHRIVASTAVA, CHAIRPERSON
HON'BLE DR. A. SENTHIL VEL, EXPERT MEMBER
HON'BLE DR. AFROZ AHMAD, EXPERT MEMBER**

Applicant: Ms. Srishti Agnihotri, Ms. Sanjana Srikumar & Ms. Tara Elizabeth Kurien, Advs.

ORDER

1. In this original application, residents of Sonbhadra District of Singrauli had claimed the compensation on account of the health issues faced by them due to pollution caused by the industrial units in that area. The plea of the Applicant is that there are 359 industries including highly polluting industries such as thermal power plants, coal mines, etc. and the industries have been set up beyond the carrying capacity as a result of which the residents have faced serious health hazards. Applicant has summarized following five main issues:

- I. The main source of water, the Rihand reservoir is severely polluted with the discharge of fly ash and other effluents from the industries. The water is unfit for consumption.
- II. Detailed environmental studies have concluded that Singrauli was one of the Critically Polluted Areas identified by the Central Pollution Control Board.

- III. There is a high prevalence of fluorosis in the region, in addition to indications of lead and mercury toxicity.
 - IV. There is a need to assess the carrying capacity of the region and to halt further industrialization/expansion of existing industries.
 - V. There is a need for industries to contribute towards compensation for damage to victims of the pollution in the region as well as restoration of the environment.
2. Further issues which are required to be remediated are stated by the applicant as under:
- I. There is heavy metal pollution in the region including toxic heavy metals such as mercury, chromium, lead and arsenic, which are attributable to the thermal power plants and coal mining in the region.
 - II. Singrauli experiences at least 95 days of very poor or critical air quality throughout the year.
 - III. The lung function of the residents is severely affected, being on average 42.7% less than the average Indian.
 - IV. There is a high prevalence of fluorosis, yellowing of teeth, blue line on gums (indicating exposure of heavy metals) and a higher rate of miscarriages in the region.
3. Learned Counsel for the Applicant has submitted that the Core Committee constituted by the Tribunal had submitted the report in the year 2015, wherein the gravity of the situation and extent of pollution

from various sources and various elements was reflected and that even the basic healthcare facilities are not available in the area concerned to take care of the various health problems faced by the residents due to the industrial pollution.

4. The OA raises substantial issue relating to compliance of the environmental norms.

5. Issue notice to the respondents. Applicant is directed to serve the respondents and file affidavit of service at least one week before the next date of hearing.

6. Respondent No. 2 will file a comprehensive report disclosing the extent of pollution in the area concerned and its effect on the health of the local residents and also the truthfulness of the allegations made in the present OA. Let the reply/report be filed by the respondents at least one week before the next date of hearing by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/OCR Support PDF and not in the form of Image PDF.

7. List on 22.05.2024.

Prakash Shrivastava, CP

Dr. A. Senthil Vel, EM

Dr. Afroz Ahmad, EM

March 15, 2024
Original Application No. 240/2024
DV