

BEFORE THE NATIONAL GREEN TRIBUNAL, New Delhi

O.A. NO. 198 OF 2022

IN THE MATTER OF

IN RE: BHAGALPUR 14 DEAD IN FIRECRACKER UNIT BLAST.

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BEFORE THE NATIONAL GREEN TRIBUNAL, New Delhi
O.A. NO. 198 OF 2022
IN THE MATTER OF
IN RE: BHAGALPUR 14 DEAD IN FIRECRACKER UNIT BLAST.

Factual & Action Taken Report.

I, S. Chandrasekar, aged about 44 years, Son of Mr. S. Subramani, residing at B-202, Amarkunj Apartment, Vivekanand Marg-Patna-800013, do hereby state as follows:-

1. That I am posted as Member Secretary, Bihar State Pollution Control Board, Patna and as such I am well aware of the facts and circumstances of the present matter.
2. That I am on leave on 20.04.2022 and as such I have authorized Sri Abhimanyu Singh (Law Officer) to sign and file this report on my behalf.
3. That the instant proceedings have been initiated based on media report that 14 persons died in a firecracker unit blast in Bihar's Bhagalpur town.

4. That the Hon'ble Tribunal vide its order dated 16.03.2022 directed the State PCB as regulator and District Magistrate as representative of State to bring out clear version about the cause of the incident, nature of violations of environmental safety norms, persons responsible for violations, identity of victims, need for remedial action by way of compensation and preventive measures to ensure that such incidents do not recur again.

5. That with respect to 'Nature of Violations of Environmental Safety Norms' it is humbly submitted as hereunder:-

Not obtained Consent from State PCB Under Water Act & Air Act:-

The firecracker unit where blast occurred is a residential house in which members of one family were engaged in manufacturing & sale of firecracker illegally. The 'Fire crackers manufacturing and bulk storage facilities' is categorized under Red Category (R14) in 'Categorization of Industries' issued by the Central Pollution Control Board, New Delhi, and as such the unit ought to have approached State PCB for grant of consent under the Air Act & Water Act. That have the said unit approached the State PCB for grant of consent the State PCB would

have made sure that the site of the unit is confirming the siting guidelines of the State PCB for such units and have also directed for installation of various pollution control devices and safety measures required in such type of units.

Non compliance with the Manufacture, Storage & Import of the Hazardous Chemical Rules, 1989:-

In making firecrackers mainly four chemicals are used, i.e. Aluminum Powder; Sulphur; Potassium Nitrate & Barium Nitrate.

The Ministry has made the Manufacture, Storage & Import of the Hazardous Chemical Rules, 1989. Under the said Rules, Hazardous Chemical has been defined under rule 2 (e) which provides that any chemical which satisfies any of the criteria laid down in Part I of 2 [Schedule 1 or] listed in column 2 of Part II of this Schedule; or any chemical listed in column 2 of Schedule 2; or any chemical listed in column 2 of Schedule 3 means Hazardous chemical.

Aluminum & Barium Nitrate is listed at Sl. No. 19 & Sl. No. 52 respectively, in Column 2 of Schedule 2 appended to the Rules, 1989, and as such the aforesaid chemical is Hazardous Chemical as per the Rules, 1989. Therefore, the occupier of the unit must have complied with the said Rules and ought to have identified accidents hazard and

provided to the persons working on the site with the information, training and equipment necessary for their safety.

6. That apart from above it appears that the said unit was not following the rules and regulation as laid down by the Explosive Rules, 2008; safety circulars; standard operating process (SOP) and was engage in business of manufacture & sale of firecracker without obtaining license.
7. That the house in which the activity was being carried out is situated in very densely populated area and house itself was also very congested and therefore the chemicals and gunpowder were kept/stored in unorganized and haphazard manner. Further storage, manufacturing, packing, labeling and finishing of firecracker was being done without the help and advice of experts and the family members were jointly responsible for everything related to firecrackers till the point of sale.
8. That with respect to assessment of Environmental Compensation on Polluter Pays Principle it is humbly submitted that the unit is situated amidst habitation. On blast, the chemicals and gunpowder contributed to smoke and resultantly SO₂, NO_X, PM₁₀, PM_{2.5} got suspended in the atmosphere. However, in the monitoring station installed at DM Office,

Bhagalpur and DFO Nursery, Bhagalpur, no major change in reading of main pollutant was noticed. The blast occurred at around 11:30 pm on 03.03.2022 and the reading recorded in monitoring station situated at DM, Office, Bhagalpur on 03.03.2022 at 11:00 pm & on 04.03.2022 at 00:00 am is reproduced herein below:-

Time	CO	SO ₂	NO	NO ₂	NOX	NH ₃	O ₃	PM _{2.5}	PM ₁₀
23:00 3.03.22	---	5.05	4.38	115.00	64.67	28.87	82.92	165.3	261.8
00:00 04.03.22	---	3.37	5.37	124.91	70.73	21.79	52.54	154.8	174.4

Similarly, the reading recorded in monitoring station situated at DFO, Nursery, Bhagalpur on 03.03.2022 at 11:00 pm & on 04.03.2022 at 00:00 am is reproduced herein below:-

Time	CO	SO ₂	NO	NO ₂	NOX	NH ₃	O ₃	PM _{2.5}	PM ₁₀
23:00 3.03.22	---	8.00	0.47	23.84	13.06	9.00	48.66	101.9	250.8
00:00 04.03.22	---	7.64	0.56	17.30	9.65	8.15	50.73	119.4	288.5

It is further submitted that the reading recorded at both the stations on 04.03.2022 does not indicate that about major pollution was caused due to the blast. Therefore, assessment of monetary damage for environmental degradation cannot be made as there is not enough material to arrive at a conclusion as to what extent pollution was caused by the blast standalone.

A copy of the monitoring data of both the station for 03.03.2022 & 04.04.2022 is annexed and marked as Annexure-1 (colly).

9. That I have read the contents of the affidavit and have understood the same.

Sd/-

S. Chandrasekar
(Member-Secretary)
Bihar State Pollution Control Board

It is further submitted that the reading recorded at both the stations on 04.03.2022 does not indicate that about major pollution was caused due to the blast. Therefore, assessment of monetary damage for environmental degradation cannot be made as there is not enough material to arrive at a conclusion as to what extent pollution was caused by the blast standalone.

A copy of the monitoring data of both the station for 03.03.2022 & 04.04.2022 is annexed and marked as Annexure-1 (colly).

9. That I have read the contents of the affidavit and have understood the same.

for 
S. Chandrasekar
(Member-Secretary)
Bihar State Pollution Control Board

Annexure-1

BIHAR STATE POLLUTION CONTROL BOARD, PATNA
Daily Reporting Format for Main Pollutants
Location: CAAQMS DM Office, Bhagalpur
03-March-2022

Time Hrs.	CO mg/m³	SO₂ µg/m³	NO µg/m³	NO₂ µg/m³	NOX ppb	NH₃ µg/m³	O₃ µg/m³	PM_{2.5} µg/m³	PM₁₀ µg/m³
00:00	...	4.39	2.70	117.38	60.28	22.36	60.36	121.8	176.7
01:00	...	3.86	2.52	107.74	55.29	18.91	59.72	109.2	177.3
02:00	...	7.17	2.02	79.62	40.73	6.29	40.77	89.5	150.9
03:00	...	8.48	2.85	39.18	18.56	9.41	61.26	34.3	177.9
04:00	...	8.27	2.41	51.52	25.47	9.31	47.43	62.0	132.6
05:00	...	8.70	2.93	47.06	22.69	12.06	72.12	84.0	145.3
06:00	...	4.92	1.54	103.17	53.64	18.25	42.56	79.4	138.3
07:00	...	2.35	8.75	154.76	89.32	22.15	27.68	108.9	225.0
08:00	...	4.78	0.02	120.19	63.95	22.22	107.00	167.9	273.8
09:00	...	11.80	0.37	79.30	42.47	11.83	117.81	160.9	260.7
10:00	...	16.30	4.62	37.29	23.53	5.34	136.41	134.3	208.9
11:00	...	17.14	4.90	25.07	17.26	6.74	136.14	50.8	164.5
12:00	...	16.13	5.21	24.44	17.17	9.68	138.62	64.6	161.6
13:00	...	16.22	5.07	31.60	20.86	10.94	143.24	56.8	140.7
14:00	...	21.04	5.87	84.55	49.67	25.33	155.48	59.8	133.2
15:00	...	25.68	6.75	93.53	55.15	19.26	154.67	81.2	136.7
16:00	...	19.17	6.88	85.44	50.95	13.75	151.17	119.5	144.8
17:00	...	17.11	5.69	81.12	47.70	12.50	134.55	68.6	159.6
18:00	...	14.10	5.07	75.05	43.97	3.12	75.70	64.6	168.7
19:00	...	12.34	5.59	57.72	35.17	0.00	61.91	22.3	239.4
20:00	...	11.89	4.59	42.87	26.47	5.42	69.77	81.7	239.0
21:00	...	11.61	4.92	61.26	36.52	8.12	47.79	86.3	195.0
22:00	...	8.51	13.28	113.20	70.84	19.02	30.99	100.8	219.0
23:00	...	5.05	4.38	115.00	64.67	28.87	82.92	165.3	261.8
Average	#DIV/0!	11.54	4.54	76.17	43.01	13.37	89.84	90.59	184.64
Min.	0.00	2.35	0.02	24.44	17.17	0.00	27.68	22.26	132.60
Max.	0.00	25.68	13.28	154.76	89.32	28.87	155.48	167.90	273.82

Note: Average value of all parameters is computed, based on averages of every Hours data.

Standard: CO - 02 mg/m³ (8 hours), O₃ - 100 µg/m³, (8 hours), SO₂ - 80 µg/m³ (24 hours), NO₂ - 80 µg/m³, (24 hours), PM₁₀ - 100µg/m³ (24 hours), PM 2.5 - 60 µg/m³ (24 hours), NH₃ - 400 µg/m³ (24 hours)

Source: CAAQMS, DM Office, Bhagalpur

BIHAR STATE POLLUTION CONTROL BOARD, PATNA
Daily Reporting Format for Main Pollutants
Location: CAAQMS DM Office, Bhagalpur
04-March-2022

Time Hrs.	CO mg/m³	SO₂ µg/m³	NO µg/m³	NO₂ µg/m³	NOX ppb	NH₃ µg/m³	O₃ µg/m³	PM_{2.5} µg/m³	PM₁₀ µg/m³
00:00	...	3.37	5.37	124.91	70.73	21.79	52.54	154.8	174.4
01:00	...	3.27	4.77	107.37	60.93	20.81	52.74	127.8	266.7
02:00	...	6.26	4.31	50.60	30.36	8.23	70.30	108.1	225.4
03:00	...	7.23	4.27	33.46	21.21	7.91	61.11	49.3	187.0
04:00	...	7.72	4.46	37.24	23.38	10.45	51.08	80.0	165.0
05:00	...	7.74	4.49	38.26	23.95	11.68	52.62	83.7	155.1
06:00	...	5.49	5.11	78.32	45.74	19.20	46.19	102.7	167.2
07:00	...	2.55	6.54	123.60	70.98	25.95	56.69	123.7	209.9
08:00	...	4.88	6.98	114.61	66.55	21.86	101.62	194.2	223.3
09:00	...	10.95	4.90	63.47	37.68	9.98	125.37	116.9	231.4
10:00	...	13.00	1.90	39.43	22.49	5.33	129.56	94.0	174.8
11:00	...	11.83	1.21	27.32	15.50	3.41	121.75	24.5	167.0
12:00	...	11.37	0.92	30.44	16.93	43.95	88.60	59.8	181.6
13:00	...	10.94	1.31	34.91	19.62	12.24	86.46	50.4	148.4
14:00	...	8.66	2.13	80.05	44.28	61.30	93.51	47.8	146.8
15:00	...	16.34	3.34	107.58	59.90	76.67	120.62	62.7	148.0
16:00	...	16.37	4.42	99.45	56.43	79.90	118.45	131.4	169.6
17:00	...	12.44	9.02	109.98	65.72	88.10	85.07	64.8	186.0
18:00	...	11.25	5.37	86.77	50.45	65.89	63.48	55.0	193.3
19:00	...	13.12	3.21	49.14	28.71	61.51	78.62	39.0	285.1
20:00	...	12.65	0.88	46.17	25.26	68.79	75.78	58.2	194.6
21:00	...	12.41	0.94	52.38	28.61	74.67	71.03	84.7	191.1
22:00	...	8.00	0.99	70.97	38.54	108.57	83.12	85.4	187.5
23:00	...	4.29	0.77	102.64	55.21	112.27	80.21	107.2	170.9
Average	#DIV/0!	9.26	3.65	71.21	40.80	42.52	81.94	87.75	189.58
Min.	0.00	2.55	0.77	27.32	15.50	3.41	46.19	24.47	146.81
Max.	0.00	16.37	9.02	124.91	70.98	112.27	129.56	194.19	285.14

Note: Average value of all parameters is computed, based on averages of every Hours data.

Standard: CO - 02 mg/m³ (8 hours), O₃ - 100 µg/m³, (8 hours), SO₂ - 80 µg/m³ (24 hours),
NO₂ - 80 µg/m³, (24 hours), PM₁₀ - 100µg/m³ (24 hours), PM 2.5 - 60 µg/m³ (24 hours),
NH₃ - 400 µg/m³ (24 hours)

Source: CAAQMS, DM Office, Bhagalpur

BIHAR STATE POLLUTION CONTROL BOARD, PATNA
Daily Reporting Format for Main Pollutants
CAAQMS DFO Nursery, Bhagalpur
03-March-2022

Time Hrs.	CO mg/m³	SO₂ µg/m³	NO µg/m³	NO₂ µg/m³	NOX ppb	NH₃ µg/m³	O₃ µg/m³	PM_{2.5} µg/m³	PM₁₀ µg/m³
00:00	...	12.94	1.97	21.90	13.22	32.97	45.75	98.5	205.8
01:00	...	12.90	2.43	27.64	16.65	36.24	34.35	91.9	149.7
02:00	...	12.55	2.92	35.19	21.05	37.45	30.03	91.5	128.0
03:00	...	12.75	1.65	11.02	7.18	38.47	60.08	89.1	145.1
04:00	...	12.49	4.57	41.88	25.93	37.60	13.60	76.0	101.0
05:00	...	12.40	2.28	27.66	16.54	39.00	27.48	100.9	141.7
06:00	...	13.04	3.38	23.82	15.37	42.30	33.81	119.9	152.9
07:00
08:00
09:00
10:00	0.89	7.96	23.28
11:00	...	16.90	0.67	3.51	2.41	47.09	120.74
12:00	...	15.46	1.45	3.01	2.76	46.87	125.31	71.2	...
13:00	...	14.65	1.28	0.95	0.52	44.97	149.00	52.5	126.4
14:00	...	12.82	249.83	27.86	...	14.54	138.40	52.3	133.2
15:00	...	19.21	424.15	12.35	...	26.77	144.25	54.6	144.6
16:00	...	13.32	0.65	6.10	3.76	28.07	136.04	52.2	143.0
17:00	...	10.58	0.47	3.45	2.21	21.00	108.85	70.4	159.2
18:00	...	6.97	2.66	37.19	21.91	10.01	57.37	66.8	146.3
19:00	...	5.98	2.70	57.79	32.91	6.52	31.59	107.0	638.5
20:00	...	4.85	8.51	43.34	29.86	7.08	35.70	130.4	357.7
21:00	...	4.37	7.83	37.52	26.22	8.53	37.56	106.8	383.5
22:00	...	4.95	1.08	23.09	13.15	3.30	42.21	102.3	256.7
23:00	...	8.00	0.47	23.84	13.06	9.00	48.66	101.9	250.8
Average	#DIV/0!	11.36	34.37	22.72	14.71	26.89	68.76	86.12	209.11
Min.	0.00	4.37	0.47	0.95	0.52	3.30	13.60	52.20	100.95
Max.	0.00	19.21	424.15	57.79	32.91	47.09	149.00	130.40	638.50

Note: Average value of all parameters is computed, based on averages of every Hours data.

Standard: CO - 02 mg/m³ (8 hours), O₃ - 100 µg/m³, (8 hours), SO₂ - 80 µg/m³ (24 hours),

NO₂ - 80 µg/m³, (24 hours), PM₁₀ - 100µg/m³ (24 hours), PM 2.5 - 60 µg/m³ (24 hours),

NH₃ - 400 µg/m³ (24 hours)

Data Source : DFO, Bhagalpur

BIHAR STATE POLLUTION CONTROL BOARD, PATNA
Daily Reporting Format for Main Pollutants
CAAQMS DFO Nursery, Bhagalpur
04-March-2022

Time Hrs.	CO mg/m³	SO₂ µg/m³	NO µg/m³	NO₂ µg/m³	NOX ppb	NH₃ µg/m³	O₃ µg/m³	PM_{2.5} µg/m³	PM₁₀ µg/m³
00:00	...	7.64	0.56	17.30	9.65	8.15	50.73	119.4	228.5
01:00	...	6.71	1.39	31.35	17.79	5.18	25.28	116.4	232.8
02:00	...	6.49	0.79	32.69	18.02	2.87	35.48	129.5	289.0
03:00	...	5.94	1.31	29.71	16.85	1.62	26.09	114.3	265.3
04:00	...	5.75	1.73	25.91	15.17	1.38	18.21	120.2	223.1
05:00	...	5.88	1.63	30.49	17.53	0.56	22.74	114.5	272.0
06:00	...	5.11	1.71	24.68	14.49	4.17	27.58	104.8	234.2
07:00	...	2.93	1.80	25.66	15.08	7.94	35.78	127.7	276.4
08:00	...	4.98	1.30	23.98	13.80	10.56	93.76	158.0	334.8
09:00	...	7.60	0.89	6.97	4.42	15.97	106.88	116.7	271.6
10:00	...	8.11	0.46	2.66	1.79	13.40	115.58	81.4	198.9
11:00	...	6.91	0.34	0.33	0.10	12.44	122.65	62.6	169.3
12:00	...	5.76	0.24	2.30	1.03	13.24	122.15	56.5	147.1
13:00	...	5.15	0.25	2.22	0.98	13.09	123.36	46.9	133.0
14:00	...	6.91	0.06	2.52	1.29	9.56	115.11	42.6	182.3
15:00	...	19.24	0.18	0.30	0.02	3.05	126.52	37.4	164.6
16:00	...	16.85	0.30	2.50	1.57	5.43	118.85	45.6	156.8
17:00	...	11.36	0.25	4.91	2.81	7.45	94.03	51.5	154.1
18:00	...	11.26	0.22	11.75	6.42	6.90	81.65	51.5	198.5
19:00	...	12.64	0.45	21.59	11.84	6.74	74.62	76.4	249.1
20:00	...	10.89	1.47	53.88	29.83	4.97	33.12	85.8	284.6
21:00	...	9.88	1.66	42.18	23.77	6.34	47.51	110.1	325.2
22:00	...	13.22	0.56	26.96	14.79	11.65	68.44	88.5	333.5
23:00	...	9.02	0.40	19.55	10.72	16.79	73.51	85.7	260.7
Average	#DIV/0!	8.59	0.83	18.43	10.41	7.89	73.32	89.33	232.73
Min.	0.00	2.93	0.06	0.30	0.02	0.56	18.21	37.40	133.04
Max.	0.00	19.24	1.80	53.88	29.83	16.79	126.52	158.00	334.82

Note: Average value of all parameters is computed, based on averages of every Hours data.

Standard: CO - 02 mg/m³ (8 hours), O₃ - 100 µg/m³, (8 hours), SO₂ - 80 µg/m³ (24 hours),

NO₂ - 80 µg/m³, (24 hours), PM₁₀ - 100µg/m³ (24 hours), PM 2.5 - 60 µg/m³ (24 hours),

NH₃ - 400 µg/m³ (24 hours)

Data Source : DFO, Bhagalpur