BEFORE THE NATIONAL GREEN TRIBUNAL PRINCIPAL BENCH, NEW DELHI.

ORIGINAL APPLICATION NO. 606/2022

Public Action Committee & Ors. — Applicants

Versus

State of Punjab & Ors. — Respondents

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1.	**Response Affidavit of CPCB** to the Affidavit filed by the Respondent No. 7 (M/s Malbros International Pvt Ltd) dated 15.01.2024 in compliance to Hon'ble NGT order dated 24.01.2024 in OA No. 606/2022, Public Action Committee & Ors. Vs. State of Punjab & Ors.	
2.	**Annexure-I:** Copy of the Status Report on "Groundwater quality in Punjab" dated 17.01.2024.	
3.	**Annexure-II:** Copy of the Hon'ble NGT order dated 24.01.2024.	

13/02/2024

(Kamlesh Singh)
Scientist E
Central Pollution Control Board
Delhi-110032

Dated: 13.02.2024

Place: Delhi

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,
Principal Bench, New Delhi

O.A. No. 606 of 2022

Public Action Committee & Ors. ..... **Applicants**

Vs.

State of Punjab & Others ..... **Respondents**

Response Affidavit of CPCB to the Affidavit filed by the Respondent No. 7 (M/s Malbros International Pvt Ltd) dated 15.01.2024.

I, Shri Kamlesh Singh S/o Shri Ramesh Chandra Singh aged 41 years, and having office at Central Pollution Control Board, "Parivesh Bhawan", East Arjun Nagar, Delhi - 110032, do hereby solemnly affirm and state as under;

That I, in the capacity of Scientist 'E' & Divisional Head, IPC-III in the Central Pollution Control Board (hereinafter referred to as CPCB), am fully conversant with the facts ofthe case on the basis of the records made available in theoffice and hence competent and authorized to depose andswear the present Reply Affidavit as under:

1. That averments made in Para 1 and 2 are about Respondent No. 7 i.e. M/s Malbros International Pvt., Ltd. and statement of filing the instant affidavit and hence, need no reply from this answering Respondent No.5.

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2. That averments made in Para 3 pertain to the suggestion made by CPCB in its response dated 23.11.2023 vide para 8 for engaging other subject matter expert Institutes such as CSIR - National Geophysical Research Institute (NGRI) and Central Ground Water Board (CGWB) in addition to NEERI, already engaged by PPCB, to carry out detailed site assessment and suggest remedial measures. It is pertinent to state that the aforesaid suggestion was made in accordance with the findings and conclusion of the CPCB Report dated 13.04.2023.

3. That averments made in Para 4 are wrong and denied. Itis humbly submitted that the alleged violation of procedure and violation of Section 21 (3) (b) & (e) of the Water(prevention and control of Pollution) Act, 1974 as alleged by Respondent no. 7 is misleading and devoid of merit. In this regard, it is humbly submitted that CPCB is empowered to take samples under Environment (Protection) Act, 1986 and due procedure was followed in accordance with the provisions of sub-section (3) and (4) of Section 11 of the Act as detailed in the affidavit filed by CPCB dated 23.11.2023. CPCB has followed due procedure/CPCB guidelines/protocol and prescribed Rules while sampling the groundwater. With respect to the point regarding dividing of the samples, it is humbly submitted that samples were divided in two portions, one of which was sealed, marked and signed by both CPCB officer and the industry representative. However, the representatives of the industry refused to acknowledge the receipt of the second portion as mandated under the Environment (Protection) Act, 1986. It is further humbly submitted that CPCB being a statutory body, is fully conversant and observant of the legal provisions & relevant laws required to be followed while investigating such matters and that all the provisions/procedures were followed during investigation of this matter.

4. That the contents of in Para 5 are wrong and denied. The contentions raised by Respondent no.7 with respect to the inspection of 45 acres of industrial plant in 2.5 hours approximately by the answering respondent allegedly in a hurried manner without following dueprocedure is erroneous. It is humbly submitted that CPCB vide reply dated 23.11.2023, despite clearly stating CPCB team visited the industry for inspection on22/02/2023 followed by sampling on 23/02/2023 and24/02/2023, Respondent no. 7 in an attempt to misleadthis Hon'ble tribunal has made contrary submissions. The aforesaid inspection and sampling is evidenced bythe geo-tagged photographs taken by the CPCB team on all three days. Furthermore, the CPCB team did not inspect the entire 45 acres of land as averred by Respondent no. 7, in the above mentioned period. The same is reflected by the fact that the CPCB report states "*In view of the fact that most of ground water structures identified by CPCB team have been installed by the*

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industry without obtaining permission from CGWB/PWRDA, the possibility of having more such structures installed illegally without obtaining permission as apprehended in the letter of Hon'ble Member of Parliament (Lok Sabha), cannot be ruled out and thus needs further investigation by involving local revenue department ".

5. That contents of Para 6 are wrong and denied. It is humbly submitted that during the CPCB's inspection the team identified 10 bore-wells and 06 piezometers installed inside the premises in the presence of representatives of the industry who were accompanying the CPCB team. Further, the details regarding Bore-wells, assembly drawings, permissions from Central Ground Water Board (CGWB), EIA reports including location of borewells monitored for generation of base-lite data while conducting environmental impact assessment before establishing the industry etc. were requested by the team during inspection and thereafter through emails from the Respondent No. 7 and also from PPCB, which are still awaited and have not been provided so far.

6. That averments made in Para 7 are with respect to the location of two borewells next to each other within the premises, violating the provision regarding minimum distance of two borewells. It is humbly submitted thatdespite reminders to Respondent No. 7 and also to PPCB, the details regarding locations and permissions obtained from CGWB for installation/registration of all the borewells located within the premises of the industry have not been provided to CPCB so far. It isalso humbly stated that the industry has installed large number of borewells (physically verified ten borewells and six piezometers) within the premises despite being a zero liquid discharge (ZLD) plant and without the permission of the concerned groundwater authority.

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7. That averments made in Para 8 are about the findings of sample analysis by CPCB and alleged to be disputed for procedural and legal infirmities while collecting samples and a comparison has been made w.r.t. analysis report of borewells by NGT Monitoring Committee (as mentioned in the affidavit) and CPCB analysis report. It is humbly submitted that the monitoring Committee and CPCB conducted their groundwater assessments during different seasons (monsoon season for the monitoring

Committee andpost-monsoon season for CPCB). Further, absence of geo-coordinates for the borewells monitored by the monitoring Committee impedes the precision of data comparison as geo-coordinates are essential for precise location-based comparisons and correlation of data. It is humbly submitted that the monitoring Committee visited the industry due to complaints from Gram Panchayat regarding discharge of untreated effluent into the groundwater by the said industry and during the visit, the Unit representative informed the monitoring Committee that there are 03 working tubewells in the industrial premises, whereas, 4th tubewell is not in working condition due to leakage in the pipeline and 5th tubewell has been closed recently due to advise of Vastu Consultant. The monitoring was done by said Committee in 05 tubewells inside the premises. However, CPCB team physically identified 10 borewells and 06 piezometers within the premises and monitoring was done in 05 bore-wells & 02piezometers inside the industry and found that theborewell which was reported to be closed due to Vastu (as reported in the monitoring Committee report), thegroundwater from the same borewell was found to be contaminated. Hence, comparison of the CPCB reportand the report pursuant to collection of samples by monitoring Committee is unsustainable.

8. That the contents of Para 9 are false and misleading. Itis humbly submitted that the suggestion made by the answering Respondent for further investigation and appointment of expert agencies does not in any manner imply the disregard of CPCB report dated 13.04.2023 and the directions dated 17.05.2023 issued thereafter and the same is based upon the factual position and analysis made thereafter. With reference to slope of groundwater, it is humbly submitted that CPCB sought technical assistance of Central Ground Water Board (CGWB) in determining the water table and slope, which was provided after physical inspection & scientific survey by the CGWB Experts.

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9. That averments made in Para 10 do not need response from this answering Respondent, being a statement made by R-7 (industry).

10. That averments made in Para 11 are a mere reproduction of the

statement made by Regional Director, CPCB as a member of the Joint Committee (constituted by Hon'ble NGT in this matter) in the report. It is humbly submitted that it is related to the report filed by the Joint Committee dated 21.10.2022 which is a matter of record and duly considered by the Ld. Tribunal, hence does not warrant a response from this answering Respondent.

11. That averments made in Para 12 is about theRespondent No. 7 submission regarding operationalstatus of the industry during visits of the Joint Committee constituted by Hon'ble NGT in this matter, and CPCB Team. In this regard, it is humbly submitted that CPCB team inspected the premises of the Industry and nearby affected villages, with regard to investigation regarding contamination of ground waterin the said area, which can be done irrespective of the operational status of the industry.

12. That averments made in para 13 relate to the issue of sewer water in the groundwater stream during rainy flooded season and imposition of fine by Hon'ble NGT to Govt. of Punjab. It is humbly submitted it is a matter of record and does not warrant any response from the answering Respondent.

13. That averments made in Para 14 are about the farmers using chemical fertilizers, pesticides, insecticides etc. which (as per respondent no. 7) has deteriorated the underground water quality, wherein reference has also been made regarding proceeding of the case related to banning of pesticide before Apex Court, which is a matter of record. With reference to groundwater monitoring conducted by CPCB team, it is humbly submitted that as per the CPCB report, CPCB monitored 29 bore-wells within and outside the industrial premises. Out of 29 borewells monitored, 12 bore-wells were yielding water with unpleasant odour, whereas 05 Bore-wells were yielding water with unpleasant odour and Grey/blackish colour (as observed by the team), which was confirmed from the high value in lab analysis report for colour and turbidity. The two bore wells monitored within the premises of the industry were found to be having the highest concentration of COD, colour, turbidity and heavy metals amongst all the bore well monitored by the team.

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14. That averments made in Para 15 and 16 are about Excerpts from annual reports of CGWB and report of Planning Commission, WHO, World Bank, Dept of Water Supply & Sanitation etc. regarding drinking water quality in Punjab and the same are the matter of record.It is humbly submitted that the Hon'ble NGT in suo- moto exercise of power on the basis of the news item published on 12.10.2023 in the Times of India, titled "Agricultural Runoff causing groundwater pollution in Punjab, making Drinking Water unsafe, Reveals Study" directed Punjab Pollution Control Board vide orderdated 03.11.2023 (in OA No. 676 of 2023) to file reportin response to the facts disclosed in the news item report, inter-alia, including the issue of heavy metals, radioactive substance, pesticides and chemical pollutants found in the groundwater of the concerned area in sample testing. CPCB has submitted a Status Report on "Groundwater quality in Punjab" including major findings dated 17.01.2024 in compliance of the aforesaid Hon'ble NGT order dated 03.11.2023 (in OANo. 676 of 2023) before the Hon'ble Tribunal. The copy of the status report on "Groundwater quality in Punjab" dated 17.01.2024 is annexed at **Annexure-I**.

15. That contents of Para 17 with respect to CPCB's report and allegation of the answering respondent having malicious intent to hurt the business interests of the Respondent Industry is wrong and denied. It is humbly submitted that matter was investigated by CPCB pursuant to and with reference to the complaint received from the Hon'ble Member of Parliament and also considering the Office Memorandum (OM) dated 20.12.2022 of Lok Sabha Secretariat regarding matter of urgent public importance raised during zero hour on 19.12.2022 in the Parliament by Shri Gurjeet Singh Aujla, Hon'ble M.P with respect to groundwaterpollution caused by M/s Malbros International Pvt.Ltd. CPCB being a statutory body performs its functions and exercises its powers impartially and strictly in accordance with law.

16. That contents of Para 18 are regarding the prayer ofthe Respondent No. 7 for appointing an independent agency/agencies to investigate and report the source of contamination and its remediation methodology. It is humbly submitted that NEERI has been engaged byPPCB for detailed environmental site assessment and suggesting remedial

measures and it is further humbly submitted that Hon'ble Tribunal may like to consider engaging other subject matter expert Institutions such as CSIR–National Geophysical Research Institute (NGRI) and Central Ground Water Board (CGWB) for associating during site assessment & remedial measures study being conducted by NEERI who has been engagedby PPCB.

17. It is humbly submitted that this answering Respondent shall abide by all orders or direction passed by this Hon'ble Tribunal in the instant case.

NOTARY PUBLIC
R.L. Chaudhary
N.C.T. of Delhi
Regd. No. 1513
GOVT. OF INDIA

DEPONENT
कमलेश सिंह / Kamlesh Singh
वैज्ञानिक 'ई' / Scientist 'E'
केंद्रीय प्रदूषण नियंत्रण बोर्ड
Central Pollution Control Board
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार
M/o Env. Forest & Climate Change, Govt. of India
परिवेश भवन, पूर्वी अर्जुन नगर, दिल्ली–110 032
Parivesh Bhawan, East Arjun Nagar, Delhi-110032

VERIFICATION

13 FEB 2024

Verified at Delhi on this ..... day of February, 2024 that contents of this Response Affidavit which is based on official record and information available in the office are true to the best of my knowledge and belief nothing has been concealedtherein.

ATTESTED
NOTARY PUBLIC
GOVT. OF INDIA
13 FEB 2024

DEPONENT
कमलेश सिंह / Kamlesh Singh
वैज्ञानिक 'ई' / Scientist 'E'
केंद्रीय प्रदूषण नियंत्रण बोर्ड
Central Pollution Control Board
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Parivesh Bhawan, East Arjun Nagar, Delhi-110032

Annexure-I

BEFORE THE NATIONAL GREEN TRIBUNAL

PRINCIPAL BENCH, NEW DELHI

ORIGINAL APPLICATION NO 676 OF 2023

IN THE MATTER OF

In re: News item appearing in The Times of India dated 12.10.2023 titled "Agricultural Runoff causing groundwater pollution in Punjab, making Drinking Water unsafe, Reveals Study"

Index

(P.K. Mishra)
Scientist F
Central Pollution Control Board
Delhi-110032

Dated: 17.01.2024
Place: Delhi

STATUS REPORT ON "GROUND WATER QUALITY IN PUNJAB" FILED BY CPCB IN COMPLIANCE TO HON'BLE NGT ORDER DATED 03.11.2023 IN O.A. No. 676 of 2023

1.0 BACKGROUND

The Hon'ble NGT in suo-moto exercise of power on the basis of the news item published on 12.10.2023 in the Times of India, titled "Agricultural Runoff causing groundwater pollution in Punjab, making Drinking Water unsafe, Reveals Study" directed Punjab Pollution Control Board vide order dated 03.11.2023 to file report in response to the facts disclosed in the news item report, inter-alia, including the issue of heavy metals, radioactive substance, pesticides and chemicals pollutants found in the ground water of the concerned area in sample testing.

Para 6 of the order states –

> *Having regard to the facts disclose in the news item, we deem it proper to implead following parties as Respondents:-*
>
> *(i) Central Pollution Control Board through its Member Secretary;*
> *(ii) Punjab Pollution Control Board through its Member Secretary;*
> *(iii) Indian Institute of Technology (IIT) Mandi; though its Director;*
> *(iv) Department of Water Supply and Sanitation, State of Punjab through its Administrative Head*
> *(v) Department of Agriculture and Farmers Welfare, State of Punjab though its Administrative Head;*

Accordingly, a brief status on ground water quality of Punjab monitored under National Water Quality Monitoring Programme (NWMP) is compiled for submission before Hon'ble NGT.

CPCB under National Water Quality Monitoring Programme (NWMP) monitors water quality of aquatic resources in association with respective State Pollution Control Board (SPCB)/ Pollution Control Committee (PCC) in

the country. Presently the monitoring network comprises 4703 locations in the country including 1233 locations on ground water.

CPCB under NWMP monitors ground water quality at 46 locations in association with Punjab Pollution Control Board (PPCB).

2.0 COMPLIANCE TO HON'BLE NGT ORDER DATED 12.10.2023

In compliance to the said order dated 12.10.2023 of the Hon'ble NGT, brief status on ground water quality monitored in Punjab at 43 out of 46 locations with respect to physico-chemical, heavy metals and pesticides under NWMP programme is compiled. Radio-active compounds are not monitored under National Water Quality Monitoring Programme (NWMP).

3.0 STATUS OF GROUND WATER QUALITY MONITORED IN PUNJAB

CPCB under National Water Quality Monitoring Programme (NWMP) monitors ground water quality at 46 locations in association with Punjab Pollution Control Board (PPCB) including 01 locations in Sangrur, 02 locations each in Amritsar, Faridkot, Gurdaspur, Jalandhar, Kapurthala, Mohali & Nangal; 03 locations in Patiala; 04 locations each in Bhatinda, Fatehgarh Sahib & Roonagar and 16 locations in Ludhiana, details provided in **Table – 1 (Annexure – I).**

Ground water quality monitored in Punjab has been carried out at 43 out of 46 locations during the years 2019 – 2023. The common chemical contaminants viz. Nitrate, Fluoride and Total Dissolved Solids (TDS) are detailed in **Table – 2 - 4 (Annexure – II**).

Assessment of ground water quality in Punjab for the years 2019 - 2023 for heavy metals monitored at 43 locations is provided in **Table – 5-7 (Annexure – II)**. Heavy metals viz. Arsenic, Cadmium, Copper, Lead, Chromium Total,

Nickel, Zinc, Mercury and Iron w.r.t Acceptable Limit prescribed by BIS Drinking Water Specifications IS 10500:2012

Assessment of 12 Pesticides viz. Alpha HCH; Beta HCH; ortho,para – DDT; Gamma HCH (Lindane); para,para – DDT; Beta Endosulphan; Dieldrin; Aldrin; Chloropyriphos; Anilophos; Malathian and Alpha Endosulphan monitored at 43 locations indicate that all these pesticides were Below Detection Limit (BDL) in the State during 2019 – 2023.

4.0 MAJOR FINDINGS

The water quality monitored at 43 out of 46 locations in the State during the years 2019 – 2023 by CPCB in association with Punjab Pollution Control Board (PPCB) under National Water Quality Monitoring Programme (NWMP) reveals the following:

- Nitrate concentration in 01 out of 43 monitored locations during the years 2019 & 2020 is exceeding its BIS Drinking Water Standards IS 10500: 2012, acceptable limit of 45.0 mg/ L. However, during 2022 and 2023, nitrate concentration is found complying.
- Fluoride concentration has been observed exceeding in the range of 9.5 – 18.6% during the years 2019 (05 out of 43 locations), 2020 (04 out of 42 locations) & 2022 (08 out of 43 locations) against BIS Drinking Water Standards IS 10500: 2012, acceptable limit of 1.0 mg/ L.
- TDS concentration has been observed exceeding in the range of 53.4 – 70.7% during the years 2019 - 2023 against BIS Drinking Water Standards IS 10500: 2012, acceptable limit of 500.0 mg/ L. Out of monitored locations, 23 locations out of 43 in the year 2019, 29 out of 41 locations in the year 2020, 22 out of 33 locations in the year 2021, 30 out of 43 locations in the year 2022 and 24 out of 40 locations in the year 2023 were found non - complying.
- Monitored Heavy metals viz. Arsenic, Cadmium, Copper, Lead, Chromium Total, Nickel, Zinc, Mercury are found complying in all during entire period of monitoring, with the Acceptable Limit prescribed by BIS Drinking Water Specifications IS 10500:2012.
- Iron concentration has been observed exceeding in the range of 11.6 – 30.3% during the years 2019 - 2023 against BIS Drinking Water Specifications IS 10500: 2012, acceptable limit of 0.3 mg/ L.
- 12 Pesticides monitored at 43 locations indicate that all these pesticides were Below Detection Limit (BDL) in the State.

Annexure - I

Table -1: list of ground water monitoring locations in Punjab under NWMP

S. No.	Station Code	Name of Monitoring Station	District Name	Latitude	Longitude
1.	1898	Petrol Pump Opp. Hero Cycle, Ludhiana	Ludhiana	30.90008	75.85728
2.	1899	Bhagwan Singh, H.No.907, Dasmesh Nagar, Gali No. 6, Ludhiana	Ludhiana	30.88439	75.85441
3.	1900	Gurchaaran Singh Haibowal Dairy Complex, Ludhiana	Ludhiana	30.89785	75.85542
4.	1901	Dusshera Ground Industrial Estate, Ludhiana	Ludhiana	30.89603	75.87373
5.	1902	Shukla Tea Stal Point, Ludhiana	Ludhiana	30.89582	75.85974
6.	1903	Punjab Agricultural University, Ludhiana	Ludhiana	30.90414	75.8168
7.	4134	Tube Well At RSSB, Tibba Road, Ludhiana Industrial Area	Ludhiana	30.92021	75.88355
8.	4135	MSW Dumping Site, Jamalpur	Ludhiana	31.5275	75.61019
9.	4136	STP Jamalpur	Ludhiana	31.52997	75.61233
10.	4139	Handpump At Park Adjoining To National Industries, E-128, Ph-Iv, Focal Point Ludhiana	Ludhiana	30.89411	75.9042
11.	4140	Handpump In Sahota Baghbani Farm, Vill Harian, Machiwara	Ludhiana	30.91354	76.19124
12.	4153	Dashmesh Nagar, Gali No 12, Ludhiana	Ludhiana	30.88371	75.85672
13.	4154	TSSM Sr Sec School Shimlapuri, Ludhiana	Ludhiana	30.86502	75.866
14.	4155	Dairy Complex, Tajpur Road, Ludhiana Opp Satish Dairy Mear Amrit Dharam Kanta	Ludhiana	30.91735	75.88644
15.	4156	Handpump In Area On Sua Road Near Dhandari Kalan, Ludhiana	Ludhiana	30.86047	75.91114
16.	4157	Handpump Shallow Tubewell In The Area Of Janta Nagar, Ludhiana	Ludhiana	30.87962	75.86337
17.	2916	Near Landfill Site, Amritsar, Punjab	Amritsar	31.63398	74.87226
18.	2917	Near Harmandir Saheb, Amritsar,	Amritsar	31.61998	74.87649
19.	2918	Dera Bassi, Punjab	Mohali	30.5872	76.8428
20.	2919	Dera Bassi, Punjab	Mohali	30.5882	76.84608
21.	2920	Hamira Village, Punjab	Kapurthala	31.45597	75.4337
22.	2921	Hamira Village, Punjab	Kapurthala	31.4491	75.44099
23.	2922	Leather Complex, Jalandhar, Punjab	Jalandhar	31.33048	75.51509
24.	2923	Leather Complex, Jalandhar, Punjab	Jalandhar	31.33044	75.52611
25.	2924	Mandi Gobindgarh, Punjab	Fatehgarh Sahib	30.66143	76.27463
26.	2925	Mandi Gobindgarh, Punjab	Fatehgarh Sahib	30.66093	76.31211
27.	2926	Nangal, Punjab	Nangal	31.37986	76.36341
28.	2927	Nangal, Punjab	Nangal	31.37727	76.36993

S. No.	Station Code	Name of Monitoring Station	District Name	Latitude	Longitude
29.	2928	Ropar, Punjab	Roopnagar	30.96233	76.52491
30.	2929	Ropar, Punjab	Roopnagar	30.97063	76.51607
31.	2930	Toansa, Punjab	Roopnagar	30.99793	76.46666
32.	2931	Toansa, Punjab	Roopnagar	30.97757	76.51653
33.	4137	Handpump In M/S Deep Steel Ltd, Mughal Majra, Mandi Gobbindgarh	Fatehgarh Sahib	30.71976	76.34716
34.	4138	Handpump, 149 Near Sant Pritam School, Ambey Majra, Mandi Gobindgarh	Fatehgarh Sahib	30.64374	76.31907
35.	4141	Handpump Instrial Growth Centre, Defence Road, Pathankot	Gurdaspur	32.31236	75.64602
36.	4142	Handpump, Vill Dheriwal, Dist Pathankot	Gurdaspur	31.95927	75.32345
37.	4143	Handpump Near Ash Dykes Of Nabha Power Ltd, Vill Nalash, Rajpura	Patiala	30.55762	76.58162
38.	4144	Ground Water Sampling Blocation In Village Main	Patiala	30.33886	76.39297
39.	4145	Sagar Para Drain Meeting With Ghaggar Near Vill Sagar Para, Patran	Patiala	29.95507	76.05501
40.	4146	Near M/S Mahaluxmi Organo Chem, Bhawanigarh	Sangrur	30.26165	76.03172
41.	4147	Near Ash Dykes Of Guru Nanak Thermal Power Plant/ Nfl, Bhatinda	Bathinda	30.20831	74.93784
42.	4148	Village Kanakwal/ Phukokari Ggs Hmel Refinery, Bhatinda	Bathinda	29.92936	74.94773
43.	4149	Ash Dykes Of Thermal Power Plant Lehra Mohabbat, Bhatinda	Bathinda	30.24696	75.16357
44.	4150	100 M D/S Of Vill Rurianwali, Dist Muktsar	Bathinda	30.46727	74.51455
45.	4151	Near Malbors Internationla P Ltd, Vill Mansoorwal, Dist Ferozpur	Faridkot	30.92059	74.96081
46.	4152	S R Spirit Bahmni Wala Road, Jalalabad (West)	Faridkot	30.63035	74.83961

Annexure – II

Table - 2: Ground water quality in Punjab w.r.t - Nitrate during the years 2019 & 2023 *(maximum value observed)*

S. No.	Station Code	Name of Monitoring Station	District	Year of monitoring				
				2019	2020	2021	2022	2023
	BIS Drinking Water Specifications IS:10500: 2012. (Acceptable Limit)			45.0 mg/ L				
1.	1898	Petrol Pump Opp. Hero Cycle,	Ludhiana	25	24.6	-	1.2	0.5
2.	1900	Gurchaaran Singh Haibowal Dairy Complex,	Ludhiana	5.1	4.8	0.4	5.1	0.7
3.	1901	Dusshera Ground Industrial Estate,	Ludhiana	22	16.1	-	2.9	0.8
4.	1902	Shukla Tea Stal Point,	Ludhiana	14	12.8	10.3	1	0.4
5.	1903	Punjab Agricultural University,	Ludhiana	5.8	6.2	BDL	4.7	BDL
6.	4134	Tube Well At Rssb, Tibba Road, Ludhiana Industrial Area	Ludhiana	0.7	1.1	0.4	0.4	BDL
7.	4135	Msw Dumping Site, Jamalpur	Ludhiana	0.8	2.2	0.32	1.13	BDL
8.	4136	Stp Jamalpur	Ludhiana	0.9	4.4	BDL	4.32	BDL
9.	4139	Handpump At Park Adjoining To National Industries, E-128, Ph-Iv, Focal Point Ludhiana	Ludhiana	31	26.4	11	1.9	BDL
10.	4140	Handpump In Sahota Baghbani Farm, Vill Harian, Machiwara	Ludhiana	1.8	8.8	9.2	1.6	0.6
11.	4153	Dashmesh Nagar, Gali No 12, Ludhiana	Ludhiana	21	18.4	BDL	7.41	BDL
12.	4154	Tssm Sr Sec School Shimlapuri, Ludhiana	Ludhiana	24	15.6	1.2	0.9	-
13.	4155	Dairy Complex, Tajpur Road, Ludhiana Opp Satish Dairy Mear Amrit Dharam Kanta	Ludhiana	8	6.9	BDL	4.3	BDL
14.	4156	Handpump In Area On Sua Road Near Dhandari Kalan, Ludhiana	Ludhiana	25	16.7	0.6	1.1	BDL
15.	4157	Handpump Shallow Tubewell In The Area Of Janta Nagar, Ludhiana	Ludhiana	18	12.2	-	1.4	0.9
16.	2916	Near Landfill Site, Amritsar,	Amritsar	1.4	2.2	1.4	2.22	0.5
17.	2917	Near Harmandir Saheb, Amritsar,	Amritsar	8	4.2	0.6	5.39	0.4
18.	2918	Dera Bassi,	Mohali	27	12.8	1.3	2.4	BDL
19.	2919	Dera Bassi,	Mohali	28	18.6	1.2	2.6	BDL
20.	2920	Hamira Village,	Kapurthala	9	8.4	7.2	1.3	BDL
21.	2921	Hamira Village,	Kapurthala	0.9	2.6	1.2	BDL	BDL
22.	2922	Leather Complex, Jalandhar,	Jalandhar	14	-	2.1	4.32	BDL
23.	2923	Leather Complex, Jalandhar,	Jalandhar	0.9	3	1.4	1.8	0.4
24.	2924	Mandi Gobindgarh,	Fatehgarh Sahib	2.4	2.9	0.7	0.8	BDL

S. No.	Station Code	Name of Monitoring Station	District	Year of monitoring				
				2019	2020	2021	2022	2023
	BIS Drinking Water Specifications IS:10500: 2012. (Acceptable Limit)			45.0 mg/ L				
25.	2925	Mandi Gobindgarh,	Fatehgarh Sahib	3.6	3.1	0.8	0.9	BDL
26.	2926	Nangal,	Nangal	18	14.8	-	1.32	BDL
27.	2927	Nangal,	Nangal	19	20.1	-	0.99	BDL
28.	2928	Ropar,	Roopnagar	2.2	3.6	BDL	0.7	BDL
29.	2929	Ropar,	Roopnagar	0.9	2.4	BDL	BDL	BDL
30.	2930	Toansa,	Roopnagar	1.2	2.2	3.7	2.2	-
31.	2931	Toansa,	Roopnagar	1	1.8	1.9	2.7	-
32.	4137	Handpump In M/S Deep Steel Ltd, Mughal Majra, Mandi Gobbindgarh	Fatehgarh Sahib	2.8	2.6	0.7	2.31	0.4
33.	4138	Handpump, 149 Near Sant Pritam School, Ambey Majra, Mandi Gobindgarh	Fatehgarh Sahib	2.2	2.8	BDL	0.91	BDL
34.	4141	Handpump Instrial Growth Centre, Defence Road, Pathankot	Gurdaspur	4.8	2.2	1.2	0.5	BDL
35.	4142	Handpump, Vill Dheriwal, Dist Pathankot	Gurdaspur	1.2	3.6	1.4	0.4	BDL
36.	4143	Handpump Near Ash Dykes Of Nabha Power Ltd, Vill Nalash, Rajpura	Patiala	0.6	1.2	2.4	1.9	-
37.	4144	Ground Water Sampling Blocation In Village Main	Patiala	3.4	1.1	1.2	4.32	-
38.	4145	Sagar Para Drain Meeting With Ghaggar Near Vill Sagar Para, Patran	Patiala	0.5	1.1	1.2	0.69	BDL
39.	4147	Near Ash Dykes Of Guru Nanak Thermal Power Plant/ Nfl, Bhatinda	Bathinda	10	12.4	-	7.82	BDL
40.	4148	Village Kanakwal/ Phukokari Ggs Hmel Refinery, Bhatinda	Bathinda	176	80.6	-	8.9	BDL
41.	4149	Ash Dykes Of Thermal Power Plant Lehra Mohabbat, Bhatinda	Bathinda	5.6	6.9	-	2.01	0.6
42.	4150	100 M D/S Of Vill Rurianwali, Dist Muktsar	Bathinda	4.1	4.8	-	3.61	BDL
43.	4151	Near Malbors Internationla P Ltd, Vill Mansoorwal, Dist Ferozpur	Faridkot	1.4	2.1	-	BDL	-
No. of locations exceedance observed				**1**	**1**	**-**	**-**	**-**
Total monitored locations				**43**	**42**	**33**	**43**	**38**

Table - 3: Ground water quality in Punjab w.r.t - Fluoride during the years 2019 & 2023 *(maximum value observed)*

S. No.	Station Code	Name of Monitoring Station	District	Year of monitoring				
				2019	2020	2021	2022	2023
	BIS Drinking Water Specifications IS:10500: 2012. (Acceptable Limit)			1.0 mg/L				
1.	1898	Petrol Pump Opp. Hero Cycle,	Ludhiana	0.29	0.28	-	0.9	0.3
2.	1900	Gurchaaran Singh Haibowal Dairy Complex,	Ludhiana	0.22	0.3	0.4	0.33	0.3
3.	1901	Dusshera Ground Industrial Estate,	Ludhiana	0.38	0.42	-	1.3	0.4
4.	1902	Shukla Tea Stal Point,	Ludhiana	0.2	0.21	BDL	0.8	BDL
5.	1903	Punjab Agricultural University,	Ludhiana	0.38	0.32	0.24	0.29	BDL
6.	4134	Tube Well At Rssb, Tibba Road, Ludhiana Industrial Area	Ludhiana	0.32	0.19	0.4	0.29	BDL
7.	4135	Msw Dumping Site, Jamalpur	Ludhiana	0.26	0.24	0.3	0.64	BDL
8.	4136	Stp Jamalpur	Ludhiana	0.28	0.26	0.5	0.9	BDL
9.	4139	Handpump At Park Adjoining To National Industries, E-128, Ph-Iv, Focal Point Ludhiana	Ludhiana	0.19	0.22	0.24	1.2	0.3
10.	4140	Handpump In Sahota Baghbani Farm, Vill Harian, Machiwara	Ludhiana	0.12	0.26	0.29	1	BDL
11.	4153	Dashmesh Nagar, Gali No 12, Ludhiana	Ludhiana	0.26	0.25	0.24	0.5	0.6
12.	4154	Tssm Sr Sec School Shimlapuri,	Ludhiana	0.11	0.16	0.3	0.6	-
13.	4155	Dairy Complex, Tajpur Road, Ludhiana Opp Satish Dairy Mear Amrit Dharam Kanta	Ludhiana	0.2	0.32	0.3	0.21	0.5
14.	4156	Handpump In Area On Sua Road Near Dhandari Kalan,	Ludhiana	0.36	0.28	0.21	0.8	BDL
15.	4157	Handpump Shallow Tubewell In The Area Of Janta Nagar,	Ludhiana	0.46	0.36	-	0.9	0.4
16.	2916	Near Landfill Site, Amritsar,	Amritsar	0.24	0.22	0.4	0.21	BDL
17.	2917	Near Harmandir Saheb,	Amritsar	0.58	0.44	0.46	0.59	BDL
18.	2918	Dera Bassi,	Mohali	0.84	0.62	0.9	0.57	0.5
19.	2919	Dera Bassi, Punjab	Mohali	0.92	0.74	0.9	0.41	0.4
20.	2920	Hamira Village,	Kapurthala	0.2	0.31	0.3	0.51	BDL
21.	2921	Hamira Village,	Kapurthala	0.36	0.34	0.6	0.39	BDL
22.	2922	Leather Complex, Jalandhar,	Jalandhar	0.24	-	BDL	0.5	BDL
23.	2923	Leather Complex, Jalandhar,	Jalandhar	0.38	0.36	0.9	0.6	BDL
24.	2924	Mandi Gobindgarh,	Fatehgarh Sahib	0.71	0.94	0.7	0.6	BDL
25.	2925	Mandi Gobindgarh,	Fatehgarh Sahib	0.84	0.98	0.8	0.8	BDL
26.	2926	Nangal,	Nangal	1.09	1.1	-	BDL	BDL
27.	2927	Nangal,	Nangal	0.96	1	-	BDL	BDL
28.	2928	Ropar,	Roopnagar	0.58	0.5	0.49	0.3	BDL

S. No.	Station Code	Name of Monitoring Station	District	Year of monitoring				
				2019	2020	2021	2022	2023
	BIS Drinking Water Specifications IS:10500: 2012. (Acceptable Limit)			1.0 mg/L				
29.	2929	Ropar,	Roopnagar	1.76	0.31	0.29	BDL	BDL
30.	2930	Toansa,	Roopnagar	0.34	0.42	0.49	0.9	-
31.	2931	Toansa,	Roopnagar	0.58	0.29	0.3	1.2	-
32.	4137	Handpump In M/S Deep Steel Ltd, Mughal Majra, Mandi Gobbindgarh	Fatehgarh Sahib	0.76	0.9	0.59	1.06	BDL
33.	4138	Handpump, 149 Near Sant Pritam School, Ambey Majra, Mandi Gobindgarh	Fatehgarh Sahib	0.69	0.75	0.53	0.9	BDL
34.	4141	Handpump Instrial Growth Centre, Defence Road, Pathankot	Gurdaspur	0.18	0.14	BDL	BDL	BDL
35.	4142	Handpump, Vill Dheriwal, Dist Pathankot	Gurdaspur	0.07	0.16	BDL	BDL	BDL
36.	4143	Handpump Near Ash Dykes Of Nabha Power Ltd, Vill Nalash, Rajpura	Patiala	0.28	0.24	0.41	0.3	-
37.	4144	Ground Water Sampling Blocation In Village Main	Patiala	0.56	0.28	0.3	0.22	-
38.	4145	Sagar Para Drain Meeting With Ghaggar Near Vill Sagar Para, Patran	Patiala	0.26	0.3	-	0.24	BDL
39.	4147	Near Ash Dykes Of Guru Nanak Thermal Power Plant/ Nfl, Bhatinda	Bathinda	1.48	1.6	-	4.31	BDL
40.	4148	Village Kanakwal/ Phukokari Ggs Hmel Refinery, Bhatinda	Bathinda	1.34	1.62	-	1.4	BDL
41.	4149	Ash Dykes Of Thermal Power Plant Lehra Mohabbat, Bhatinda	Bathinda	5.28	6.44	-	2.35	0.3
42.	4150	100 M D/S Of Vill Rurianwali, Dist Muktsar	Bathinda	0.4	0.44	-	1.91	0.3
43.	4151	Near Malbors Internationla P Ltd, Vill Mansoorwal, Dist Ferozpur	Faridkot	0.58	0.39	-	BDL	-
No. of locations exceedance observed				**5**	**4**	**-**	**8**	**-**
Total monitored locations				**43**	**42**	**32**	**43**	**37**
% exceedance				**11.6%**	**9.5%**	**-**	**18.6%**	**-**

Table - 4: Ground water quality in Punjab w.r.t - Total Dissolved Solids (TDS) during the years 2019 & 2023 *(maximum value observed)*

S. No.	Station Code	Name of Monitoring Station	District	Year of monitoring				
				2019	2020	2021	2022	2023
	BIS Drinking Water Specifications IS:10500: 2012. (Acceptable Limit)			500.0 mg/ L				
1.	1898	Petrol Pump Opp. Hero Cycle, Ludhiana	Ludhiana	672	732	-	850	1002
2.	1900	Gurchaaran Singh Haibowal Dairy Complex, Ludhiana	Ludhiana	430	757	819	527	682
3.	1901	Dusshera Ground Industrial Estate,	Ludhiana	470	444	-	368	783
4.	1902	Shukla Tea Stal Point, Ludhiana	Ludhiana	804	727	638	797	791
5.	1903	Punjab Agricultural University,	Ludhiana	434	303	348	282	304
6.	4134	Tube Well At Rssb, Tibba Road, Ludhiana Industrial Area	Ludhiana	344	736	331	378	325
7.	4135	Msw Dumping Site, Jamalpur	Ludhiana	354	365	418	821	574
8.	4136	STP Jamalpur	Ludhiana	338	1061	1004	998	335
9.	4139	Handpump At Park Adjoining To National Industries, E-128, Ph-Iv, Focal Point Ludhiana	Ludhiana	682	1029	1056	1253	1035
10.	4140	Handpump In Sahota Baghbani Farm, Vill Harian, Machiwara	Ludhiana	298	1015	931	1058	445
11.	4153	Dashmesh Nagar, Gali No 12, Ludhiana	Ludhiana	326	449	504	752	611
12.	4154	Tssm Sr Sec School Shimlapuri,	Ludhiana	496	541	552	519	-
13.	4155	Dairy Complex, Tajpur Road, Ludhiana Opp Satish Dairy Mear Amrit Dharam Kanta	Ludhiana	478	882	783	483	581
14.	4156	Handpump In Area On Sua Road Near Dhandari Kalan, Ludhiana	Ludhiana	684	687	602	631	285
15.	4157	Handpump Shallow Tubewell In The Area Of Janta Nagar, Ludhiana	Ludhiana	454	482	-	749	832
16.	2916	Near Landfill Site, Amritsar, Punjab	Amritsar	650	622	540	493	721
17.	2917	Near Harmandir Saheb, Amritsar,	Amritsar	699	619	610	645	681
18.	2918	Dera Bassi, Punjab	Mohali	1532	341	1548	1574	1071
19.	2919	Dera Bassi, Punjab	Mohali	1950	1542	1195	1829	1293
20.	2920	Hamira Village, Punjab	Kapurthala	840	834	680	824	741
21.	2921	Hamira Village, Punjab	Kapurthala	286	-	281	262	548
22.	2922	Leather Complex, Jalandhar, Punjab	Jalandhar	954	-	578	828	498
23.	2923	Leather Complex, Jalandhar, Punjab	Jalandhar	232	1440	1502	1588	698
24.	2924	Mandi Gobindgarh, Punjab	Fatehgarh Sahib	523	1344	690	580	498
25.	2925	Mandi Gobindgarh, Punjab	Fatehgarh Sahib	1663	1396	718	733	562
26.	2926	Nangal, Punjab	Nangal	886	502	-	520	438
27.	2927	Nangal, Punjab	Nangal	723	550	-	447	398
28.	2928	Ropar, Punjab	Roopnagar	577	282	305	409	364

S. No.	Station Code	Name of Monitoring Station	District	Year of monitoring				
				2019	2020	2021	2022	2023
	BIS Drinking Water Specifications IS:10500: 2012. (Acceptable Limit)			500.0 mg/ L				
29.	2929	Ropar, Punjab	Roopnagar	273	409	335	153	321
30.	2930	Toansa, Punjab	Roopnagar	454	1186	915	795	-
31.	2931	Toansa, Punjab	Roopnagar	1240	433	862	1518	-
32.	4137	Handpump In M/S Deep Steel Ltd, Mughal Majra, Mandi Gobbindgarh	Fatehgarh Sahib	805	1393	607	1067	687
33.	4138	Handpump, 149 Near Sant Pritam School, Ambey Majra, Mandi Gobindgarh	Fatehgarh Sahib	471	1386	382	629	367
34.	4141	Handpump Instrial Growth Centre, Defence Road, Pathankot	Gurdaspur	221	318	263	195	645
35.	4142	Handpump, Vill Dheriwal, Dist Pathankot	Gurdaspur	322	349	273	184	748
36.	4143	Handpump Near Ash Dykes Of Nabha Power Ltd, Vill Nalash, Rajpura	Patiala	351	794	697	668	-
37.	4144	Ground Water Sampling Blocation In Village Main	Patiala	644	340	327	365	-
38.	4145	Sagar Para Drain Meeting With Ghaggar Near Vill Sagar Para, Patran	Patiala	320	609	498	347	278
39.	4147	Near Ash Dykes Of Guru Nanak Thermal Power Plant/ Nfl, Bhatinda	Bathinda	1380	1954	-	1655	791
40.	4148	Village Kanakwal/ Phukokari Ggs Hmel Refinery, Bhatinda	Bathinda	3112	2882	-	1270	796
41.	4149	Ash Dykes Of Thermal Power Plant Lehra Mohabbat, Bhatinda	Bathinda	756	874	-	710	815
42.	4150	100 M D/S Of Vill Rurianwali, Dist Muktsar	Bathinda	1256	1087	-	2693	958
43.	4151	Near Malbors Internationla P Ltd, Vill Mansoorwal, Dist Ferozpur	Faridkot	1358	1518	-	1076	-
No. of locations exceedance observed				**23**	**29**	**22**	**30**	**24**
Total monitored locations				**43**	**41**	**33**	**43**	**40**
% exceedance				**53.4%**	**70.7%**	**66.6%**	**69.7%**	**60%**

Table - 5: Compliance of ground water in Punjab w.r.t Heavy Metals viz. Arsenic, Cadmium & Copper during the year 2019 – 2023

S. No.	Station Code	Name of Monitoring Station	District	Arsenic (mg/ L)					Cadmium (mg/ L)					Copper (mg/ L)				
				Year of monitoring					Year of monitoring					Year of monitoring				
				2019	2020	2021	2022	2023	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
	BIS Drinking Water Specifications IS:10500: 2012. (Acceptable Limit)			0.01 mg/ L					0.003 mg/ L					0.05 mg/ L				
1.	1898	Petrol Pump Opp. Hero Cycle, Ludhiana	Ludhiana	BDL	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL
2.	1900	Gurchaaran Singh Haibowal Dairy Complex,	Ludhiana	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
3.	1901	Dusshera Ground Industrial Estate,	Ludhiana	BDL	BDL	-	BDL	BDL	BDL	BDL		BDL	BDL	BDL	BDL	-	BDL	BDL
4.	1902	Shukla Tea Stal Point, Ludhiana	Ludhiana	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
5.	1903	Punjab Agricultural University, Ludhiana	Ludhiana	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
6.	4134	Tube Well At Rssb, Tibba Road, Ludhiana Industrial Area	Ludhiana	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.007	BDL	BDL	BDL	BDL
7.	4135	MSW Dumping Site, Jamalpur	Ludhiana	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
8.	4136	STP Jamalpur	Ludhiana	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
9.	4153	Dashmesh Nagar, Gali No 12, Ludhiana	Ludhiana	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.009	BDL	BDL	BDL	BDL
10.	4154	Tssm Sr Sec School Shimlapuri, Ludhiana	Ludhiana	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL		0.008	BDL	BDL	BDL	-
11.	4155	Dairy Complex, Tajpur Road, Ludhiana Opp Satish Dairy Mear Amrit Dharam Kanta	Ludhiana	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12.	4156	Handpump In Area On Sua Road Near Dhandari Kalan, Ludhiana	Ludhiana	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13.	4157	Handpump Shallow Tubewell In The Area Of Janta Nagar, Ludhiana	Ludhiana	BDL	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL
14.	4139	Handpump At Park Adjoining To National Industries, E-128, Ph-Iv, Focal Point	Ludhiana	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.031	BDL	BDL	BDL	BDL
15.	4140	Handpump In Sahota Baghbani Farm, Vill Harian, Machiwara	Ludhiana	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
16.	2916	Near Landfill Site, Amritsar, Punjab	Amritsar	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
17.	2917	Near Harmandir Saheb, Amritsar, Punjab	Amritsar	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
18.	2918	Dera Bassi, Punjab	Mohali	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

S. No.	Station Code	Name of Monitoring Station	District	Arsenic (mg/ L)					Cadmium (mg/ L)					Copper (mg/ L)				
				Year of monitoring					Year of monitoring					Year of monitoring				
	BIS Drinking Water Specifications IS:10500: 2012. (Acceptable Limit)			2019	2020	2021	2022	2023	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
				0.01 mg/ L					0.003 mg/ L					0.05 mg/ L				
19.	2919	Dera Bassi, Punjab	Mohali	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20.	2920	Hamira Village, Punjab	Kapurthala	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
21.	2921	Hamira Village, Punjab	Kapurthala	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
22.	2922	Leather Complex, Jalandhar, Punjab	Jalandhar	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL
23.	2923	Leather Complex, Jalandhar, Punjab	Jalandhar	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
24.	2924	Mandi Gobindgarh, Punjab	Fatehgarh Sahib	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
25.	2925	Mandi Gobindgarh, Punjab	Fatehgarh Sahib	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
26.	2926	Nangal, Punjab	Nangal	BDL	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	-	BDL	BDL	BDL
27.	2927	Nangal, Punjab	Nangal	BDL	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	-	BDL	BDL	BDL
28.	2928	Ropar, Punjab	Roopnagar	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
29.	2929	Ropar, Punjab	Roopnagar	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
30.	2930	Toansa, Punjab	Roopnagar	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	-	0.008	BDL	BDL	BDL	-
31.	2931	Toansa, Punjab	Roopnagar	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	-	0.009	BDL	BDL	BDL	-
32.	4137	Handpump In M/S Deep Steel Ltd, Mughal Majra, Mandi Gobbindgarh	Fatehgarh Sahib	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
33.	4138	Handpump, 149 Near Sant Pritam School, Ambey Majra, Mandi Gobindgarh	Fatehgarh Sahib	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
34.	4141	Handpump Instrial Growth Centre, Defence Road, Pathankot	Gurdaspur	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
35.	4142	Handpump, Vill Dheriwal, Dist Pathankot	Gurdaspur	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
36.	4143	Handpump Near Ash Dykes Of Nabha Power Ltd, Vill Nalash, Rajpura	Patiala	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	-
37.	4144	Ground Water Sampling Blocation In Village Main	Patiala	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	-
38.	4145	Sagar Para Drain Meeting With Ghaggar Near Vill Sagar Para, Patran	Patiala	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

S. No.	Station Code	Name of Monitoring Station	District	Arsenic (mg/ L)					Cadmium (mg/ L)					Copper (mg/ L)				
				Year of monitoring					Year of monitoring					Year of monitoring				
	BIS Drinking Water Specifications IS:10500: 2012. (Acceptable Limit)			2019	2020	2021	2022	2023	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
				0.01 mg/ L					0.003 mg/ L					0.05 mg/ L				
39.	4147	Near Ash Dykes Of Guru Nanak Thermal Power Plant/ Nfl, Bhatinda	Bathinda	BDL	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL	0.017	BDL	-	BDL	BDL
40.	4148	Village Kanakwal/ Phukokari Ggs Hmel Refinery, Bhatinda	Bathinda	BDL	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL	0.045	BDL	-	BDL	BDL
41.	4149	Ash Dykes Of Thermal Power Plant Lehra Mohabbat, Bhatinda	Bathinda	BDL	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL
42.	4150	100 M D/S Of Vill Rurianwali, Dist Muktsar	Bathinda	BDL	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL	0.045	BDL	-	BDL	BDL
43.	4151	Near Malbors Internationla P Ltd, Vill Mansoorwal, Dist Ferozpur	Faridkot	BDL	BDL	-	BDL	-	BDL	BDL	-	BDL	-	0.038	BDL	-	BDL	-

Table - 6: Compliance of ground water in Punjab w.r.t Heavy Metals viz. Lead, Chromium & Nickel during the year 2019 – 2023

S. No.	Station Code	Name of Monitoring Station	District	Lead (mg/ L)					Chromium (mg/ L)					Nickel (mg/ L)				
				Year of monitoring					Year of monitoring					Year of monitoring				
	BIS Drinking Water Specifications IS:10500: 2012. (Acceptable Limit)			2019	2020	2021	2022	2023	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
				0.001 mg/ L					0.05 mg/ L					0.02 mg/ L				
1.	1898	Petrol Pump Opp. Hero Cycle, Ludhiana	Ludhiana	BDL	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL		BDL	BDL
2.	1900	Gurchaaran Singh Haibowal Dairy Complex,	Ludhiana	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
3.	1901	Dusshera Ground Industrial Estate, Ludhiana	Ludhiana	BDL	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL		BDL	BDL
4.	1902	Shukla Tea Stal Point, Ludhiana	Ludhiana	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
5.	1903	Punjab Agricultural University, Ludhiana	Ludhiana	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
6.	4134	Tube Well At Rssb, Tibba Road, Ludhiana Industrial Area	Ludhiana	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
7.	4135	MSW Dumping Site, Jamalpur	Ludhiana	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
8.	4136	STP Jamalpur	Ludhiana	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	0.008	BDL	BDL	BDL	BDL
9.	4139	Handpump At Park Adjoining To National Industries, E-128, Ph-Iv, Focal Point	Ludhiana	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10.	4140	Handpump In Sahota Baghbani Farm, Vill Harian, Machiwara	Ludhiana	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
11.	4153	Dashmesh Nagar, Gali No 12, Ludhiana	Ludhiana	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12.	4154	Tssm Sr Sec School Shimlapuri, Ludhiana	Ludhiana	-	BDL	BDL	BDL	-	-	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	-
13.	4155	Dairy Complex, Tajpur Road, Ludhiana Opp Satish Dairy Mear Amrit Dharam Kanta	Ludhiana	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
14.	4156	Handpump In Area On Sua Road Near Dhandari Kalan, Ludhiana	Ludhiana	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

S. No.	Station Code	Name of Monitoring Station	District	Lead (mg/ L)					Chromium (mg/ L)					Nickel (mg/ L)				
				Year of monitoring					Year of monitoring					Year of monitoring				
	BIS Drinking Water Specifications IS:10500: 2012. (Acceptable Limit)			2019	2020	2021	2022	2023	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
				0.001 mg/ L					0.05 mg/ L					0.02 mg/ L				
15.	4157	Handpump Shallow Tubewell In The Area Of Janta Nagar, Ludhiana	Ludhiana	-	BDL	-	BDL	BDL	-	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL
16.	2916	Near Landfill Site, Amritsar, Punjab	Amritsar	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
17.	2917	Near Harmandir Saheb, Amritsar, Punjab	Amritsar	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
18.	2918	Dera Bassi, Punjab	Mohali	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
19.	2919	Dera Bassi, Punjab	Mohali	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20.	2920	Hamira Village, Punjab	Kapurthala	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
21.	2921	Hamira Village, Punjab	Kapurthala	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
22.	2922	Leather Complex, Jalandhar, Punjab	Jalandhar	-	-	BDL	BDL	BDL	-		BDL	BDL	BDL	BDL		BDL	BDL	BDL
23.	2923	Leather Complex, Jalandhar, Punjab	Jalandhar	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
24.	2924	Mandi Gobindgarh, Punjab	Fatehgarh Sahib	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
25.	2925	Mandi Gobindgarh, Punjab	Fatehgarh Sahib	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	0.006	BDL	BDL	BDL	BDL
26.	2926	Nangal, Punjab	Nangal	-	BDL	-	BDL	BDL	-	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL
27.	2927	Nangal, Punjab	Nangal	-	BDL	-	BDL	BDL	-	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL
28.	2928	Ropar, Punjab	Roopnagar	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
29.	2929	Ropar, Punjab	Roopnagar	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
30.	2930	Toansa, Punjab	Roopnagar	-	BDL	BDL	BDL	-	-	BDL	BDL	BDL		BDL	BDL	BDL	BDL	-
31.	2931	Toansa, Punjab	Roopnagar	-	BDL	BDL	BDL	-	-	BDL	BDL	BDL		BDL	BDL	BDL	BDL	-
32.	4137	Handpump In M/S Deep Steel Ltd, Mughal Majra, Mandi Gobbindgarh	Fatehgarh Sahib	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	0.007	BDL	BDL	BDL	BDL
33.	4138	Handpump, 149 Near Sant Pritam School, Ambey Majra, Mandi Gobindgarh	Fatehgarh Sahib	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
34.	4141	Handpump Instrial Growth Centre, Defence Road, Pathankot	Gurdaspur	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

S. No.	Station Code	Name of Monitoring Station	District	Lead (mg/ L)					Chromium (mg/ L)					Nickel (mg/ L)				
				Year of monitoring					Year of monitoring					Year of monitoring				
	BIS Drinking Water Specifications IS:10500: 2012. (Acceptable Limit)			2019	2020	2021	2022	2023	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
				0.001 mg/ L					0.05 mg/ L					0.02 mg/ L				
35.	4142	Handpump, Vill Dheriwal, Dist Pathankot	Gurdaspur	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
36.	4143	Handpump Near Ash Dykes Of Nabha Power Ltd, Vill Nalash, Rajpura	Patiala	-	BDL	BDL	BDL	-	-	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	-
37.	4144	Ground Water Sampling Blocation In Village Main	Patiala	-	BDL	BDL	BDL	-	-	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	-
38.	4145	Sagar Para Drain Meeting With Ghaggar Near Vill Sagar Para, Patran	Patiala	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
39.	4147	Near Ash Dykes Of Guru Nanak Thermal Power Plant/ Nfl, Bhatinda	Bathinda	-	BDL	-	BDL	BDL	-	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL
40.	4148	Village Kanakwal/ Phukokari Ggs Hmel Refinery, Bhatinda	Bathinda	-	BDL	-	BDL	BDL	-	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL
41.	4149	Ash Dykes Of Thermal Power Plant Lehra Mohabbat, Bhatinda	Bathinda	-	BDL	-	BDL	BDL	-	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL
42.	4150	100 M D/S Of Vill Rurianwali, Dist Muktsar	Bathinda	-	BDL	-	BDL	BDL	-	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL
43.	4151	Near Malbors Internationla P Ltd, Vill Mansoorwal, Dist Ferozpur	Faridkot	-	BDL	-	BDL	-	-	BDL	-	BDL	-	BDL	BDL	-	BDL	-

Table - 7: Compliance of ground water in Punjab w.r.t Heavy Metals viz. Zinc, Mercury & Iron during the year 2019 – 2023

Station Code	Name of Monitoring Station	District	Zinc (mg/ L)					Mercury (mg/ L)					Iron (mg/L)				
			Year of monitoring					Year of monitoring					Year of monitoring				
BIS Drinking Water Specifications IS:10500: 2012. (Acceptable Limit)			2019	2020	2021	2022	2023	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
			5.0 mg/ L					0.001 mg/ L					0.3 mg/ L				
1898	Petrol Pump Opp. Hero Cycle	Ludhiana	0.1	BDL	-	BDL	0.12	BDL	BDL	-	BDL	BDL	0.19	BDL		0.1	BDL
1900	Gurchaaran Singh Haibowal Dairy Complex, Ludhiana	Ludhiana	0.16	0.28	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.11	BDL	0.29	0.11	BDL
1901	Dusshera Ground Industrial Estate, Ludhiana	Ludhiana	0.29	BDL	-	0.17	BDL	BDL	BDL	-	BDL	BDL	0.16	BDL		0.31	BDL
1902	Shukla Tea Stal Point, Ludhiana	Ludhiana	0.12	0.14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.22	BDL	BDL	0.15	BDL
1903	Punjab Agricultural University, Ludhiana	Ludhiana	0.21	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.29	BDL	0.19	0.1	BDL
4134	Tube Well At Rssb, Tibba Road, Ludhiana Industrial Area	Ludhiana	0.29	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.13	0.24	0.1	BDL
4135	Msw Dumping Site, Jamalpur	Ludhiana	0.19	BDL	BDL	0.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.22	0.21	BDL
4136	Stp Jamalpur	Ludhiana	0.13	BDL	0.36	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.1	BDL	0.58	BDL	BDL
4139	Handpump At Park Adjoining To National Industries, E-128, Ph-Iv, Focal Point Ludhiana	Ludhiana	0.1	BDL	BDL	0.2	0.45	BDL	BDL	BDL	BDL	BDL	0.16	BDL	0.17	0.34	0.13
4140	Handpump In Sahota Baghbani Farm, Vill Harian, Machiwara	Ludhiana	BDL	BDL	BDL	0.19	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.86	0.11	0.22	BDL
4153	Dashmesh Nagar, Gali No 12, Ludhiana	Ludhiana	0.18	BDL	0.14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.18	BDL	0.31	0.19	BDL
4154	Tssm Sr Sec School Shimlapuri, Ludhiana	Ludhiana	0.98	1.67	0.11	BDL	-	BDL	BDL	BDL	BDL	-	0.21	0.3	0.22	0.12	
4155	Dairy Complex, Tajpur Road, Ludhiana Opp Satish Dairy Mear Amrit Dharam Kanta	Ludhiana	0.17	0.14	0.22	0.11	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.38	0.27	BDL
4156	Handpump In Area On Sua Road Near Dhandari Kalan, Ludhiana	Ludhiana	0.31	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.62	0.12	0.16	BDL

Station Code	Name of Monitoring Station	District	Zinc (mg/ L)					Mercury (mg/ L)					Iron (mg/L)				
			Year of monitoring					Year of monitoring					Year of monitoring				
BIS Drinking Water Specifications IS:10500: 2012. (Acceptable Limit)			2019	2020	2021	2022	2023	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
			5.0 mg/ L					0.001 mg/ L					0.3 mg/ L				
4157	Handpump Shallow Tubewell In The Area Of Janta Nagar, Ludhiana	Ludhiana	0.18	BDL	-	0.11	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	-	0.21	BDL
2916	Near Landfill Site, Amritsar, Punjab	Amritsar	BDL	0.14	0.24	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.58	0.26	0.2	BDL	BDL
2917	Near Harmandir Saheb, Amritsar, Punjab	Amritsar	BDL	BDL	0.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.1	BDL	0.3	BDL	BDL
2918	Dera Bassi, Punjab	Mohali	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.11	0.14	BDL	BDL	BDL
2919	Dera Bassi, Punjab	Mohali	BDL	0.11	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.15	BDL	BDL	BDL	BDL
2920	Hamira Village, Punjab	Kapurthala	0.88	BDL	0.39	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.55	0.17	0.63	0.18	BDL
2921	Hamira Village, Punjab	Kapurthala	1.06	0.59	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.96	0.24	0.22	0.12	BDL
2922	Leather Complex, Jalandhar,	Jalandhar	0.56	-	0.4	0.1	BDL	BDL	-	BDL	BDL	BDL	0.7		0.69	0.16	BDL
2923	Leather Complex, Jalandhar	Jalandhar	0.12	BDL	0.95	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.31	BDL	1.17	0.14	BDL
2924	Mandi Gobindgarh, Punjab	Fatehgarh Sahib	BDL	BDL	0.11	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.22	0.1	BDL
2925	Mandi Gobindgarh, Punjab	Fatehgarh Sahib	BDL	BDL	0.17	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.12	BDL	0.31	BDL	BDL
2926	Nangal, Punjab	Nangal	BDL	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL	0.15	BDL	-	0.15	BDL
2927	Nangal, Punjab	Nangal	BDL	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	-	0.16	BDL
2928	Ropar, Punjab	Roopnagar	0.1	BDL	BDL	0.1	BDL	BDL	BDL	BDL	BDL	BDL	0.24	0.21	BDL	0.26	BDL
2929	Ropar, Punjab	Roopnagar	BDL	BDL	0.13	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.4	0.1	BDL
2930	Toansa, Punjab	Roopnagar	0.26	1.6	0.96	0.37	-	BDL	BDL	BDL	BDL	-	0.71	5.85	1.47	0.55	-
2931	Toansa, Punjab	Roopnagar	0.14	1.33	0.71	0.11	-	BDL	BDL	BDL	BDL	-	0.48	4.96	2.31	0.2	-
4137	Handpump In M/S Deep Steel Ltd, Mughal Majra, Mandi Gobbindgarh	Fatehgarh Sahib	BDL	0.2	BDL	0.15	BDL	BDL	BDL	BDL	BDL	BDL	0.11	0.39	BDL	0.2	BDL
4138	Handpump, 149 Near Sant Pritam School, Ambey Majra, Mandi Gobindgarh	Fatehgarh Sahib	BDL	0.21	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.1	BDL	BDL	0.16	BDL

Station Code	Name of Monitoring Station	District	Zinc (mg/ L)					Mercury (mg/ L)					Iron (mg/L)				
			Year of monitoring					Year of monitoring					Year of monitoring				
BIS Drinking Water Specifications IS:10500: 2012. (Acceptable Limit)			2019	2020	2021	2022	2023	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
			5.0 mg/ L					0.001 mg/ L					0.3 mg/ L				
4141	Handpump Instrial Growth Centre, Defence Road, Pathankot	Gurdaspur	BDL	BDL	BDL	0.19	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.36	BDL
4142	Handpump, Vill Dheriwal, Dist Pathankot	Gurdaspur	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.14	BDL	BDL	0.19	BDL
4143	Handpump Near Ash Dykes Of Nabha Power Ltd, Vill Nalash, Rajpura	Patiala	BDL	0.35	BDL	0.1	-	BDL	BDL	BDL	BDL	-	0.11	0.13	BDL	0.21	-
4144	Ground Water Sampling Blocation In Village Main	Patiala	BDL	0.35	0.13	BDL	-	BDL	BDL	BDL	BDL	-	0.14	0.19	BDL	0.12	-
4145	Sagar Para Drain Meeting With Ghaggar Near Vill Sagar Para, Patran	Patiala	0.1	BDL	0.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.44	BDL	0.3	0.16	BDL
4147	Near Ash Dykes Of Guru Nanak Thermal Power Plant/ Nfl, Bhatinda	Bathinda	BDL	BDL	-	0.2	BDL	BDL	BDL	-	BDL	BDL	0.17	BDL	-	0.37	BDL
4148	Village Kanakwal/ Phukokari Ggs Hmel Refinery, Bhatinda	Bathinda	0.64	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL	0.38	BDL	-	0.1	BDL
4149	Ash Dykes Of Thermal Power Plant Lehra Mohabbat, Bhatinda	Bathinda	0.25	BDL	-	0.11	BDL	BDL	BDL	-	BDL	BDL	0.14	BDL	-	0.18	BDL
4150	100 M D/S Of Vill Rurianwali, Dist Muktsar	Bathinda	0.14	BDL	-	0.1	BDL	BDL	BDL	-	BDL	BDL	0.11	BDL	-	0.15	BDL
4151	Near Malbors Internationla P Ltd, Vill Mansoorwal, Dist Ferozpur	Faridkot	0.15	BDL	-	BDL	-	BDL	BDL	-	BDL	-	0.24	0.17	-	0.15	-
No. of locations exceedance observed													**9**	**5**	**10**	**5**	**0**
Total monitored locations													**43**	**42**	**33**	**43**	**37**
% exceedance													**20.9%**	**11.9%**	**30.3%**	**11.6%**	**-**

Item No. 05 Court No. 1

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

Original Application No.676/2023

In re: News item appearing in The Times of India dated 12.10.2023 titled **"Agricultural Runoff causing groundwater pollution in Punjab, making Drinking Water unsafe, Reveals Study "**

Date of hearing: 03.11.2023

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: Mr. Abhay Dev Sharma, Advocate with Mr. Avtar Singh, Scientific Officer, Punjab PCB (Through VC)

ORDER

1. This original application has been registered in suo-moto exercise of power on the basis of the news item published on 12.10.2023 in the Times of India, titled "Agricultural Runoff causing groundwater pollution in Punjab, making Drinking Water unsafe, Reveals Study "

2. As per the said news item, in a research released by Indian Institute of Technology (IIT) Mandi, it has been found that human activity has increased ground water pollution, particularly, through agricultural runoff in Punjab, making it unsafe for drinking and raising health risks.

3. The report reveals that on account of increase in the demand of ground water, local farmers exploiting ground water from deeper geological strata which are enriched in heavy metals and few are radioactive, having serious health impacts. Such incidents relating to declining in water quality are mainly in Southwestern region of Punjab. The report states that Punjab once celebrated as the 'bread bowl of India', is now infamously referred to as the 'cancer capital of India', reflecting the

dire consequences of water pollution and its impact on human health. As per the report, immediate action is required at the end of the concerned authorities to investigate the quality of groundwater for drinking and irrigation purposes.

4. The tribunals power to register suo-moto OA has been recognized in the matter of *"Municipal Corporation of Greater Mumbai vs. Ankita Sinha & Ors." reported in 2021 SCC Online SC 897.*

5. On advance notice, Punjab Pollution Control Board has filed a short reply seeking time to file response to the news item report. It was informed that Punjab PCB is monitoring ground water quality at 46 locations but, could not give the water quality status.

6. Having regard to the facts disclose in the news item, we deem it proper to implead following parties as Respondents:-

(i) Central Pollution Control Board through its Member Secretary;

(ii) Punjab Pollution Control Board through its Member Secretary;

(iii) Indian Institute of Technology (IIT) Mandi; though its Director;

(iv) Department of Water Supply and Sanitation, State of Punjab through its Administrative Head

(v) Department of Agriculture and Farmers Welfare, State of Punjab though its Administrative Head;

7. Registry is directed to serve the above Respondents except PPCB which is represented today.

8. The Punjab Pollution Control Board is directed to file report in response to the facts disclosed in the news item report, inter-alia,

including the issue of heavy metals, radioactive substance, pesticides and chemicals pollutants found in the ground water of the concerned area in sample testing.

9. Let the report be submitted within a period of six weeks

10. List the matter on 18.01.2024.

Prakash Shrivastava, CP

Sudhir Agarwal, JM

Dr. A. Senthil Vel, EM

November 03, 2023
Original Application No.676/2023
JG

Item No. 12 Court No. 1

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

Original Application No. 606/2022
(IA No. 825/2023, IA No. 813/2023, IA No. 749/2023,
IA No. 738/2023, IA No. 737/2023 & IA No. 262/2022)

Public Action Committee Applicant

Versus

State of Punjab Respondent

Date of hearing: 24.01.2024

CORAM: HON'BLE MR. JUSTICE PRAKASH SHRIVASTAVA, CHAIRPERSON
HON'BLE MR. JUSTICE ARUN KUMAR TYAGI JUDICIAL MEMBER
HON'BLE DR. AFROZ AHMAD, EXPERT MEMBER

Applicant: Mr. Collin Gonsalves, Senior Counsel with Mr. Deepak Kumar Singh, Advocate for Applicant alongwith Applicant in Person

Respondent: Ms. Tanisha Samantha proxy counsel for Mr. Balendu Shekhar, Advocate for Respondent no. 5 (CPCB)
Mr. Sreekar Aechuri Proxy Counsel for Mr. Prateek K. Chadha, Deputy AG for Respondent No.6 (Through VC)
Mr. A.R. Takkar, Mr. Manan Takkar, Ms.Himani Bhadauria, Mr. Bhargava Ravikumar & Mr. Prince Sharma, Advocates for respondent no. 7-M/s Malbros International Pvt. Ltd.
Mr. Collin Gonsalves, Senior Counsel with Mr. Deepak Kumar Singh, Advocate for Respondent No. 8- Sanjha Morcha, Zira.
Mr. Naginder Benipal, Advocate for PPCB.

ORDER

1. Learned Senior Counsel appearing for the applicant submits that his instructing Counsel is in personal difficulty today.

2. Learned Counsel appearing for the CPCB also seeks a week time to file response to the affidavit dated 15.01.2024 filed by respondent no.7.

3. It will be opened to all the concerned parties to complete the pleadings in the meanwhile.

4. List on 14.02.2024.

Prakash Shrivastava, CP

Arun Kumar Tyagi, JM

Dr. Afroz Ahmad, EM

January 24, 2024
Original Application No. 606/2022
JG.