

## BEFORE THE NATIONAL GREEN TRIBUNAL

PRINCIPAL BENCH :: NEW DELHI

ORIGINAL APPLICATION No. 295 of 2023

IN THE MATTER OF:

DIMPAL KUMAR

....APPLICANT

VERSUS

STATE OF PUNJAB , &amp; ORS.

....RESPONDENTS

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Filed by

Applicant



Filed through

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**ORIGINAL APPLICATION No. 295 of 2023**

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**RESPONSE OF APPLICANT TO FINAL REPORT OF JOINT  
COMMITTEE**

**MOST RESPECTFULLY SHOWETH:**

1. That a matter of Original Application No 295/23, titled Dimpal Kumar Vs State of Punjab & Others, against unregulated violation of air quality norms by 220 coal fired furnaces operating in Mandi Gobind Garh, Punjab, engaged in recycled steel production, Ceramics/Refractory, Cupola Furnaces, Forging Induction furnaces, Lead Smelting units, Rolling mills, Ply board, Milk Plant and Pyrolysis Plants is under consideration of this Hon'ble Tribunal.
2. That Hon'ble Tribunal was pleased to constitute a joint committee of CPCB, State PCB and District Magistrate to undertake visit to the site, interact with stakeholders and furnish a factual and action taken report in the matter

within two months vide order dated 21. 4.2023. The Hon'ble Tribunal was also pleased to direct vide said order that "the report may be holistic on the subject of restoring environmental quality in the critically polluted area in question. The affected parties may be put to notice of these proceedings by the State PCB to enable them to file their response, if any, before the next date".

3. That the final report of Joint Committee has been filed on 7.10.2023 before Hon'ble Tribunal and placed at running page number 174-213.
4. That the applicant respectfully submits current status of air pollution and hazardous waste management by some industries at Mandi Govind garh that have come to his notice during a round taken of the area. The photographs of heavy spewing of smoke by various industries is clearly visible in the photos enclosed herewith as **Annexure A/1 colly**. The Photo have GPS coordinates as well as names of industries in as many cases as possible. Likewise photographs of display boards for hazardous waste for few industries showing no entries being made is enclosed as **Annexure A /2 colly** that clearly reflect that no environmental laws are being complied and no hazardous waste is being disposed off as per HWM Rules by these industries. As a result of inaction and non action of PPCB the AQI of the area from 3.11.2023 – 9.11.2023 hovered between 277-355. Even on 16 Nov 2023, as per CPCB

monitoring station results at Mandi Govind Garh, The value of PM2.5 average is 315 micro g/ cum and PM 10 average is 232 micro gram / cum. It shows air quality has substantially deteriorated further since OA was filed. An extract of referred monitoring results for Mandi Gobind Garh are enclosed as **Annexure A/3 colly**.

5. That the applicant respectfully submits that the final report of joint committee filed before Hon'ble Tribunal after more than 5 months instead of 2 months as directed, is utterly evasive, misleading and fails to comply with direction of Hon'ble Tribunal dated 29.4.2023. The response of the applicant to the said report is as follows:

(a) Only Associations of small scale steel re rollers, steel re rollers, and induction furnaces attended meeting under chairmanship of ADC, Fatehgarh saheb as per minutes of meeting dated 22.6.2023 placed at running page 191-193 (relevant page 191). None is shown present in the meeting on behalf of ceramic ind, lead smelting, milk plants, pyrolysis units etc which are also causing air pollution/ producing hazardous waste contaminating environment.

(b) There is nothing on record through the report that concerned industries are put to notice of present proceedings to enable them to submit their response before Hon'ble Tribunal in terms of order dated 29.4.2023.

- (c) Joint committee has taken upon itself to present the case of industrial association present in the meeting which has nothing new to say except what has already been said and considered by Hon'ble Tribunal before passings several orders in OA 924/2019 Neeraj Goel Vs State of Punjab, as already included in the present OA. Joint committee has not submitted any details of steps taken by State, Local authorities and PPCB subsequent to and specifically in compliance of order dated 1.10.2020 of Hon'ble Tribunal in OA 924/2019 ( page 159-165) and after disposing off the application wide order dated 6.4. 2021 ( Page 166-181).
- (d) The report informs that 171 out of 220 coal/ FO using industries started using PNG as fuel in the furnaces (Page 177). However, the minutes of the meeting enclosed at running page (191-193) inform at page 193 that 44 of these 171 industries have shifted again to use coal as fuel. Apart from these 77 industries have registered for supply of PNG but refused to take connection of PNG gas, as on 23.6.2023. Thus out of 245 industries using coal/ FO as fuel, only 127 industries are actually using PNG as fuel. The report informs that 44 industries which had started using PNG but later converted to coal have kept the infrastructure to use PNG intact (Running page 185).

(e) The report admits that PPCB on request of industry association, considered and the industries were extended the temporary relief to use till fuel policy of the state is notified (Running page 186). Escalation in price of PNG due to Ukrain war and loss of competitive edge is cited as reason for said decision, notwithstanding directions of Hon'ble NGT dated 1.10.2020 in OA 924/2019 to close down all industries not converting to PNG in the area by 31.12.2020 ( Page 116) . The joint committee has not brought on record that VAT on PNG was reduced by Govt of Punjab from 14.3% to 3.3 % vide notification dated 25.10.2019 to facilitate use of PNG as fuel by industries. A copy of VAT notification is enclosed herewith as **Annexure A/4**. The Clean Air Action Plan had prescribed (Running page 85) all coal/ FO using industries to convert to PNG as fuel upon reduction in VAT, as then demanded by the industry. A copy of Clean Air Action Plan, 2019 for Mandi Gobindgarh is enclosed as **Annexure A/5**.

(f) The report further states that fuel policy has been notified by the State Govt on 4.10.2023 and the industrial associations, rolling mills operating in the area has been requested vide letter dated 5.10.2023 to use cleaner fuel. Neither the copy of fuel policy nor the letter dated 5.10.2023 has been enclosed with the

report (Running page 186). A copy of fuel policy notified on 4.10.2023 by Punjab Govt is enclosed as **Annexure A/6**. A copy of letter of PPCB to industry association dated 5.10.2023 is also enclosed as **Annexure A/7**. The fuel policy notified on 4.10.2023 notifies “upon availability of supply of CNG/ PNG/CBG etc in various geographical areas of the state by various licensees authorised by Petroleum & Natural Gas Authority, the state govt in consultation with the State Pollution Control Board, shall issue appropriate directions and time lines to the industries and other stakeholders for conversion to such cleaner fuels considering techno-economic and legal feasibility. ....”.

(g) As per list of industries provided at Annexure E (Running page 196-212) 337 industries fall under category no. 2063 and only 37 industries are shown gas/electric based. As per PPCB categorisation list available on their website Steel and steel products using various furnaces like blast furnace /open hearth furnace/induction furnace/arc furnace/submerged arc furnace /basic oxygen furnace /hot rolling reheated furnace are categorised under category 2063.

(h) As per list of industries (running page 196-212), industry at Sno 47 ( rice mill orange cat)n , 51( induction

furnace orange cat) , 56 ( un registered), 197, 254( red) , 291( cupola furnace orange cat), 293( red),351( Red cat), 564 and 575 are located at non conforming (NC) sites. However, none of these have been relocated to conforming areas as per the Clean Air Action Plan for Mandi Gobindgarh (Annexure A/5). The industries engaged in processes/ using fuel causing air pollution, other than steel rolling and induction furnaces were not present in the meeting of stake holders held on 22.6.2023 (minutes at running page 191-193).

- (i) The Report claims that PPCB has conducted 602 inspections of various industries during Jan 2022- Sept 2023 (Running page 179). The list of such inspected industries (page 196-212) show that many industries are inspected more than once during said period as evident from test check of industries whose front photo is enclosed at Annexure A/1. It is found that out of 20 industries inspected from out side, 13 find mention in the list of industries inspected by PPCB while 7 industries are found not inspected even once during said period by PPCB as per below:

S.No	Industry Name	Industry Type	Location	GPS Coordinates	S.No as per annexure - 4 in Joint Committee Survey
1	Shree Ganesh Steel Rolling Mills	Rolling Mill	Peer Gajju Shah Road,MGG	30.671631,76.270514	76 ,248 ,357 ,433
2	RP Concast/Metal	Electric Furnace	Peer Gajju Shah Road,MGG	30.673791,76.263114	303 ,359 ,444 ,526
3	Fortune Metals	Electric Furnace	Talwara Road	30.65129,76.32476	46 ,79 ,105 ,392 ,521 ,560
4	Ruby Strips	Rolling Mill	Talwara Road	30.649323,76.322397	NA
5	Samana Concast	Electric Furnace	Amlloh Road	30.645906,76.272041	283 ,431 ,556
6	Adarsh Steel Rolling Mills	Rolling Mill	GT Road, Sirhind Side	30.658574,76.303554	192

7	Bee Cee Steel Rolling Mill	Rolling Mill	Village Kumbh	30.640742,76.277078	399 , 401
8	Vishwanath Iron & Steel	Rolling Mill	GT Road, Sirhind Side	30.657759,76.309902	185 , 321
9	Devshree Metals	Rolling Mill	Kumbh, MGG	30.637047,76.2809986	NA
10	Bharat Steel Industry	Electric Furnace	Kumbh, MGG	30.639368, 76.282646	28 , 146, 595
11	Paras Industries	Metal Work	Kumbh, MGG	30.639403, 76.278504	NA
12	Shankar Steel Industries	Rolling Mill	Amlah Road	30.651387, 76.275207	207
13	Nisha Steel	Rolling Mill	Mugal Majra	30.672980, 76.261327	244 , 319
14	Shree steel Industries	Rolling Mill	Mugal Majra	30.673646, 76.265877	184, 396
15	Jindal Steel Industries	Metal Work	Backside Focal Point, MGG	30.647342, 76.299105	NA
16	Fern Technocast	Foundry	Backside Focal Point, MGG	30.648131, 76.298449	NA
17	Praveen Alloys	Rolling Mill	Focal Point, MGG	30.647600, 76.301216	93
18	Chehal Udyog	Rolling Mill	Focal Point, MGG	30.648541, 76.301537	NA
19	Sanjeev Traders	Rolling Mill	Mugal Majra	30.674120, 76.265964	NA
20	Jaisleen Ceramics	ceramics	Vill. Majri Mishriwali	30.6411807,76.2965646	72,236,248

None of the industries mentioned above and inspected by PPCB are listed among the list of 8 industries ( running page 213) whom directions u/s 31A of AIR Act are issued for disconnection of power supply. The list of 64 industries whom SCN were issued for violation of various environmental laws has not been enclosed with the report. Even the amount of EC imposed on each of 30 units or amount of bank guarantee obtained from each of 26 of units among said 64 units has been shared in the report. Based on sample test inspection by applicant, about 40 percent of industries in the area are not inspected even once during 21 months for which inspection data is enclosed in the report. It may be seen from photographs at Annexure A/2, that none of these industries has filled even basic data on display boards required to be placed prominently at / near the gate of respective industry. It clearly shows the lack of compliance with environmental laws / HWM Rules by the industries in the area. The PPCB has not performed

its field duty diligently and sincerely is also evident from facts revealed above. According to Association of induction furnaces, there are more than 600 industries in small area of radius of about 5 km (running page 192). The list of industries inspected show that only 309 industries are inspected during 602 inspections.

(j) The report claims that road dust ( 34-57 %) and vehicles ( 13-31 %) are major contributors to air pollution in the area as per source apportionment report of IIT, Delhi ( running page 179) while industries are attributed only 23-24 % to air pollution, but on same page the report tells that IIT, Delhi source apportionment report is yet to be finalised. IIT Delhi was assigned said study on carrying capacity in 2020 and final report was expected by June 2021. The copy of said report of IIT Delhi has not been enclosed with joint committee report. However, it is pertinent to mention here that in the Clean Air Action Plan referred at running page 177, the industries were reportedly found accountable for 50 % of air pollution (running page 75).

(k)The joint committee report is prepared after visit to 2 rolling mills using coal as fuel, 2 rolling mills using PNG as fuel and 4 large scale induction furnaces beside considering inputs during interaction with

industrial associations and meeting with stakeholders on 22.6.2023 whose minutes are placed at running page 191- 192.

- (l) The joint committee has made certain suggestions to improve ambient air quality (Page 186-188). Recommendation / suggestion (k) states “ The Mandi Gobindgarh is falling under Non Attainment City , hence all the rolling mills and refractories should be directed to use of cleaner fuels for improving the air quality of the area”. In fact, all other industries, like ceramics, refractories, cupola furnaces etc, using dirty fuel like coal/FO also need to use clean fuel.

Applicant

*Dt  
Tham*

New Delhi

Dated 04.12.2023

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ORIGINAL APPLICATION No. 295 of 2023

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DIMPAL KUMAR ...APPLICANT

VERSUS

STATE OF PUNJAB .& ORS. ....RESPONDENTS

**AFFIDAVIT**

I, Dimpal Kumar S/O Mahinder Pal, R/O BhadaiTuha, Tehsil Amloh, Distt Fatehgarh, do hereby solemnly affirm and declare as under: -

- 1. That I am presently the applicant in the Application No 295/2023.
- 2. That I am fully conversant with case as derived from office record and competent to swear to this affidavit.
- 3. That I have read the accompanying response to the final report of Joint Committee and have understood the contents thereof. The facts stated there in are true and correct to the best of my knowledge and nothing has been concealed there from.
- 4. That the Annexures are true copy of the originals.

I know the deponent/executant signatory and he/she has signed/marked his/her RTI/LTI in my presence.  
 Author No  
 5855 4195 9950

certified that the affidavit SPA/GPA has been read over & explained to the deponent/executant who seemed correctly to understand the same at the time making above there of.

DK  
Sharma

**DEPONENT**

**VERIFICATION:**

Verified at Ludhiana on this 4<sup>th</sup> day of December 2023, I the above named deponent, do hereby verify that the contents of the above affidavit are true and correct. No part of it is false and nothing material has been concealed there from.

**DEPONENT**

DK  
Sharma

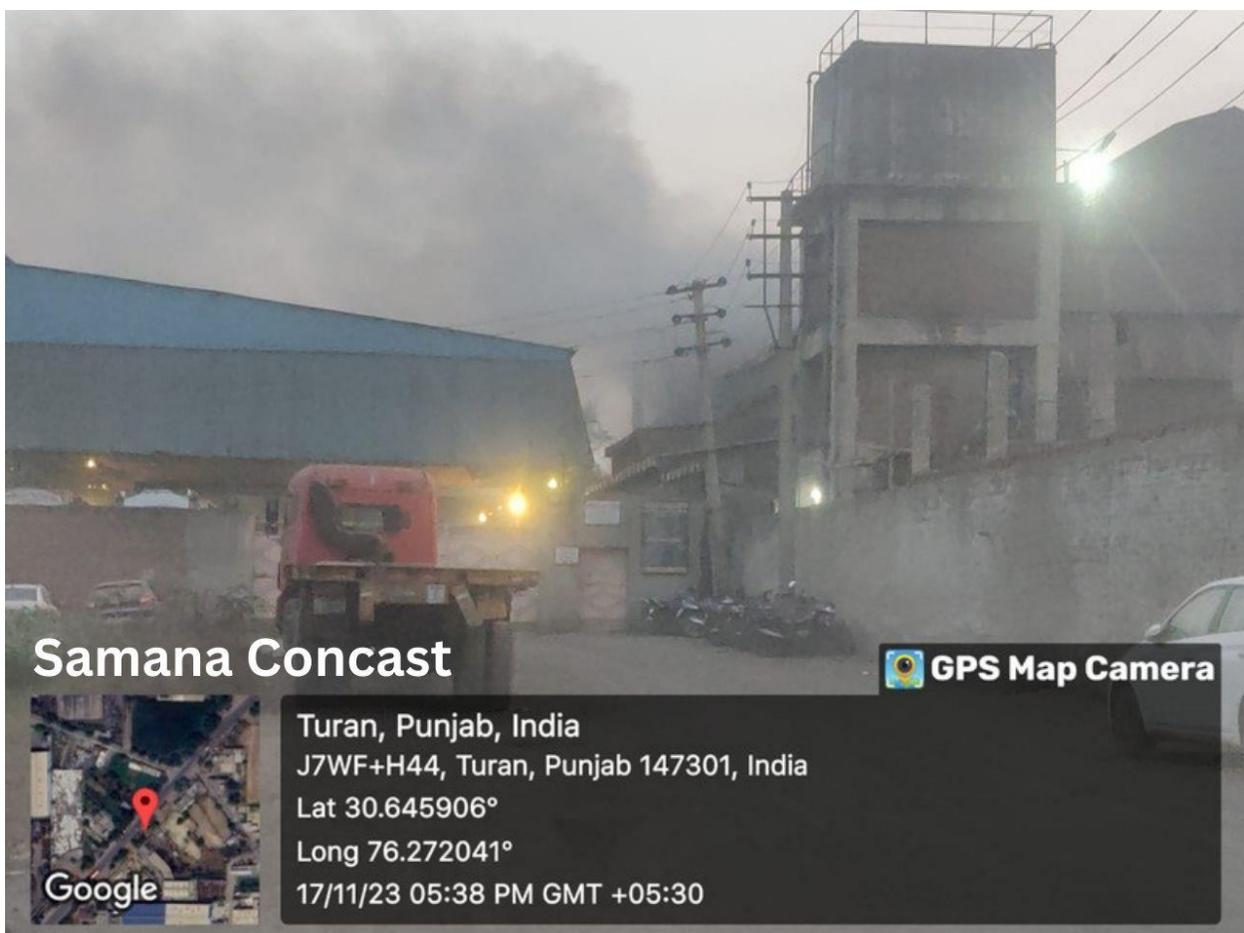
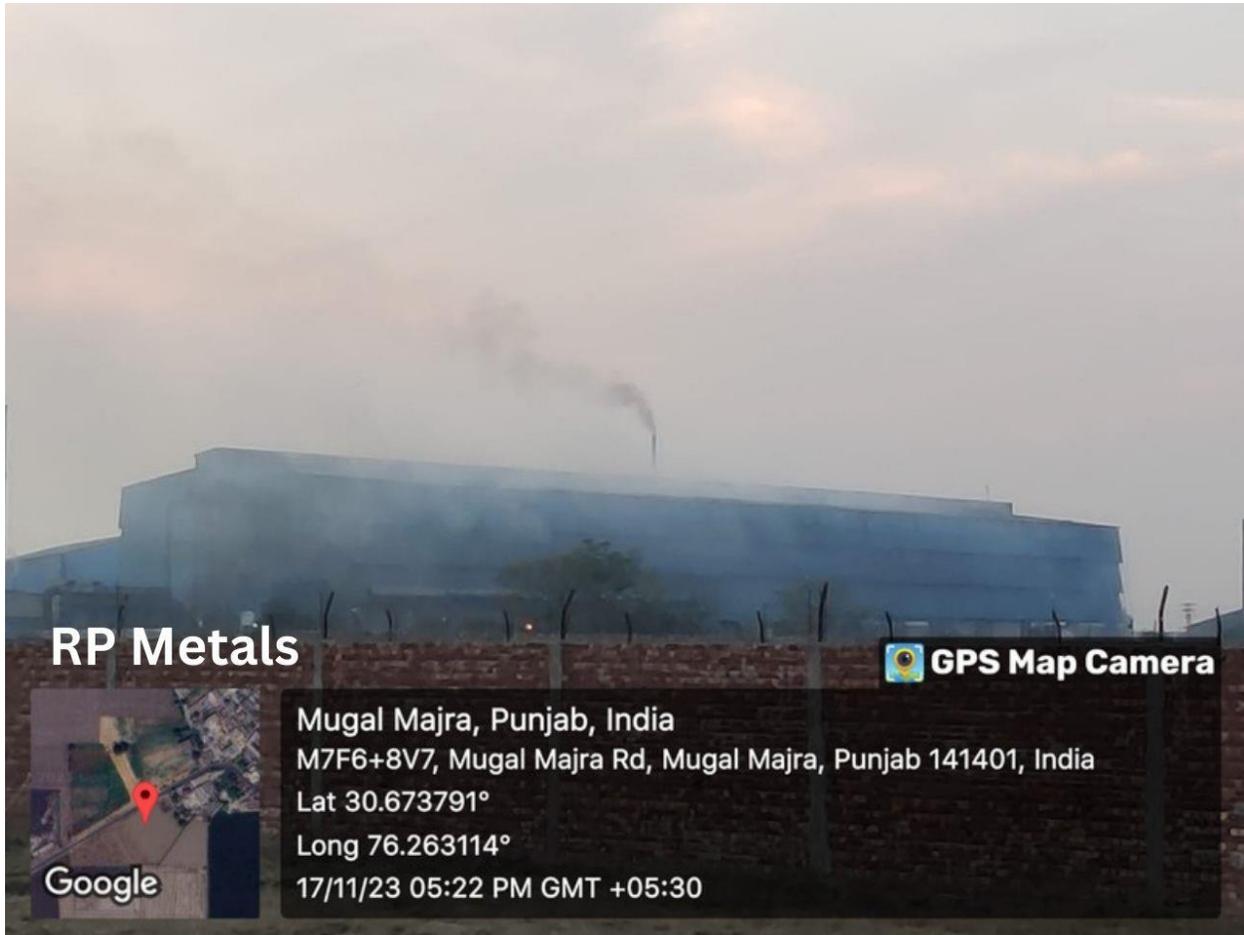


ATTESTED AS IDENTIFIED  
 NOTARY PUBLIC  
 LUDHIANA (PB.)

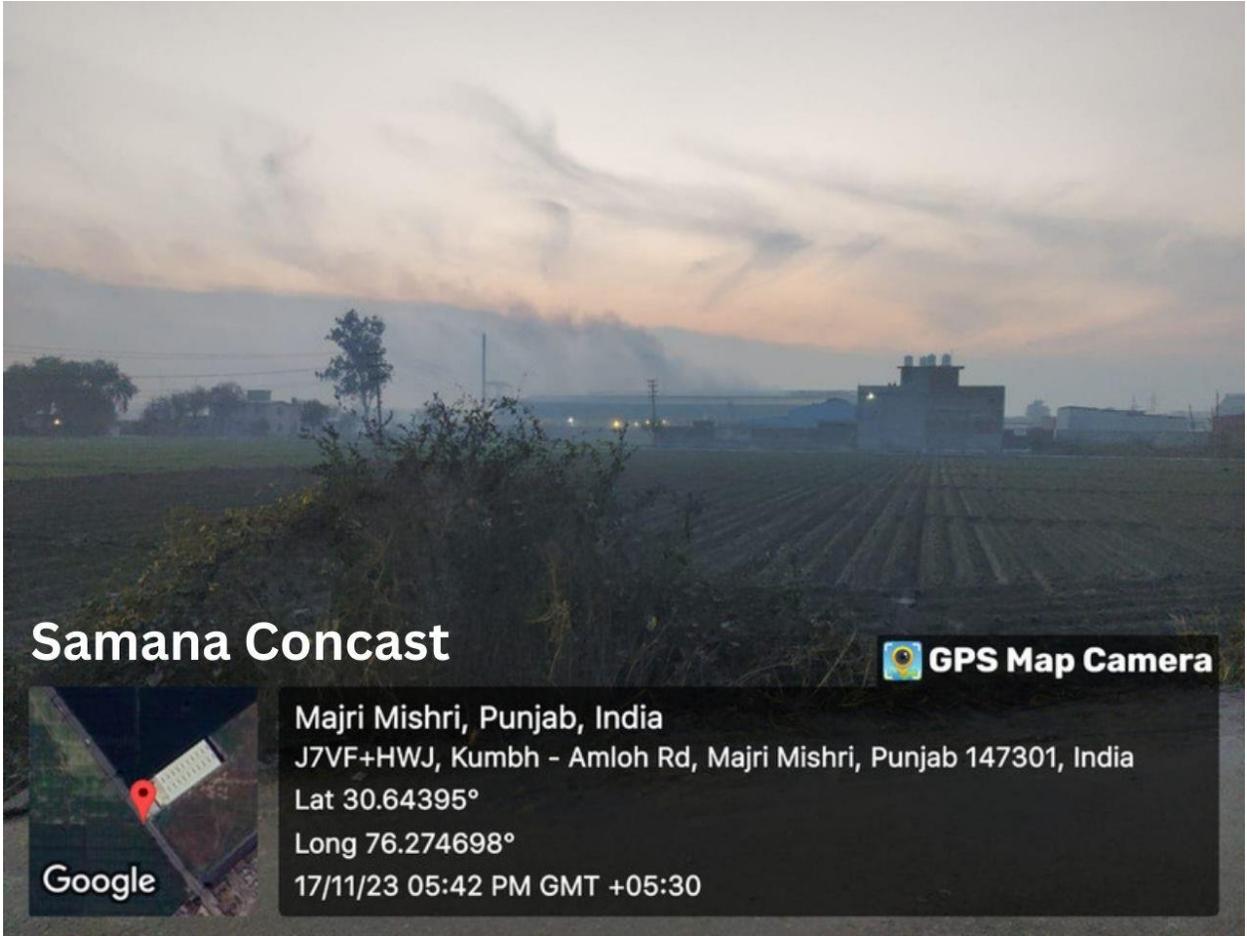
05 DEC 2023

## ANNEXURE A / 1

## Photographs of Air Pollution



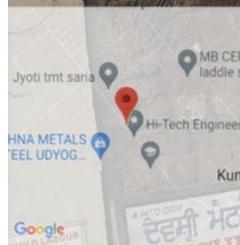
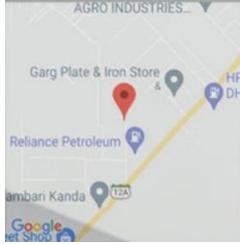
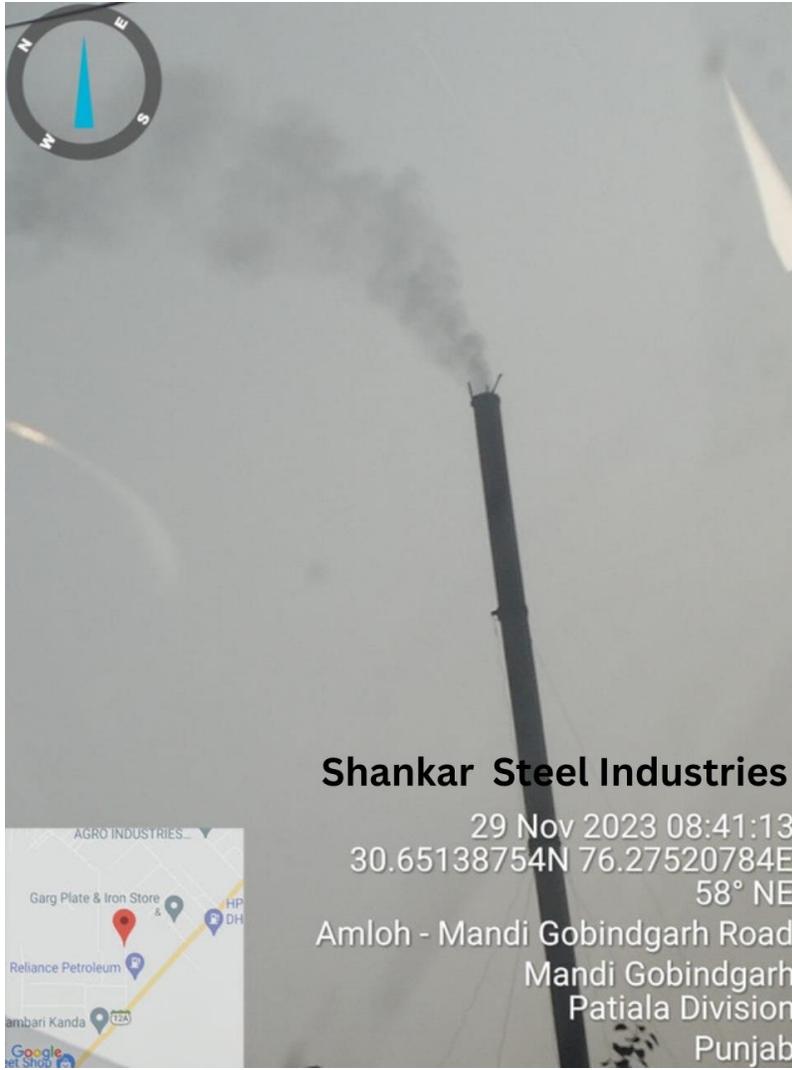






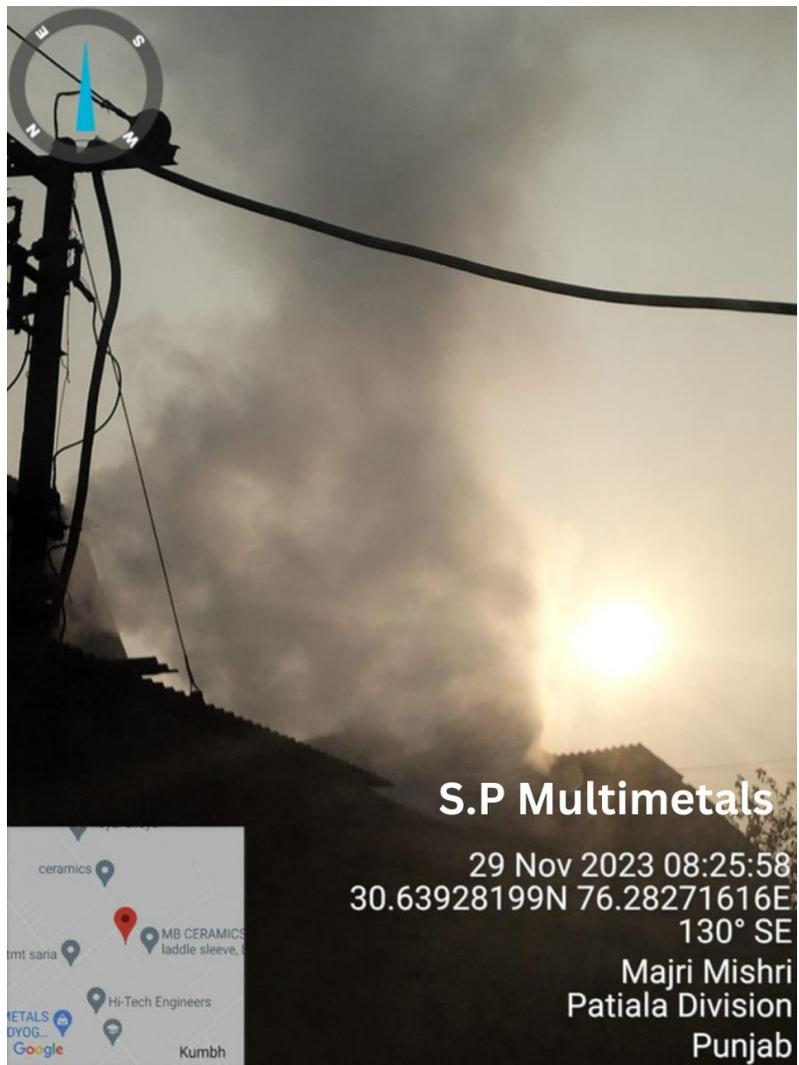














# Jindal Steel Industries

28 Nov 2023 15:53:13  
30.64734285N 76.29910559E  
300° NW  
Fatehgarh Sahib  
Patiala Division  
Punjab



# Paras Industries

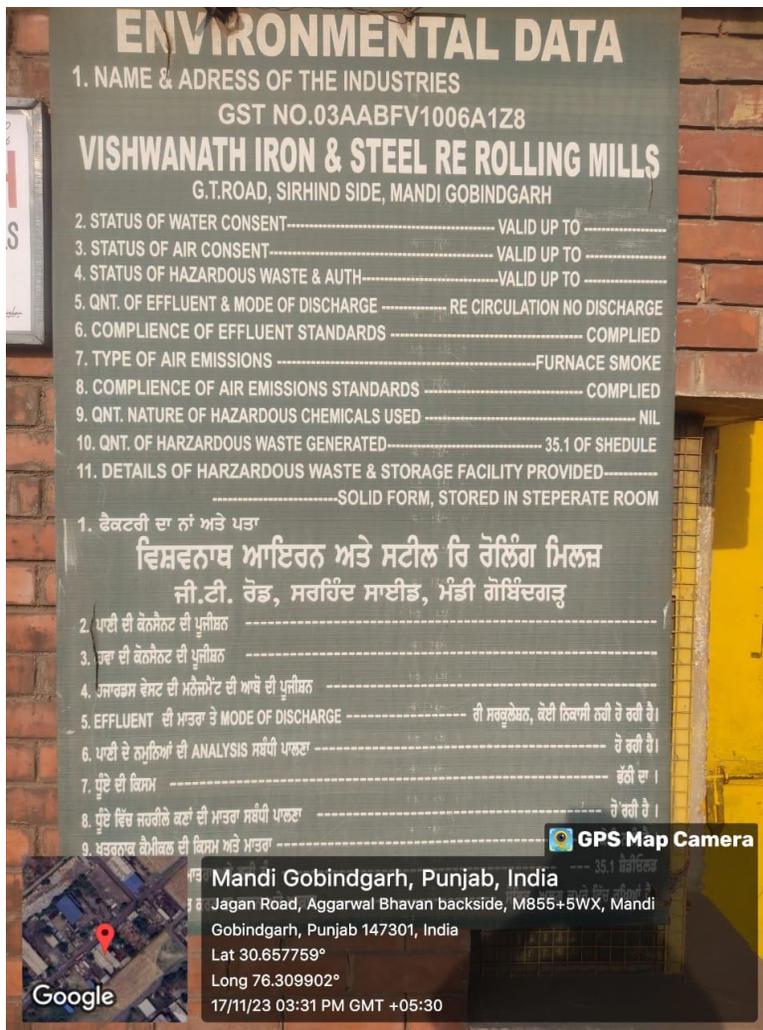
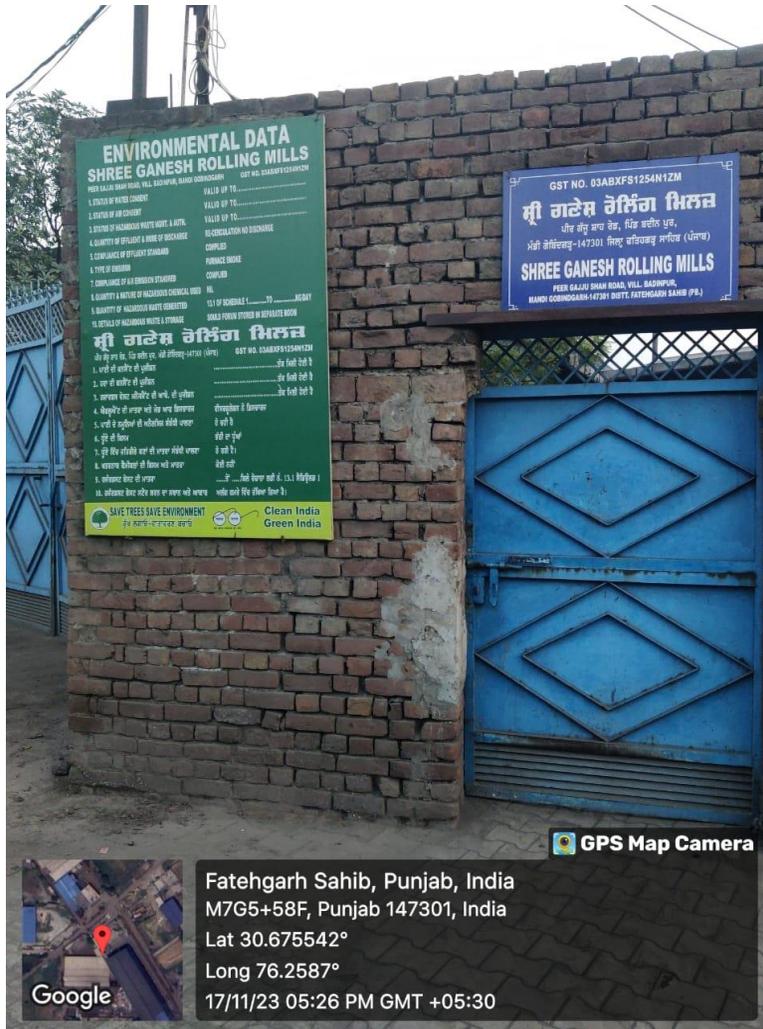
GPS Map Camera



Kumbh, Punjab, India  
J7QH+PJX, Kumbh Rd, Kumbh, Punjab 147301, India  
Lat 30.639403°  
Long 76.278504°  
28/11/23 04:51 PM GMT +05:30

ANNEXURE A / 2

Photographs of Environment Data Display Board



### ENVIRONMENTAL DATA

## ਜੇ ਟੀ ਐਲ ਇੰਡਸਟਰੀਜ਼ ਲਿਮਿਟੇਡ

# 24 /113, ਜਗਨ ਰੋਡ, ਅੰਗਰਵਾਲ ਭਵਨ ਦੇ ਪਿੱਛੇ, ਜੀ.ਟੀ. ਰੋਡ, ਸਰਹਿੰਦ ਸਾਇਡ, ਮੰਡੀ ਗੋਬਿੰਦਗੜ੍ਹ-147301  
ਜੀ. ਐਸ. ਟੀ. O3AAACJ8505 G2ZW

1. ਪਾਣੀ ਦੀ ਕਨਸੈਂਟ ਦੀ ਪੁਸ਼ੀਲਨ	ਤੱਕ ਮਿਲੀ ਹੋਈ ਹੈ
2. ਹਵਾ ਦੀ ਕਨਸੈਂਟ ਦੀ ਪੁਸ਼ੀਲਨ	ਤੱਕ ਮਿਲੀ ਹੋਈ ਹੈ
3. ਹਜ਼ਰਡਸ ਵੇਸਟ ਮੈਨੇਜਮੈਂਟ ਦੀ ਐਂਬੋਰਾਈਜ਼ਮਨ ਦੀ ਪੁਸ਼ੀਲਨ	ਤੱਕ ਮਿਲੀ ਹੋਈ ਹੈ
4. ਐਫਲੂਐਂਟ ਦੀ ਮਾਤਰਾ ਅਤੇ ਨਿਕਾਲੀ ਦਾ ਸਾਧਨ	ਰੀਸਰਕੂਲੇਸ਼ਨ ਨੇ ਡਿਸਚਾਰਜ ਹੋ ਰਹੀ ਹੈ
5. ਪਾਣੀ ਦੇ ਨਮੂਨਿਆਂ ਦੇ ਅਨੈਲਿਸਿਸ ਸੰਬੰਧੀ ਪਲਾਣਾ	ਕੋਈ ਦਾ ਪ੍ਰੀਅੰ
6. ਪ੍ਰੀਏ ਦੀ ਵਿਸ਼ਮ	ਹੋ ਰਹੀ ਹੈ
7. ਪ੍ਰੀਏ ਦੇ ਨਮੂਨਿਆਂ ਦੇ ਅਨੈਲਿਸਿਸ ਸੰਬੰਧੀ ਪਲਾਣਾ	ਕੋਈ ਨਹੀਂ
8. ਖਤਰਨਾਕ ਕੈਮੀਕਲ ਦੀ ਵਿਸ਼ਮ ਅਤੇ ਮਾਤਰਾ	34.1 APX. Kg./Day
9. ਹਜ਼ਰਡਸ ਵੇਸਟ ਦੀ ਮਾਤਰਾ	ਅਨੰਗ ਕਮਰੇ ਵਿੱਚ ਰੱਖਿਆ ਗਿਆ ਹੈ।
10. ਹਜ਼ਰਡਸ ਵੇਸਟ ਸਟੋਰ ਕਰਨ ਦਾ ਸਾਧਨ	

### JTL INDUSTRIES LIMITED

#24/113, JAGAN ROAD, BACKSIDE AGGARWAL BHAWAN, G.T. ROAD, SIRHIND SIDE, M. G. G.

1. STATUS OF WATER CONSENT	VALID UPTO
2. STATUS OF AIR CONSENT	VALID UPTO
3. STATUS OF HAZARDOUS WASTE MGT. & AUTHORIZATION	VALID UPTO
4. QUANTITY OF EFFLUENT & MODE OF DISCHARGE	RECIRCULATION NO DISCHARGE
5. COMPLIANCE OF EFFLUENT STANDARD	COMPLIED
6. TYPE OF EMISSIONS	FURNACE SMOKE
7. COMPLIANCE OF AIR EMISSION STANDARD	COMPLIED
8. QUANTITY & NATURE OF HAZARDOUS CHEMICAL USED	NIL
9. QUANTITY OF HAZARDOUS WASTE GENERATED	34.1 APX. Kg./Day
10. DETAIL OF HAZARDOUS WASTE STORAGE FACILITY PROVIDED	STORED IN A SEPARATE ROOM



SAVE TREES SAVE ENVIRONMENT



GPS Map Camera



Google

**GREEN INDIA**

Mandi Gobindgarh, Punjab, India  
M866+H27, RG Mill Rd, Mandi Gobindgarh, Punjab 147301, India  
Lat 30.661593°  
Long 76.310106°  
17/11/23 03:26 PM GMT +05:30

### ENVIRONMENTAL DATA

## SANGAM STEEL INDUSTRIES

R.G MILL ROAD, MANDI GOBINDGARH  
GST No.O3ABEFS 4122 J1ZG

1. STATUS OF WATER CONSENT	VALID UPTO
2. STATUS OF AIR CONSENT	VALID UPTO
3. STATUS OF HAZARDOUS WASTE MGT. & AUTHORIZATION	VALID UPTO
4. QUANTITY OF EFFLUENT & MODE OF DISCHARGE	RE-CIRCULATION NO DISCHARGE
5. COMPLIANCE OF EFFLUENT STANDARD	COMPLIED
6. TYPE OF EMISSIONS	FURNACE SMOKE
7. COMPLIANCE OF AIR EMISSION STANDARD	COMPLIED
8. QUANTITY & NATURE OF HAZARDOUS CHEMICAL USED	NIL
9. QUANTITY OF HAZARDOUS WASTE GENERATED	34.1 APX. Kg. TO Kg.
10. DETAIL OF HAZARDOUS WASTE STORAGE FACILITY PROVIDED	STORED IN A SEPARATE ROOM

### ਸੰਗਮ ਸਟੀਲ ਇੰਡਸਟਰੀਜ਼

ਮਾਚ. ਜੀ. ਮਿੱਲ ਰੋਡ, ਮੰਡੀ ਗੋਬਿੰਦਗੜ੍ਹ

1. ਪਾਣੀ ਦੀ ਕਨਸੈਂਟ ਦੀ ਪੁਸ਼ੀਲਨ	ਤੱਕ ਮਿਲੀ ਹੋਈ ਹੈ
2. ਹਵਾ ਦੀ ਕਨਸੈਂਟ ਦੀ ਪੁਸ਼ੀਲਨ	ਤੱਕ ਮਿਲੀ ਹੋਈ ਹੈ
3. ਹਜ਼ਰਡਸ ਵੇਸਟ ਮੈਨੇਜਮੈਂਟ ਦੀ ਐਂਬੋਰਾਈਜ਼ਮਨ ਦੀ ਪੁਸ਼ੀਲਨ	ਤੱਕ ਮਿਲੀ ਹੋਈ ਹੈ
4. ਐਫਲੂਐਂਟ ਦੀ ਮਾਤਰਾ ਅਤੇ ਨਿਕਾਲੀ ਦਾ ਸਾਧਨ	ਰੀਸਰਕੂਲੇਸ਼ਨ ਨੇ ਡਿਸਚਾਰਜ ਹੋ ਰਹੀ ਹੈ
5. ਪਾਣੀ ਦੇ ਨਮੂਨਿਆਂ ਦੇ ਅਨੈਲਿਸਿਸ ਸੰਬੰਧੀ ਪਲਾਣਾ	ਕੋਈ ਦਾ ਪ੍ਰੀਅੰ
6. ਪ੍ਰੀਏ ਦੀ ਵਿਸ਼ਮ	ਹੋ ਰਹੀ ਹੈ
7. ਪ੍ਰੀਏ ਦੇ ਨਮੂਨਿਆਂ ਦੇ ਅਨੈਲਿਸਿਸ ਸੰਬੰਧੀ ਪਲਾਣਾ	ਕੋਈ ਨਹੀਂ
8. ਖਤਰਨਾਕ ਕੈਮੀਕਲ ਦੀ ਵਿਸ਼ਮ ਅਤੇ ਮਾਤਰਾ	34.1 APX. Kg. TO Kg.
9. ਹਜ਼ਰਡਸ ਵੇਸਟ ਦੀ ਮਾਤਰਾ	ਅਨੰਗ ਕਮਰੇ ਵਿੱਚ ਰੱਖਿਆ ਗਿਆ ਹੈ।
10. ਹਜ਼ਰਡਸ ਵੇਸਟ ਸਟੋਰ ਕਰਨ ਦਾ ਸਾਧਨ	



SAVE TREES SAVE ENVIRONMENT



CLEAN INDIA  
GREEN INDIA

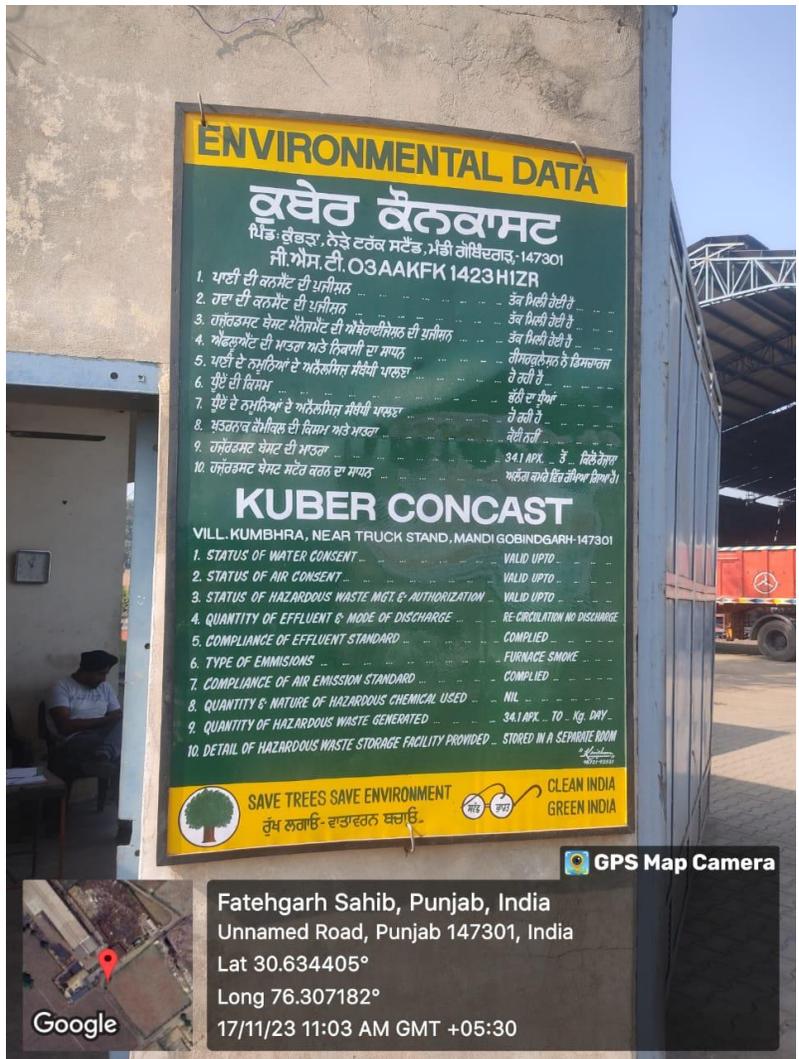


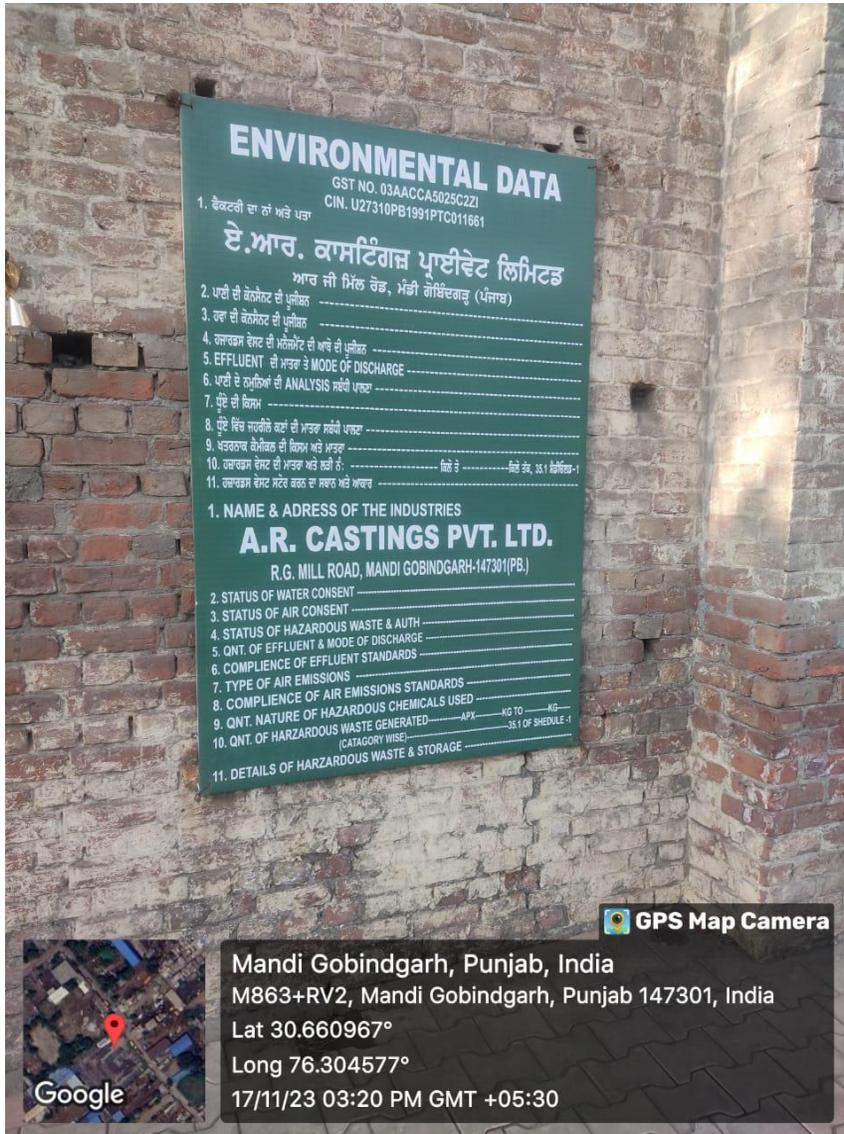
GPS Map Camera



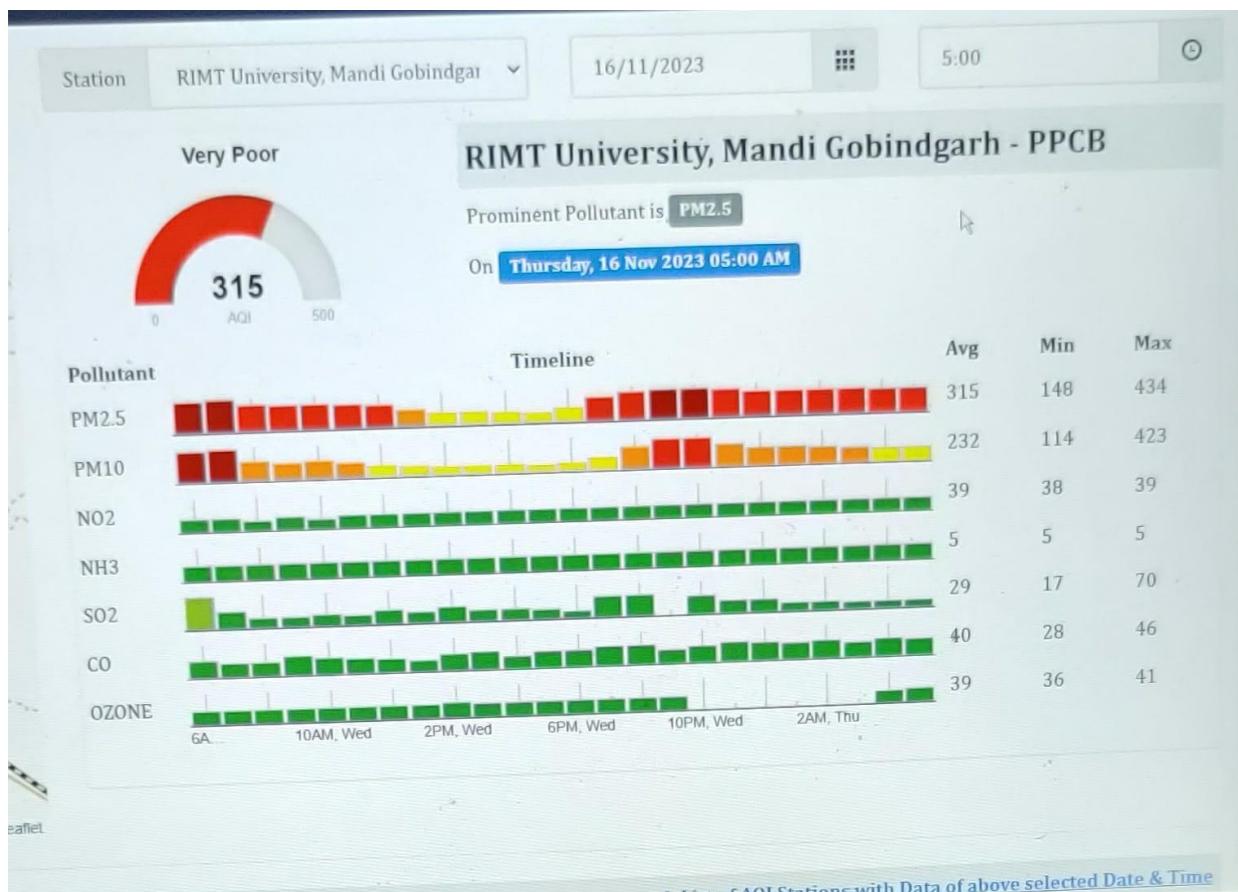
Google

Mandi Gobindgarh, Punjab, India  
M866+H27, RG Mill Rd, Mandi Gobindgarh, Punjab 147301, India  
Lat 30.661194°  
Long 76.30956°  
17/11/23 03:23 PM GMT +05:30





### Ambient Air Quality Results – Nov 2023



Station Name: RIMT University, Mandi Gobindgarh - PPCB  
 Address: Near Agarsen Ground, RIMT university Opposite Floating Restaurant, Sirhind Side, Mandi Gobindgarh.  
 Latitude: 30.649961, Longitude: 76.331442

[Previous 15 Min Data](#)  
 [Previous 30 Min Data](#)  
 [Previous 1 Hour Data](#)  
 [Previous 1 Day Data](#)  
[Next 15 Min Data](#)  
 [Next 30 Min Data](#)  
 [Next 1 Hour Data](#)  
 [Next 1 Day Data](#)

Parameters	From Date	To Date	Concentration	Unit	Standard	Concentration (previous 24 Hours)	Remarks
PM2.5	27 Nov 2023 22:00	27 Nov 2023 22:15	69.81	ug/m3		75.54	
PM10	27 Nov 2023 22:00	27 Nov 2023 22:15	124.66	ug/m3		235.97	
NO	27 Nov 2023 22:00	27 Nov 2023 22:15	6.1	ug/m3		5.83	
NO2	27 Nov 2023 22:00	27 Nov 2023 22:15	30.9	ug/m3		31.11	
NOx	27 Nov 2023 22:00	27 Nov 2023 22:15	37	ppb		36.96	
NH3	27 Nov 2023 22:00	27 Nov 2023 22:15	21.6	ug/m3		21.45	
SO2	27 Nov 2023 22:00	27 Nov 2023 22:15	7.8	ug/m3		11.59	
CO	27 Nov 2023 22:00	27 Nov 2023 22:15	0.57	mg/m3		0.81	
Ozone	27 Nov 2023 22:00	27 Nov 2023 22:15	40.12	ug/m3		39.07	
Benzene	27 Nov 2023 22:00	27 Nov 2023 22:15	1.57	ug/m3		2.94	
RH	27 Nov 2023 22:00	27 Nov 2023 22:15	88.78	%		78.01	
WS	27 Nov 2023 22:00	27 Nov 2023 22:15	0.15	m/s		-	
WD	27 Nov 2023 22:00	27 Nov 2023 22:15	38.33	deg		-	
RF	27 Nov 2023 22:00	27 Nov 2023 22:15	0	mm		0	

\*\*Prescribed Standards for CO and Ozone is one hour Average

Item No.11

Court No. 1

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

Original Application No. 687/2023

n re: **Air Quality Index in various Cities**

Date of hearing: 10.11.2023

**CORAM: HON'BLE MR. JUSTICE PRAKASH SHRIVASTAVA, CHAIRPERSON  
HON'BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER  
HON'BLE DR. A. SENTHIL VEL, EXPERT MEMBER**

Respondent(s): Mr. Krishnam Mishra, Adv., Dr. Abhishek Atrey & Mr. Vaibhav Kandpal, Advs. for Commission for Air Quality Management for NCR & Adjoining Areas  
Mr. Amit Singh Chauhan, Adv. for CPCB (Through VC)  
Mr. Abhimanyu Singh, Adv. for the State of Bihar (Through VC)  
Mr. Prashant M. Harne, Adv. for the State of Madhya Pradesh (Through VC)  
Mr. Pradeep Misra & Mr. Daleep Dhyani, Advs. for UPPCB (Through VC)  
Mr. Kumar Anurag Singh, Adv. for the State of Jharkhand (Through VC)  
Mr. Mukesh Verma, Adv. for MPCB (Through VC)  
Mr. Maulik Nanavati, Adv. for the State of Gujarat (Through VC)  
Ms. Priyanka Swami, Adv. for the State of UP  
Mr. Rahul Khurana, Adv. for the State of Haryana & HSPCB  
Ms. Richa Kapoor, Mr. Kunal Anand & Ms. Eesha Sharma, Advs. for Punjab PCB

**ORDER**

1. This original application was registered suo-moto considering the air quality in different cities on pan India basis as reflected in the Air Quality Bulletins of CPCB from 20.10.2023 to 01.11.2023.

2. The Tribunal taking note of the fact that on 01.11.2023, the air quality in the cities under consideration had dipped to severe, very poor and poor categories had issued notice to the Chief Secretaries of all the States where cities' AQI had dipped. These Chief Secretaries were directed to take immediate remedial action and submit action taken report.

3. After passing of the order on 03.11.2023 almost a week has passed but no significant improvement in the air quality in different cities under consideration has been found and in fact in some of the cities the air quality is either at the same stage or has dipped further.

4. The State-wise air quality position of different cities under consideration with reference to AQI from 03.11.2023 (date of passing of the previous order by the Tribunal) till 09.11.2023 (yesterday) is as under:-

Sl. No	State	City	Date	Air Quality	Index Value
1.	Punjab	Amritsar	03.11.2023	Poor	248
			04.11.2023	Poor	282
			05.11.2023	Moderate	178
			06.11.2023	Very Poor	316
			07.11.2023	Poor	205
			08.11.2023	Poor	240
			09.11.2023	Poor	229
2.	Gujarat	Ankleshwar	03.11.2023	Poor	254
			04.11.2023	Poor	228
			05.11.2023	Poor	210
			06.11.2023	Poor	216
			07.11.2023	Poor	228
			08.11.2023	Poor	226
			09.11.2023	Poor	216
3.	Himachal Pradesh	Baddi	03.11.2023	Moderate	166
			04.11.2023	Moderate	131
			05.11.2023	Insufficient Data	Insufficient Data
			06.11.2023	Insufficient Data	Insufficient Data
			07.11.2023	Moderate	129
			08.11.2023	Insufficient Data	Insufficient Data

			09.11.2023	Insufficient Data	Insufficient Data
4.	Haryana	Bahadurgarh	03.11.2023	Severe	404
			04.11.2023	Very Poor	364
			05.11.2023	Very Poor	363
			06.11.2023	Insufficient Data	Insufficient Data
			07.11.2023	Very Poor	329
			08.11.2023	Poor	252
			09.11.2023	Very Poor	342
5.	Haryana	Balllabgarh	03.11.2023	Insufficient Data	Insufficient Data
			04.11.2023	Insufficient Data	Insufficient Data
			05.11.2023	Insufficient Data	Insufficient Data
			06.11.2023	Very Poor	342
			07.11.2023	Poor	249
			08.11.2023	Poor	229
			09.11.2023	Very Poor	378
6.	Punjab	Bathinda	03.11.2023	Very Poor	338
			04.11.2023	Very Poor	385
			05.11.2023	Very Poor	375
			06.11.2023	Poor	288
			07.11.2023	Very Poor	343
			08.11.2023	Very Poor	348
			09.11.2023	Very Poor	372
7.	Rajasthan	Bharatpur	03.11.2023	Very Poor	305
			04.11.2023	Very Poor	367
			05.11.2023	Very Poor	365
			06.11.2023	Very Poor	319
			07.11.2023	Poor	287
			08.11.2023	Poor	247
			09.11.2023	Insufficient Data	Insufficient Data
8.	Rajasthan	Bhiwadi	03.11.2023	Severe	410
			04.11.2023	Very Poor	388

			05.11.2023	Severe	413
			06.11.2023	Severe	433
			07.11.2023	Very Poor	374
			08.11.2023	Severe	414
			09.11.2023	Severe	410
9.	Haryana	Bhiwani	03.11.2023	Very Poor	313
			04.11.2023	Poor	300
			05.11.2023	Very Poor	310
			06.11.2023	Very Poor	335
			07.11.2023	Very Poor	361
			08.11.2023	Very Poor	400
			09.11.2023	Very Poor	334
10.	Madhya Pradesh	Bhopal	03.11.2023	Poor	211
			04.11.2023	Poor	218
			05.11.2023	Poor	261
			06.11.2023	Insufficient Data	Insufficient Data
			07.11.2023	Moderate	195
			08.11.2023	Moderate	180
			09.11.2023	Moderate	195
11	Rajasthan	Bikaner	03.11.2023	Poor	260
			04.11.2023	Insufficient Data	Insufficient Data
			05.11.2023	Poor	243
			06.11.2023	Insufficient Data	Insufficient Data
			07.11.2023	Moderate	173
			08.11.2023	Poor	272
			09.11.2023	Very Poor	301
12	Uttar Pradesh	Bulandshahr	03.11.2023	Very Poor	325
			04.11.2023	Very Poor	319
			05.11.2023	Insufficient Data	Insufficient Data
			06.11.2023	Poor	243
			07.11.2023	Moderate	173
			08.11.2023	Poor	264

			09.11.2023	Very Poor	312
13	Rajasthan	Bundi	03.11.2023	Moderate	178
			04.11.2023	Moderate	191
			05.11.2023	Moderate	184
			06.11.2023	Poor	233
			07.11.2023	Moderate	200
			08.11.2023	Poor	217
			09.11.2023	Poor	210
14	Meghalaya	Byrnihat	03.11.2023	Poor	276
			04.11.2023	Poor	272
			05.11.2023	Poor	241
			06.11.2023	Poor	293
			07.11.2023	Poor	260
			08.11.2023	Poor	277
			09.11.2023	Insufficient Data	Insufficient Data
15	Haryana	Charkhi Dadri	03.11.2023	Poor	257
			04.11.2023	Insufficient Data	Insufficient Data
			05.11.2023	Poor	278
			06.11.2023	Poor	278
			07.11.2023	Very Poor	315
			08.11.2023	Very Poor	324
			09.11.2023	Very Poor	301
16	Rajasthan	Churu	03.11.2023	Very Poor	355
			04.11.2023	Very Poor	335
			05.11.2023	Very Poor	365
			06.11.2023	Very Poor	308
			07.11.2023	Poor	243
			08.11.2023	Very Poor	324
			09.11.2023	Poor	210
17	Rajasthan	Dausa	03.11.2023	Moderate	195
			04.11.2023	Very Poor	334

			05.11.2023	Poor	272
			06.11.2023	Insufficient Data	Insufficient Data
			07.11.2023	Poor	298
			08.11.2023	Poor	277
			09.11.2023	Poor	290
18	Delhi	Delhi	03.11.2023	Severe	468
			04.11.2023	Severe	415
			05.11.2023	Severe	454
			06.11.2023	Severe	421
			07.11.2023	Very poor	395
			08.11.2023	Severe	426
			09.11.2023	Severe	437
19	Jharkhand	Dhanbad	03.11.2023	Insufficient data	Insufficient Date
			04.11.2023	Insufficient data	Insufficient Date
			05.11.2023	Very Poor	303
			06.11.2023	Poor	255
			07.11.2023	Insufficient data	Insufficient Date
			08.11.2023	Moderate	197
			09.11.2023	Poor	296
20	Haryana	Dharuhera	03.11.2023	Poor	276
			04.11.2023	Very Poor	383
			05.11.2023	Very Poor	385
			06.11.2023	Very Poor	334
			07.11.2023	Very Poor	320
			08.11.2023	Very poor	356
			09.11.2023	Very Poor	398
21	Haryana	Faridabad	03.11.2023	Severe	460
			04.11.2023	Severe	438
			05.11.2023	Severe	450
			06.11.2023	Severe	412
			07.11.2023	Very poor	374
			08.11.2023	Severe	425
			09.11.2023	Severe	410
22	Haryana	Fatehabad	03.11.2023	Severe	432
			04.11.2023	Severe	466
			05.11.2023	Severe	442
			06.11.2023	Severe	422
			07.11.2023	Severe	421
			08.11.2023	Severe	451

			09.11.2023	Severe	413
23	Uttar Pradesh	Ghaziabad	03.11.2023	Severe	410
			04.11.2023	Very Poor	394
			05.11.2023	Very Poor	394
			06.11.2023	Very Poor	391
			07.11.2023	Very Poor	342
			08.11.2023	Very Poor	384
			09.11.2023	Very Poor	391
24	Uttar Pradesh	Greater Noida	03.11.2023	Severe	494
			04.11.2023	Severe	490
			05.11.2023	Severe	402
			06.11.2023	Severe	420
			07.11.2023	Severe	457
			08.11.2023	Severe	478
			09.11.2023	Severe	439
25	Haryana	Gurugram	03.11.2023	Very Poor	367
			04.11.2023	Severe	404
			05.11.2023	Severe	402
			06.11.2023	Very poor	373
			07.11.2023	Very Poor	364
			08.11.2023	Very Poor	385
			09.11.2023	Severe	404
26	Madhya Pradesh	Gwalior	03.11.2023	Poor	206
			04.11.2023	Poor	252
			05.11.2023	Poor	270
			06.11.2023	Poor	286
			07.11.2023	Poor	289
			08.11.2023	Poor	239
			09.11.2023	Poor	222
27	Rajasthan	Hanumangarh	03.11.2023	Very Poor	395
			04.11.2023	Very Poor	393
			05.11.2023	Very Poor	371
			06.11.2023	Very poor	310
			07.11.2023	Very poor	369
			08.11.2023	Very Poor	386
			09.11.2023	Severe	403
28	Haryana	Hisar	03.11.2023	Severe	456
			04.11.2023	Severe	425
			05.11.2023	Severe	427
			06.11.2023	Very Poor	377
			07.11.2023	Severe	403

			08.11.2023	Very Poor	332
			09.11.2023	Severe	410
29	Uttar Pradesh	Jhansi	03.11.2023	Poor	202
			04.11.2023	Moderate	137
			05.11.2023	Moderate	160
			06.11.2023	Moderate	194
			07.11.2023	Poor	203
			08.11.2023	Moderate	144
			09.11.2023	Moderate	157
			30	Rajasthan	Jhunjhunu
04.11.2023	Moderate	168			
05.11.2023	Poor	264			
06.11.2023	Poor	278			
07.11.2023	Poor	246			
08.11.2023	Moderate	197			
09.11.2023	Moderate	193			
31	Haryana	Kaithal	03.11.2023	Very Poor	361
			04.11.2023	Severe	415
			05.11.2023	Severe	434
			06.11.2023	Very Poor	366
			07.11.2023	Very Poor	377
			08.11.2023	Very poor	380
			09.11.2023	Severe	436
32	Haryana	Karnal	03.11.2023	Very Poor	312
			04.11.2023	Very Poor	305
			05.11.2023	Very Poor	319
			06.11.2023	Poor	238
			07.11.2023	Poor	290
			08.11.2023	Poor	279
			09.11.2023	Very Poor	327
33	Uttar Pradesh	Khurja	03.11.2023	Very Poor	336
			04.11.2023	Poor	253
			05.11.2023	Poor	272
			06.11.2023	Moderate	143
			07.11.2023	Satisfactory	99
			08.11.2023	Moderate	111
			09.11.2023	Moderate	172
34	Rajasthan	Kota	03.11.2023	Poor	264
			04.11.2023	Poor	202
			05.11.2023	Poor	212
			06.11.2023	Poor	216

			07.11.2023	Poor	204
			08.11.2023	Moderate	196
			09.11.2023	Poor	226
35	Haryana	Kurukshetra	03.11.2023	Very Poor	321
			04.11.2023	Very Poor	319
			05.11.2023	Very Poor	330
			06.11.2023	Poor	272
			07.11.2023	Very Poor	303
			08.11.2023	Poor	294
			09.11.2023	Very Poor	348
36	Uttar Pradesh	Lucknow	03.11.2023	Moderate	174
			04.11.2023	Moderate	186
			05.11.2023	Poor	274
			06.11.2023	Poor	251
			07.11.2023	Poor	237
			08.11.2023	Poor	235
			09.11.2023	Poor	265
37	Punjab	Ludhiana	03.11.2023	Poor	228
			04.11.2023	Poor	289
			05.11.2023	Poor	243
			06.11.2023	Poor	282
			07.11.2023	Poor	239
			08.11.2023	Poor	292
			09.11.2023	Poor	285
38	Punjab	Mandi Gobindgarh	03.11.2023	Poor	277
			04.11.2023	Poor	277
			05.11.2023	Poor	291
			06.11.2023	Poor	256
			07.11.2023	Poor	202
			08.11.2023	Very Poor	338
			09.11.2023	Very Poor	357
39	Haryana	Manesar	03.11.2023	Very Poor	372
			04.11.2023	Very Poor	361
			05.11.2023	Very Poor	381
			06.11.2023	Very Poor	320
			07.11.2023	Very Poor	326
			08.11.2023	Very Poor	364
			09.11.2023	Very Poor	391
40	Haryana	Narnaul	03.11.2023	Poor	286
			04.11.2023	Very Poor	329
			05.11.2023	Very Poor	377

			06.11.2023	Very Poor	341
			07.11.2023	Poor	275
			08.11.2023	Poor	298
			09.11.2023	Poor	282
41	Maharashtra	Navi Mumbai	03.11.2023	Poor	228
			04.11.2023	Poor	219
			05.11.2023	Poor	267
			06.11.2023	Poor	261
			07.11.2023	Poor	239
			08.11.2023	Moderate	160
			09.11.2023	Moderate	113
42	Uttar Pradesh	Noida	03.11.2023	Severe	440
			04.11.2023	Severe	408
			05.11.2023	Severe	414
			06.11.2023	Very Poor	384
			07.11.2023	Very Poor	355
			08.11.2023	Severe	405
			09.11.2023	Very Poor	394
43	Haryana	Panipat	03.11.2023	Insufficient Data	
			04.11.2023	Very Poor	303
			05.11.2023	Very Poor	346
			06.11.2023	Insufficient Data	Insufficient Date
			07.11.2023	Very Poor	328
			08.11.2023	Very Poor	323
			09.11.2023	Very Poor	323
44	Bihar	Patna	03.11.2023	Moderate	177
			04.11.2023	Poor	218
			05.11.2023	Poor	238
			06.11.2023	Poor	265
			07.11.2023	Very Poor	324
			08.11.2023	Very Poor	309
			09.11.2023	Very Poor	326
45	Bihar	Purnia	03.11.2023	Poor	220
			04.11.2023	Poor	222
			05.11.2023	Very Poor	305
			06.11.2023	Very Poor	339
			07.11.2023	Very Poor	307
			08.11.2023	Very Poor	348
			09.11.2023	Severe	409
46	Bihar	Rajgir	03.11.2023	Poor	250
			04.11.2023	Poor	249

			05.11.2023	Poor	280
			06.11.2023	Very Poor	312
			07.11.2023	Moderate	129
			08.11.2023	Very Poor	305
			09.11.2023	Insufficient Data	Insufficient Date
47	Haryana	Rohtak	03.11.2023	Severe	242
			04.11.2023	Very Poor	320
			05.11.2023	Very Poor	362
			06.11.2023	Very Poor	334
			07.11.2023	Very Poor	326
			08.11.2023	Very Poor	362
			09.11.2023	Very Poor	352
48	Haryana	Sirsa	03.11.2023	Poor	236
			04.11.2023	Severe	414
			05.11.2023	Very Poor	390
			06.11.2023	Very Poor	306
			07.11.2023	Very Poor	334
			08.11.2023	Very Poor	319
			09.11.2023	Very Poor	310
49	Haryana	Sonipat	03.11.2023	Severe	455
			04.11.2023	Severe	416
			05.11.2023	Insufficient Date	Insufficient Date
			06.11.2023	Severe	417
			07.11.2023	Very Poor	381
			08.11.2023	Insufficient Data	Insufficient Date
			09.11.2023	Severe	429
50	Rajasthan	Sri Ganganagar	03.11.2023	Very Poor	378
			04.11.2023	Severe	440
			05.11.2023	Very Poor	385
			06.11.2023	Very Poor	310
			07.11.2023	Very Poor	389
			08.11.2023	Very Poor	351
			09.11.2023	Very Poor	345
51	Maharashtra	Thane	03.11.2023	Moderate	148
			04.11.2023	Moderate	156
			05.11.2023	Moderate	159
			06.11.2023	Moderate	144
			07.11.2023	Poor	202
			08.11.2023	Moderate	199

			09.11.2023	Moderate	132
52	Rajasthan	Tonk	03.11.2023	Poor	214
			04.11.2023	Poor	268
			05.11.2023	Poor	228
			06.11.2023	Poor	214
			07.11.2023	Poor	248
			08.11.2023	Poor	231
			09.11.2023	Poor	272
53	Gujarat	Vapi	03.11.2023	Insufficient Data	Insufficient Date
			04.11.2023	Moderate	182
			05.11.2023	Moderate	152
			06.11.2023	Moderate	145
			07.11.2023	Moderate	137
			08.11.2023	Moderate	160
			09.11.2023	Moderate	149

5. The above chart clearly depicts that the concerned authorities somewhere are lacking in making the desired efforts which could bring about improvement in the air quality.

6. The reports have been filed by the State of Bihar, Punjab Pollution Control Board, State of MP, Gujarat Pollution Control Board, State of Haryana, State of UP, Maharashtra Pollution Control Board, Deputy Commissioner, Ludhiana, Punjab, Environment Department, Govt. of H.P, Central Pollution Control Board (CPCB) and Commission of Air Quality Management (CAQM) in NCR & Adjoining Areas. We have perused these reports and also have heard the Learned Counsels for the parties. We find that in these reports mostly long-term action plans for controlling the air pollution have been mentioned but, direction of the Tribunal to take “immediate remedial action”, has not been fully complied with. Though, the Counsels for the parties have stated that adequate action has been taken to control the pollution but a perusal of the chart reproduced above does not depict any significant improvement. The concerned State Authorities

and the Chief Secretaries, therefore, are required to review their approach and come up with adequate measures so that the air quality in the concerned cities improves. This may require identification of major contributing source of pollution causing deterioration of air quality and to take immediate steps to control it. This is all the more necessary as in the forthcoming Diwali festival and prevailing contributory factors, the air quality may dip further.

7. The issue needs to be considered by the concerned authorities with full seriousness as a dip in the air quality has serious adverse effect on the health of general public especially infants and elderly. Thus, we direct all the Chief Secretaries of the States where cities' AQI is dipped or continued to be severe, very poor and poor, to take all possible immediate remedial measures and ensure that the air quality improves in those cities. Let a further action taken report be filed within 10 days by e-mail at [judicial-ngt@gov.in](mailto:judicial-ngt@gov.in) preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF.

8. A copy of this order be forwarded to the concerned Chief Secretaries of the States by email for compliance.

9. List the matter on 22.11.2023.

Prakash Shrivastava, CP

Sudhir Agarwal, JM

Dr. A. Senthil Vel, EM

November 10, 2023  
Original Application No. 687/2023  
JG

**328**

**GOVERNMENT OF PUNJAB  
DEPARTMENT OF EXCISE AND TAXATION  
(EXCISE AND TAXATION II-BRANCH)**

**ANNEXURE A / 4****Date: 25.10.2019****NOTIFICATION**

**No. S.O.108/P.A.8/2005/S.8/Amd./2019.-** Whereas the State Government is satisfied that circumstances exist, which render it necessary to take immediate action in public interest;

Now, therefore, in exercise of the powers conferred by the provisions of sub-section (3) of section 8 of the Punjab Value Added Tax Act, 2005 (Punjab Act No.8 of 2005) and all other powers enabling him in this behalf, the Governor of Punjab, is pleased to make the following amendment in Schedule 'E', appended to the said Act, with immediate effect by dispensing with the condition of previous notice, namely:-

**AMENDMENT**

In the said Schedule 'E', after serial No.32 and entries relating thereto, the following serial No. and entries relating thereto shall be added, namely:-

**"33. Natural Gas in Gaseous State other than 3 percent"  
Compressed Natural Gas**

M.P. SINGH,  
Additional Chief Secretary-cum-  
Financial Commissioner (Taxation) to  
Government of Punjab,  
Department of Excise and Taxation.

<<<<<Not part of the Notification>>>>>

**PUNJAB VALUE ADDED TAX ACT, 2005  
SCHEDULE-E  
(See section 8)**

**LIST OF GOODS TAXABLE AT SPECIAL RATES**

<i>Sr. No.</i>	<i>Name of the Commodity</i>	<i>Rate (Percent)</i>
1.	<i>Diesel other than the premium diesel Explanation.- The "premium diesel" Shall mean the branded Diesel, which is superior than diesel.</i>	<i>11.8 percent</i>
2.	<i>Petrol</i>	<i>20.11 per cent</i>
3.	<i>Plastic granules, plastic powder, master batches, Polyvinyl Chloride, Linear low density Polyethylene (LLDPE) and low density polyethylene (LDPE), High density Polyethylene and</i>	<i>8.5 percent</i>

	<i>Polymers of propylene in primary forms.</i>		
4.	<i>Spectacles, goggles or sun glasses, parts and components thereof, contact lens and lens cleaners</i>		8.5 percent
5	<i>Uninterrupted power supply (UPS)</i>		8.5 percent
6	<i>Invertor</i>		8.5 percent
7	<i>Liquefied Petroleum Gas for domestic use</i>		4 percent
8	(a) <i>Pre-owned cars having engine Capacity not exceeding 1000cc.</i>	<i>Rs.3000/- per car on the first sale, by a dealer</i>	
	(b) <i>Pre-owned cars having engine Capacity exceeding 1000cc.</i>	<i>Rs.5000/- per car on the first sale, by a dealer liable to pay tax under this Act.</i>	
9	<i>Sugar cane</i>		3 percent
10	<i>Cell Phone Including all its parts and Accessories such as Head phone, Data cable, mobile charger, memory card, Ear phone, Audio device, Mobile cover, Mobile battery, Bluetooth and Mobile holder."</i>		8.5 percent.
11.	<i>Pulses</i>		1.5 percent
12.	<i>Unbranded besan</i>		1.5 percent
13	<i>Omitted w.e.f. 01-02-2014</i>		
14	<i>Newsprint</i>		2 percent
15	<i>These following commodities shall be taxable at the first point of sale i.e manufacturer or first importer's stage, at the rates specified against these entries in the Table given below, namely:-</i>		
	<i>Sr. No.</i>	<i>Commodity Name</i>	<i>Rate of tax</i>
	1	<i>All types of Televisions, Refrigerators, Washing Machines, Microwave ovens, Oven Toaster Grillers (OTGs), Home Theaters, and Air Conditioners, Heaters, Blowers, Vaccum Cleaners, Music Systems including CD players, VCD players, DVD players, ROs and Water Purifiers, Dish Washers and Geysers;</i>	14.5 percent
	2	<i>Kitchen Appliances i.e. sandwich makers, tea/coffee makers, juicer mixer grinders (JMGs), hand blenders, electric rice cookers, electric tandoors, induction cook lops, electric chimneys, electric fryers</i>	14.5 percent
	3	<i>Cold Drinks, Aerated Drinks and Soda;</i>	27.5 percent
	4	<i>All types of personal care products i.e deodorants, shaving products, beauty soaps, shampoos, hair oil, conditioners, serums, hair care products, tooth pastes, hand wash, body wash, beauty products, hair gels, bathing gels, talcum powders, creams, anti-persiprants, petroleum jellies, baby care products, skin care lotions, sanitary napkins, after shaving lotion and tooth brush;</i>	14.5 percent
	5	<i>All types of soaps and detergents i.e. washing bars and soaps, fabric softeners, bleach, gentle wash, dish wash, color care, Neel;</i>	14.5 percent
	6	<i>All types of branded and packaged food products i.e chips, wafers, chocolates, toffees, chewing gums and bubble gums, ice creams, Breakfast Cereals, Muesilli, Corn Flacks, pasta, macroni, biscuits, frozen desserts, frozen ready to</i>	14.5 percent

	<i>eat products, meal makers, instant soups , instant noodles, ready to eat products, custard powder, bakery products, baby foods, coffee powder, ice tea, coffee premix, tea premix, branded snacks and namkeen, ketchup and spreads;</i>	
7	<i>Mineral Water;</i>	14.5 percent
8	<i>Processed fruits and vegetables i.e Fruit jam, jelly, pickles, fruit squash, paste, fruit drinks, fruit juice (whether in sealed container or otherwise);</i>	6.25%
9	<i>Roasted or fried grams and groundnuts, namkeens and snacks;</i>	6.25%
10	<i>Branded Honey;</i>	6.25%
11	<i>Branded Atta, Maida, Suji and Dalia manufactured by units purchasing wheat from outside the State and traded after purchase from outside the State and branded besan.</i>	6.25%
12	<i>Branded Cottage Cheese (Paneer), processed cheese including mozzarella, parmesan and other varieties of processed cheese;</i>	6.25%
13	<i>Desi Ghee;</i>	6.25%
14	<i>Edible Oils;</i>	6.25%
15	<i>Sweetened Flavored Milk;</i>	6.25%
16	<i>Tea excluding Green tea;</i>	6.25%
17	<i>Coffee beans and seeds, cocoa pod and chicory;</i>	6.25%
18	<i>Drugs and medicines including vaccines, syringes and dressing, mediated ointments produced under drug license, light liquid paraffin of IP and other grades, medical equipments/devices and implants;</i>	6.25%
19	<i>Spices of all varieties and forms including aniseed and dry chillies except haldi, Jeera, Ajwain, Kali Mirch and Dhania.</i>	6.25%
20	<i>Mosquito repellants, toilet cleaners, wood preservatives, chemicals for killing domestic insects, termicides, phenyl and similar other products, which are not used for agricultural purpose;</i>	6.25%
21	<i>Tissue papers;</i>	6.25%
22	<i>Cups and glasses of paper and plastic;</i>	6.25%
23	<i>Branded Vermicilli.</i>	6.25%
24	<i>Vanaspati (Hydrogenated Vegetable Oil)</i>	6.25%
25	<i>Cigarette and Cigar</i>	30%
26.	<i>Jeera, Ajwain, Kali Mirch and Dhania</i>	4%
21	<i>Iron and steel goods as enumerated in clause IV of Section 14 of Central Sales Tax Act, 1956 excepte Non-cenvat paid Iron and Steel Scrap</i>	3.5%
22	<i>Non-cenvat paid Iron and Steel Scrap</i>	1%
23	<i>Milk when purchased for manufacturing of taxable goods</i>	3%
24	<i>Wheat, when purchased for processing</i>	3%
25	<i>Sales made by Canteen Stores Department to serving military personnel and ex-servicemen directly or through unit run canteens; and Sales made to Canteen Stores Department subject to the furnishing of a certificate duly signed and stamped by the officer authorized to make</i>	3.64%

	<i>purchases certifying that the goods purchased are meant for sale to serving military personnel and ex-servicemen directly or through unit run canteens</i>	
26.	<i>Aviation Turbine Fuel when sold at the airports in Punjab to scheduled and non-scheduled airlines carrying passengers".</i>	<i>4 Percent</i>
27.	<i>All automobiles (i.e. commercial vehicles, passenger vehicles, three wheelers, two wheelers).</i>	<i>12 Percent</i>
28.	<i>Dry Fruits</i>	<i>4.5%.</i>
29.	<i>Sarson and binola khal</i>	<i>2 Percent</i>
30.	<i>Stone bajri and sand when sent outside the State through, -</i>	
	<i>(i) tractor trolley;</i>	<i>Rs.4,000/-per trip</i>
	<i>(ii) ordinary truck having capacity up to 9 metric ton; and</i>	<i>Rs.7,000/- per trip</i>
	<i>(iii) any other vehicle bigger than vehicles mentioned in item (i) and (ii) above.</i>	<i>Rs. 10,000/- per trip</i>
31	<i>All types yarn (including cotton yarn), their waste and sewing thread</i>	<i>3.3%.</i>
32.	<i>Liquor sold against licenses L-3, L-3A, L-4, L-4A, L-5, L-5A, L-5B, L-5C and L-12C issued under the Punjab Excise Act, 1914</i>	<i>13.10 per cent.</i>
33.	<i>Natural Gas in Gaseous State other than Compressed Natural Gas</i>	<i>3 percent</i>

**Action Plan for Clean Air, Mandi Gobindgarh**

30<sup>th</sup> April 2019

Directorate of Environment and Climate Change  
Department of Science, Technology and Environment,

**Government of Punjab**

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## Chapter 1 - Introduction

### 1.1 About Air Pollution

1.1.1. Air pollutant means any solid, liquid or gaseous substance present in the atmosphere in such concentration as may be or tend to be injurious to human being or other living creatures or plants or property or environment. Air pollution means the presence of air pollutants in the atmosphere. The most common sources of air pollution include particulates, ozone, oxides of nitrogen, and sulphur dioxide.

1.1.2. The health effects caused by air pollution may include difficulty in breathing, wheezing, coughing, asthma and worsening of existing respiratory and cardiac conditions.

### 1.2 About Mandi Gobindgarh

#### 1.2.1. History

Mandi Gobindgarh, the Steel Town was blessed by the sixth Guru Shri Guru Hargobind Sahib as "Steel City". In 1902, Maharaja Hira Singh of Nabha ordered the building of industrial units in the town. Maharaja Partap Singh conducted further industrial development. In 1928, Gobindgarh became a free trade zone for steel. As a centre for steel, the town experienced growth. The land was made available to local blacksmiths at nominal rates in early 1940, leading to the establishment of a number of workshops on both sides of the G.T. Road at Gobindgarh.

#### 1.2.2. Area and Population

Mandi Gobindgarh falls in district Fatehgarh Sahib. The city is located in a stretch of about 10 Km. on National Highway-I, spread over an area of about 27 SqKm and currently accommodates a population of about 90,000.

#### 1.2.3. Industry and Trade

At present, the city produces 25 percent of the total recycled steel production of India. Industrialization in Mandi Gobindgarh began at the start of the 20th century. Mandi Gobindgarh town is known as 'Steel Town of India' as various categories of steel manufacturing units are operating in this town.

#### 1.2.4. Topography

The topography of the Mandi Gobindgarh is typical representative of an Alluvial plain, it owes its origin to the aggravation work of the Sutlej River. The alluvium deposited by the river has been worked over by the wind which gave rise to a number of small dunes and sand mounds. Most of these dunes have been levelled by the brave hard-working agriculturists of the district.

### 1.2.5. Climate

The climate of Mandi Gobindgarh is characterized by dryness except a brief spell of monsoon season in a very hot summer and a bracing winter. The winter season is from middle of November to the early part of March. The succeeding period up-to the end of June is the hot season. July, August and half of September constitute the south west of monsoon, the period of mid-September to about the middle of November may be termed as post monsoon or transitional period. June is generally the hottest month. Hot and scorching dust laden winds blow during summer season. December & January are the coldest months. The mean daily temperature varies in the range of 5.8 degree centigrade to 41.2 degree centigrade.

### 1.2.6. Rainfall

The rainfall in the city increases from south west towards the north east. About 70% of the rainfall is received during the period July to September. The rainfall during December to March accounts for 16% of the rainfall and the remaining 14% rainfall is received in other months of the year. The average annual rainfall is 681 mm.

## 1.3 Government's past efforts for control of Air pollution

- 1.3.1. The environment of Mandi Gobindgarh has degraded a lot during the last few years due to rapid urbanization, industrialization, increase in population, vehicles and commercialization of land available within the town. The industrial cluster of Mandi Gobindgarh had been identified as one of the critically polluted clusters by the Ministry of Environment & Forests vide office memorandum J-11013/5/2010-IA II (I) dated 13/1/2010. This had resulted in imposition of a temporary restriction of 8 months for establishment of new industrial units, which were covered in Schedule-I appended to the EIA notification dated 14/9/2006.
- 1.3.2. Punjab Pollution Control Board had taken this as a challenge and also as an opportunity in order to achieve significant improvement in environmental quality and pave the way for sustainable development in the area. A comprehensive remedial environmental action plan was prepared in consultation with all the stakeholders, including Industrial Associations. The multi-disciplinary action plan was based on Prevention, Promotion and Mitigation (PPM) principles emphasizing on a time bound implementation of effective measures.
- 1.3.3. The Action Plan was monitored by high level steering committee, to ensure collaborative efforts among various implementing agencies and industries. The first meeting of the said Action plan committee was held on November, 2010. The meetings are conducted every second month to review the progress made by various departments. After fresh monitoring of Mandi Gobindgarh area, the moratorium imposed was lifted by MoEF&CC in year 2011 due to improvement in the environment parameters.

#### 1.4 About National Green Tribunal directions

- 1.4.1. Nine cities of Punjab namely DeraBassi, Nangal, Patiala, Mandi Gobindgarh, Khanna, Ludhiana, Jalandhar, Pathankot and Amritsar were declared non-attainment cities by Central Pollution Control Board (CPCB) on the basis of Ambient air data for the period of 2011-2015 for not meeting the annual average of 60  $\mu\text{g}/\text{m}^3$  for PM<sub>10</sub>. Directions were issued to the Board by CPCB to prepare action plans for the above stated non-attainment cities of Punjab.
- 1.4.2. Subsequently, National Green Tribunal has taken cognizance of draft National Clean Air Program and passed directions in the matter of application no. 681 of 2018 dated 8/10/2018. The important points of the said directions are given as under:
- (i) Action plans to be prepared within two months aimed at bringing the standards of air quality within the prescribed norms within six months from date of finalization of the action plans.
  - (ii) The action plans may be prepared by six-member committee comprising of Director of Environment, Transport, Industries, Urban Development, Agriculture and Member Secretary, State Pollution Control Board under the overall supervision of Principal Secretary, Environment and further supervised by Chief Secretary.
  - (iii) The Action plans may take into account the GRAP, the CAP and the action plan prepared by CPCB as well as all other relevant factors.
  - (iv) The Action Plan will include components like identification of source and its apportionment considering sectors like vehicular pollution, industrial pollution, dust pollution, construction activities, garbage burning, agricultural pollution including pollution caused by burning of crop residue, residential and indoor pollution etc.
  - (v) The Action plan shall also consider measures for strengthening of Ambient Air Quality (AAQ) monitoring and steps for public awareness include issuing of advisory to public for prevention and control of air pollution and involvement of schools, colleges and other academic institutions and awareness programmes.
  - (vi) The Action plan will indicate steps to be taken to check different sources of pollution having speedy, definite and specific timelines for execution.
  - (vii) The Action plan should be consistent with the carrying capacity assessment of the non-attainment cities in terms of vehicular pollution, industrial emissions and population density, extent of construction and construction activities etc. The carrying capacity assessment shall also lay emphasis on agricultural and indoor pollution in rural areas. Depending upon assessed carrying capacity and source apportionment, the authorities may consider the need for regulating, number of vehicles and their parking and plying, population density, extent of construction and construction activities etc. Guidelines may accordingly be framed to regulate

vehicles and industries in non-attainment cities in terms of carrying capacity assessment and source apportionment.

- (viii) The CPCB and SPCBs shall develop a public grievance redressal portal for redressal of public complaints on air pollution along with a supervisory mechanism for its disposal in a time bound manner. Any visible air pollution can be reported at such portal by email/SMS.
- (ix) The CPCB and all SPCBs shall collectively workout and design a robust nationwide ambient air quality monitoring programme in a revised format by strengthening the existing monitoring network with respect to coverage of more cities / towns. The scope of monitoring should be expanded to include all twelve (12) notified parameters as per notification no. B-29016/20/90/PCI-L dated 18th November of CPCB. The Continuous Ambient Air Quality Monitoring Stations (AAQMS) should be preferred in comparison to manual monitoring stations. The CPCB and States shall file a composite action plan with timelines for its execution which shall not be more than three months.

1.4.3. Earlier, NGT had also issued various directions in OA No. 21 of 2014 titled as Vardhaman KaushikV/s Union of India and Others for combating air pollution.

## Chapter 2 – Vision, Mission and Strategy

### 2.1 Mission Tandrust Punjab

The Government of Punjab envisions to make Punjab the healthiest State with healthy people by ensuring the quality of air, water, food and a good living Environment.

### 2.2 Vision for Clean Air, Mandi Gobindgarh

To restore the quality of air in Mandi Gobindgarh to the prescribed standards to ensure health of the people, ecological balance and socio-economic well-being of the people.

### 2.3 Mission Clean Air, Mandi Gobindgarh

To prepare and implement a comprehensive action plan for clean Mandi Gobindgarh:

- (i) Creating awareness about the adverse impact of air pollution
- (ii) Identifying the sources of airpollution, their apportionment
- (iii) Identifying action steps related to Awareness, Enforcement, Infrastructure or Policy for control of various sources of Air Pollution
- (iv) Designing effective systems for monitoring the progress of the implementation of action steps
- (v) Ensuring effective monitoring of the quality of air
- (vi) Mitigating adverse impact on health of the people due to air pollution

### 2.4 Strategy for Clean Air, Mandi Gobindgarh

The key elements of strategy for Clean Air campaign for Mandi Gobindgarh will include:

- (i) Identification of Government Stakeholders
- (ii) Identification of Non-Government Stakeholders
- (iii) Integration of Departmental plans – Creating synergies
- (iv) Nodal Department
- (v) Citizen Participation
- (vi) Monitoring and Governance

### 2.5 Identification of Government Stakeholders

In order to combat the challenges of air pollution, all the Stakeholders will have to make concerted efforts. Following Departments and agencies have been identified along with their responsibilities:

- (i) **Punjab Pollution Control Board**
  - (a) Monitoring of air pollution control devices installed by industries
  - (b) Up-gradation of existing air pollution control devices
  - (c) Monitoring of ambient air quality and stack emissions
  - (d) Provision of canopies on the existing D.G sets

- (ii) **Department of Local Government/ MC, Mandi Gobindgarh**
  - (a) Development of engineered municipal solid waste dump site
  - (b) Improvement of road infrastructure for smooth traffic movement
  - (c) Regular and mechanical cleaning of roads
  - (d) Sprinkling of in the parks and maintenance of fountains
  - (e) Increasing green cover in city
  - (f) Upgrading traffic lights for smooth traffic movement
  - (g) Provide canopies on the existing D.G sets
- (iii) **Department of Transport**
  - (a) Plan for effective traffic management
  - (b) Plan for phasing out old polluting vehicles
  - (c) Shift to cleaner fuels viz. CNG etc.
  - (d) Monitoring of vehicles without PUC certificate
  - (e) Banning of pressure horns
- (iv) **Department of Police**
  - (a) Planning and enforcement of traffic management plan
  - (b) Checking of vehicles running without PUC certificate
  - (c) Impounding and challan of vehicles running without permission/ registration.
- (v) **Department of Forests**
  - (a) Preparation of afforestation plan
  - (b) Organizing awareness camps for Greener City
  - (c) Providing green belt around the industrial areas
- (vi) **Department of Industries and Commerce / PSIEC**
  - (a) Shifting of industries from non-designated areas
  - (b) Provision of environment infrastructure in Industrial Areas
- (vii) **PWD (B&R)**
  - (a) Improving road conditions for smooth movement of traffic
  - (b) Increasing green cover on roadside under their jurisdiction
- (viii) **Punjab State Council for Science and Technology**
  - (a) Evolving cost-effective cleaner technologies
- (ix) **Department of Agriculture**
  - (a) Promotion of bio-mechanization and compost facilities for agro waste
  - (b) To provide Machinery for in-situ management
  - (c) To create awareness about ill-effects of stubble burning
  - (d) To create awareness regarding alternative crops to break wheat-rice cycle.

(x) **District Administration**

- (a) Coordination with all the Stakeholders promoting collaboration and resolving local issues
- (b) Public Awareness Campaign

2.6 **Non-Government Stakeholders**

2.6.1. There is need to involve various Industry associations of Mandi Gobindgarh in this plan. Following Industry Associations of Mandi Gobindgarh will be associated with the plan:

- (i) President, Gobindgarh Steel Chamber of Commerce & Industries, Mandi Gobindgarh.
- (ii) President, All India Steel Re-Rollers Association, Mandi Gobindgarh
- (iii) President, Small Scale Steel Re-Rollers Association, Mandi Gobindgarh
- (iv) President, Mandi Gobindgarh Induction Furnace Association, Mandi Gobindgarh

2.6.2. These association will help in the following activities:

**Generic**

- (i) To stabilize the vehicular movement area within premises of the industries
- (ii) To persuade the member industries to comply with emission norms by PPCB
- (iii) To evolve more efficient machinery, boiler furnace and air pollution control devices which may be adopted by all the industries for better environment

**Specific**

- (iv) To shift over the industries from coal / pet coke / furnace oil to CNG
- (v) To upgrade the existing APCD of Induction Furnaces consisting of canopy hood to the new APCD designed by PSCST, Chandigarh with side hood collection system & ensuring the adequacy of APCD for other coal fired industry.

2.6.3. Apart from Industry Associations, the support of various NGOs in the city such as Go Green (NGO), Mandi Gobindgarh will be sought. These NGOs will assist in the following:

- (i) To create awareness among the public regarding ill-effects of air pollution
- (ii) To motivate residents of Mandi Gobindgarh for adopting the practices to minimize the use of fresh water, planting more trees, to promote pooling by minimal use of private vehicles. Parking of vehicles in the designated zones, minimum use of electricity etc
- (iii) To give suggestions to District Level Committee to control or minimize the air pollution
- (iv) To give feedback on enforcement activities

2.7 **Nodal Department**

The clean air plan for Mandi Gobindgarh is part of State-wide campaign to control air pollution in non-attainment cities. In order to bring necessary impetus, support from other stakeholder departments, uniformity and consistency, there is need to have a Nodal

Department. The Department of Science, Technology and Environment will be the nodal department for coordinating and monitoring activities of the plan. The Department has recently set up Directorate of Environment and Climate Change, which will provide necessary support at the headquarter for coordination and oversight and PPCB will provide necessary technical and field support.

## 2.8 Integration of Departmental plans

The Nodal Department will integrate plans of individual departments for control of pollution from various sources and prepare a comprehensive plan.

## 2.9 Citizen participation

Citizen participation will be key to the success of the plan. Effort will be made to seek citizen participation in various public awareness activities, feedback and support in various enforcement related activities. A strong social media and technology driven platform will be set up to seek citizens particularly youth participation.

## 2.10 Design of Monitoring System

2.10.1 Various measures envisaged under the action plan for control of pollution can be classified in the following categories:

- (i) Public Awareness
- (ii) Effective Enforcement
- (iii) Creation of new Infrastructure
- (iv) Maintenance related activities
- (v) Policy Advocacy
- (vi) Technology Support

2.10.2 Monitoring of various activities of the Action Plan will be key to achieve the outcomes envisaged under the Action Plan. Different kind of monitoring systems will be required for different categories of activities:

- (i) Design of effective online platform including social media to disseminate air pollution related information and seek citizen feedback and participation in the campaign. It will have a monitoring mechanism to see the level of participation and measures to increase the same.
- (ii) Design of effective online system to capture various enforcement activities by various agencies to monitor them, evaluate them and provide feedback and enforce accountability.
- (iii) Design of an effective monitoring system to monitor the progress of various infrastructure related activities as envisaged under the plan.
- (iv) Design of an effective monitoring system for policy advocacy within the Government for expediting formulation of various policies.

- (v) Design of an effective monitoring system for various technological interventions to reduce the air pollution.

2.10.3 Directorate of Environment and Climate Change and PPCB will set up a dedicated team for design of monitoring system and setting up of IT platform for tracking progress of the plan.

#### 2.11 **Governance**

The monitoring of progress, coordination of various activities, corrective measures required and fixing of accountability will be done by Air Quality Monitoring Committees at the District level under Deputy Commissioner, State Level under Principal Secretary, Environment and Apex Committee under Chief Secretary.

### Chapter 3 – Current Status and Trends of Air Quality in Mandi Gobindgarh

#### 3.1 Monitoring of Air Quality

Mandi Gobindgarh is the major industrial hub in the Distt. Fatehgarh Sahib and the ambient air quality monitoring is being carried out regularly at 3 no. manually operated stations installed at Mandi Gobindgarh under National Air Monitoring Programme (NAMP). The year wise data of PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub> for the period 2014-18 is placed at **Annexure-A**. Further, the Board has also commissioned one Continuous Ambient Air Quality Monitoring Station (CAAQMS) at Mandi Gobindgarh and the real time data of the same is being displayed at National Highway-I. The AQI data of 2017 and 2018 has been given in **Annexure-B**.

#### 3.2 CPCB's norms for Air Quality

The CPCB on 18/10/2009 has revised National Ambient Air Quality Standards (NAAQS) which are reproduced as under:

S.N.	Pollutants	Time weighted average	Concentration of Ambient Air	
			Industrial, Residential, Rural and other areas	Notified Ecologically sensitive area
1	Sulphur Dioxide (SO <sub>2</sub> ) µg/m <sup>3</sup>	Annual	50	20
		24 hours	80	80
2	Nitrogen Dioxide (NO <sub>2</sub> ) µg/m <sup>3</sup>	Annual	40	30
		24 hours	80	80
3	Particulate Matter (size<10 µm) or PM <sub>10</sub> µg/m <sup>3</sup>	Annual	60	60
		24 hours	100	100
4	Particulate Matter (size<2.5 µm) or PM <sub>2.5</sub> µg/m <sup>3</sup>	Annual	40	40
		24 hours	60	60
5	Ozone (O <sub>3</sub> ) µg/m <sup>3</sup>	8 hours	100	100
		1 hour	180	180
6	Lead (Pb), µg/m <sup>3</sup>	Annual	0.50	0.50
		24 hours	1.0	1.0
7	Carbon Monoxide (CO), mg/m <sup>3</sup>	8 hours	02	02
		1 hour	04	04
8	Ammonia (NH <sub>3</sub> ), µg/m <sup>3</sup>	Annual	100	100
		24 hours	400	400
9	Benzene (C <sub>6</sub> H <sub>6</sub> ) µg/m <sup>3</sup>	Annual	05	05

10	Benzo (a) Pyrene (BaP)- particulate phase only ng/m <sup>3</sup>	Annual	01	01
11	Arsenic (As) ng/m <sup>3</sup>	Annual	06	06
12	Nickel (Ni) ng/m <sup>3</sup>	Annual	20	20

### 3.3 Air Quality Index (AQI)

3.3.1. Awareness of daily levels of air pollution is important to the citizens, especially for those who suffer from illnesses caused by exposure to air pollution. Further, success of a nation to improve air quality depends on the support of its citizens who are well-informed about local and national air pollution problems and about the progress of mitigation efforts. Thus, a simple yet effective communication of air quality is important. The concept of an air quality index (AQI) that transforms weighted values of individual air pollution related parameters into a single number is widely used for air quality communication and decision making.

3.3.2. The AQI system is based on maximum operator of a function (i.e. selecting the maximum of sub-indices of individual pollutants as an overall AQI). The objective of an AQI is to quickly disseminate air quality information (almost in real-time) that entails the system to account for pollutants which have short-term impacts. Eight parameters (PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub>, SO<sub>2</sub>, CO, O<sub>3</sub>, NH<sub>3</sub>, and Pb) having short-term standards have been considered for near real-time dissemination of AQI.

3.3.3. The AQI has further been classified in six categories as shown below:

AQI	Quality	Impact on health
0-50	Good	Minimal impact
51-100	Satisfactory	Minor breathing discomfort to sensitive people
101-200	Moderate	Breathing discomfort to people with lungs, asthma and heart diseases
201-300	Poor	Breathing discomfort to most people on prolonged exposure
301-400	Very poor	Respiratory illness on prolonged exposure
>401	Severe	Affects healthy people and seriously impacts those with existing diseases.

3.3.4. Based on this, the CPCB evolved a Graded Response Action plan (GRAP) which is implemented in the NCR, Delhi when the air quality deteriorates and various steps have

been mentioned in GRAP to be taken to immediately control the deterioration of the air quality.

### 3.4 Trends of Quality of Air

- 3.4.1. The Board has commissioned one no. Continuous Ambient Air Quality Monitoring Station (CAAQMS) at Mandi Gobindgarh and the real time data of the same is being displayed at National Highway-I. Annual average of AQI for the last 2 years is given as under:

Year	PM <sub>10</sub> (µg/m <sup>3</sup> )	PM <sub>2.5</sub> (µg/m <sup>3</sup> )	SO <sub>2</sub> (µg/m <sup>3</sup> )	NO <sub>x</sub> (µg/m <sup>3</sup> )	AQI
2017	174.16	77.40	12.41	69.59	196
2018	113.0	62.40	9.66	36.45	121

- 3.4.2. The trend of AQI in the ambient air quality shows that the concentration of SO<sub>2</sub>, NO<sub>x</sub> and SPM in the ambient air has decreased in 2018 as compared to 2017.

### 3.5 Major parameters of concern

The major concern of the air quality is PM<sub>10</sub>. All other parameters are within the prescribed limits. The perusal of data in **Annexure-B** clearly indicates that air quality index of Mandi Gobindgarh generally remains moderate (101-200) and sometimes satisfactory (51-100). The sources of pollution and their apportionment are given in the next chapter.

## Chapter 4 – Sources of Air Pollution in Mandi Gobindgarh

### 4.1 Major Sources

4.1.1 The following are the major sources of air pollution:

- (i) Vehicular Emissions
- (ii) Road Dust
- (iii) Burning of Garbage and Biomass
- (iv) Industrial Emissions
- (v) Mining
- (vi) Construction and Demolition Activities
- (vii) Other Sources

4.1.2 Due to paucity of time, detailed studies regarding source apportionment and carrying capacity could not be done, however, the Board has made some projections based on its in-house projections for Mandi Gobindgarh. The estimated contribution of various sources in air pollution is given as under:

1.	Industrial Emissions	50%
2.	Road Dust	25%
3.	Vehicular Pollution	15%
4.	Burning of Garbage and Biomass	5%
5.	Construction and Demolition Activities	4%
6.	Other Sources	1%

4.1.3 PPCB shall carry out source apportionment for the city involving Expert Agency. The estimated cost to be incurred on the Source Apportionment study is Rs. 5.00 lacs.

### 4.2 Vehicular Emissions

4.2.1 Transport sector is one of the significant contributors to air pollution in Mandi Gobindgarh due to movement of heavy goods vehicles carrying raw materials and products of the industries located in and around the city. At present about 15000 vehicles (heavy transport vehicles, LMVs, cars & jeeps, two wheelers and three wheelers) are plying on the roads of Mandi Gobindgarh. National Highway NH-1 passes through Mandi Gobindgarh, which is connecting tourist destination like Amritsar and industrial hubs like Ludhiana and Jalandhar.

### 4.3 Road Dust

4.3.1 The particles of dust that deposit from the atmosphere and accumulate along road sides are called road dust particles. Two main sources of road dust are deposition of previously suspended particles (atmospheric aerosols) and displaced soil. Some of the factors contributing to road dust are:

- (i) Emissions from the vehicular traffic,
- (ii) Construction and demolition activities, corrosion of metals structures etc.
- (iii) Presence of potholes on the road
- (iv) Absence of metaled roads / stabilized roads / un-stabilized movement area within industries
- (v) Presence of un-stabilized berms along the roads
- (vi) Movement of overloaded transport vehicles

#### 4.4 Burning of Biomass and Garbage

4.4.1 There are only small patches of agricultural land within the Mandi Gobindgarh city, however, the city is surrounded by agricultural area and a lot of biomass is generated during post harvesting paddy and wheat seasons. During wheat season biomass burning is lesser than paddy season as the farmers use the wheat crop residue as cattle fodder. The effect of biomass burning in the paddy season is augmented due to the cold climate conditions.

4.4.2 At present, Municipal solid waste generation of the city is estimated as 45 TPD, which is being dumped unscientifically in the present dumping site along G.T. Road. The garbage burning increases during winter season as the general public tend to burn the waste for heating purposes.

#### 4.5 Industrial Emissions

4.5.1 The main stationary sources of air pollution are the industrial units, which are emitting particulate matter, sulphur di-oxide and oxides of nitrogen etc. All the rolling mills, cupola furnaces and ceramic units are using coal / furnace oil as fuel in their furnaces emitting the aforesaid pollutants, besides the process / fugitive emissions.

4.5.2 The category wise detail of air polluting industries situated within 5 km of outskirts of MC limits of Mandi Gobindgarh are given as under:

Sr. No.	Category	Number of Units
1.	Cattle Feed/Poultry Feeds	4
2.	Ceramics/Refractory	18
3.	Cupola Furnaces	28
4.	Forging units	14
5.	Induction furnaces	79
6.	Kothali units	4
7.	Lead Smelting units	4
8.	Milk Plant/Dairy	1
9.	Ply Board units	2

Sr. No.	Category	Number of Units
10.	Pyrolysis Plant	2
11.	Rolling Mills	212
Total		378

4.5.3 It is pertinent to mention here that emission standards for most of the above industries are the most stringent for such type of industries i.e. 150 mg/Nm<sup>3</sup>.

#### 4.6 Mining

Mining activities also contribute to the AQI, however, in Mandi Gobindgarh area, no mining activity is carried out due to absence of mining sites. As such, it has no contribution in the air quality index of Mandi Gobindgarh.

#### 4.7 Construction and Demolition Activities

4.7.1 Mandi Gobindgarh is a small city having population of about 90,000. No major construction projects are being set up in the city. However, small construction activities are being carried out by the individual house holders / industrial units / commercial units and paving of streets by the MC on routine basis.

#### 4.8 Others

4.8.1 Other than above mentioned sources, episodic incidents like Holi, Dushera, Diwali, Gurupurab and New Year etc. are celebrated by bursting crackers, spraying colours etc. which also contribute to the ambient air quality.

## Chapter 5 –Control on Vehicular Emissions

### 5.1 Key Activities

5.1.1 The vehicles are major pollution contributor, producing significant amount of nitrogen oxides, carbon monoxides and other polluting gases and particulate matter. To minimize the pollution generated from the vehicles, various actions have to be taken, which have been classified into following categories:

- (a) Public Awareness related,
- (b) Enforcement related,
- (c) Infrastructure related,
- (d) Policy related

5.1.2 Some activities may have more than one category but they have been kept in the category where it has the major requirement. Following are the key activities for control on vehicular emissions:

#### Public Awareness

- (i) CVE 1 - Public awareness campaign for control of vehicular emissions

#### Enforcement Related

- (ii) CVE 2 -Remote sensor based PUC system
- (iii) CVE 3 - Extensive drive against polluting vehicles
- (iv) CVE 4 - Prevent parking of vehicles in non-designated areas
- (v) CVE 5 - Check fuel adulteration

#### Infrastructure Related

- (vi) CVE 6 - Widening of roads and improvement of infrastructure for decongestion of roads
- (vii) CVE 7 - Introduce intelligent traffic systems
- (viii) CVE 8 - Construction of expressways/ bypasses to avoid congestion

#### Policy Related

- (ix) CVE 9 – Phasing out of commercial Diesel vehicles more than 15 years old
- (x) CVE 10 – Promotion of E- vehicles
- (xi) CVE 11 – Introduction of CNG based public transport
- (xii) CVE 12 – Retrofitting of particulate filters in diesel vehicles for BS-IV fuels

5.1.3 Various actions to be taken for the above activities are given below. Further, the details such as baseline, target, timeline, milestones have been given in **Annexure – C**.

### 5.2 CVE 1 - Public awareness campaign for control of vehicular emissions

Public support is essential for clean air mission to be successful. As part of overarching mission of clean air, Mandi Gobindgarh, the public must be made aware of ill effects of air pollution on health and contribution of vehicular emissions in the same. The public has to be motivated to play their role in curbing the air pollution. Following action shall be taken:

- (i) Public awareness campaign in print and electronic media
- (ii) Use of Social Media Facebook, twitter, Instagram
- (iii) Jingles on air pollution on local radio and TV
- (iv) Awareness drives in educational institutions
- (v) Public meetings
- (vi) Nukarnataks

### 5.3 **CVE 2 - Remote sensor based PUC system**

The Department of Transport will implement remote sensor based PUC system to eliminate the malpractices in the existing system of issuing PUCs. All PUC centres will be made online.

### 5.4 **CVE 3 - Extensive drive against polluting vehicles**

There is need to strictly enforce checking of PUC certificates so that unauthorized vehicles could be penalized. The traffic police shall place check points (Nakas) at differed locations and the performance of such check points shall be monitored. A Whatsapp number shall be dedicated and publicized among general public so that complaints of public regarding polluting vehicles may be received and action taken.

Traffic Police and Department of Transport will be responsible for the activity.

### 5.5 **CVE 4 - Prevent parking of vehicles in non-designated areas**

**4(a) Creating parking infrastructure:** Presently, vehicles are being parked in a haphazard manner and on the roads as well, which leads to traffic congestion, thus, causing vehicular pollution. Hence, local government shall develop designated parking lots, Multi storey parking facilities, parking area for trucks/ commercial vehicles and earmark roadside parking by yellow line.

**4(b) Enforcement:** Traffic police shall impound vehicles parked in non-designated areas and shall compile the list of prominent areas of such violations & pay special attention to these areas. CCTV cameras shall be installed in such areas to capture the evidence. Number of challans shall be monitored.

### 5.6 **CVE 5 - Check fuel adulteration**

Online Automated System has been adopted by the State Level Coordinator, Oil industry, Punjab for transportation & checking the density of Petrol/Diesel. In case of complaint, Department of Food and Civil Supplies in coordination with local oil company officials shall check fuel adulteration & if any discrepancy is noticed then action against the violator shall be taken by State Level Coordinator, Oil industry, Punjab.

### 5.7 **CVE 6 - Widening of roads and improvement of infrastructure to decongestion of roads**

The roads constructed within the city having traffic congestion shall be identified by the MC. The major air pollution is caused by dust emission along road sides as the condition of roads is very pathetic. Due to the movement of heavy goods vehicles like Trucks, tippers etc.

carrying raw materials and final products of the industries, lot of dust / vehicular emissions are generated, which is affecting the ambient air quality of the city. Widening of Roads and construction of over-bridges, wherever possible, is required for smooth and speedy flow of traffic and the pending construction work should be completed in the time bound manner. The concerned department like PWD (B&R), PSIEC, Mandi Board and Municipal Council shall widen these roads suitably to decongest the traffic.

#### 5.8 **CVE 7 - Introduce intelligent traffic systems**

The traffic lights installed in the area shall be synchronized in such a way so as to achieve minimal stoppage of vehicles for a stretch of at least 2 Km. The traffic lights shall be placed at various intersection, so as to avoid traffic jams and smooth operation of the vehicles. Municipal Council in consultation with Traffic Police shall identify such places and provide traffic lights.

#### 5.9 **CVE 8 - Construction of expressways/ bypasses to avoid congestion**

PWD (B&R) shall examine the need for any expressways/by-passes to avoid congestions.

#### 5.10 **CVE 9 – Phasing out commercial Diesel vehicles more than 15 years old**

The Department of Transport will frame policy at State level to phase out commercial vehicles more than 15 years old.

#### 5.11 **CVE 10 - Promotion of E- vehicles**

The framing of E-Vehicle policy is at an advance stage of finalization. The Department of Transport shall notify the policy to promote battery operated vehicles.

#### 5.12 **CVE 11 – Introduction of CNG based public transport**

**11 (a) Infrastructure development:** The Department of Food & Civil Supplies shall facilitate and expedite development of requisite infrastructure such as laying of pipe line and setting up of CNG filling station to promote CNG based public transport.

**11 (b) CNG based City Bus Service:** Local Government shall take necessary measures to promote CNG based City Bus service.

**11 (c) CNG based Auto Rickshaws/Taxis:** The Department of Transport shall take necessary steps to promote CNG based Auto Rickshaws/Taxis.

#### 5.13 **CVE 12 - Retrofitting of particulate filters in diesel vehicles for BS-IV fuels**

State Level Coordinator (Oil Industry) has informed that as per Government of India guidelines, India is going to skip adopting BS-5 norms and progress directly to adopting BS-6 norms by 2020. The steps for retrofitting of particulate filters in diesel vehicles is to be undertaken by Automotive industry under directions from Government of India as and when BS-VI fuels are available.

## Chapter 6—Control of Road Dust

### 6.1 Key Activities

- 6.1.1 The particles of dust that deposit from the atmosphere and accumulate along road sides are called road dust particles. Two main sources of road dust are deposition of previously suspended particles (atmospheric aerosols) and displaced soil. Additionally the emissions from the vehicular traffic, building construction and renovation, corrosion of metals structures etc. contribute directly to the road dust. To minimize the pollution generated from the dust emissions, following key activities are proposed:

#### Maintenance Related

- (i) CRD1— Maintain potholes free roads for free-flow of traffic
- (ii) CRD 2 – Water sprinkling
- (iii) CRD 3 – Mechanical sweeping

#### Infrastructure Related

- (i) CRD4 -Creation of green buffers along the road sides
- (ii) CRD 5 - Greening of parks open areas community places, schools and housing societies
- (iii) CRD6 - Water fountains at major traffic intersections
- (iv) CRD 7 - Blacktopping of metaled road including pavement of road sides

- 1.1.2 Various actions to be taken for the above activities are given below. Further, the details such as baseline, target, timeline, milestones have been given in **Annexure-D**.

### 6.2 CRD 1 – Maintain potholes free roads for free-flow of traffic

All the agencies such as MC/ PWD/PUDA/PSIEC/ NHAI will put in place a system of regular inspections to identify the potholes and ensure its filled up. It shall be monitored on regular basis. A web based/ mobile app shall be set up for Public to lodge complaint against the pothole and it shall be monitored for repair.

### 6.3 CRD 2 – Water sprinkling

**2(a) Water sprinkling on dust prone roads:** Municipal Council shall identify the dust prone roads and shall prepare schedule for regular sprinkling of water on these roads to suppress dust emissions. This activity shall be started immediately. In order to save the water, the Municipal Council shall utilize the treated wastewater of STPs installed in the city.

**2(b) Procurement of Water sprinkler:** Municipal Council need to make arrangements for regular sprinkling of water on dust prone roads for which it may procure suitable number of water sprinklers.

#### 6.4 **CRD 3 – Mechanical sweeping**

Municipal Council shall procure adequate number of automatic sweeping machines for efficient and fast sweeping of the road / streets. The frequency of the sweeping shall be fixed appropriately by the Municipal Council.

#### 6.5 **CRD 4 – Creation of green buffers along the road sides**

Municipal Council/PSIEC shall identify the trees with the help of Deptt. of Horticulture which may be grown along the roads without any obstruction to the traffic. These trees shall be planted at the suitable places. The maintenance of these trees shall be done by the Municipal Council.

#### 6.6 **CRD 5 – Greening of parks, open areas community places, schools and housing societies**

In order to increase greenery in the city, the Municipal Council shall identify open areas/ lawns/ vacant lands including community places and schools in the city and these places be allocated to the NGOs or Industrial Associations for tree plantation and their maintenance. The activity of identification of the suitable sites shall be completed in a time bound manner and shall be allotted to the NGOs or Industrial Associations.

#### 6.7 **CRD 6 – Water fountains at major traffic intersections**

Municipal Council shall explore the possibility of setting up of the water fountains at important traffic junctions to reduce the emission level including dust at these points.

#### 6.8 **CRD 7 – Blacktopping of roads including pavement of road sides**

**7 (a) Kaccha/Brick Paved Roads to be made Pucca road:** Some of the city roads are not properly metalled, which are the source of dust and gaseous emissions. These roads shall be converted into metalled road. Municipal Council shall undertake this activity in a time bound manner.

**7 (b) Existing roads requiring re carpeting:** Roads require regular upkeep & recarpeting. The responsible agencies (MC/PWD/NHAI/PSIEC) shall ensure re carpeting of damaged existing roads.

**7 (c) Pavement of road sides using interlocking tiles to prevent road dust emissions:** Berms along the roads need to be stabilized with interlocking tiles to prevent road dust emissions.

## Chapter 7–Control on Burning of Garbage and Biomass

### 7.1 Key Activities

- 7.1.1 There are only small patches of agricultural land within the Mandi Gobindgarh city, however, the city is surrounded by agricultural area and a lot of biomass is generated during post harvesting paddy and wheat seasons. During wheat season biomass burning is lesser than paddy season as the farmers use the wheat crop residue as cattle fodder. The effect of biomass burning in the paddy season is augmented due to the cold climate conditions. To minimize the pollution generated from burning of garbage and biomass, following key activities are proposed:

#### Enforcement Related

- (i). CBGB 1 –Control on open burning of bio-mass in City
  - (ii). CBGB 2 – Control on burning of municipal solid waste
  - (iii). CBGB 3 –Control on burning of agriculture waste and crop residue
- 7.1.2 Various actions to be taken for the above activities are given below. Further, the details such as baseline, target, timeline, milestones have been given in **Annexure-E**.

### 7.2 CBGB 1 – Control on open burning of bio-mass in City

The burning of biomass like leaves of the trees creates lot of smoke in the area particularly during winter season, as such, the open burning of these biomass must be stopped. Municipal Council shall deploy its staff to have a check on various areas so as to forbid the inhabitants and sweepers for open burning of the biomass. A Whatsapp number shall provide to the public along with the setting up of the dedicated control room for receiving complaints of public through this system. Municipal Council shall provide education to the educational institutions, government offices, residents welfare associations regarding horticulture waste collection and its benefits by way of disposing the waste in the form of composting and encouraging the organic farming in the gardens and fields.

Municipal Corporation shall provide education to the educational institutions, government offices, residents welfare associations regarding horticulture waste collection and its benefits by way of disposing the waste in the form of composting and encouraging the organic farming in the gardens and fields.

### 7.3 CBGB 2 – Control on burning of municipal solid waste

Presently, Municipal Council has one municipal waste dumping site along the GT Road, which has not been developed scientifically for the disposal of the municipal solid waste and consequently it has become the source of burning of waste on this dump. Lot of smoke is generated which contribute to the air pollution index. Similarly at the collection point and after sweeping the streets, the garbage collected may be burnt, instead of transporting to the dumping site.

Municipal Council shall identify and develop municipal waste dumping site as per the provisions of Municipal Solid Waste Rules, 2016 and the construction work of the said site shall be completed.

**7.4 CBGB 3 – Control on burning of agriculture waste and crop residue**

The city is surrounded by agricultural area and a lot of agricultural waste is generated during post harvesting paddy and wheat season. During wheat season stubble burning is lesser than paddy season as the farmers use the wheat crop residue as cattle fodder. Punjab Pollution Control Board shall engage Punjab Remote Sensing Centre, Ludhiana for real time monitoring and reporting of stubble burning incidents. The District Administration shall constitute District Level Committees to verify the reported sites and issue challans to the violators besides filing of proceedings u/s 133 CrPc. Necessary directions / instructions shall be issued by the District Administration u/s 144 IPC to restrict harvesting of crops between 6.00 p.m to 6.00 a.m during crop harvesting seasons and attaching of the super SMS with the combine harvesters. Department of Agriculture to promote mechanical reincorporation of paddy straw to prevent its burning.

## Chapter 8 – Control on Industrial Emissions

### 8.1 Key Activities

- 8.1.1 The main stationary sources of air pollution are the industrial units, which are emitting particulate matter, sulphur di-oxide and oxides of nitrogen etc. All the rolling mills, cupola furnaces and ceramic units are using coal / furnace oil as fuel in their furnaces emitting the aforesaid pollutants, besides the process / fugitive emissions. To minimize the pollution generated from the industries, following key activities are proposed:

#### Technology Intervention

- (i). CIE 1 – Conversion to side-hood suction in furnaces
- (ii). CIE 2 – Conversion to CNG/PNG from coal

#### Enforcement Related

- (iii). CIE 3–Conversion of natural draft brick kilns to induced draft
- (iv). CIE 4 – Action against non-complying industrial units

#### Infrastructure Related

- (v). CIE 5 – Shifting of industries from non-designated areas to industrial areas

- 8.1.2 CIE 6 - Various actions to be taken for the above activities are given below. Further, the details such as baseline, target, timeline, milestones have been given in **Annexure-F**.

### 8.2 CIE 1 – Conversion to side-hood suction in furnaces

PPCB with the technical support from Council for Science and Technology has improvised technology to provide for side-hood suction in furnaces to reduce the emissions. The side-hood suction shall be implemented in a time bound manner and shall be monitored by the Board monthly.

### 8.3 CIE 2 – Conversion to CNG/ PNG from Coal

A large number of units in Gobindgarh are using coal as source of energy. With the availability of CNG in the city, PPCB will motivate the industry to convert from Coal to CNG. The State government will be approached to reduce VAT to make it viable alternative.

### 8.4 CIE 3 - Conversion of natural draft brick kilns to induced draft

There is no brick kiln in the city. However, Punjab Pollution Control Board has issued directions to the existing brick kilns of the State to convert their conventional brick kilns to induced draft technology. The Brick kilns located in the district will be monitored for conversion to the new technology in a time bound manner.

**8.5 CIE 4 – Action against non-complying industrial units:**

The regular monitoring of industries is being carried out as per the policy of the Board. In case, any industry is found violating the provisions of the Air (Prevention and Control of Pollution) Act, 1981, action under the provisions of the said Act is initiated against the violating industries. The number of inspections carried out and action taken will be monitored regularly by the District Level Committee.

**8.6 CIE 5 – Shifting of industries from non-designated areas to industrial areas**

There are certain industries, which are located in non-designated areas and the PSIEC/ Department of Industries and Commerce shall develop new areas to shift the industries from non-designated areas in coordination with Local Govt./Deptt. of Town & Country Planning.

## Chapter 9 – Control on Construction and Demolition activities

### 9.1 Key Activities

9.1.1 Mandi Gobindgarh area is a small city having population about 90,000. No major construction projects are being set up in the city. However, small construction activities are being carried out by the individual house holders / industrial units / commercial units and paving of streets by the MC on routine basis. To minimize the pollution generated from the construction and demolition activities, following key activities are proposed:

- (i). CCDA 1 –Enforcement of Construction & Demolition Rules.
- (ii). CCDA 2 – Control measures for fugitive emissions
- (iii). CCDA 3 – Ensure carriage of construction material in closed/covered vessels.

9.1.2 Various actions to be taken for the above activities are given below. Further, the details such as baseline, target, timeline, milestones have been given in **Annexure-G**.

### 9.2 CCDA 1 –Enforcement of Construction& Demolition (C&D) Rules, 2016:

**1(a)- Enforcement:** The necessary provisions of the C&D Rules, 2016 shall be implemented in the city to ensure proper management of these wastes. Municipal Council shall frame mechanism for challaning the violators found dumping the C&D waste on non-designated areas. The enforcement will be monitored through the use of technology and regular review.

**1 (b) – Infrastructure Development:** Municipal Co shall identify suitable land and set up the processing plant for effective disposal of C&D waste.

### 9.3 CCDA 2 – Control measures for fugitive emissions

Municipal Council shall ensure that

- (i). The builders provide proper curtains / sheets on the construction sites to avoid spreading of dust emissions into the environment.
- (ii). No dust should be emitted during demolition.
- (iii). No construction materials should be kept on the roads. The construction material inside the plots should also be kept in covered conditions and labour should be provided with required personal protective equipment's during the course of construction to safeguard from ill effects of fugitive emissions.

### 9.4 CCDA 3 – Ensure carriage of construction material in closed/covered vessels

The relevant enforcement authorities will ensure that the construction material to be transported through trucks / vehicles shall be covered with tarpaulin to avoid the dust emissions.

## Chapter 10 – Control through Other Steps

### 10.1 Key Activities

10.1.1 Apart from various measures being taken to control various sources of pollution, following activities will also be undertaken to control the pollution:

#### Public Awareness

(i). COS 1–Dissemination of information on Air Quality Index

#### Infrastructure

(ii). COS 2 – Establish an Air Quality Management Division at SPCB HQ

(iii). COS 3 – Setup helpline in each city/town as well as SPCB HQ

#### Enforcement

(i). COS 4 - Monitoring of DG sets and action against violations

10.1.2 Various actions to be taken for the above activities are given below. Further, the details such as baseline, target, timeline, milestones have been given in **Annexure-H**.

### 10.2 COS 1 – Dissemination of information on Air Quality Index

Punjab Pollution Control Board shall display the air quality index of the city at its prominent places for the awareness of the public including website, social media and print media.

### 10.3 COS 2 – Establish an Air Quality Management Division at SPCB HQ

There is need to strengthen technical capability pertaining to air pollution. The Board will identify the requisite skill sets and number of technical staff required along with future roadmap for the Board's activities.

### 10.4 COS 3 – Setup helpline in each city/town as well as SPCB HQ

The Board shall set up a helpline system at headquarter and each city to receive the complaints from public and have effective feedback system.

### 10.5 COS 4 - Monitoring of DG sets and action against violations

The concerned agency shall identify the commercial activities where the DG sets have been set up without fulfilling the norms for control of emissions and noise. Punjab Pollution Control Board shall identify the illegal DG sets manufacturers and necessary directions for their non-operation / closure shall be issued. Punjab Pollution Control Board shall identify the industries where the DG sets have been set up without fulfilling the norms for control of emissions and noise.

### Chapter 11–Graded Response Action Plan for Mandi Gobindgarh

#### 11.1 Graded Responses

In order to mitigate the impact of higher level of pollution when AQI crosses satisfactory level, Graded Response Action Plan has been prepared for Mandi Gobindgarh for implementation under different Air Quality Index (AQI) categories namely, Moderate & Poor, Very Poor and Severe.

#### 11.2 Agency Responsible for Graded Response

The concerned authorities responsible for taking action when AQI reaches various levels have been indicated against the proposed action. The authorities will work in coordination with and under the overall supervision of the District Level Committee.

#### 11.3 Action in case of Severe AQI (Value $\geq$ 400)

11.3.1 Following action shall be taken by the concerned authorities:

S.N.	Severe (AQI value becomes 401-500)	Agency responsible / Implementing Agency
1	Temporary closure of brick kilns, hot mix plant, induction furnaces, rolling mills etc.	PPCB
2	Stop construction activity	MC, Mandi Gobindgarh
3	Alert in newspapers / local cable TV to advice people with respiratory and cardiac patients to avoid polluted areas and restrict outdoor movement.	MC, Mandi Gobindgarh, Distt. Administration & PPCB
4	Sprinkling of water at the various dust emission points	MC, Mandi Gobindgarh
5	Deploy Traffic police for smooth traffic flow at the identified vulnerable areas	Traffic Police
6	Stringently enforce / stop garbage burning in landfills and other places and impose heavy fines on person responsible.	MC, Mandi Gobindgarh
7	To increase the frequency of mechanized sweeping on roads with heavy traffic and water sprinkling also on unpaved roads.	MC, Mandi Gobindgarh
8	Stop entry of heavy good vehicles except essential commodities into Mandi Gobindgarh	Traffic Police
9	To take decision regarding closing of schools	District Administration

#### 11.4 Action in case of Very Poor AQI (Value between 301 to 400)

11.4.1 Following action shall be taken by the concerned authorities:

S.N.	Very Poor (AQI value becomes 301-400)	Agency responsible / Implementing Agency
1	Restraining the operation of air polluting industries i.e. induction furnaces, rolling mills, brick kilns etc. for 8 hours/day	PPCB
2	Banning of construction activities	MC, Mandi Gobindgarh
3	Stop of garbage burning in the landfill areas or in the open fields	MC, Mandi Gobindgarh
4	Water sprinklings at the dust emission points etc.	MC, Mandi Gobindgarh
5	Strict vigil and enforcement of PUC norms	Traffic Police
6	Strict vigil and no tolerance for visible emissions from the vehicles and industries	PPCB and Traffic Police.
7.	Strictly enforce Supreme Court ban on fire crackers	MC, Mandi Gobindgarh & Distt. Administration
8	Strictly enforce all pollution control regulations in the air polluting industries like induction furnaces, rolling mills, brick kilns etc.	PPCB

#### 11.5 Action in case of Poor AQI (Value between 201 to 300)

11.5.1 Following action shall be taken by the concerned authorities:

S.N.	Poor (AQI value becomes 201-300)	Agency responsible / Implementing Agency
1	Strictly enforce garbage burning in landfill and other places and impose heavy fines on person responsible	MC, Mandi Gobindgarh
2	Increase frequency of mechanized cleaning of road and sprinkling of water on roads. Identify road stretches with high dust generation.	MC, Mandi Gobindgarh
3	Stop use of coal / firewood in open eateries	MC, Mandi Gobindgarh
4	Strictly enforce rules for dust control in construction activities and close non-complaint sites.	MC, Mandi Gobindgarh
5	Close / Strictly enforce all pollution control regulations in the air polluting industries like induction furnaces, rolling mills, brick kilns etc.	PPCB
6	Restricting air polluting industries i.e. induction furnaces, rolling mills, brick kilns etc. for 12 hours/day	PPCB

11.6 **Action in case of moderately polluted AQI (Value between 101 to 200)**

11.6.1 Following action shall be taken:

<b>S.N.</b>	<b>Moderately polluted (AQI value becomes 101-200)</b>	<b>Agency responsible / Implementing Agency</b>
1	Increasing the frequency of mechanized cleaning the roads etc.	MC, Mandi Gobindgarh
2	Sprinkling of water at the dust emitting points	MC, Mandi Gobindgarh
3	To stop open burning of garbage and municipal solid waste	MC, Mandi Gobindgarh
4	Close / strictly enforce all pollution control regulations in the air polluting industries like induction furnaces, rolling mills, brick kilns etc.	PPCB

## Chapter 12 –Monitoring Requirements and Formats

### 12.1 Monitoring Requirements

12.1.1. Following are the key components of monitoring requirements of the Plan:

- (i) Monitoring of activities for control on Vehicular Emissions
- (ii) Monitoring of activities for control on Road Dust
- (iii) Monitoring of activities for control on Burning of Garbage and Biomass
- (iv) Monitoring of activities for control on Industrial Emissions
- (v) Monitoring of activities for control on Construction and Demolition activities
- (vi) Monitoring of activities for control on other sources

12.1.2. Further, various activities can be classified into one of the following categories:

- (i) Public Awareness
- (ii) Enforcement
- (iii) New Infrastructure
- (iv) Maintenance activities
- (v) Policy Advocacy
- (vi) Technology Support

### 12.2 Development of Environment Protection Monitoring System (EPMS)

In order to keep track of the progress made by concerned stakeholder departments on various projects, activities and initiatives, it is proposed to develop a dedicated IT platform namely Environment Protection Monitoring System (EPMS).

12.2.1. To work out detailed formats and setting up online system to track progress of various activities, a dedicated team of PPCB and NIC is working on it.

12.2.2. The system will ensure that information is captured at source and transmitted to the System and the system will be able to analyse and report it in the prescribed format. The system will generate different reports for use at different levels. The System will also have dashboard to present the key indicators and metrics.

### Chapter 13 –Governance and Supervision

#### 13.1 Three Tier Monitoring

**13.1.1.** Monitoring will be done by the Departments concerned, which are executing or responsible for particular activities. In addition, there will be three level of Air Quality Monitoring Committees (AQMC) to review and monitor the status:

- (i) AQMC at District Level under Deputy Commissioner
- (ii) AQMC at State level under Principal Secretary, Environment
- (iii) Steering Committee under Chief Secretary

**13.1.2.** PPCB will set up a dedicated team for supporting coordination and monitoring of the Action Plan. It will also develop suitable IT platform for monitoring purposes.

#### 13.2 AQMC at District Level

District Level Committee will be constituted under the chairmanship of Deputy Commissioner, Fatehgarh Sahib and the monthly meeting of the District Level Committee will be conducted to discuss / monitor the progress of the activities to be performed under the Action plan. The committee shall involve civil society organization and their participation will be ensured for achieving various targets mentioned in the Action plan. The district level committee shall constitute the followings:

1	The Deputy Commissioner, Fatehgarh Sahib	Chairman
2	The Senior Superintendent of Police, Fatehgarh Sahib	Member
3	The Environmental Engineer, Punjab Pollution Control Board, Regional Office, Fatehgarh Sahib	Convener
4	The Executive Officer, Municipal Council, Mandi Gobindgarh	Member
5	The Regional Transport Authority, Patiala	Member
6	The Divisional Forest Officer, Patiala	Member
7	Sub Divisional Magistrate, Amlah	Member
8	The Executive Engineer, PWD (B & R), Sirhind, Distt. Fatehgarh Sahib	Member
9	The District Town Planner, Fatehgarh Sahib	Member
10	The Executive Engineer, Punjab Small Industries & Export Corporation, 18, Himalya Marg, Udyog Bhawan, Sector-17-A, Chandigarh	Member
11	The General Manager, District Industries Centre, Fatehgarh Sahib	Member

12	The Asstt. Executive Engineer, Punjab Small Industries & Export Corporation, Mandi Gobindgarh	Member
13	The District Agriculture Officer, Deptt. of Agriculture, Fatehgarh Sahib	Member
14	The General Manager-cum- Project Director, NHAI, 17-L, Model Town, Ambala City.	Member
15	The Vertical Head – Projects, IRM Energy Pvt. Ltd., C.G. Road, Navrangpura, Ahmedabad 380009, Gujrat	Member
16	The President, Gobindgarh Steel Chamber of Commerce & Industries, Mandi Gobindgarh	Member
17	The President, All India Steel Re-Rollers Association, Mandi Gobindgarh	Member
18	The President, Small Scale Steel Re-Rollers Association, Mandi Gobindgarh	Member
19	The President, Mandi Gobindgarh Induction Furnace Association, Mandi Gobindgarh	Member

### 13.3 AQMC at State Level

**13.3.1.** State Level Air Quality Monitoring Committee (AQMC) will comprise of the following:

1	Administrative Secretary, Department of Environment	Chairman
2	Director, Local Government	Member
3	Director, Transport	Member
4	Director, Industries and Commerce	Member
5	ADGP, Traffic	Member
6	Director, Directorate of Environment & Climate Change	Member
7	Chairman, PPCB	Member
8	Representatives of NGO/ Expert Members	Member
9	Representatives of NGO/ Expert Members	Member
10	Joint Director, Directorate of Environment & Climate Change	Convener

**13.3.2.** The State level Committee would meet every month to review the progress of the action plan and take corrective measures and also escalate issued to the Steering committee for intervention.

#### 13.4 Steering Committee

**13.4.1.** There will be a Steering Committee under Chief Secretary and comprising of Administrative Secretaries of relevant administrative departments for monitoring the progress, resolving issues and enforcing accountability.

**13.4.2.** The Committee will comprise of the following:

1	Chief Secretary	Chairman
2	Administrative Secretary, Environment	Member
3	Administrative Secretary, Local Government	Member
4	Administrative Secretary, Industries and Commerce	Member
5	Administrative Secretary, Transport	Member
6	Administrative Secretary, PWD	Member
7	ADGP, Traffic	Member
8	Director, Directorate of Environment & Climate Change	Member
9	Chairman, PPCB	Member
10	Additional Secretary, Environment	Convener

**Chapter 14 –Risk Mitigation Plan****14.1 Identification of Major Risks**

Following are the major risks:

- (i) Lack of formal source apportionment study
- (ii) Accuracy and completeness of baseline data, targets and milestones
- (iii) Lack of formal analysis of implementation barriers

**14.2 Source Apportionment Study**

It is important to have the assessment of various sources and their contribution to the air pollution and accordingly focus on controlling those sources. Currently no such study has been done. In order to mitigate the risk, Punjab Pollution Control Board shall get source apportionment study of the city conducted to adjudge various sources contributing air pollution in the area and mitigation thereof. The same will be incorporated in the Action Plan.

**14.3 Accuracy and completeness of baseline data, targets and milestones**

The baseline data, targets and milestones are not very accurate or complete. During the course of implementation detailed surveys and analysis will be carried out and the baseline data, targets and milestones will be suitably updated and same will be reviewed in the AQMC meeting at District Level.

**14.4 Lack of formal analysis of implementation barriers**

Various activities included in the action plan need to be carefully analysed with respect to implementation challenges so that suitable remedial measures could be envisaged. Efforts will be made to study various barriers and improving the efficacy and effectiveness of the proposed activities by overcoming the shortcomings in the present system.

## Chapter 15 –Action plan for Training and Capacity Building

### 15.1 Importance

It is important to enhance the capability and skills of the officers of stakeholder departments for effective implementation of Air Action Plans. Therefore, training and capacity building programmes related to various technical aspects are required to be conducted for different functionaries of relevant departments & organizations at various levels of hierarchies.

### 15.2 Objectives

- (i) Raising awareness and changing the mindset.
- (ii) Building trust and appreciation for the purpose of various Environment Protection Plans, environmental concerns, issues, roles and responsibilities of different stakeholders.
- (iii) Improving skills regarding existing practices, procedures and methodologies.
- (iv) Promoting an integrated and holistic approach for addressing the concerns.
- (v) Enhancing core competencies of concerned stakeholders in relevant areas of environment improvement.
- (vi) Strengthening institutional arrangements
- (vii) Reinforcing accountabilities and identifying aspects that require improvement
- (viii) Understanding new challenges and requirements

### 15.3 Need Assessment

Specific modules for training of nodal and other responsible officers of various line departments involved in implementation of Air Action Plan are required to be developed for which need assessment would be carried out.

### 15.4 Involvement of Institutions and Experts

Organizations of national & international repute having expertise in the area of environment in general and air pollution in particular shall be involved for conducting need specific trainings & capacity building programmes for various target groups and officials of stakeholder departments. Experts would also be involved in developing knowledge products and information material on various issues & technologies for creating mass awareness to build a responsible society with an aim to reduce air pollution in cities. Further, the details such as baseline, target, timeline, milestones have been given in **Annexure-I**

## Annexure A – Trends in Air Quality of Mandi Gobindgarh

## 1. Station at M/s United Steel, Mandi Gobindgarh

Month	PM <sub>10</sub> (µg/m <sup>3</sup> )					NO <sub>x</sub> (µg/m <sup>3</sup> )					SO <sub>2</sub> (µg/m <sup>3</sup> )				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
January	171	153	118	101	173	37	35	28	33	40	8	7	7	6	7
February	160	166	122	108	123	37	38	27	30	40	6	8	7	6	7
March	168	150	138	111	149	39	39	30	28	41	7	7	7	6	6
April	192	152	132	98	137	40	40	38	38	36	8	7	7	6	7
May	162	131	117	104	140	38	36	37	29	38	7	6	7	6	7
June	169	119	112	101	142	38	36	39	28	38	8	7	6	6	7
July	150	115	118	118	134	40	34	37	30	37	8	6	7	6	7
August	111	117	117	114	131	35	34	36	36	37	7	6	7	7	8
September	119	108	122	120	117	36	34	35	37	36	7	6	6	7	7
October	121	114	146	201	117	38	38	37	45	37	7	6	7	8	7
November	99	162	154	277	136	32	42	36	41	41	7	7	7	9	8
December	109	138	113	174	138	35	32	32	40	40	7	7	6	13	8
<b>Annual Avg.</b>	<b>144</b>	<b>135</b>	<b>126</b>	<b>136</b>	<b>136</b>	<b>37</b>	<b>37</b>	<b>34</b>	<b>35</b>	<b>38</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>

## 2. Station at M/s Modi Oil Mills, Shifted to Modern Automotive in Nov. 2009, Mandi Gobindgarh

Month	PM <sub>10</sub> (µg/m <sup>3</sup> )					NO <sub>x</sub> (µg/m <sup>3</sup> )					SO <sub>2</sub> (µg/m <sup>3</sup> )				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
January	166	146	131	123	161	36	35	27	33	41	8	8	6	6	7
February	143	159	134	110	110	36	37	26	32	42	7	7	7	6	7
March	173	155	126	103	119	37	38	30	29	38	7	8	7	6	7
April	155	158	138	104	183	38	39	37	32	35	7	7	7	6	7
May	154	125	121	102	135	39	37	37	28	39	7	7	7	6	7
June	155	132	120	103	143	37	36	38	28	37	8	7	6	6	7
July	139	123	122	122	147	39	34	37	31	39	8	6	6	6	7
August	106	127	111	106	116	38	35	34	36	38	7	7	6	7	7
September	121	111	107	112	111	38	33	35	39	38	8	7	6	7	7
October	113	115	137	205	133	35	36	36	45	38	8	7	7	9	8
November	99	142	162	277	156	32	40	36	42	38	7	7	7	9	8
December	110	140	114	195	138	35	34	33	38	41	8	7	6	8	7
<b>Annual Avg.</b>	<b>136</b>	<b>136</b>	<b>127</b>	<b>139</b>	<b>138</b>	<b>37</b>	<b>36</b>	<b>34</b>	<b>34</b>	<b>39</b>	<b>8</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>

## 3. Station at M/s Raj Steels, Mandi Gobindgarh

Month	PM <sub>10</sub> (µg/m <sup>3</sup> )					NO <sub>x</sub> (µg/m <sup>3</sup> )					SO <sub>2</sub> (µg/m <sup>3</sup> )				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
January	129	141	129	110	162	35	34	30	32	41	7	6	6	6	7
February	104	144	115	108	102	17	35	26	32	41	7	6	6	6	7
March	110	125	120	101	119	33	35	31	27	38	6	6	6	6	7
April	149	132	129	106	171	37	36	37	31	33	6	6	7	6	7
May	141	117	116	108	116	35	35	38	29	37	6	6	6	6	7
June	164	109	126	97	145	37	35	37	28	36	8	6	6	6	7
July	134	98	133	122	129	37	37	37	31	36	7	6	7	6	7
August	120	97	99	109	123	35	31	38	35	38	7	6	6	7	7
September	110	106	107	117	116	36	33	34	38	38	6	5	6	7	7
October	125	112	134	194	123	38	36	38	43	37	8	6	7	8	7
November	100	119	163	265	146	33	38	36	43	38	7	6	7	8	8
December	106	127	117	186	139	33	31	26	42	37	6	7	6	8	8
<b>Annual Avg.</b>	<b>124</b>	<b>119</b>	<b>124</b>	<b>135</b>	<b>133</b>	<b>34</b>	<b>35</b>	<b>34</b>	<b>34</b>	<b>38</b>	<b>7</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>7</b>

## Annexure B – AQI data from 2017 to 2018 depicting the air quality in Mandi Gobindgarh

AQI Data for year 2017			AQI Data for year 2018		
Month	AQI	Category	Month	AQI	Category
Jan-17	164	Moderate	Jan-18	166	Moderate
Feb-17	166	Moderate	Feb-18	130	Moderate
Mar-17	152	Moderate	Mar-18	117	Moderate
Apr-17	194	Moderate	Apr-18	114	Moderate
May-17	195	Moderate	May-18	146	Moderate
Jun-17	219	Poor	Jun-18	163	Moderate
Jul-17	203	Poor	Jul-18	78	Satisfactory
Aug-17	123	Moderate	Aug-18	62	Satisfactory
Sep-17	173	Moderate	Sep-18	56	Satisfactory
Oct-17	270	Poor	Oct-18	108	Moderate
Nov-17	281	Poor	Nov-18	159	Moderate
Dec-17	209	Poor	Dec-18	154	Moderate
<b>2017 annual Avg.</b>	<b>196</b>	<b>Moderate</b>	<b>2018 Annual avg.</b>	<b>121</b>	<b>Moderate</b>

## Annexure C – Action Plan for Control on Vehicular Emissions

Sr No.	Activity	Implementation period (short/mid/long term)	Responsible Agencies	Base Line	Target to be achieved	Target Date	Milestones (Monthly / Quarterly)	Financial Implications, if any (Estimated Cost)
1	CVE 1 - Public awareness campaign for control of vehicular emissions	Short term	Deptt. of Transport	Presently, awareness is being done in the Educational Institutes under SadakSurakhya Abhiyan	The public has to be motivated to play their role in curbing the air pollution	Regular Activity	<ol style="list-style-type: none"> <li>1. Public awareness campaign in print and electronic media-Twice a month</li> <li>2. Use of Social Media Facebook, twitter, Instagram-Regular</li> <li>3. Jingles on air pollution on local radio and TV-Local FM Radio will be hired</li> <li>4. Awareness drives in educational institutions-Monthly</li> <li>5. Public meetings-Monthly</li> <li>6. Nukarnataks-Quarterly</li> </ol>	NIL

		Short Term	Traffic Police.	Organised 17 no. awareness camps during Jan & Feb 2019 through Traffic Education Cell	Public awareness campaigns to be continued	Regular activity	--	Nil
2	CVE 2 - Remote sensor based PUC system	Medium Term	Department of Transport	Manual checking at Pollution Checking Centre (PCC) exists	All Pollution CheckingCentres will be linked with VAHAN 4.0 software of the Transport deptt.	31.01.2020	<ol style="list-style-type: none"> <li>1. Preparation of RFP for selection of vendors - Under Process</li> <li>2. Allotment of work after selection of vendors – 2 Months</li> <li>3. Development of software solution to link all PUC centres – 9 months</li> <li>4. Linking of software to VAHAN 4.0 software of the transport Deptt.- 1 Month</li> </ol>	Nil

3	CVE 3 - Extensive drive against polluting vehicles	Short term	Traffic Police	450 Challans were issued against polluting vehicles in 2018 and 161 challans issued upto Feb, 2019.	Regular inspection to be continued and violators to be challaned.	Regular Activity	--	Nil
4	CVE 4 (a) – Prevent parking of vehicles in non-designated areas by creating parking infrastructure	Long Term	Municipal Council	<ul style="list-style-type: none"> <li>• 1 No. designated parking lot site identified for development - Bus stand (for commercial vehicles)</li> <li>• No Multi storey parking lots exists</li> <li>• Parking for trucks/ commercial: 1 no. transport nagar exists.</li> </ul>	<ul style="list-style-type: none"> <li>• Identified site to be developed.</li> <li>• No requirement of Multi storey parking lot.</li> <li>• Existing Parking areas for trucks/ commercial vehicles to be renovated.</li> </ul>	31.01.2020	<ol style="list-style-type: none"> <li>1. Estimation- Under process</li> <li>2. Tendering- After estimation</li> <li>3. Work allotment- After tendering</li> <li>4. Completion- Within 1 year</li> </ol>	Rs. 2 crore
	CVE (4b) – Enforcement	Short Term	Traffic Police.	176 no. of challans issued in the month of Jan & Feb, 2019	Regular inspection to be continued and violators to be challaned.	31.12.2019	-	Nil
		Med. Term	Municipal Council	<ul style="list-style-type: none"> <li>• Roadside parking earmarked by yellow line : 4</li> </ul>	<ul style="list-style-type: none"> <li>• Identified additional 1 km of Roadside parking for</li> </ul>			Rs. 7 lacs

				<p>no. (3 km existing)</p> <ul style="list-style-type: none"> <li>"No Parking" sign Boards installed - Nil.</li> </ul>	<p>earmarking are- Main Bazar, HDFC bank, Motia Khan, MC office road</p> <ul style="list-style-type: none"> <li>"No Parking" sign Boards being installed in non designated areas – 50 no.</li> </ul>			
5	CVE 5 - Check fuel adulteration	Short Term	Department of Food and Civil Supplies/Oil Industry	<p>As informed by Deptt.of Food &amp; Civil Supplies, the Oil Companies have adopted Online Automated System for transportation &amp; checking the density of Petrol/Diesel.</p>	<p>State Level Coordinator, Oil Companies will conduct inspections on annual, quarterly &amp; random basis.</p> <p>- In case of complaint, Department of Food &amp; Civil Supplies in coordination with local oil company officials shall check fuel adulteration &amp; if any discrepancy is noticed then action against the violator shall be taken by State Level Coordinator of Oil Company.</p>	Regular activity	-	Nil

6	CVE 6 - Widening of road and infrastructure for decongestion of road	Short term	Municipal Council	1.5 Kms of Amloh road identified	Identified road to be widened.	30.10.2019	1. Estimation-Completed 2. Tendering and Work allotment-Under process 4. Completion-Within 6 months	Rs. 1.80 Crore
		Long term	PWD (B&R)	1.87 km road length to be widened (GT road to Ambe Majra)	Identified road to be widened.	30.03.2021	1. Identification-Complete 2. Preparation of DPR, Tendering and Work allotment after receiving administrative approval.	Rs. 3.85 Crore
7	CVE 7 - Introduce intelligent traffic systems	NA	Municipal Council	1 no. conventional traffic light exists	Intelligent traffic system not required.	NA	NA	NIL
8	CVE 8 - Construction of expressways/ bypasses to avoid congestion	NA	PWD (B&R)	Presently, six lane National Highway exists	Not required	NA	NA	NIL

9	CVE 9 – Phasing out commercial diesel vehicles more than 15 years old	Long Term	Department of Transport	New commercial diesel vehicles is registered for 2 years and thereafter, fitness certificate is being issued every year.	Matter of fixing the age of commercial diesel vehicle is being examined legally.	-	-	Nil
10	CVE 10 – Promotion of E- vehicles	Medium term	Deptt. of Transport	Presently, most of the vehicles are running on diesel and petrol. -Framing of the E-vehicle policy is in the final stages.	After approval from Competent Authority E-Vehicle policy will be notified.	31.01.2020	1. Framing & Notification of E-vehicle policy – 9 months 2. Providing public charging points for E-vehicles as per Govt. policy.	NIL
11	CVE 11 (a) – Introduction of CNG based public transport (Infrastructure development)	Medium Term	Deptt. of food & civil supplies	<ul style="list-style-type: none"> <li>01 nos. of CNG Station exists</li> <li>Work being executed M/s IRM</li> </ul>	<ul style="list-style-type: none"> <li>To upgrade 2 No conventional filling stations to CNG filling stations.</li> <li>Deptt to follow up &amp; facilitate Up gradation and commissioning of CNG filling stations &amp; laying of pipeline.</li> </ul>	31.03.2020	Upgradation & commissioning of CNG filling stations	Nil
	CVE 11 (b) – Introduction	NA	Municipal Council	At present no CNG based city bus	CNG based city bus service not required.	-	-	Nil

	of CNG based city bus service			service exits.				
	CVE 11 (c) – Introduction of CNG based autos / taxis	Long Term	Deptt. of Transport	At present, no CNG based auto/ taxis exits. PPCB has issued direction under section 31-A of Air Act 1981 to stop registration of new diesel / petrol driven auto rickshaw (s), in 5 districts including Fatehgarh Sahib, w.e.f 01.02.2019.	To take measures to introduce CNG based auto/ taxis.	-	Implementation of PPCB orders dated 03.01.2019.	Nil
12	CVE 12 – Retrofitting of particulate filters in diesel vehicles for BS-V fuels	Long Term	Department of Transport	Presently, India is implementing BS-IV standards for diesel vehicles.	India is going to skip adopting BS-5 norms and shift directly to adopting BS-6 norms by 2020	-	The steps for retrofitting of particulate filters in diesel vehicles is to be undertaken by Automotive industry under directions from Government of India as and when BS-VI fuels will be available	NIL

## Annexure D – Action Plan for Control on Road Dust

Sr No.	Activity	Implementation period (short/Medium/long term)	Responsible Agencies	Base Line	Target to be achieved	Target Date	Milestones (Monthly / Quarterly)	Financial Implications, if any (Estimated Cost)
1	CRD 1 – Maintain potholes free roads for free-flow of traffic	Short term	Municipal Council	5 Km road length has been identified as follows: (Arrey Mill Road-1.5 Km, Backside MC office, Mandi Gobindgarh-500 mtr., Under bridge road-1 Km, Road near ESI Hospital-1 Km&Radha Swami Satsang Bhawan Road- 1 Km)	Repair of 5 km of identified road length	30.10.2019	1. Identification- Completed 2. Estimation- Completed 3. Tendering- Completed 4. Work allotment- Allotted 5. To be completed- Within 6 months	Rs. 1.50 Crore
		Medium Term	PWD (B&R)	9 Km of major road length has been identified (Nabha Gobindgarh road (SH-12A)	Toll road already made pothole free		1. Tendering & Work allotment – completed	Rs. 25 lacs
2	CRD 2 (a) – Water sprinkling	Short Term	Municipal Council	5.6 km of Road length Identified for water sprinkling (Amloh	Regular Water sprinkling on identified road	Regular Activity	-	Nil

				Road-4 Kms, Service Roads and under bridge road around NH-1- 6 Kms)				
	CRD 2 (b) – Procurement of Water sprinkler	Medium Term	Municipal Council	1 No. water sprinklers- exists.	2 more sprinklers each of 5KL capacity to be procured	30.10.2019	1. Estimation- Completed 2. Tendering -Under process.	Rs.46 lacs
3	CRD 3 – Mechanical sweeping	Medium Term	Municipal Council	-Presently manual sweeping being done. -Identification of 7.5 Km roads has been done as below : (Arrey Mill Road- 1.5 Km, Jassran Road- 1 Km, Partap Mill Road- 300 mtr, Bank of India Road- 400 mtr, MC office Road- 300 mtr, Dharam Mill Road- 500 mtr, Talwara Road-1 Km, KotlaRoad- 500 mtr, Ram Nagar Mill Road- 500 mtr&Amlah Road-	Procurement of 1 no. mechanical sweeping machines for regular sweeping of identified roads.	31.03.2020	1. Estimation- Completed 2. Tendering -Under process	Rs. 55 Lacs

				1.5 Km)				
4	CRD 4 - Creation of green buffers along the road sides	Short term	Municipal Council	Identified 12 Kms of road sides for plantation as below : [Dharam Mill Road- 500 mtr, Master Colony Road- 500 mtr, Ram Nagar Mill Road- 1 Km, Talwara Road-1 Km, Bank of India Road- 500 mtr, Model Town area Road- 500 mtr, AmbeyMajra Road- 4 Km, Ajnali Road- 2 Km and Slip Road along (NH-1)- 2 Km]	-3000 trees to be planted in industrial, residential areas and along road sides.	Regular Activity	1. Identification of roads-Completed 2. Plantation to be started in Monsoon	Rs. 18.33 Lacs
		Short term	PSIEC	800 no. of plants already planted	550 no. plants to be planted in industrial areas along road sides.	Regular Activity	1. Plantation to be started in Monsoon	Rs. 10 Lacs
5	CRD 5 - Greening of parks, open areas	Short Term	Municipal Council	-Identified 5 no. sites / open areas for plantation of trees:	-3000 trees to be planted in the identified areas.	Regular activity	1. Identification of open areas- Completed 2. Plantation-To be	Rs. 4 Lacs

	community places, schools and housing societies			(Govt. Senior Secondary School for Boys, Govt. Senior Secondary School for Girls, Govt. Primary School, Ajnali, Govt. Primary School, AmbeyMajra and Primary School, Tarlokपुरी) -11 nos of parks are being maintained by MC and Park Management Committees.	-To ensure all public parks have adequate green cover/ plantation.		started in rainy season	
6	CRD 6 - Water fountains at major traffic intersections	Medium Term	Municipal Council	1 no. traffic intersection point identified near Railway Station (Balu Ram Dharamshala)	To install water fountain at identified traffic intersection	30.11.2019	1. Identification- Completed 2. Estimate- Under process 3. Tendering and Work allotment will be done within 6 months after administrative approval.	Rs. 15 Lacs
7	CRD 7 (a) Kaccha/Brick	Medium Term	Municipal Council	Identified 25 Km of Kaccha roads for making pucca	Blacktopping of identified	31.03.2021	1. Estimation- Under process 2. Tendering, Work	Rs 8.20 Crore

Paved Roads to be made Pucca roads			roads. (AmbeyMajra Road- 3 Km, Ajnali Road- 3 Km, Jassran Road-3 Km, Kuchha shanti Nagar-7 Km, Iqbal Nagar- 3 Km, Sant Nagar- 2 Km, Sukha Singh Colony-3 Km and Talwara Road-1 Km)	Kaccha roads to be done for control of road dust emissions.		allotment- After estimation and necessary approvals from the house. 3. Completion-One year after laying of sewerage system which is to be completed by PWSSB.	
CRD 7 (b) Existing roads requiring recarpeting	Short Term	Municipal Council	Nil	-	--	-	
	Short term	PSIEC	Identified 9 kms of existing roads for re-carpeting	Identified roads to be re carpeted.	30.06.2019	Recarpeting to be completed under IID scheme of GOI.	Rs. 1.35 Crore
CRD 7 (c) Pavement of road side using interlocking tiles to prevent road dust emissions	Medium Term	Municipal Council	Identified 10 Kms of road length from Amloh Chowk to Canal Bridge requiring Pavement of road side	Pavement of road side using interlocking tiles to prevent road dust emissionsof identified road	31.03.2020	1. Estimation- Completed 2. Tendering- Under process. 3. Work allotment- After tendering 4. Completion- 6 months after receiving the administrative approvals.	Rs. 1.31 Crore

		Medium Term	PWD	Identified 53.84 Km of 11 existing roads and 31 new proposed roads	Pavement of road side using interlocking tiles of identified roads	31.03.2021	<ol style="list-style-type: none"> <li>1. Identification- Completed</li> <li>2. DPR, Tendering, Work allotment and project will be completed after one year of Administrative approval</li> </ol>	Rs.4.23 Crore
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## Annexure E – Action Plan for Control on Burning of Garbage and Biomass

Sr No.	Activity	Implementation period (short/Medium/long term)	Responsible Agencies	Base Line	Target to be achieved	Target Date	Milestones (Monthly / Quarterly)	Financial Implications, if any (Estimated Cost)
1	CBGB 1 – Control on open burning of bio-mass in City	Medium Term	Municipal Council	- 27 Kaccha pits have been made in different parks for collection of horticulture waste to avoid burning of Bio Mass. - 11 No. Parks under Mc	48 nos. of Pucca compost pits are to be constructed in parks and green belts	30.10.2019	i) Estimate : Completed ii) Tender : Under process	Rs. 4.80 Lacs
2	CBGB 2 – Control on burning of municipal solid wastes	Medium Term	Municipal Corporation	-No. of inspections – 11 -No. of Challans issued - NIL -No. of awareness camps – 10 -Burning of municipal solid wastes stands prohibited.	Regular inspections to be continued for Control on burning of municipal solid wastes and Challans to be issued to the violators.	Regular Activity	-	Nil

3	CBGB 3 – Control on burning of agriculture waste and crop residue	Short term	District Administration, Department of Agriculture, Police, PSPCL, Revenue Department & PPCB	<ul style="list-style-type: none"> <li>• Identification of sites by PRSC (PAU)</li> <li>• Regular monitoring under supervision of DC</li> <li>• 182 challans issued in which total amount of Rs 5,87,500/- imposed as Environmental compensation in year 2018 by PPCB</li> <li>• Rs.37,500/- Environmental compensation recovered upto Dec 2018.</li> </ul>	Enforcement by Team	During wheat/rice harvesting season	<ol style="list-style-type: none"> <li>1. To create awareness among farmers regarding health effects of residue burning</li> <li>2. Deptt. of Agriculture to provide subsidy for equipment/machinery as per Govt. policy</li> <li>3. Teams will be constituted one month prior to start of each harvesting season.</li> <li>4. Identification of no. of fire incidents by PRSC.</li> <li>5. Visit to identified sites</li> <li>6. Imposing Environmental compensation on defaulters</li> </ol>	NIL
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							<p>7. PSPCL shall ensure electricity for in-situ management</p> <p>8. Progress review in District Level Air Quality Monitoring Committee meeting</p> <p>9. Recovery of Environmental compensation</p>	
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## Annexure F – Action Plan for Control on Industrial Emissions

Sr No.	Activity	Implementation period (short/Medium/long term)	Responsible Agencies	Base Line	Target to be achieved	Target Date	Milestones (Monthly / Quarterly)	Financial Implications, if any (Estimated Cost)
1	CIE 1 – Conversion to Side Hood suction in furnaces	Short Term	PPCB	Total 69 induction furnace to be converted. 19 nos. Induction furnace have already converted.	50 Induction furnaces are required to be converted.	30.9.2019	-	NIL
2	CIE 2 – Conversion to CNG from coal	Long term	PPCB	6 nos. industries have converted their furnace from coal to CNG fuel	220units will shift to cleaner fuel	31.03.2021	<ol style="list-style-type: none"> <li>1. The matter to be taken with State Government.</li> <li>2. Providing pipeline for transportation of CNG-One year.</li> <li>3. Procurement of instruments</li> <li>4. Installation</li> <li>5. Commissioning</li> </ol>	NIL

3	CIE 3 - Conversion of natural draft brick kilns to induced draft.	Short Term	PPCB	No brick kiln	NIL	NIL	NIL	NIL
4	CIE 4 – Action against non-complying industrial units	Short term	PPCB	Regular inspection as per policy of the Board	<ul style="list-style-type: none"> <li>• Action against defaulting industries</li> <li>• Checking the adequacy of APCD installed by the industries</li> </ul>	Regular activity	<ul style="list-style-type: none"> <li>-Identification of industries in which APCD is installed.</li> <li>- Checking the adequacy of APCD already installed.</li> <li>- Issuing show cause notice to the industries violating norms.</li> <li>-Facilitating industry to get set right the inadequate APCD.</li> </ul>	Nil
5	CIE 5 – Shifting of industries from non-designated areas to industrial areas	Long Term	Local Govt. / Deptt of Town & CountryPlanning/ Deptt of Industries.	Industries located in non designated areas need to be identified for shifting.	Identified Industries required to be shifted to the designated industrial	Upto 2031	- Timeline for shifting the industry as per provision of notified Master Plan	Nil

## Annexure G– Action Plan for Control on Construction and Demolition Activities

Sr No.	Activity	Implementation period (short/Medium/long term)	Responsible Agencies	Base Line	Target to be achieved	Target Date	Milestones (Monthly / Quarterly)	Financial Implications, if any (Estimated Cost)
1	CCDA 1 (a) – Enforcement of Construction & Demolition Rules.	Short Term	Municipal Council	Inspection is being carried out as per need for bigger/commercial & road projects.	-Regular inspection will be made for Control of Construction & Demolition waste.  -Counter verification to be done by ATP/EO.	Regular Activity	--	Nil
	CCDA 1 (b) – Infrastructure of Construction & Demolition waste	Long Term	Municipal Council	Presently no site for C&D waste disposal exists	Identification of site & setting up of processing plant for C& D Waste	31.03.2022	DPR – Under Process Tendering – After estimation Work Allotment- After Tendering	NIL
2	CCDA 2 – Control measure for fugitive measures	Short Term	Municipal Council	At present, minimal measures being taken by the building contractors.	-Proper curtains / sheets on the construction sites to be provided & the construction material be kept in covered conditions  -Regular inspection	Regular activity	Regular inspections	Nil

					to be made and challan issued to violators			
3	CCDA 3 – Ensure carriage of construction material in closed/covered vessels.	Short Term	Municipal Council	MC has already directed all contractors to carry building materials and malba in enclosed/ covered vessels.	Regular inspection will be made to ensure implementation of directions given to contractors to carry the building materials and malba in enclosed/ covered vessels.	Regular Activity	-	Nil

## Annexure H – Action Plan for Control through Other Steps

Sr No..	Activity	Implementation period (short/Medium/long term)	Responsible Agencies	Base Line	Target to be achieved	Target Date	Milestones (Monthly / Quarterly)	Financial Implications, if any (Estimated Cost)
1	COS 1 – Dissemination of Air Quality Index	NA	PPCB	1 no. CAAQMS installed.		--	Public awareness	NA
2	COS 2 – Establish an Air Quality Management Division at SPCB HQ	Medium Term	PPCB	No such division exists	One required	31.03.2020	<ol style="list-style-type: none"> <li>1. Develop methodology-Three months</li> <li>2. Providing infrastructure-Six months</li> <li>3. Implementation-Three months</li> </ol>	Rs. 2 lacs
3	COS 3 – Setup helpline in each city/town as well as SPCB HQ	Medium Term	PPCB	No helpline exists	One help line number required	31.03.2020	<ol style="list-style-type: none"> <li>1. Develop methodology-Three months</li> <li>2. Providing infrastructure-Six months</li> <li>3. Implementation-Three months</li> </ol>	Rs 0.5 Lacs

4	COS 4 - Monitoring of DG sets and action against violations	Short term	PPCB	Punjab Pollution Control Board	Manual monitoring exists	No non-complying DG set to be operated	Regular Activity	NIL
6	COS 5 – Source Apportionment Study	Short Term	PPCB	Source Apportionment Study not carried out	Source Apportionment Study to be carried out through selected Agency.	31.03.2020	Selection of Agency Develop scope of work Allotment of work	Rs.5.00 lacs

## Annexure I – Action Plan for Training &amp; Capacity Building Programmes

Sr. No.	Activity	Implementation period (Short/ Medium/ Long term)	Responsible Agencies	Base Line	Target to be achieved	Target Date	Milestones (Monthly / Quarterly)	Financial Implications, if any (Estimated Cost)
1	TCB1 – Training & Capacity Building Programmes	Short Term	PPCB	Officers get trainings under various programmes organized by the concerned departments	<ul style="list-style-type: none"> <li>• District/City level training programmes – 1 Nos.</li> <li>• State level training programmes – 1 Nos.</li> </ul>	31.03.2020	Selecting agencies/ experts for organizing theme specific trainings. Organization of programmes at City/District and level.	Rs.2.00 lacs

Note: 'Short Term' refers to activities to be carried out during next 6 months, 'Medium Term' refers to activities to be carried out during next 2 years and 'Long Term' refers to activities to be carried out in more than 2 years time period.

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**Government of Punjab**  
**Department of Science, Technology & Environment**  
**(STE Branch)**

**NOTIFICATION**

No. 10/64/2020-STE4/469

Dated, Chandigarh: 04/10/2023

**FUEL POLICY FOR THE INDUSTRIES OF STATE OF PUNJAB**

In order to address the problem of air pollution in the State of Punjab in accordance with the provisions of the Air (Prevention & Control of Pollution) Act, 1981, the Govt. of Punjab in consultation with Punjab Pollution Control Board (PPCB) has declared whole of the State of Punjab as 'Air Pollution Control Area' under section 19(1) of the Air (Prevention & Control of Pollution) Act, 1981 vide Notification No. SO21/C.A.14/81/S.19/88 dated 02.03.1988;

And whereas, the Govt. of Punjab, vide Notification No.4/46/92-3ST/2839 dated 29.12.1993 has banned the use and burning of rubber scrap, tyre, oil sludge, acid sludge and loose rice husk as fuel, in the State of Punjab, as detailed below:

- (I) Rubber in any form with effect from 1.4.1994;
- (II) Process waste containing Sulphur and toxic substances with effect from 1.4.1994;
- (III) Rice Husk (except in the form of fuel briquettes and use of rice husk in fluidized bed combustion) as fuel in the air pollution control area with effect from 1.4.1994.

And whereas, the Govt. of Punjab & Punjab Pollution Control Board, from time to time, are taking all such measures which are required for the reduction and control of air pollution in the State of Punjab including the regulation and use of such fuels which may or may have an adverse impact on the quality of environment in the State;

And whereas, the usage of coal, pet coke, furnace oil and other fuels in the boilers/ furnaces or in any other form by the industry, needs to be regulated due to presence of higher sulphur content leading to Sulphur Dioxide (SO<sub>2</sub>) emissions in the ambient air, which may adversely affect the environment;

And whereas, the Hon'ble Supreme Court of India and the Hon'ble National Green Tribunal had also considered the matter relating to the use of pet coke and furnace oil and issued certain directions for compliance, whereupon the Central Pollution Control Board vide letter dated 23.8.2019 had issued directions under section 5 of the Environment (Protection) Act, 1986, to all the States and Union Territories including the State of Punjab for formulating and enforcing fuel policy regarding use of pet coke and furnace oil in the States/ UTs in light of various orders passed by Supreme Court regarding use of Pet Coke and Furnace Oil in Writ Petition (C) no. 13029/1985;

And whereas, according to the provisions of the Section 19(3) of the Air (Prevention & Control of Pollution) Act, 1981, if the State Government after consultation with the State Pollution Control Board, is of the opinion that the use of any fuel, other than an approved fuel, in any air pollution control area or part thereof, may cause or is likely to cause air pollution, it may, by notification in the Official Gazette, prohibit the use of such fuel in such area or part thereof with effect from such date as may be specified in the notification;

And whereas, the State Government has considered the matter in the above background of the case in consultation with the Punjab Pollution Control Board and other stakeholder departments and is satisfied that the use of pet coke, furnace oil and other fuels is required to be regulated, so as to ensure that there is no adverse impact on the environment;

And whereas, the draft of Policy to prohibit the furnace oil and to regulate the use of pet coke and other fuels was considered at the highest level of the Government, wherein, the Hon'ble Chief Minister, Punjab has desired that final draft be put up after obtaining comments of all the stakeholders, concerned Departments/Agencies as well as general public;

And whereas, meetings/discussions were held with primary stakeholders (various Industrial Associations, Brick Kiln Associations, Thermal Plants operating in the State, M/s Guru Gobind Singh Refinery (Unit of HPCL Mittal Energy Ltd.), Talwandi Sabo Bathinda, Briquettes manufacturers, Brick kilns owners using briquettes & Boiler manufacturers for conversion of furnaces compatible for usage of alternative fuels). The suggestions/ inputs in the matter were also sought from the stakeholder departments/

reputed institutes (Department of Industries & Commerce/ Transport/Agriculture/Food Supplies & Consumer Affairs/Power/New and Renewable Energy Resources/PSIEC/ DECC/ PSCST/State Level Co-ordinator, IOCL/ Custom Commissioner-ate Amritsar/ Ludhiana, IIT Roorkee/Ropar/Delhi/TIET/CSIR-IIP & CPCB);

And whereas, after considering the suggestions/inputs of various stakeholders, the draft fuel Policy to prohibit the furnace oil and to regulate the use of Pet Coke and other fuels in the State was published by the Government of Punjab, Department of Science, Technology & Environment vide Notification No. STE-STE-010/64/2020-STE (5/4) 455004 dated the 9<sup>th</sup> Nov, 2022, thereby inviting objections or suggestions on the proposal contained in the draft notification from all the stakeholders and persons likely to be affected thereby, within a period of 30 days from the date of publication of the said notification;

And whereas, the objections or comments received from various stakeholders including Industrial Associations/Individual Industries/CNG/PNG Supplier Companies and Government Departments within the stipulated period, were duly considered and amended policy by incorporating the suggestions/objections/ comments received was put and displayed on the website of the Punjab Pollution Control Board for inviting objections or suggestions, within a period of 15 days. A public notice was also published in leading newspapers/vernacular dailies on 15.07.2023 in this regard;

And whereas, the additional objections or comments received within the stipulated period were duly considered by the State Government;

Now, the Government of Punjab after consultation with the Punjab Pollution Control Board, in exercise of the powers conferred under section 19(3) of the Air (Prevention & Control of Pollution) Act, 1981, hereby, issue the following fuel policy and guidelines for the prohibition of furnace oil, regulation of the use of pet coke and for promoting the cleaner fuels in the State of Punjab:

**Guidelines for regulation and monitoring of Imported Pet Coke (IPC)**

- (I) The guidelines issued by the Government of India, Ministry of Environment, Forest & Climate Change vide office memorandum No. Q-18011/54/2018-CPA dated 10.09.2018 for regulation and monitoring of imported pet coke in India in compliance to the directions of the Hon'ble Supreme Court of India in Writ Petition (Civil) No. 13029 of 1985 in the matter of M.C Mehta v/s Union of India and Others and in the exercise of the powers conferred under the Environment (Protection) Act, 1986 shall be applicable.

- (II) The import of pet coke for use as fuel is prohibited.
- (III) The import of pet coke is allowed to be used by the industries namely cement, lime kiln, calcium carbide and gasification for use as feedstock or in the manufacturing process only on actual user basis as per the conditions stipulated below:
- a) Pet coke importing industries namely, cement, lime kiln, calcium carbide and gasification shall obtain the consent and registration from the State Pollution Control Board (SPCB).
  - b) Consent issued by the State Pollution Control Board shall clearly specify the quantity permitted for import and its use on a per month and per annum basis.
  - c) Only registered industrial units with valid consent from State Pollution Control Board as per clause (a) shall be permitted to directly import pet coke and consignment shall be in the name of user industrial units for their own use only.
  - d) Import of pet coke for the purpose of trading shall not be permitted.
  - e) Authorized importers of Pet coke shall furnish opening and closing stock of imported pet coke to the State Pollution Control Board on quarterly basis.
  - f) The State Pollution Control Board shall develop an electronic record system for uploading of consents, registration and record of use of imported Pet coke by industrial units, as mentioned above and the Board shall share this data with the Central Pollution Control Board on quarterly basis.
- (IV) The Supreme Court of India has further allowed the use of pet coke vide various orders passed in Writ Petition (Civil) no. 13029 of 1985 as under:
- a) Import of needle pet coke is allowed for use in graphite electrode industry (order dated 6.9.2018);
  - b) Calcined Pet Coke (CPC) domestic as well as imported can be used as raw material for anode making in aluminum industry with revised BIS specifications and subject to condition that imported raw material cannot exceed 0.5 MT per annum in total (order dated 9.10.2018);
  - c) Raw Pet Coke (domestic and imported) can be used as feed stock for producing Calcined Pet Coke (CPC) and the quantity for this purpose cannot exceed 1.4 MT/annum in total (order dated 9.10.2018);
- (V) Anyone using pet coke in consequence to the orders of Hon'ble Supreme Court given in point (IV) above shall comply with all conditions laid by Hon'ble Supreme Court for using such pet coke as well as notified by the PPCB from time to time.

#### **Guidelines for use of Pet Coke for Boilers/ Furnaces**

- (I) The industry shall provide well designed two stages desulphurization i.e. at combustion stage and of flue gas emissions and install adequate air pollution control device so as to contain the Particulate Matter (PM) and gaseous emissions specifically Sulphur Dioxide (SO<sub>2</sub>) as per the limits mentioned below:
- a) Particulate Matter (PM): as prescribed by the MoEF&CC depending upon the source (Boiler or type of industry)
  - b) Sulphur Dioxide (SO<sub>2</sub>): 400 mg/Nm<sup>3</sup> Wherever, any industry specific standards are prescribed by the MoEF&CC/CPCB/State Govt./PPCB same shall prevail.

- c) Mitigation measures to contain SO<sub>2</sub>, NO<sub>x</sub>, particulate matter and other parameters shall remain applicable for Thermal Plants and other industries for which industry specific standards/guidelines have been laid down by the MoEF&CC/Central Government.
- (II) The industry shall install online monitor for SO<sub>2</sub> with the stack equipped with an alarm system to alert the boiler/APCD operator, in case, the concentration of SO<sub>2</sub> increases beyond the prescribed standard of 400 mg/Nm<sup>3</sup> so as to take necessary mitigation measures to bring the SO<sub>2</sub> emission within the prescribed limits.
- (III) The industry shall provide a stack of height calculated by using the formula  $H=14Q^{0.3}$ , where Q is the emission rate of SO<sub>2</sub> in kg/hr and should be calculated by using the volume of flue gas emissions and the standards for SO<sub>2</sub> (400 mg/Nm<sup>3</sup>) or 30 meter, whichever is higher.
- (IV) The industry shall provide adequate and appropriate treatment to the bleed off/ purge wastewater being discharged from the scrubber. The sludge produced in the recirculation tank of the scrubbing liquor shall be disposed of in an environmentally sound manner.
- (V) The industry shall follow the standard operating practices prescribed by MoEF&CC/CPCB/PPCB issued from time to time to contain SO<sub>2</sub>, particulate matter and other parameters within the prescribed limit.

#### **Prohibition on the use of Furnace Oil and alternate fuels**

- (I) Furnace oil and any other liquid oil containing high Sulphur contents (exceeding 1.8% by weight) shall not be allowed to be used as fuel.
- (II) Only specified liquid fuels marketed and supplied by the oil companies authorized by the Government of India, including Low Sulphur Heavy Stock (LSHS), Light Diesel Oil (LDO) and Propane, Butane etc. having sulphur content not exceeding 1.8% by weight shall be allowed.
- (III) No oil company shall supply furnace oil and any liquid fuel having high sulphur content in the State except the liquid fuels/ oil allowed at Sr. No. (II) above.
- (IV) The industry shall provide a stack of adequate height calculated by using the formula  $H=14Q^{0.3}$ , where Q is the emission rate of SO<sub>2</sub> in kg/hr. Where providing all stacks are not feasible using above formula, a minimum stack height of 11 meters is to be provided considering the emission standards for SO<sub>2</sub> as 400 mg/Nm<sup>3</sup>.
- (V) The industry shall follow the standard operating practices prescribed by MoEF&CC/CPCB/PPCB issued from time to time and provide appropriate and adequate emission control/treatment systems so as to contain SO<sub>2</sub>, particulate matter and other parameters within the prescribed limit.
- (VI) Carbon Black Feed Stock (CBFS) or its sub types including acetylene black, channel black, furnace black, lamp black and thermal black etc. shall not be used as fuel in boilers, furnaces, brick kilns or anywhere as a source of energy generation.

#### **Cleaner and Eco-Friendly Fuels**

- (I) State Government/PPCB in its endeavor to save natural resources shall take appropriate steps for replacement of its conventional natural energy resources like coal, wood etc. in phased manner with cleaner fuels (CNG/PNG/LPG/CBG/

electricity/solar/wind etc.), biomass fuels and fuels having low sulphur content in industrial units as well as in brick kilns, wherever possible.

- (II) Upon the availability of supply of CNG / PNG / CBG etc. in various geographical areas of the state by the respective licensees authorized by the Petroleum and Natural Gas Regulatory Board (PNGRB), the State Government in consultation with the State Pollution Control Board shall issue appropriate directions and timelines to the industries and other stakeholders for conversion to such cleaner fuels considering techno-economic and legal feasibility.
- (III) Use of bio-mass specifically paddy stubble in raw form, torrefied form, briquettes, palettes, or any other modified form including blending with other acceptable fuels shall be encouraged for their use as fuel for boilers/ furnaces in controlled/regulated conditions as approved by the State Pollution Control Board on case to case basis.
- (IV) Renewable energy sources like solar/ wind energy etc. shall be incentivized, wherever possible by the concerned departments.
- (V) Provisions of notification issued by the Department of Science, Technology & Environment vide notification no. 10/512/2021-STE(3)/2075 dated 27.8.2021 as amended and subsequent notifications issued by various departments of the Government of Punjab with regard to the encouragement of the usage of paddy straw as fuel shall be applicable.
- (VI) All industrial units using solid fuel and located within one hundred km from a solid waste based Refused Derived Fuel (RDF) plant shall make arrangements to replace at least five percent of their fuel requirement by RDF so produced (torrified, non-torrified, fuel briquettes, pellets or loose form as per feasibility), as prescribed under the Solid Waste Management Rules 2016.
- (VII) Due to dynamics of cost and availability of fuels based on international markets, State Government in consultation with PPCB shall be empowered to permit usage of alternative fuels for a limited period based on techno-economic feasibility as per the prevailing scenario to ensure the sustainability of industrial sector in the State.

And whereas, this Fuel Policy of the State shall be subject to the compliance of further orders of the Hon'ble Supreme Court of India in WP(C) no. 13029 of 1985, judgements and orders passed by Hon'ble National Green Tribunal or any other judicial/ quasi-judicial authority from time to time, office memorandums, guidelines and notifications issued by the Ministry of Environment, Forest & Climate Change (MOEF&CC), Central Pollution Control Board (CPCB) and the Commission for Air Quality Management in National Capital Region (NCR) and Adjoining Areas (CAQM), State Government or Punjab Pollution Control Board including those issued under National Clean Air Programme (NCAP) and under the action plans prepared by the State/Central Government for the clean air.

Needless to say that any order already passed or to be passed by the Hon'ble Supreme Court of India, Hon'ble High Court or Hon'ble National Green Tribunal shall supersede any provision of this policy, if such provision is not in consonance with such order.

In case of failure to comply with the provisions of this notification, action in accordance with the provisions laid down under Air (Prevention & Control of Pollution) Act, 1981, Environment (Protection) Act, 1986 and under other relevant environmental laws shall be taken against the violators.

That provisions of Air (Prevention & Control of Pollution) Act, 1981 shall be applicable on this policy.

Dated...04/10/2023

Chandigarh



Secretary to Government of Punjab,  
Department of Science, Technology & Environment

Endst.No.10/64/2020-STE4/470

Dated...04.10.2023

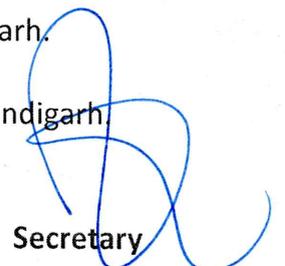
A copy of the above is forwarded to the Special Principal Secretary to the Chief Minister, Punjab for information.

Endst.No.10/64/2020-STE4/471-480

Secretary  
Dated...04/10/2023

A copy of the above is forwarded to the following for information and necessary action:

1. The Chief Secretary, Punjab.
2. The Special Chief Secretary Department of Agriculture & Farmers Welfare, Govt. of Punjab, Chandigarh.
3. The Principal Secretary, Department of Power, Govt. of Punjab, Chandigarh.
4. The Principal Secretary, Department of Industries & Commerce, Government of Punjab, Chandigarh.
5. The Principal Secretary, Department of Food, Civil Supplies and Consumers Affairs, Government of Punjab, Chandigarh.
6. The Secretary, Department of New and Renewable Energy Sources, Government of Punjab, Chandigarh.
7. The Secretary, Department of Transport; Government of Punjab, Chandigarh.
8. The Chairman, Punjab Pollution Control Board, Patiala.
9. The Chief Executive Officer, Punjab Bureau of Investment Promotion, Chandigarh.
10. The Director, Directorate of Environment & Climate Change, Punjab.



Secretary

Endst.No.....10/64/2020-STE4/481

Dated...04.10.2023

A copy of the above is forwarded to the Controller, Department of Printing & Stationary, Punjab to print the 100 copies of this notification.

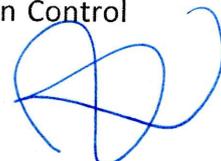


Secretary

Dated...04.10.2023

Endst.No.....10/64/2020-STE4/482

A copy of the above is forwarded to the Chairman, Central Pollution Control Board, New Delhi for information and necessary action.



Secretary

Dated...04.10.2023

Endst.No.....10/64/2020-STE4/483

A copy of the above is forwarded to all the Deputy Commissioners of the State of Punjab for information and necessary action.



Secretary

## PPCB Order dated 05.10.2023

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Dated. 05/10/23

**ORDER**

The relaxation granted by the Punjab Pollution Control Board on concurrence of the Government to the rolling mills operating in the area of Mandi Gobindgarh for shifting from conventional fuels to cleaner fuels in view of the request of the industrial associations made on the basis of closure of industrial units and escalating prices of cleaner fuel, till the finalization of the State fuel policy or 31.12.2023, whichever is earlier subject to the suitable conditions is now withdrawn.

The industrial associations, rolling mills operating in the area of Mandi Gobindgarh are requested to shift to the cleaner fuels.

This letter is issued with the approval of the Competent Authority.

Endst. No. 23880      Date: 05/10/23

A copy of above is forwarded to the Chief Environmental Engineer, Punjab Pollution Control Board, Bathinda and Jalandhar for information and further necessary action please.

Member Secretary

Endst. No.      Date:

A copy of above is forwarded to the following for information and necessary action please:

1. The President, All India Steel Rolling Association (AISRA), Bhadla Road, Mandi Gobindgarh.
2. The President, Small Scale Steel Re-Roller Association (SMASRA), Bhadla Road, Mandi Gobindgarh.

Member Secretary

ਦਾਤਾਵਰਣ ਭਵਨ, ਨਾਭਾ ਰੋਡ, ਪਟਿਆਲਾ-147001