

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
253
PRINCIPAL BENCH, NEW DELHI

M.A No. 3 OF 2026

In

ORIGINAL APPLICATION NO. 676 OF 2023

In the matter of:

News Item "Agriculture Runoff causing groundwater pollution in Punjab Making Drinking Water Unsafe Reveals Study" appearing in The Times of India dated 12.10.2023.

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Filed by Adv. Vikrant Pachnanda
On behalf of Central Pollution Control Board

Place: Delhi

Dated:30.03.2026

Sample Report of 34 locations in Compliance to the Hon'ble NGT (PB), New Delhi order dated 30.01.2025 in the matter of O.A No. 676 of 2023 titled as News Item "Agriculture Runoff causing groundwater pollution in Punjab Making Drinking Water Unsafe Reveals Study" appearing in The Times of India dated 12.10.2023.

1.0 Background and the Directions of Hon'ble National Green Tribunal:

In the matter of Original Application No. 676 of 2023; *"Agricultural Runoff Causing Groundwater Pollution in Punjab, Making Drinking Water Unsafe, Reveals Study"*, a report dated 13/09/2024 filed by Punjab Pollution Control Board (PPCB) in compliance to the order dated 03/11/2023 was considered by Hon'ble NGT and it was observed by Hon'ble NGT in the order dated 30/01/2025 at Para 08 that *"The state of Punjab has filed the compliance report dated 13.09.2024 disclosing that out of samples collected from 337 locations, samples from 34 locations were found to be contaminated and out of these 34 contaminated locations, 18 locations fall under the purview and jurisdiction of the Department of Water Supply and Sanitation (DWSS) and remaining 16 locations fall under the jurisdiction of Department of Local Government (DLG)."*

CPCB was directed by Hon'ble National Green Tribunal, Principal Bench in its order dated 30.01.2025 (**Annexure-I**) at Para 10, as follows:

Para 10: *In the aforesaid background, the State of Punjab has sought 18 months for completion of the study related to the assessment of heavy metals in crop growth. Since the State of Punjab has disclosed that at all the 34 contaminated locations, remedial measures had been taken, for assessment of the heavy metals in the crop growth, the study has already been assigned to PBTI, which will take 18 months. Therefore, the OA at this stage is disposed of with the following directions: -*

A. CPCB will conduct the sample test of 34 locations which were found to be contaminated within three months and submit the affidavit along with details of the sample report with the Registrar General of the Tribunal.

2.0 Action taken by CPCB:

1. CPCB Regional Directorate, Chandigarh obtained locations and Geo Co-ordinates of 18 contaminated bore-wells falling under the jurisdiction of Department of Water Supply and Sanitation (DWSS), Punjab and 16 contaminated bore-wells falling under the jurisdiction of Department of Local Government. The details of the Locations provided by the Department of Water Supply and Sanitation (DWSS), Punjab and Department of Local Government (DLG) along with field observations made by CPCB Team are given in Table 1 and 2 respectively.

Table-1- Sampling Locations of 16 Borewells under the jurisdiction of Department of Local Government (DLG)

Sample Codes	Depth, m (As informed to CPCB Team)	Name of Districts	GW, Sampling Locations of Towns and Geo-Coordinates	Field observation
DLG-1	365	SAS Nagar	Issapur 30.59137 76.83064	<ul style="list-style-type: none"> •At the given coordinates (30.59137707, 76.83064118), the borewell was dismantled, hence, the sample was collected from source at approx. 50- 70 m away from the given coordinates. •There were no industries in the surrounding area (within 1 Km) •The sampling location was in the residential area.
DLG-5	100	Nawans hahr	Rahon	<ul style="list-style-type: none"> •At the given coordinates (31.078218 76.1178), the

			31.07821 76.1178	borewell was dismantled, hence, the sample was collected from source at approx. 50- 70 m away from the given coordinates. •There were no industries in the surrounding area (within 1 Km).
DLG-13	220	Patiala	Samana 30.09055 76.11368	•Groundwater sample was collected by the CPCB team in the presence of a representative from Punjab Water Supply & sewerage Board (PWSSB). •There were no industrial units within 1Km. •The source point had agricultural fields around it. •A chlorination unit was installed with the tubewell at Samana, Patiala to supply drinking water.
DLG-15	82	Barnala	Bahadaur 30.48138 75.32701	•Groundwater sample was collected by the CPCB team in the presence of a representative from the DLG (PWSSB). •A public drinking water facility is being used for supply of ground water.
DLG-16	107	Moga	Nihal singhwala 30.58796 75.27666	•Groundwater sample was collected by the CPCB team in the presence of a representative from the DLG. •During the visit, it was observed that surface/canal water is being used for drinking water supply in the village through water treatment plant (WTP) and distribution system.
DLG-17	90	Bhatinda	Kothaguru 30.43916 75.11694	•Groundwater sample was collected by the CPCB team in the presence of a representative from the DLG. •It was informed that DLG (PWSSB) has proposed to set up

				Filtration Unit i.e. RSF which will use surface/canal water to provide drinking water supply to the community as an alternate source
DLG-20	100	Ludhiana	Jagraon 30.75773 75.48874	<ul style="list-style-type: none"> •It was informed that PWSSB has installed 21 borewells near the city to supply drinking water to the community. Electricity connection to operate these borewell is underway. •Groundwater sample was collected by the CPCB team in the presence of a representative from the DLG (PWSSB).
DLG-21	152	Ludhiana	Chattarsingh Park 30.89655 75.84642	<ul style="list-style-type: none"> •Installed borewell/well supplies domestic and commercial water up to a radius of 100 meters. •Groundwater sample was collected by the CPCB team in the presence of a representative from the DLG (MC Ludhiana).
DLG-23	130	Amritsar	Ajnala 31.84243 74.76901	<ul style="list-style-type: none"> •Groundwater sample was collected by the CPCB team in the presence of a representative from the Punjab Sewerage Board (source under MC Ajnala). •Team observed that near the ground water source a material recovery facility was operational for processing the solid waste. •There were no industrial units within 1Km.
DLG-25	150	Amritsar	Ramdas 31.96528 74.91020	<ul style="list-style-type: none"> •Groundwater sample was collected by the CPCB team in the presence of a representative from the Punjab Water supply & Sewerage Board(PWSSB). •Chlorination was done at the source and then the water was supplied further.

				<ul style="list-style-type: none"> •There were no industrial units within 1Km. •The source point had agricultural fields around it.
DLG-26	140	Kapurthala	Kapurthala 31.37090 75.38152	<ul style="list-style-type: none"> •Groundwater sample was collected by the CPCB team in the presence of pump operator. •At the given coordinates, the water was not available, hence, the sample was taken from other source of DLG. (Municipal Corporation) at a distance of 100 mtr. •Chlorination was done at the source and then the water was supplied further. •There were no industrial units within 1Km. •The source point had agricultural fields around it.
DLG-27	150	Kapurthala	Bholath 31.53825 75.50002	<ul style="list-style-type: none"> •Groundwater sample was collected by CPCB team in the presence of pump operator. •Chlorination was being done at the source and then the water was supplied further. •There were no industrial units within 1Km. •The source point had agricultural fields around it.
DLG-28	137	Jalandhar	Shahkot 31.08321 75.34258	<ul style="list-style-type: none"> •Groundwater sample was collected by CPCB team in the presence of a representative from the DLG (Nagar Panchayat, Shahkot). •Chlorination was being done at the source and then the water was supplied further. •There were no industrial units within 1Km. •The source point had agricultural

				fields around it.
DLG-30	37	Tarn Taran	Bhikiwind 31.30030 74.77009	<ul style="list-style-type: none"> •Groundwater sample was collected by the CPCB team in the presence of a representative from the DLG (PWSSB). •There were no industries within 1Km. •The area was surrounded by agricultural fields.
DLG-32	207	Faridkot	Kotkapura 30.57247 74.81613	<ul style="list-style-type: none"> • Groundwater sample was collected by the CPCB team in the presence of a representative from the DLG (PWSSB). •Surface water is being used as an alternative source of drinking water through a 4.5 MGD water Treatment (WTP) installed at Faridkot.
DLG-34	37	Fazilka	Abohar 30.11844 74.20746	<ul style="list-style-type: none"> •Groundwater sample was collected by the CPCB team in the presence of a representative from the DLG (PWSSB). •Surface water is being used as an alternative source of drinking water through a 5 MGD WTP installed at Abohar

Table-2- Sampling Locations of the 18 Bore-wells under the Jurisdiction of Department of Water Supply and Sanitation Punjab (DWSS)

Sample codes	Depth, m (As in formed to CPCB Team)	Name of Districts	Sampling Location of Towns and Geo Coordinates	Field observations
DWS S-2	450	Fatehgarh Sahib	Tubewell at Chunni Kalan 30.65821, 76.56613	<ul style="list-style-type: none"> • There were no industries in the surrounding area (within 1 Km). • The sampling location was in the residential area.

DWS S-3	305	Fateh garh Sahib	Bhangrana 30.60335, 76.57633	<ul style="list-style-type: none"> • There were no industries in the surrounding area (within 1 Km) • The sampling location was in the residential area.
DWS S-4	198	Ropar	Maini 31.03262, 76.52989	<ul style="list-style-type: none"> • There were no industries in the surrounding area (within 1 Km). • The source was located near Satluj River (approx. 700 m). • The source was surrounded by agricultural fields. • An Arsenic Treatment Plant has been installed. • However, the sample was collected before Arsenic treatment.
DWS S-6	96	Patiala	Tubewell at Sangatpura, Nabha, Patiala, Division 1 30.34138 76.22404	<ul style="list-style-type: none"> • The source point had agricultural fields around it. • There were no industrial units within 1Km. • A chlorination unit was found installed with the tube-well at Sangatpura, Nabha to supply drinking water to the villages.
DWS S-7	400	Patiala	Tubewell at Thuha, Shambukalan, Rajpura 30.49874 76.66442	<ul style="list-style-type: none"> • There were no industrial units within 1Km. • The source point had agricultural fields around it. • A community Water Purification Plant has been installed with the tube-well at Thuha. • Surface water is being used as an alternative source of drinking water through water treatment plant (WTP) installed at Mandoli.

DWS S-8	365	Patiala	Tubewell at Kami kalan, Ghanaur, Rajpura 30.36181 76.63754	<ul style="list-style-type: none"> • Surface water / Canal Water is being used as an alternative source of drinking water through water treatment plant (WTP) installed at Mandoli. • A Community Water Purification Plant is installed with the tubewell at Kami Kalan. . • There were no industrial units within 1Km. • The source point had agricultural fields around it.
DWS S-9	320	Patiala	Tubewell at Lacharu Kalan, Ghanaur, Rajpura 30.33809 76.63404	<ul style="list-style-type: none"> • There were no industrial units within 1Km:- • The source point had agricultural fields around it. • A Community Water Purification Plant is installed with the tubewell at Lachuru Kalan.
DWS S-10	250	Patiala	Tubewell at Bir kauli, Sanour, Rajpura 30.41475 76.51907	<ul style="list-style-type: none"> • There were no industrial units within 1Km. • The source point had agricultural fields around it. • A RO plant was installed near the source at Bir Kauli by DWSS but same was found not operational. • Surface water/Canal Water is being used as an alternative source of drinking water through WTP installed at

				Mandoli.
DWS S-11	305	Patiala	Tubewell at Lohakheri, Ghanaur, Rajpura 30.41444 76.59082	<ul style="list-style-type: none"> • The tubewell at LohaKheri was found non-operational. • As informed by the concerned department representative, drinking water is supplied from the Kutha Kheri tube well; accordingly, the sample was collected from Kutha Kheri tube well instead of Loha Kheri tube well. • There were no industrial units within 1Km. • The source point had agricultural fields around it.
DWS S-12	300	Patiala	Tubewell at Rajgarh, Shambukalan, Rajpura 30.41780 76.73152	<ul style="list-style-type: none"> • Surface water/Canal Water is being used as an alternative source of drinking water through WTP installed at Mandoli. • There were no industrial units within 1Km. • The source point had agricultural fields around it. • Waste dumping observed near the source point.
DWS S-14	180	Sangrur	Tubewell at Bugra, Dhuri, Malerkotla 30.35896 75.78690	<ul style="list-style-type: none"> • Groundwater sample was collected by the CPCB team in the presence of a representative from the DWSS. • A RO plant has been installed at villages namely Bugra, Dhuri, Malerkotla, Sangrur by DWSS.

DWS S-18	40	Ludhiana	Tubewell at Begowal, Doraha, Khanna 30.81995 76.03992	<ul style="list-style-type: none"> • A RO plant has been installed at village Rampur, Block Doraha, near Begowal by DWSS but same was found not operational.
DWS S-19	55	Ludhiana	Tubewell at Begowal, Doraha, Khanna 30.81712 76.05614	<ul style="list-style-type: none"> • A RO plant has been installed at village Begowal by DWSS. The groundwater sample was collected by the CPCB team in the presence of a representative of the DWSS department.
DWS S-22	150	Amritsar	Tubewell at Urdhan Ajnala, Amritsar Division 1 31.87852 74.86617	<ul style="list-style-type: none"> • The tubewell is equipped with an Arsenic-cum-Iron Removal Plant, from which treated water is supplied to the households. • There were no industrial units within 1Km. • The source point had agricultural fields around it.
DWS S-24	107	Amritsar	Tubewell at Gagoo Mahal, Ajnala, Amritsar, Division-01 31.91301 74.81145	<ul style="list-style-type: none"> • The tubewell had Community Water Purification Plant. The local people take RO treated water from there for drinking. • Sample was collected from borewell before RO treatment. • There were no industrial units within 1Km. • The source point had agricultural fields around it. • Groundwater sample was collected by the CPCB team in the presence of a representative from the DWSS

DWS S-29	145	Tarn Taran	Tubewell at Goindwal Sahib, Khadoor Sahib, Tarn Taran no. 2 31.36729 75.14164	<ul style="list-style-type: none"> At the coordinates provided the source was dismantled, hence the sample was collected from approx. 1km distance from DWSS tubewell. There were industries like paint industry, CNG filling plant, Thermal Power plant and many other units within 1km of the sampling point.
DWS S-31	91	Faridkot	Tubewell at Deep singhwala, Faridkot 30.74192 74.48182	<ul style="list-style-type: none"> Surface water from the canal is being used as an alternative source for drinking water supply in the village.
DWS S-33	50	Fazilka	Tubewell at Dipulana, Fazilka 30.46132, 74.13495	<ul style="list-style-type: none"> A RO plant has been installed near Panchayat Ghar, Village Dipulana, by DWSS.

- CPCB Regional Directorate, Chandigarh, constituted 03 monitoring teams vide Office Order No. RD-CHD/TECH/NGT-matter/2024/249 dated 19.05.2025 for conducting groundwater monitoring across Punjab at the identified 34 contaminated locations. The monitoring was carried out by the officials from CPCB accompanied by the officials from the DWSS and DLG during 20–21 May 2025 and 27–28 May 2025. Groundwater samples were collected, preserved, and transported to CPCB Head Office Laboratory for analysis as per CPCB Protocol/SOP. Sampling Analysis Results of Ground water monitoring locations are attached as **Annexure-II**
- The results of analysis of the samples collected from the 16 Locations under the jurisdiction of Department of Local Government, Punjab (DLG) are given

in **Table 3** and **4**, and 18 Locations under the jurisdiction of Department of Water Supply and Sanitation (DWSS), Punjab given in **Table 5** and **Table 6** for general/physical parameters and heavy metals respectively.

Table 3: Analysis Results of Physico-Chemical parameters in the samples taken from 16 bore-wells under the jurisdiction of Department of Local Government

S. No	Parameters	Units	IS 10500:2012 drinking water standards		Sampling Locations/ Field Code (The codes of the locations are as per table 1)															
			Acceptable limit	Permissible limit in the absence of alternate source	DLG1	DLG5	DLG13	DLG15	DLG16	DLG17	DLG20A	DLG21	DLG23	DLG25	DLG26	DLG27	DLG28	DLG30	DLG32	DLG34
01	Sulphate	mg/l	200	400	34	46	10	58	65	43	46	29	9	24	7	7	49	25	35	161
02	Color	Hazen	5	15	5	7	BDL	7	7	BDL	7	6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
03	Phenolic Compounds	mg/l	0.001	0.002	BDL	BDL	BDL	BDL	BDL	BDL	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
04	Boron	mg/l	0.5	1.0	BDL	BDL	BDL	BDL	BDL	BDL	0.31	BDL	0.31	0.21	BDL	BDL	0.30	0.27	BDL	BDL
05	NH₃-N	mg/l	0.5	No relaxation	BDL	BDL	BDL	BDL	BDL	0.32	BDL	BDL	BDL	BDL	BDL	BDL	0.33	BDL	BDL	BDL

06	pH	--	6.5-8.5	No Relaxation	7.5	7.6	8.55	7.75	7.8	8.2	7.49	7.5	7.5	9.56	7.63	9.08	7.57	7.88	6.99	7.14	
07	TDS	mg/l	500	2000	398	246	716	296	850	184	232	496	306	450	234	442	442	380	128	458	
08	Cl⁻	mg/l	250	1000	25	13	8	14	56	15	46	27	13	115	11	90	10	9	24	32	
09	Total Alkalinity	mg/l	200	600	251	150	226	180	459	114	156	285	210	234	189	271	292	275	30	169	
10	Mg²⁺	mg/l	30	100	16	8	11	11	4	3	16	20	26	10	13	3	13	15	7	31	
11	Total Hardness	mg/l	200	600	165	111	112	199	140	83	125	245	158	79	105	64	95	124	64	181	
12	Ca²⁺	mg/l	75	200	40	31	27	61	49	29	24	65	20	15	21	20	16	25	14	21	
13	NO₃-N	mg/l	45	No Relaxation	0.78	1.24	0.41	0.57	4.63	0.53	0.35	6.65	0.34	1.18	1.04	0.85	BDL	2.21	0.57	0.6	
14	F⁻	mg/l	1.0	1.5	0.21	4.3	BDL	0.2	0.67	0.95	1.31	0.44	0.36	BDL	BDL	BDL	BDL	BDL	BDL	0.34	1.15

BDL stands for Below Detection Limit, Detection Limits: Color: 5 Hazen, Phenolic compound: 0.001 mg/l, Boron: 0.2 mg/l, NH₃-N: 0.3 mg/l, NO₃-N: 0.25 mg/l, Fluoride: 0.2 mg/l

*Turbidity meter not working

Results & Discussion of Physico-Chemical Parameters of DLG Locations:

- ❖ The concentration levels of parameters namely Sulphate, Phenolic compounds, Boron, Ammonical nitrogen, Chloride, Calcium and Nitrates in all sampling locations was found within acceptable limits as well as the permissible limits prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012).
- ❖ The pH value at three sampling locations namely DLG 13 (Samana, Patiala), (DLG 25 (Ramdass), DLG 27 (Bholath, Kapurthala) was found exceeding the acceptable range prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012). No relaxation in acceptable range for permissible range is prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012).
- ❖ The Magnesium concentration at 01 locations, namely DLG 34 (Abohar, Fazilka) was found exceeding acceptable limit of 30 mg/l prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012). However, the Magnesium concentration was within the permissible limit of 100 mg/l prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012).
- ❖ The Fluoride concentration at 03 sampling locations namely DLG-5 (Rahon, Near Bisht Doab Colony, Nawanshahr, Punjab), DLG-20A (Community Hall, Tubewell No.9, Jagraon, Ludhiana) and DLG-34 (Near 5 MGD Plant, Abohar) was found exceeding the acceptable limit of 1 mg/l prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012). However, out of 03 sampling locations where fluoride concentration found exceeding the acceptable limit, 02 sampling locations i.e. DLG-20A (Community Hall, Tubewell No.9, Jagraon, Ludhiana) and DLG-34 (Near 5 MGD Plant, Abohar), the Fluoride concentration was within the permissible limit of 1.5 mg/l. prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012).

- ❖ Total Dissolved Solids (TDS) concentration at two sampling locations, namely DLG-13 (Samana, Patiala) and DLG-16 (Nihalsinghwala, Moga) was found exceeding the acceptable limit of 500 mg/l prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012). However, the TDS concentrations observed at 02 sampling locations were within the permissible limit of 2000 mg/l prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012).
- ❖ Total hardness at 15 sampling locations was found to be within the acceptable limit (200 mg/l) as well as permissible limits (600 mg/l). However, at 01 sampling location (DLG-21, Chattarsingh Park, Ludhiana), the concentration of total hardness found exceeding the acceptable limit prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012). However, the total hardness concentration at sampling location was within the permissible limit prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012).
- ❖ Total alkalinity were found exceeding the acceptable limit (200 mg/l) prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012) at 09 sampling locations, namely DLG 1 (Issapur, SAS Nagar), DLG 13 (Samana, Patiala), DLG 16 (Nihalsinghwala, Moga), DLG 21 (Chattarsingh Park, Ludhiana), DLG 23 (Ajnala, Amritsar), DLG 25 (Ramdass, Amritsar), DLG 27 (Bholath, Kapurthala), DLG 28 (Shahkot, Jalandhar), and DLG 30 (Bhikiwind, Tarn Taran). However, the Total Alkalinity concentrations observed at 09 sampling locations were within the permissible limit (600 mg/l) prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012).

Table-4: Analysis results of Heavy metals parameters in the samples taken from the 16 bore-wells under the jurisdiction of Department of Local Government (DLG)

S. No	Parameter s	Units	IS 10500:2012 drinking water standards	Sampling Locations/ Field Code (The codes of the locations are as per Table-1)																	
				Acceptable limit	Permissible limit in the absence of alternate source	DLG1	DLG5	DLG13	DLG15	DLG16	DLG17	DLG20A	DLG21	DLG23	DLG25	DLG26	DLG27	DLG28	DLG30	DLG32	DLG34
01	Mercury	mg/l	0.001	No relaxation	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
02	Arsenic	mg/l	0.01	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.039	BDL	BDL	BDL	BDL	BDL	0.019	BDL	BDL
03	Cadmium	mg/l	0.003	No relaxation	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

S. No	Parameter	Units	IS 10500:2012 drinking water standards	Sampling Locations/ Field Code (The codes of the locations are as per Table-1)																
				Acceptable limit	Permissible limit in the absence of alternate source	DLG1	DLG5	DLG13	DLG15	DLG16	DLG17	DLG20A	DLG21	DLG23	DLG25	DLG26	DLG27	DLG28	DLG30	DLG32
04	Chromium	mg/l	0.05	No relaxation	BDL	BDL	BDL	BDL	BDL	0.012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
05	Copper	mg/l	0.05	1.5	BDL	BDL	0.092	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06	Iron	mg/l	0.3	No relaxation	0.47	0.0119	0.114	0.036	0.025	4.416	4.098	0.023	0.392	0.095	0.172	0.096	0.129	0.145	0.06	0.026
07	Lead	mg/l	0.01	No relaxation	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

S. No	Parameter	Units	IS 10500:2012 drinking water standards	Sampling Locations/ Field Code (The codes of the locations are as per Table-1)																
				Acceptable limit	Permissible limit in the absence of alternate source	DLG1	DLG5	DLG13	DLG15	DLG16	DLG17	DLG20A	DLG21	DLG23	DLG25	DLG26	DLG27	DLG28	DLG30	DLG32
08	Manganese	mg/l	0.1	0.3	0.045	BDL	0.026	BDL	BDL	0.181	0.041	BDL	0.068	0.015	0.02	0.012	0.024	BDL	BDL	BDL
09	Nickel	mg/l	0.02	No relaxation	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10	Selenium	mg/l	0.01	No relaxation	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
11	Zinc	mg/l	5	15	0.025	0.028	0.115	0.031	0.032	0.063	0.035	0.011	0.044	0.062	0.079	0.018	0.043	0.061	BDL	BDL
12	Cyanide	mg/l	0.05	No relaxation	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

S. No	Parameters	Units	IS 10500:2012 drinking water standards	Sampling Locations/ Field Code (The codes of the locations are as per Table-1)															
				Acceptable limit	Permissible limit in the absence of alternate source	DLG1	DLG5	DLG13	DLG15	DLG16	DLG17	DLG20A	DLG21	DLG23	DLG25	DLG26	DLG27	DLG28	DLG30
BDL stands for Below Detection Limit, Detection Limits: Mercury: 0.9 ug/l, Arsenic: 0.00049 mg/l, Cadmium: 0.00042 mg/l, Chromium: 0.00056 mg/l, Copper: 0.00035 mg/l, Iron: 0.00067 mg/l, Lead: 0.00031 mg/l, Manganese: 0.00043 mg/l, Nickel: 0.00034 mg/l, Selenium: 0.00113 mg/l, Zinc: 0.00059 mg/l, Cyanide: 0.05 mg/l																			

Results and Discussion of Heavy Metals in the samples collected from the bore-wells under the jurisdiction of Department of Local Government (DLG):

- ❖ The concentration levels of parameters namely Mercury, Cadmium, Lead, Chromium, Nickel, Selenium, Cyanide and Zinc in all the sampling locations were found within acceptable limits as well as the permissible limits prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012).
- ❖ The Arsenic concentration at DLG-23 (Ajanala, Amritsar): 0.039 mg/L and at DLG-30 (Bhikiwind, TaranTaran): 0.019 mg/L were found exceeding acceptable limit of 0.01 mg/l prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012). However, the arsenic concentration was within the permissible limit of 0.05 mg/l prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012).
- ❖ The Copper concentration at DLG-13 (Samana, Patiala): 0.092 mg/L was found exceeding acceptable limit of 0.05 mg/l prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012). However, the copper concentration was within the permissible limit of 1.5 mg/l prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012).
- ❖ The Iron concentration was found exceeding the acceptable limit prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012) at 04 sampling locations DLG-1 (Issapur, SAS Nagar; Fe-0.47 mg/l) DLG-23 (Ajanala, Amritsar; Fe-0.392 mg/l), DLG-20A (Jagraon, Ludhiana; Fe-4.098 mg/l) and DLG-17 (Kothaguru, Bhatinda;

Fe-4.416 mg/l).. No relaxation in acceptable range for permissible range is prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012).

- ❖ The Manganese concentration was found exceeding the acceptable limit at DLG-17 (Kothaguru, Bhatinda): 0.181 mg/l was found exceeding acceptable limit of 0.1 mg/l prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012). However, the manganese concentration was within the permissible limit of 0.3 mg/l prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012).

Table 5: Analysis Results of Physico-chemical parameters in the samples taken from 18 bore-wells under the jurisdiction of Department of Water Supply and Sanitation (DWSS)

S. No	Parameter	Units	IS 10500:2012 drinking water standards		Sampling Locations/ Field Code (The codes of the locations are as per Table –2)																	
			Acceptable limit)	Permissible limit	DWSS-2	DWSS-3	DWSS-4	DWSS-06	DWSS-07	DWSS-08	DWSS-09	DWSS-10	DWSS-11	DWSS-12	DWSS-14	DWSS-18	DWSS-19	DWSS-22	DWSS-24	DWSS-29	DWSS-31	DWSS-33
01	SO ₄ ²⁻	mg/L	200	400	49	81	85	38	#	262	214	216	235	215	60	39	43	79	27	10	194	195
02	Color	Hazen	5	15	7	5	6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	7	5	6	BDL	BDL	6	BDL	BDL
03	Phenolic Compounds	mg/L	0.001	0.002	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
04	Boron	mg/L	0.5	1.0	BDL	BDL	BDL	BDL	BDL	BDL	0.29	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.2	0.23	BDL	BDL

S. No	Parameter	Units	IS 10500:2012 drinking water standards		Sampling Locations/ Field Code (The codes of the locations are as per Table -2)																	
			Acceptable limit)	Permissible limit	DWSS-2	DWSS-3	DWSS-4	DWSS-06	DWSS-07	DWSS-08	DWSS-09	DWSS-10	DWSS-11	DWSS-12	DWSS-14	DWSS-18	DWSS-19	DWSS-22	DWSS-24	DWSS-29	DWSS-31	DWSS-33
05	NH₃-N	mg/L	0.5	No relaxation	BDL	BDL	BDL	BDL	BDL	0.32	BDL	BDL	BDL	BDL	BDL	0.46	0.51	BDL	BDL	BDL	BDL	BDL
06	pH	--	6.5-8.5	No Relaxation	7.72	8.30	8.5	7.32	8.51	7.98	8.11	7.85	8.22	8.08	7.4	7.85	7.6	6.8	7.75	7.51	7.7	8.84
07	TDS	mg/L	500	2000	446	516	566	454	490	1476	956	1174	1488	928	608	208	294	244	246	318	930	1042
08	Cl⁻	mg/L	250	1000	32	64	75	22	59	177	155	161	134	117	38	16	18	114	9	8	67	39
09	Total Alkalinity	mg/L	200	600	285	255	266	328	#	292	231	222	421	294	373	113	201	189	188	239	355	449

S. No	Parameter	Units	IS 10500:2012 drinking water standards	Sampling Locations/ Field Code (The codes of the locations are as per Table -2)																		
				Acceptable limit)	Permissible limit	DWSS-2	DWSS-3	DWSS-4	DWSS-06	DWSS-07	DWSS-08	DWSS-09	DWSS-10	DWSS-11	DWSS-12	DWSS-14	DWSS-18	DWSS-19	DWSS-22	DWSS-24	DWSS-29	DWSS-31
10	Mg ²⁺	mg/L	30	100	8	18	21	41	5	15	13	20	10	19	9	5	28	9	6	12	19	10
11	Total Hardness	mg/L	200	600	117	138	141	238	62	135	96	124	92	122	210	123	217	80	81	122	132	78
12	Ca ²⁺	mg/L	75	200	34	25	23	28	16	29	16	16	20	18	70	40	41	17	22	29	22	14
13	NO ₃ -N	mg/L	45	No Relaxation	1.59	1.93	BDL	8.27	#	1.57	1.08	0.68	0.25	0.94	6.52	0.73	0.77	1.12	0.28	0.39	5.34	9.9
14	F ⁻	mg/L	1.0	1.5	2.35	3.86	0.92	BDL	#	1.33	1.07	1.27	1.27	1.24	0.42	0.52	0.94	BDL	0.21	0.42	BDL	0.84

BDL stands for Below Detection Limit, Detection Limits: Color: 5 Hazen, Phenolic compound: 0.001 mg/l, Boron: 0.2 mg/l, NH₃-N: 0.3 mg/l, NO₃-N: 0.25 mg/l, Fluoride: 0.2 mg/l

Sample leaked as reported by Lab and further *Turbidity meter not working

Results & Discussion of Physico-Chemical Parameters of DWSS Locations:

- ❖ The concentration levels of parameters namely Phenolic compounds, Boron, Chloride, Calcium and Nitrates in all sampling locations was found within acceptable limits as well as the permissible limits prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012).
- ❖ The pH value was found exceeding the acceptable range prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012) at three sampling locations namely DWSS-07 (Shambukalan -Rajpura, Patiala), DWSS-33 (Dipulana, Fazilka). No relaxation in acceptable range for permissible range is prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012).
- ❖ The Sulphate concentration was found exceeding the acceptable limits at 05 sampling locations namely DWSS 8 (Kamikalan, Ghanaur, Rajpura, Patiala), DWSS 9 (Lacharukalan, Ghanaur, Rajpura), DWSS 10 (Bir Kauli, Rajpura), DWSS 11 (Lohakheri, Ghanaur, Rajpura), and DWSS 12 (Rajgarh, Rajpura, Patiala) was found exceeding acceptable limit of 200 mg/l prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012). However, the sulphate concentration was within the permissible limit of 400 mg/l prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012).
- ❖ The Ammonical nitrogen concentration was found exceeding the acceptable limits at 01 sampling location namely DWSS 19 (Begowal, Doraha, Khanna, Ludhiana) was found exceeding acceptable limit of 0.5 mg/l prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012). No relaxation in acceptable range for permissible range is prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012).

- ❖ The Magnesium concentration at 01 location namely DWSS-06 (Sangatpura, Nabha, Patiala, Division) was found exceeding acceptable limit of 30 mg/l prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012). However, the Magnesium concentration was within the permissible limit of 100 mg/l prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012).
- ❖ The Total Hardness concentration at 03 locations namely DWSS-06 (Sangatpura, Nabha, Patiala, Division), DWSS-14 (Bugra, Dhuri, Malerkotla, Sangrur), DWSS-19 (Begowal, Doraha, Khanna, Ludhiana) was found exceeding acceptable limit of 200 mg/l prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012). However, the Magnesium concentration was within the permissible limit of 400 mg/l prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012).
- ❖ Total alkalinity was found exceeding the acceptable limit (200 mg/l) prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012) at 13 sampling locations namely DWSS 2 (Chunni Kalan, Fatehgarh Sahib), DWSS 3 (Bhagrana, Fatehgarh Sahib), DWSS 4 (Miani, Ropar), DWSS 6 (Sangatpura, Patiala), DWSS 8 (Kami Kalan, Patiala), DWSS 9 (Lacharukalan, Rajpura), DWSS 10 (Bir Kauli, Rajpura), DWSS 11 (Lohakheri, Ghanaur, Rajpura), DWSS 12 (Rajgarh, Rajpura, Patiala), DWSS 14 (Burga, Sangrur), DWSS 29 (Goindwal Sahib, Tarn Taran), DWSS 31 (Deepsinghwala, Faridkot), and DWSS 33 (Dipulana, Fazilka). However, the Total Alkalinity concentrations observed at 13 sampling locations were within the permissible limit (600 mg/l) prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012).
- ❖ Total Dissolved Solids (TDS) concentration was found exceeding the acceptable limit (500 mg/l) prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012) at 10 sampling locations namely

DWSS-3(Bhagrana, Fatehgarh Sahib) ,DWSS-4 (Miani, Ropar, Punjab), DWSS-08, (Kami kalan, Patiala) DWSS-09 (Lacharukalan, Rajpura) , DWSS-10 (Bir kauli, Rajpura,) DWSS-11 (Lohakheri, Ghanaur), DWSS-12 (Rajgarh, Rajpura, Patiala),DWSS-14 (Burga Sangrur) DWSS-31 (Deepsinghwala Faridkot) and DWSS-34 (Dipulana, Fazilka). However, the Total Dissolved Solids concentrations observed at 10 sampling locations were within the permissible limit (600 mg/l) prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012).

- ❖ The Fluoride concentration at the 07 sampling locations namely DWSS-2 (Chunni Kalan, Fatehgarh Sahib), DWSS-3 (Bhagrana, Fatehgarh Sahib), DWSS-8 (Kamikalan, Patiala), DWSS-9 (Lacharukalan, Patiala), DWSS-10 (Bir Kauli, Rajpura), DWSS-11 (Lohakheri, Ghanaur, Rajpura), and DWSS-12 (Rajgarh, Rajpura, Patiala) was found exceeding the acceptable limit of 1 mg/l prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012). However, out of 07 sampling locations where fluoride concentration found exceeding the acceptable limit, 05 sampling locations i.e. DWSS-8 (Kamikalan, Patiala), DWSS-9 (Lacharukalan, Patiala), DWSS-10 (Bir Kauli, Rajpura), DWSS-11 (Lohakheri, Ghanaur, Rajpura), and DWSS-12 (Rajgarh, Rajpura, Patiala), the Fluoride concentration was within the permissible limit of 1.5 mg/l. prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012).

Results and Discussion of Heavy Metals of DWSS locations:

- ❖ The concentration levels of parameters namely Mercury, Cadmium, Chromium, Copper, Lead, Manganese, Nickel, Selenium, Zinc and Cyanide was found were found within acceptable limits as well as the permissible limits prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012).
- ❖ The Arsenic concentration at 03 sampling locations namely DWSS-22 (Tubewell at Urdhan Ajnala, Amritsar Division 1): 0.018 mg/l , DWSS-24 (Tubewell at Gagoo Mahal, Ajnala, Amritsar, Division-01): 0.029 mg/l and DWSS-33 (Dipulana, Fazilka): 0.325 mg/l found exceeding acceptable limit of 0.01 mg/l prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012). However, out of 03 sampling locations where arsenic concentration found exceeding the acceptable limit, 02 sampling locations i.e. DWSS-22 (Tubewell at Urdhan Ajnala, Amritsar Division 1), DWSS-24 (Tubewell at Gagoo Mahal, Ajnala, Amritsar, Division-01), the arsenic concentration was within the permissible limit of 0.05 mg/l. prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012).
- ❖ The Iron concentration was found exceeding the acceptable limit prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012) at 04 sampling locations DWSS-4 (Maini, Ropar), DWSS-9 (Lacharukalan, Ghanaur, Rajpura), DWSS-11 (Lohakheri, Ghanaur, Rajpura, Patiala) and DWSS-18 (Begowal Doraha, Khanna, Ludhiana), DWSS-22 (Tubewell at Urdhan Ajnala, Amritsar Division 1). No relaxation in acceptable range for permissible range is prescribed for Drinking water in Bureau of Indian Specifications - IS 10500 (2012).

The photographs taken by CPCB team during monitoring of bore-wells is attached as **Annexure-III** (DLG locations) and **Annexure- IV** (DWSS locations).



Nazimuddin
Scientist 'F'
Central Pollution Control Board
19.03.2026

नाज़िमउद्दीन / Nazimuddin
वैज्ञानिक 'एफ' / Scientist 'F'
केंद्रीय प्रदूषण नियंत्रण बोर्ड
Central Pollution Control Board
(पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार)
(Mo Environment, Forest And Climate Change, Govt. of India)
परिवेश भवन, पूर्वी अर्जुन नगर, दिल्ली-110032
Parivesh Bhawan, East Arjun Nagar, Delhi-110032

Item No. 12

Court No. 1

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

Original Application No. 676/2023

News Item titled "Agriculture Runoff causing groundwater pollution in Punjab Making Drinking Water Unsafe Reveals Study" appearing in The Times of India dated 12.10.2023.

Date of hearing: 30.01.2025

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

Respondent: Mr. Sandeep Bajaj, Additional AG & Ms. Manpreet Kaur, AAG for the State of Punjab.
Ms. Sunieta Ojha, Advocate for Punjab PCB (Through VC).
Mr. Vikrant Pachnanda & Mr. Mukul Katyal, Advocates for CPCB.

ORDER

1. This OA has been registered *suo motu* on the basis of a news item titled as "Agricultural Runoff Causing Groundwater Pollution in Punjab, Making Drinking Water Unsafe, Reveals Study". The news item is based upon a research study released by the Indian Institute of Technology (IIT) Mandi. The publication of the news item reveals that human activity has increased groundwater pollution, particularly through agricultural runoff in Punjab, making it unsafe for drinking and raising health risks. The research paper was published in the journal *Environmental Science and Pollution Research*, showing that in the last two decades, the groundwater demand has increased due to the absence of monsoon. The groundwater department and local farmers have to exploit groundwater from deeper geological strata which are enriched in heavy metals and few are radioactive, having serious health impacts. The study involved the measurements of pH, electric conductivity (EC) and various ions from over 315 sites in Punjab and the study revealed a disturbing trend with water

quality declining in the southwestern region of Punjab, adversely affecting the health of the residents. The study highlights the alarming state of groundwater pollution in Punjab and underscores the urgent need for mitigation measures. News item states that Punjab once celebrated as the “bread bowl of India”, is now infamously referred to as the "cancer capital" of India.

2. The Tribunal by order dated 03.11.2023 after taking up the matter in *suo motu* exercise of power had impleaded the concerned respondent and had issued notice to them. Respondent no. 1, CPCB had filed the reply dated 17.01.2024 mentioning that the groundwater quality monitoring in Punjab was done at 43 locations out of 46 during 2019-2023 and disclosing the major findings as under: -

“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.”*

3. The above finding reveals that at some places, nitrate, fluoride, TDS and iron concentrations were found to be exceeding the prescribed limits.

4. The respondent no. 2, Punjab Pollution Control Board (PPCB), had also filed the reply dated 12.01.2024 disclosing that out of the monitoring at 43 groundwater locations, the samples were found to be beyond parameters in respect of drinking water. The disclosure by respondent no. 2 in this regard is as under: -

“xxx-----xxx-----xxx-----xxx”

iv. The comparison of the data against the drinking water standards as per IS 10500:2012 (WHO Standards) has been carried out. Parameters beyond permissible and desirable limits are highlighted and compiled and are enclosed as Annexure-B.

xxx-----xxx-----xxx-----xxx”

5. It has further been stated by respondent no. 1 that information regarding radioactive substances is not available in the laboratories of PPCB, therefore, the parameters of radioactive substances have not been commented upon.

6. Respondent No. 4, Department of Water Supply and Sanitation, State of Punjab by filing the reply had taken a stand that this department is responsible only for providing safe and potable drinking water to the people of rural areas of the State through ground/canal/surface-based water supply scheme. The stand of respondent no. 4 in this regard is as under: -

“7. That the Department of Water Supply and Sanitation, Punjab is responsible only for providing safe and potable drinking water to the people of rural areas of the state through ground/canal/surface-based water supply schemes. DWSS, Punjab is extracting water through tube well based schemes only for drinking & cooking purposes of the rural population to meet their basic needs only. However, if any contamination is found in the Departmental sources only then accordingly remedial measures are being taken by the Department.”

7. Respondent no. 5, Department of Agriculture and Farmers Welfare, State of Punjab, has disclosed the parameters set for the groundwater quality assessment, and in respect of south-west Punjab, it has been stated that deposition of salts released from the parent rock, ancient drainage basins and lack of proper natural drainage are major reasons for relatively higher impacts of salinity in south-west Punjab.

8. The state of Punjab has filed the compliance report dated 13.09.2024 disclosing that out of samples collected from 337 locations, samples from 34 locations were found to be contaminated and out of these 34 contaminated locations, 18 locations fall under the purview and jurisdiction of the Department of Water Supply and Sanitation and remaining 16 locations fall under the jurisdiction of Department of Local Government. It also mentions the remedial measures which have been adopted.

9. The latest report of the State of Punjab dated 28.01.2025 states that Punjab Biotechnology Incubator (PBTI), SAS Nagar has been assigned the project relating to the study of biomagnification of contamination of food chain and that the interim report and final report of the study will be submitted by the PBTI to the Government at the end of 4th, 8th, 12th and 18th months. The affidavit further states that the Government of Punjab undertakes to implement the recommendations of the interim study report as well as the final report of the PBTI. Concerning 34 locations, where

contamination was found, it is stated that these 34 contaminated locations have been sealed by the concerned department, and remedial measures were taken for the supply of potable drinking water. The stand of the State of Punjab in the latest report dated 28.01.2025 is as under: -

- “2) *That in compliance to the order dated 17.01.2025 of the Hon'ble Tribunal, it is submitted that the Punjab Biotechnology Incubator (PBTI), SAS Nagar has been assigned the project relating to the study of biomagnification of contaminants in food chain. The PBTI has submitted project proposal on "Assessments of Contaminants (Heavy Metals) in Crops Grown in Punjab" to the Department of Agriculture and Farmer's Welfare. The brief scope of work of the study is mentioned herein below:*
- a) *Collection of 1700 samples of Agri-Food Commodities (Pulses, Cereals, Fruits & Vegetables and Milk) from 34 locations across 16 districts of Punjab and analysis of samples for 10 heavy metals including uranium.*
 - b) *Collection and analysis of 600 soil samples from the locations where agri-food commodities are being sampled and analysis of these samples for 10 heavy metals including uranium.*
 - c) *Collection of 500 irrigation water samples (from tubewell/ surface water sources) being used for irrigation of above Agri-Food Commodities and analysis of these samples for 10 heavy metals including Uranium, 05 cations, 05 anions and 05 general parameters.*
 - d) *Data analysis and report preparation.*
- 3) *That the objective of the study is to assess the Biomagnification of contaminants (heavy metals) in food chain through analysis of agri-food commodities, soil and irrigation water.*
- 4) *That the duration of the project of the aforementioned study is 18 months. The interim reports and the final report of the study will be submitted by the Punjab Biotechnology Incubator (PBTI), SAS Nagar (Mohali) to the Government at the end of 4th, 8th, 12th and 18th months as per details given below:*
- i. *1st Interim report of pre monsoon season (8 districts) at the end of 4th month.*
 - ii. *2nd interim report of pre monsoon season (16 districts) at the end of 8th month.*
 - iii. *3rd interim report of post monsoon season (8 districts) at the end of 12th month.*
 - iv. *Final report submission at the end of 18th month.*

- 5) *That a copy of the project proposal on Assessments of Contaminants (Heavy Metals) in Crops Grown in Punjab given by Punjab Biotechnology Incubator (PBTI), SAS Nagar is enclosed as Annexure-A.*
- 6) *That the Government of Punjab undertakes to implement the recommendations of the interim study reports as well as the final report of the PBTI and based on the findings and recommendations of the study report, remedial measures will be taken.*
- 7) *That further it is submitted that after the analysis of samples collected from 337 locations in the State of Punjab, 34 locations were found contaminated. Out of the said 34 contaminated locations, 18 locations fall under the purview of the Department of Water Supply and Sanitation and 16 locations fall under the purview of the Department of Local Government. The said 34 contaminated locations have been sealed by the concerned departments and the remedial measures taken for supply of potable drinking water are summarized herein below.*

A) 18 Locations (Department of Water Supply and Sanitation)

- i. *02 locations namely Chunni Kalan & Bhugrana of District Fatehgarh Sahib have recently been covered with the Large Surface Water Project Nanowal and 01 location namely Sangatpura of District Patiala has been attached with adjoining Water Supply Scheme of Laloda, District Patiala which is supplying potable water.*
- ii. *Out of remaining 15 locations, 08 locations are provided with Reverse Osmosis (RO) plants, 06 locations are provided with. Community Water Purification Plant (CWPP) and one location is provided with Arsenic cum Iron Removal Plant.*
- iii. *As regards, the performance of AIRPS/CWPP/ROs installed and their efficiency for the remaining 15 site locations of DWSS, the samples of raw water as well as treated water were collected and got analyzed in the NABL accredited laboratory of DWSS, which reveals that all the Plants are functioning well and giving satisfactory results.*
- iv. *These plants have been found efficient in the removal of contaminants from the sources of the Department of Water Supply and Sanitation and potable drinking water is being provided through these plants.*
- v. *A copy of the report given by the Department of Water Supply and Sanitation vide letter no. 58 dated 14.01.2025 is enclosed as Annexure-B.*

B) 16 (Department of Local Government)

- i) *To provide potable drinking water at the 16 sealed locations through other nearest municipal water source, water samples from that nearest municipal water source*

were collected and analyzed for 24 parameters based upon physiochemical parameters and heavy metals through NABL accredited labs of DWSS. Out of these 16, results of 10 were found to be within permissible limits. Results of balance 6 water sources of respective towns Bhikhiwind, Jagraon, Nihal Singh Wala, Rahon, Kotha Guru and Bhadaur, were found to be more than permissible limits.

- ii) Swift action was taken to evaluate the availability and feasibility of providing potable water to the six affected towns from alternative nearby sources. Options such as utilizing the nearest available Water Treatment Plant (WTP), installing tubewells adjacent to nearby canals, etc. were thoroughly assessed. During this evaluation, it was identified that a 50 MLD capacity WTP at Village Daudhar, near Nihal Singh Wala town, is already operational under the Department of Water Supply and Sanitation and has surplus availability of potable water. Accordingly, an MoU was signed between the departments to supply potable water to Nihal Singh Wala by tapping into the existing water supply line near the town. The work has already commenced, and potable water will be provided to the residents of Nihal Singh Wala by 14.01.2025.
 - iii) Additionally, the feasibility of providing potable water to the six affected towns by Installing tubewells adjacent to nearby canals was also evaluated. As a result, tenders worth Rs 55.84 crore have already been floated to provide potable water supply to these towns. Work orders have been issued for Bhadaur, Bhikhiwind, Nihal Singh Wala, and Jagraon, with the Installation expected to be completed within the next four to six months. For Kotha Guru and Rahon, tenders have been technically evaluated and will be awarded by 20.01.2025 Meanwhile, potable water is being supplied to the public through municipal tankers.
 - iv) Simultaneously, under the AMRUT 2.0 scheme, the groundwater supply for these six towns is being transitioned to surface water supply. Funding of Rs. 155.43 crore has already been secured to support this initiative.
 - v) A copy of the report given by the Punjab Water Supply and Sewerage Board vide letter no. PWSSB/2024/729 dated 10.01.2025 is enclosed as Annexure-C.”
- 8) That further it is submitted that health check-up camps conducted by the Department of Health and Family Welfare, Punjab through the respective Civil Surgeons at all the 34 contaminated sites. At 18 contamination sites, the health check-up camps were conducted by the Department Water Supply and Sanitation and at 16 contamination sites by the Punjab Water Supply and Sewerage Board. Also, health check-up camps were conducted at few additional sites to find and disease related to the mentioned pollutants and to monitor the health of residents. In the report, it has been found that none of the examined population reported by

symptoms related to ground water contamination. A copy of letter dated 16.01.2025 of the Department of Health and Family Welfare, Punjab is enclosed as Annexure-D.

- 9) *That in view of the above stated facts, it is submitted that remedial and mitigation measures have been taken at the contaminated sites to ensure portable drinking water to the people of the area. The study relating to the assessment of heavy metals in crop growth in the State of Punjab has been entrusted to Punjab Biotechnology Incubator (PBTI), SAS Nagar (Mohali) and as per the proposal given by PBTI, the study will take around 18 months for completion and the PBTI will submit interim reports to the Government at the end of 4th, 8th, 12th months and the final report at the end of 18th month. The Government of Punjab undertakes to implement the remedial measures considering the findings and recommendations of the study report of PBTI.*
- 10) *It is, therefore, prayed that the above-mentioned case may kindly be disposed with appropriate orders and time period of 18 months may kindly be granted to the State of Punjab for the completion of the study relating to the assessment of heavy metals in crop growth.”*

10. In the aforesaid background, the State of Punjab has sought 18 months for completion of the study related to the assessment of heavy metals in crop growth. Since the State of Punjab has disclosed that at all the 34 contaminated locations, remedial measures had been taken, for assessment of the heavy metals in the crop growth, the study has already been assigned to PBTI, which will take 18 months. Therefore, the OA at this stage is disposed of with the following directions:-

- A. CPCB will conduct the sample test of 34 locations which were found to be contaminated within three months and submit the affidavit along with details of the sample report with the Registrar General of the Tribunal.
- B. The State of Punjab will ensure uninterrupted supply of potable drinking water in the areas that were found to be contaminated and will carry out regular checks of all the contamination-prone areas and, wherever the contamination is found, take remedial action without any delay.

C. The State of Punjab will submit the action taken report on completion of 4th, 8th,12th and 18th month, along with the interim and final report of the PBTI received at the end of 4th, 8th,12th and 18th month, before the Registrar General of the Tribunal. If found necessary, the OA will be listed for consideration before the bench again.

Prakash Shrivastava, CP

Arun Kumar Tyagi, JM

Dr. Afroz Ahmad, EM

January 30, 2025
Original Application No. 676/2023
Avt..



Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)
स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

ULR No: TC772325500000078F

नमूने की पंजीकरण सं. एवं तिथि Samples Registration No. & Date : WATER/FW/2526/SR00032, 23/05/2025	आख्या सं एवं जारी करने की तिथि Report No. & Date of Issue : WATER/2526/FW/00078,25/06/2025
नमूना विवरण Sample Details :	आख्या किसे जारी की गयी (नाम एवं प्रभाग) Report sent to (Name & Address of Indentor) : RD Chandigarh
नमूने एकत्रित करने वाले का नाम और प्रभाग/संगठन Sample Collected by Name & Division/Organization : J. P. Meena,Aakash Mishra & Deeksha Garg/RD Chandigarh	नमूना मैट्रिक्स Sample Matrix : Fresh Water
नमूनाकरण योजना प्राथमिकता Sampling Plan Preference : N/A	नमूने प्राप्ति की तिथि एवं समय Date & Time of Sample Receipt : 23/05/2025 12:16 PM
रिपोर्ट स्थिति Report Status : Final	नमूने के विश्लेषण की अवधि Sample Analysis Period : 19/05/2025 to 30/05/2025
नमूना लेने की विधि Sampling Method :	

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	pH	TDS(mg/l)	Cl-(mg/l)	TA(mg/l)	Mg2+(mg/l)	TH(mg/L)	Ca2+(mg/l)	NO3- N(mg/l)
1	20/05/2025	DWSS-18	7.85	208	16	113	5	123	40	0.73
2	20/05/2025	DWSS-19	7.6	294	18	201	28	217	41	0.77
3	20/05/2025	DLG-20	7.35	510	46	361	13	242	76	3.75
4	20/05/2025	DLG-21	7.5	496	27	285	20	245	65	6.65
5	21/05/2025	DWSS-14	7.4	608	38	373	9	210	70	6.52

विश्लेषणकर्ता Analyst

Pravin Kumar Gupta , Inder Mohan , Aayush Rana

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 1/4
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केंद्रीय प्रदूषण नियंत्रण बोर्ड **294** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



TC-7723

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)
स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

ULR No: TC772325500000078F

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	pH	TDS(mg/l)	Cl-(mg/l)	TA(mg/l)	Mg2+(mg/l)	TH(mg/L)	Ca2+(mg/l)	NO3- N(mg/l)
6	21/05/2025	DLG-15	7.75	296	14	180	11	199	61	0.57
7	21/05/2025	DLG-16	7.8	850	56	459	4	140	49	4.63
8	21/05/2025	DLG-17	8.2	184	15	114	3	83	29	0.53
9	20/05/2025	DLG-01	7.5	398	25	251	16	165	40	0.78
10	20/05/2025	DWSS-02	7.72	446	32	285	8	117	34	1.59
11	20/05/2025	DWSS-03	8.3	516	64	255	18	138	25	1.93
12	21/05/2025	DWSS-04	8.5	566	75	266	21	141	23	BDL
13	21/05/2025	DLG-05	7.6	246	13	150	8	111	31	1.24

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	F- (mg/l)
1	20/05/2025	DWSS-18	0.52
2	20/05/2025	DWSS-19	0.94
3	20/05/2025	DLG-20	0.54
4	20/05/2025	DLG-21	0.44

विश्लेषणकर्ता Analyst

Pravin Kumar Gupta , Inder Mohan , Aayush Rana

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 2/4
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केंद्रीय प्रदूषण नियंत्रण बोर्ड **295** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



TC-7723

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)
स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

ULR No: TC772325500000078F

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	F- (mg/l)
5	21/05/2025	DWSS-14	0.42
6	21/05/2025	DLG-15	0.2
7	21/05/2025	DLG-16	0.67
8	21/05/2025	DLG-17	0.95
9	20/05/2025	DLG-01	0.21
10	20/05/2025	DWSS-02	2.35
11	20/05/2025	DWSS-03	3.86
12	21/05/2025	DWSS-04	0.92
13	21/05/2025	DLG-05	4.3

बीडीएल : मापन सीमा से नीचे **BDL :** Below Detection Limit

Remarks (if any) : , , , *Turbidity meter not working

नोट : पीएच तथा चालकता ($\mu\text{mho/cm}$) के अतिरिक्त सभी सांद्रता मिग्रा/ली. में व्यक्त की गई हैं। Note: All the concentrations are expressed in mg/l except pH and Conductivity ($\mu\text{mho/cm}$).

Statement कथन :

- परिणाम केवल परीक्षण किए गए नमूनों से संबंधित हैं और प्राप्त नमूने पर लागू होते हैं। The results relate only to the samples tested and apply to the sample as received.
- पूर्ण रिपोर्ट के अतिरिक्त प्रयोगशाला के लिखित अनुमोदन के बिना आख्या की आंशिक प्रतिकृति नहीं की जायेगी। The report shall not be reproduced except in full without written approval of the laboratory
- यह पैरामीटर NABL मान्यता, ISO-17025:2017 (प्रमाणपत्र संख्या TC-7723) के दायरे में है। | The parameter is under the scope of NABL accreditation, ISO-17025:2017 (Certificate No. TC-7723).
- नमूनों को परीक्षण रिपोर्ट की तारीख से एक सप्ताह के लिए बनाए रखा जाएगा। Samples will be retained for one Week from the date of Issue of test Report.

विश्लेषणकर्ता Analyst

Pravin Kumar Gupta , Inder Mohan , Aayush Rana

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 3/4
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केंद्रीय प्रदूषण नियंत्रण बोर्ड **296** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)
स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

ULR No: TC77232550000078F

TC-7723

मानदंड का नाम Parameter Name	परिक्षण विधि Test Method	इकाई Unit	मापन की सीमा Limit of Detection	माप की अनिश्चितता Uncertainty of Measurement
pH	APHA 4500 H+ - B, 23rd Ed.: 2017		2	±0.18@7.24
TDS (Total Dissolved Solids)	APHA 2540 C, 23rd Ed.: 2017	mg/l	5	±20@350
Cl- (chloride ion)	APHA 4500 - Cl B, 23rd Ed.: 2017	mg/l	2	±15@300
TA (Total Alkalinity)	2320 B Titration Method, 23rd Ed.: 2017	mg/l	5	±2@29
Mg2+ (Magnesium Cation)	APHA 3500 - Mg B, 23rd Ed.: 2017	mg/l	2	±5@20
TH (Total Hardness)	APHA 2340 C, 23rd Ed.: 2017	mg/L	5	± 5@150
Ca2+	2340 EDTA Titrimetric method, 23rd Ed.: 2017	mg/l	2	±05@50
NO3- N	APHA 4500 - NO3 B, 23rd Ed.: 2017	mg/l	0.25	±0.2@2.104
F-	APHA 4500 - F D, 23rd Ed.: 2017	mg/l	0.2	± 0.08 @ 0.8

विश्लेषणकर्ता Analyst

Pravin Kumar Gupta , Inder Mohan , Aayush Rana

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 4/4
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*आख्या समाप्ति END OF REPORT *



केंद्रीय प्रदूषण नियंत्रण बोर्ड **CENTRAL POLLUTION CONTROL BOARD**
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



TC-7723

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)

स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट **Physico-Chemical Analysis Report for Fresh Water Samples**

ULR No: TC77232550000084F

नमूने की पंजीकरण सं. एवं तिथि Samples Registration No. & Date : WATER/FW/2526/SR00039, 29/05/2025	आख्या सं एवं जारी करने की तिथि Report No. & Date of Issue : WATER/2526/FW/00084,25/06/2025
नमूना विवरण Sample Details :	आख्या किसे जारी की गयी (नाम एवं प्रभाग) Report sent to (Name & Address of Indentor) : RD Chandigarh
नमूने एकत्रित करने वाले का नाम और प्रभाग/संगठन Sample Collected by Name & Division/Organization :	नमूना मैट्रिक्स Sample Matrix : Fresh Water
नमूनाकरण योजना प्राथमिकता Sampling Plan Preference :	नमूने प्राप्ति की तिथि एवं समय Date & Time of Sample Receipt : 29/05/2025 13:13 PM
रिपोर्ट स्थिति Report Status :	नमूने के विश्लेषण की अवधि Sample Analysis Period : 30/05/2025 to 06/06/2025
नमूना लेने की विधि Sampling Method :	

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	pH	TDS(mg/l)	Cl-(mg/l)	TA(mg/l)	Mg2+(mg/l)	TH(mg/L)	Ca2+(mg/l)	NO3- N(mg/l)
1	27/05/2025	DWSS-07	8.51	490	59	#	5	62	16	#
2	27/05/2025	DWSS-08	7.98	1476	177	292	15	135	29	1.57
3	27/05/2025	DWSS-09	8.11	956	155	231	13	96	16	1.08
4	27/05/2025	DWSS-10	7.85	1174	161	222	20	124	16	0.68
5	27/05/2025	DWSS-11	8.22	1488	134	421	10	92	20	0.25

विश्लेषणकर्ता Analyst

पर्यवेक्षक और समीक्षक

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Pravin Kumar Gupta , Inder Mohan , Aayush Rana

Bathala Sasi Devi

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 1/5
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केंद्रीय प्रदूषण नियंत्रण बोर्ड **298** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



TC-7723

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)
स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

ULR No: TC772325500000084F

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	pH	TDS(mg/l)	Cl-(mg/l)	TA(mg/l)	Mg2+(mg/l)	TH(mg/L)	Ca2+(mg/l)	NO3- N(mg/l)
6	27/05/2025	DWSS-12	8.08	928	117	294	19	122	18	0.94
7	28/05/2025	DWSS-06	7.32	454	22	328	41	238	28	8.27
8	28/05/2025	DLG-13	8.55	716	8	226	11	112	27	0.41
9	27/05/2025	DWSS-22	6.8	244	114	189	9	80	17	1.12
10	27/05/2025	DWSS-24	7.75	246	9	188	6	81	22	0.28
11	27/05/2025	DLG-23	7.5	306	13	210	26	158	20	0.34
12	27/05/2025	DLG-26	7.63	234	11	189	13	105	21	1.04
13	27/05/2025	DLG-27	9.08	442	90	271	3	64	20	0.85
14	28/05/2025	DLG-25	9.56	450	115	234	10	79	15	1.18
15	28/05/2025	DLG-28	7.57	442	10	292	13	95	16	BDL
16	28/05/2025	DLG-30	7.88	380	9	275	15	124	25	2.21
17	28/05/2025	DWSS-29	7.51	318	8	239	12	122	29	0.39
18	27/05/2025	DLG-20A	7.49	232	9	156	16	125	24	0.35
19	27/05/2025	DLG-34	7.14	458	32	169	31	181	21	0.6
20	27/05/2025	DWSS-33	8.84	1042	39	449	10	78	14	9.9
21	28/05/2025	DWSS-31	7.7	930	67	355	19	132	22	5.34

विश्लेषणकर्ता Analyst

Pravin Kumar Gupta , Inder Mohan , Aayush Rana

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized
signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 2/5
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.



केंद्रीय प्रदूषण नियंत्रण बोर्ड **299** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



TC-7723

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)
स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

ULR No: TC77232550000084F

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	pH	TDS(mg/l)	Cl-(mg/l)	TA(mg/l)	Mg2+(mg/l)	TH(mg/L)	Ca2+(mg/l)	NO3- N(mg/l)
22	28/05/2025	DLG-32	6.99	128	24	30	7	64	14	0.57

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	F- (mg/l)
1	27/05/2025	DWSS-07	#
2	27/05/2025	DWSS-08	1.33
3	27/05/2025	DWSS-09	1.07
4	27/05/2025	DWSS-10	1.27
5	27/05/2025	DWSS-11	1.27
6	27/05/2025	DWSS-12	1.24
7	28/05/2025	DWSS-06	BDL
8	28/05/2025	DLG-13	BDL
9	27/05/2025	DWSS-22	BDL
10	27/05/2025	DWSS-24	0.21
11	27/05/2025	DLG-23	0.36

विश्लेषणकर्ता Analyst

Pravin Kumar Gupta , Inder Mohan , Aayush Rana

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 3/5
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.



केंद्रीय प्रदूषण नियंत्रण बोर्ड **300** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



TC-7723

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)
स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

ULR No: TC77232550000084F

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	F- (mg/l)
12	27/05/2025	DLG-26	BDL
13	27/05/2025	DLG-27	BDL
14	28/05/2025	DLG-25	BDL
15	28/05/2025	DLG-28	BDL
16	28/05/2025	DLG-30	BDL
17	28/05/2025	DWSS-29	0.42
18	27/05/2025	DLG-20A	1.31
19	27/05/2025	DLG-34	1.15
20	27/05/2025	DWSS-33	0.84
21	28/05/2025	DWSS-31	BDL
22	28/05/2025	DLG-32	0.34

बीडीएल : मापन सीमा से नीचे **BDL :** Below Detection Limit

Remarks (if any) : * Turbidity Meter is not working. , # Sample Leaked , #- Sample Leaked

नोट : पीएच तथा चालकता ($\mu\text{mho/cm}$) के अतिरिक्त सभी सांद्रता मिग्रा/ली. में व्यक्त की गई हैं। Note: All the concentrations are expressed in mg/l except pH and Conductivity ($\mu\text{mho/cm}$).

विश्लेषणकर्ता Analyst

Pravin Kumar Gupta , Inder Mohan , Aayush Rana

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 4/5
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.



TC-7723

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)
स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

ULR No: TC77232550000084F

Statement कथन :

- परिणाम केवल परीक्षण किए गए नमूनों से संबंधित हैं और प्राप्त नमूने पर लागू होते हैं। The results relate only to the samples tested and apply to the sample as received.
- पूर्ण रिपोर्ट के अतिरिक्त प्रयोगशाला के लिखित अनुमोदन के बिना आख्या की आंशिक प्रतिकृति नहीं की जायेगी। The report shall not be reproduced except in full without written approval of the laboratory
- यह पैरामीटर NABL मान्यता, ISO-17025:2017 (प्रमाणपत्र संख्या TC-7723) के दायरे में है। | The parameter is under the scope of NABL accreditation, ISO-17025:2017 (Certificate No. TC-7723).
- नमूनों को परीक्षण रिपोर्ट की तारीख से एक सप्ताह के लिए बनाए रखा जाएगा। Samples will be retained for one Week from the date of Issue of test Report.

मानदंड का नाम Parameter Name	परिक्षण विधि Test Method	इकाई Unit	मापन की सीमा Limit of Detection	माप की अनिश्चितता Uncertainty of Measurment
pH	APHA 4500 H+ - B, 23rd Ed.: 2017		2	±0.18@7.24
TDS (Total Dissolved Solids)	APHA 2540 C, 23rd Ed.: 2017	mg/l	5	±20@350
Cl- (chloride ion)	APHA 4500 - Cl B, 23rd Ed.: 2017	mg/l	2	±15@300
TA (Total Alkalinity)	2320 B Titration Method, 23rd Ed.: 2017	mg/l	5	±2@29
Mg2+ (Magnesium Cation)	APHA 3500 - Mg B, 23rd Ed.: 2017	mg/l	2	±5@20
TH (Total Hardness)	APHA 2340 C, 23rd Ed.: 2017	mg/L	5	± 5@150
Ca2+	2340 EDTA Titrimetric method, 23rd Ed.: 2017	mg/l	2	±05@50
NO3- N	APHA 4500 - NO3 B, 23rd Ed.: 2017	mg/l	0.25	±0.2@2.104
F-	APHA 4500 - F D, 23rd Ed.: 2017	mg/l	0.2	± 0.08 @ 0.8

विश्लेषणकर्ता Analyst

Pravin Kumar Gupta , Inder Mohan , Aayush Rana

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 5/5
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.

*आख्या समाप्ति END OF REPORT *



केंद्रीय प्रदूषण नियंत्रण बोर्ड **302** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)

स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

नमूने की पंजीकरण सं. एवं तिथि Samples Registration No. & Date	: WATER/FW/2526/SR00032, 23/05/2025	आख्या सं एवं जारी करने की तिथि Report No. & Date of Issue	: WATER/2526/FW/00078,25/06/2025
नमूना विवरण Sample Details	:	आख्या किसे जारी की गयी (नाम एवं प्रभाग) Report sent to (Name & Address of Indentor)	: RD Chandigarh
नमूने एकत्रित करने वाले का नाम और प्रभाग/संगठन Sample Collected by Name & Division/Organization	: J. P. Meena,Aakash Mishra & Deeksha Garg/RD Chandigarh	नमूना मैट्रिक्स Sample Matrix	: Fresh Water
नमूनाकरण योजना प्राथमिकता Sampling Plan Preference	: N/A	नमूने प्राप्ति की तिथि एवं समय Date & Time of Sample Receipt	: 23/05/2025 12:16 PM
रिपोर्ट स्थिति Report Status	: Final	नमूने के विश्लेषण की अवधि Sample Analysis Period	: 19/05/2025 to 30/05/2025
नमूना लेने की विधि Sampling Method	:		

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	SO ₄ ²⁻	Color(Hazen)	Turbidity(NTU)
1	20/05/2025	DWSS-18	39	5	*
2	20/05/2025	DWSS-19	43	6	*
3	20/05/2025	DLG-20	30	7	*

विश्लेषणकर्ता Analyst

Pravin Kumar Gupta , Inder Mohan , Aayush Rana

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 1/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.



केंद्रीय प्रदूषण नियंत्रण बोर्ड **303** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)

स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	SO ₄ ²⁻	Color(Hazen)	Turbidity(NTU)
4	20/05/2025	DLG-21	29	6	*
5	21/05/2025	DWSS-14	60	7	*
6	21/05/2025	DLG-15	58	7	*
7	21/05/2025	DLG-16	65	7	*
8	21/05/2025	DLG-17	43	BDL	*
9	20/05/2025	DLG-01	34	5	*
10	20/05/2025	DWSS-02	49	7	*
11	20/05/2025	DWSS-03	81	5	*
12	21/05/2025	DWSS-04	85	6	*
13	21/05/2025	DLG-05	46	7	*

बीडीएल : मापन सीमा से नीचे **BDL :** Below Detection Limit

Remarks (if any) : , , , *Turbidity meter not working

नोट : पीएच तथा चालकता (µmho/cm) के अतिरिक्त सभी सांद्रता मिग्रा/ली. में व्यक्त की गई हैं। Note: All the concentrations are expressed in mg/l except pH and Conductivity (µmho/cm).

Statement कथन :

- परिणाम केवल परीक्षण किए गए नमूनों से संबंधित हैं और प्राप्त नमूने पर लागू होते हैं। The results relate only to the samples tested and apply to the sample as received.
- पूर्ण रिपोर्ट के अतिरिक्त प्रयोगशाला के लिखित अनुमोदन के बिना आख्या की आंशिक प्रतिकृति नहीं की जायेगी। The report shall not be reproduced except in full without written approval of the laboratory
- यह पैरामीटर NABL मान्यता, ISO-17025:2017 (प्रमाणपत्र संख्या TC-7723) के दायरे में है। The parameter is under the scope of NABL accreditation, ISO-17025:2017 (Certificate No.TC-7723).
- नमूनों को परीक्षण रिपोर्ट की तारीख से एक सप्ताह के लिए बनाए रखा जाएगा। Samples will be retained for one Week from the date of Issue of test Report.

विश्लेषणकर्ता Analyst

Pravin Kumar Gupta , Inder Mohan , Aayush Rana

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 2/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.



केंद्रीय प्रदूषण नियंत्रण बोर्ड **304** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)
स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

मानदंड का नाम Parameter Name	परिक्षण विधि Test Method	इकाई Unit	मापन की सीमा Limit of Detection	माप की अनिश्चितता Uncertainty of Measurement
SO ₄ ²⁻			0	
Color	APHA 2120 C Spectrophotometric Method, 23rd Ed.: 2017	Hazen	5	
Turbidity	2130 B Nephelometric Method, 23rd Ed.: 2017	NTU	1	

विश्लेषणकर्ता Analyst

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पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 3/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.

***आख्या समाप्ति END OF REPORT ***



केंद्रीय प्रदूषण नियंत्रण बोर्ड **305** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)

स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

नमूने की पंजीकरण सं. एवं तिथि Samples Registration No. & Date	: WATER/FW/2526/SR00039, 29/05/2025	आख्या सं एवं जारी करने की तिथि Report No. & Date of Issue	: WATER/2526/FW/00084,25/06/2025
नमूना विवरण Sample Details	:	आख्या किसे जारी की गयी (नाम एवं प्रभाग) Report sent to (Name & Address of Indentor)	: RD Chandigarh
नमूने एकत्रित करने वाले का नाम और प्रभाग/संगठन Sample Collected by Name & Division/Organization	: J. P. Meena, Nikita Grover, Aakash Mishra & Deeksha Garg/RD Chandigarh	नमूना मैट्रिक्स Sample Matrix	: Fresh Water
नमूनाकरण योजना प्राथमिकता Sampling Plan Preference	: N/A	नमूने प्राप्ति की तिथि एवं समय Date & Time of Sample Receipt	: 29/05/2025 13:13 PM
रिपोर्ट स्थिति Report Status	: Final	नमूने के विश्लेषण की अवधि Sample Analysis Period	: 30/05/2025 to 06/06/2025
नमूना लेने की विधि Sampling Method	:		

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	SO ₄ ²⁻	Color(Hazen)	Turbidity(NTU)
1	27/05/2025	DWSS-07	#	BDL	*
2	27/05/2025	DWSS-08	262	BDL	*
3	27/05/2025	DWSS-09	214	BDL	*

विश्लेषणकर्ता Analyst

Pravin Kumar Gupta , Inder Mohan , Aayush Rana

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 1/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.



केंद्रीय प्रदूषण नियंत्रण बोर्ड **306** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)
स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	SO ₄ ²⁻	Color(Hazen)	Turbidity(NTU)
4	27/05/2025	DWSS-10	216	BDL	*
5	27/05/2025	DWSS-11	235	BDL	*
6	27/05/2025	DWSS-12	215	BDL	*
7	28/05/2025	DWSS-06	38	BDL	*
8	28/05/2025	DLG-13	10	BDL	*
9	27/05/2025	DWSS-22	79	BDL	*
10	27/05/2025	DWSS-24	27	BDL	*
11	27/05/2025	DLG-23	9	BDL	*
12	27/05/2025	DLG-26	7	BDL	*
13	27/05/2025	DLG-27	7	BDL	*
14	28/05/2025	DLG-25	24	BDL	*
15	28/05/2025	DLG-28	49	BDL	*
16	28/05/2025	DLG-30	25	BDL	*
17	28/05/2025	DWSS-29	10	6	*
18	27/05/2025	DLG-20A	46	BDL	*
19	27/05/2025	DLG-34	161	BDL	*

विश्लेषणकर्ता Analyst

Pravin Kumar Gupta , Inder Mohan , Aayush Rana

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 2/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.



केंद्रीय प्रदूषण नियंत्रण बोर्ड **307** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)
स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	SO ₄ ²⁻	Color(Hazen)	Turbidity(NTU)
20	27/05/2025	DWSS-33	195	BDL	*
21	28/05/2025	DWSS-31	194	BDL	*
22	28/05/2025	DLG-32	35	BDL	*

बीडीएल : मापन सीमा से नीचे **BDL :** Below Detection Limit

Remarks (if any) : * Turbidity Meter is not working. , # Sample Leaked , #- Sample Leaked

नोट : पीएच तथा चालकता (µmho/cm) के अतिरिक्त सभी सांद्रता मिग्रा/ली. में व्यक्त की गई हैं। | Note: All the concentrations are expressed in mg/l except pH and Conductivity (µmho/cm).

Statement कथन :

- परिणाम केवल परीक्षण किए गए नमूनों से संबंधित हैं और प्राप्त नमूने पर लागू होते हैं। The results relate only to the samples tested and apply to the sample as received.
- पूर्ण रिपोर्ट के अतिरिक्त प्रयोगशाला के लिखित अनुमोदन के बिना आख्या की आंशिक प्रतिकृति नहीं की जायेगी। The report shall not be reproduced except in full without written approval of the laboratory
- यह पैरामीटर NABL मान्यता, ISO-17025:2017 (प्रमाणपत्र संख्या TC-7723) के दायरे में है। | The parameter is under the scope of NABL accreditation, ISO-17025:2017 (Certificate No.TC-7723).
- नमूनों को परीक्षण रिपोर्ट की तारीख से एक सप्ताह के लिए बनाए रखा जाएगा। Samples will be retained for one Week from the date of Issue of test Report.

मानदंड का नाम Parameter Name	परिक्षण विधि Test Method	इकाई Unit	मापन की सीमा Limit of Detection	माप की अनिश्चितता Uncertainty of Measurement
SO ₄ ²⁻			0	
Color	APHA 2120 C Spectrophotometric Method, 23rd Ed.: 2017	Hazen	5	
Turbidity	2130 B Nephelometric Method, 23rd Ed.: 2017	NTU	1	

विश्लेषणकर्ता Analyst

Pravin Kumar Gupta , Inder Mohan , Aayush Rana

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 3/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.

***आख्या समाप्ति END OF REPORT ***



केंद्रीय प्रदूषण नियंत्रण बोर्ड **308** **CENTRAL POLLUTION CONTROL BOARD**
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



TC-7723

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)
स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट **Physico-Chemical Analysis Report for Fresh Water Samples**

ULR No: TC77232550000081F

नमूने की पंजीकरण सं. एवं तिथि Samples Registration No. & Date	: WATER/FW/2526/SR00036, 23/05/2025	आख्या सं एवं जारी करने की तिथि Report No. & Date of Issue	: WATER/2526/FW/00081,25/06/2025
नमूना विवरण Sample Details	:	आख्या किसे जारी की गयी (नाम एवं प्रभाग) Report sent to (Name & Address of Indentor)	: RD Chandigarh
नमूने एकत्रित करने वाले का नाम और प्रभाग/संगठन Sample Collected by Name & Division/Organization	: J. P. Meena,Aakash Mishra & Deeksha Garg/RD Chandigarh	नमूना मैट्रिक्स Sample Matrix	: Fresh Water
नमूनाकरण योजना प्राथमिकता Sampling Plan Preference	: N/A	नमूने प्राप्ति की तिथि एवं समय Date & Time of Sample Receipt	: 23/05/2025 12:34 PM
रिपोर्ट स्थिति Report Status	: Final	नमूने के विश्लेषण की अवधि Sample Analysis Period	: 23/05/2025 to 30/05/2025
नमूना लेने की विधि Sampling Method	:		

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	NH3-N (mg/l)
1	20/05/2025	DWSS-18	0.46
2	20/05/2025	DWSS-19	0.51
3	20/05/2025	DLG-20	BDL

विश्लेषणकर्ता Analyst

Atul Sharma , Aayush Rana

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 1/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.



केंद्रीय प्रदूषण नियंत्रण बोर्ड **309** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



TC-7723

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)
स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

ULR No: TC772325500000081F

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	NH3-N (mg/l)
4	20/05/2025	DLG-21	BDL
5	21/05/2025	DWSS-14	BDL
6	21/05/2025	DLG-15	BDL
7	21/05/2025	DLG-16	BDL
8	21/05/2025	DLG-17	0.32
9	20/05/2025	DLG-01	BDL
10	20/05/2025	DWSS-02	BDL
11	20/05/2025	DWSS-03	BDL
12	21/05/2025	DWSS-04	BDL
13	21/05/2025	DLG-05	BDL

बीडीएल : मापन सीमा से नीचे **BDL** : Below Detection Limit

Remarks (if any) : ,

नोट : पीएच तथा चालकता (µmho/cm) के अतिरिक्त सभी सांद्रता मिग्रा/ली. में व्यक्त की गई हैं। Note: All the concentrations are expressed in mg/l except pH and Conductivity (µmho/cm).

Statement कथन :

- परिणाम केवल परीक्षण किए गए नमूनों से संबंधित हैं और प्राप्त नमूने पर लागू होते हैं। The results relate only to the samples tested and apply to the sample as received.
- पूर्ण रिपोर्ट के अतिरिक्त प्रयोगशाला के लिखित अनुमोदन के बिना आख्या की आंशिक प्रतिकृति नहीं की जायेगी। The report shall not be reproduced except in full without written approval of the laboratory
- यह पैरामीटर NABL मान्यता, ISO-17025:2017 (प्रमाणपत्र संख्या TC-7723) के दायरे में है। The parameter is under the scope of NABL accreditation, ISO-17025:2017 (Certificate No. TC-7723).
- नमूनों को परीक्षण रिपोर्ट की तारीख से एक सप्ताह के लिए बनाए रखा जाएगा। Samples will be retained for one Week from the date of Issue of test Report.

विश्लेषणकर्ता Analyst

Atul Sharma , Aayush Rana

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 2/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.



केंद्रीय प्रदूषण नियंत्रण बोर्ड **310** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)
स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

TC-7723

ULR No: TC77232550000081F

मानदंड का नाम Parameter Name	परिक्षण विधि Test Method	इकाई Unit	मापन की सीमा Limit of Detection	माप की अनिश्चितता Uncertainty of Measurment
NH3-N	IS: 3025 (Part - 34): 1988	mg/l	0.3	±0.2@2

विश्लेषणकर्ता Analyst

Atul Sharma , Aayush Rana

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 3/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.

*आख्या समाप्ति END OF REPORT *



केंद्रीय प्रदूषण नियंत्रण बोर्ड **311** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



TC-7723

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)
स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

ULR No: TC77232550000085F

नमूने की पंजीकरण सं. एवं तिथि Samples Registration No. & Date	: WATER/FW/2526/SR00040, 29/05/2025	आख्या सं एवं जारी करने की तिथि Report No. & Date of Issue	: WATER/2526/FW/00085,25/06/2025
नमूना विवरण Sample Details	:	आख्या किसे जारी की गयी (नाम एवं प्रभाग) Report sent to (Name & Address of Indentor)	: RD Chandigarh
नमूने एकत्रित करने वाले का नाम और प्रभाग/संगठन Sample Collected by Name & Division/Organization	: J. P. Meena, Nikita Grover, Aakash Mishra & Deeksha Garg/RD Chandigarh	नमूना मैट्रिक्स Sample Matrix	: Fresh Water
नमूनाकरण योजना प्राथमिकता Sampling Plan Preference	: N/A	नमूने प्राप्ति की तिथि एवं समय Date & Time of Sample Receipt	: 29/05/2025 13:14 PM
रिपोर्ट स्थिति Report Status	: Final	नमूने के विश्लेषण की अवधि Sample Analysis Period	: 30/05/2025 to 06/06/2025
नमूना लेने की विधि Sampling Method	:		

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	NH3-N (mg/l)
1	27/05/2025	DWSS-07	BDL
2	27/05/2025	DWSS-08	0.32
3	27/05/2025	DWSS-09	BDL

विश्लेषणकर्ता Analyst

Atul Sharma

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 1/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.



केंद्रीय प्रदूषण नियंत्रण बोर्ड **312** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)
स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

TC-7723

ULR No: TC772325500000085F

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	NH3-N (mg/l)
4	27/05/2025	DWSS-10	BDL
5	27/05/2025	DWSS-11	BDL
6	27/05/2025	DWSS-12	BDL
7	28/05/2025	DWSS-06	BDL
8	28/05/2025	DLG-13	BDL
9	27/05/2025	DWSS-22	BDL
10	27/05/2025	DWSS-24	BDL
11	27/05/2025	DLG-23	BDL
12	27/05/2025	DLG-26	BDL
13	27/05/2025	DLG-27	BDL
14	28/05/2025	DWSS-29	BDL
15	28/05/2025	DLG-25	BDL
16	28/05/2025	DLG-28	0.33
17	28/05/2025	DLG-30	BDL
18	27/05/2025	DLG-20A	BDL
19	27/05/2025	DLG-34	BDL

विश्लेषणकर्ता Analyst

Atul Sharma

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Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 2/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.



केंद्रीय प्रदूषण नियंत्रण बोर्ड **313** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



TC-7723

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)
स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

ULR No: TC77232550000085F

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	NH3-N (mg/l)
20	27/05/2025	DWSS-33	BDL
21	28/05/2025	DWSS-31	BDL
22	28/05/2025	DLG-32	BDL

बीडीएल : मापन सीमा से नीचे **BDL :** Below Detection Limit

Remarks (if any) :

नोट : पीएच तथा चालकता (µmho/cm) के अतिरिक्त सभी सांद्रता मिग्रा/ली. में व्यक्त की गई हैं। Note: All the concentrations are expressed in mg/l except pH and Conductivity (µmho/cm).

Statement कथन :

- परिणाम केवल परीक्षण किए गए नमूनों से संबंधित हैं और प्राप्त नमूने पर लागू होते हैं। The results relate only to the samples tested and apply to the sample as received.
- पूर्ण रिपोर्ट के अतिरिक्त प्रयोगशाला के लिखित अनुमोदन के बिना आख्या की आंशिक प्रतिकृति नहीं की जायेगी। The report shall not be reproduced except in full without written approval of the laboratory
- यह पैरामीटर NABL मान्यता, ISO-17025:2017 (प्रमाणपत्र संख्या TC-7723) के दायरे में है। The parameter is under the scope of NABL accreditation, ISO-17025:2017 (Certificate No. TC-7723).
- नमूनों को परीक्षण रिपोर्ट की तारीख से एक सप्ताह के लिए बनाए रखा जाएगा। Samples will be retained for one Week from the date of Issue of test Report.

मानदंड का नाम Parameter Name	परिक्षण विधि Test Method	इकाई Unit	मापन की सीमा Limit of Detection	माप की अनिश्चितता Uncertainty of Measurement
NH3-N	IS: 3025 (Part - 34): 1988	mg/l	0.3	±0.2@2

विश्लेषणकर्ता Analyst

Atul Sharma

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 3/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.

*आख्या समाप्ति END OF REPORT *



केंद्रीय प्रदूषण नियंत्रण बोर्ड **314** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)

स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

नमूने की पंजीकरण सं. एवं तिथि Samples Registration No. & Date	: WATER/FW/2526/SR00034, 23/05/2025	आख्या सं एवं जारी करने की तिथि Report No. & Date of Issue	: WATER/2526/FW/00079,25/06/2025
नमूना विवरण Sample Details	:	आख्या किसे जारी की गयी (नाम एवं प्रभाग) Report sent to (Name & Address of Indentor)	: RD Chandigarh
नमूने एकत्रित करने वाले का नाम और प्रभाग/संगठन Sample Collected by Name & Division/Organization	: J. P. Meena,Aakash Mishra & Deeksha Garg/RD Chandigarh	नमूना मैट्रिक्स Sample Matrix	: Fresh Water
नमूनाकरण योजना प्राथमिकता Sampling Plan Preference	: N/A	नमूने प्राप्ति की तिथि एवं समय Date & Time of Sample Receipt	: 23/05/2025 12:13 PM
रिपोर्ट स्थिति Report Status	: Final	नमूने के विश्लेषण की अवधि Sample Analysis Period	: 23/05/2025 to 30/05/2025
नमूना लेने की विधि Sampling Method	:		

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	Boron (mg/l)
1	20/05/2025	DWSS-18	BDL
2	20/05/2025	DWSS-19	BDL
3	20/05/2025	DLG-20	BDL

विश्लेषणकर्ता Analyst

Atul Sharma

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 1/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.



केंद्रीय प्रदूषण नियंत्रण बोर्ड **315** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)

स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	Boron (mg/l)
4	20/05/2025	DLG-21	BDL
5	21/05/2025	DWSS-14	BDL
6	21/05/2025	DLG-15	BDL
7	21/05/2025	DLG-16	BDL
8	21/05/2025	DLG-17	BDL
9	20/05/2025	DLG-01	BDL
10	20/05/2025	DWSS-02	BDL
11	20/05/2025	DWSS-03	BDL
12	21/05/2025	DWSS-04	BDL
13	21/05/2025	DLG-05	BDL

बीडीएल : मापन सीमा से नीचे **BDL** : Below Detection Limit

Remarks (if any) :

नोट : पीएच तथा चालकता ($\mu\text{mho/cm}$) के अतिरिक्त सभी सांद्रता मिग्रा/ली. में व्यक्त की गई हैं। Note: All the concentrations are expressed in mg/l except pH and Conductivity ($\mu\text{mho/cm}$).

Statement कथन :

- परिणाम केवल परीक्षण किए गए नमूनों से संबंधित हैं और प्राप्त नमूने पर लागू होते हैं। The results relate only to the samples tested and apply to the sample as received.
- पूर्ण रिपोर्ट के अतिरिक्त प्रयोगशाला के लिखित अनुमोदन के बिना आख्या की आंशिक प्रतिकृति नहीं की जायेगी। The report shall not be reproduced except in full without written approval of the laboratory
- यह पैरामीटर NABL मान्यता, ISO-17025:2017 (प्रमाणपत्र संख्या TC-7723) के दायरे में है। | The parameter is under the scope of NABL accreditation, ISO-17025:2017 (Certificate No.TC-7723).
- नमूनों को परीक्षण रिपोर्ट की तारीख से एक सप्ताह के लिए बनाए रखा जाएगा। Samples will be retained for one Week from the date of Issue of test Report.

विश्लेषणकर्ता Analyst

Atul Sharma

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 2/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.



केंद्रीय प्रदूषण नियंत्रण बोर्ड **316** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)
स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

मानदंड का नाम Parameter Name	परिक्षण विधि Test Method	इकाई Unit	मापन की सीमा Limit of Detection	माप की अनिश्चितता Uncertainty of Measurement
Boron	34500 - BC Carmine Methdo. 23rd Ed.: 2017	mg/l	01	

विश्लेषणकर्ता Analyst

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Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized
signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 3/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.

*आख्या समाप्ति END OF REPORT *



केंद्रीय प्रदूषण नियंत्रण बोर्ड **317** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)

स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

नमूने की पंजीकरण सं. एवं तिथि Samples Registration No. & Date	: WATER/FW/2526/SR00042, 29/05/2025	आख्या सं एवं जारी करने की तिथि Report No. & Date of Issue	: WATER/2526/FW/00087,25/06/2025
नमूना विवरण Sample Details	:	आख्या किसे जारी की गयी (नाम एवं प्रभाग) Report sent to (Name & Address of Indentor)	: RD Chandigarh
नमूने एकत्रित करने वाले का नाम और प्रभाग/संगठन Sample Collected by Name & Division/Organization	: J. P. Meena, Nikita Grover, Aakash Mishra & Deeksha Garg/RD Chandigarh	नमूना मैट्रिक्स Sample Matrix	: Fresh Water
नमूनाकरण योजना प्राथमिकता Sampling Plan Preference	: N/A	नमूने प्राप्ति की तिथि एवं समय Date & Time of Sample Receipt	: 29/05/2025 13:17 PM
रिपोर्ट स्थिति Report Status	: Final	नमूने के विश्लेषण की अवधि Sample Analysis Period	: 30/05/2025 to 06/06/2025
नमूना लेने की विधि Sampling Method	:		

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	Boron (mg/l)
1	27/05/2025	DWSS-07	BDL
2	27/05/2025	DWSS-08	BDL
3	27/05/2025	DWSS-09	0.29

विश्लेषणकर्ता Analyst

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Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 1/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.



केंद्रीय प्रदूषण नियंत्रण बोर्ड **318** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)
स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	Boron (mg/l)
4	27/05/2025	DWSS-10	BDL
5	27/05/2025	DWSS-11	BDL
6	27/05/2025	DWSS-12	BDL
7	28/05/2025	DWSS-06	BDL
8	28/05/2025	DLG-13	BDL
9	27/05/2025	DWSS-22	BDL
10	27/05/2025	DWSS-24	0.2
11	27/05/2025	DLG-23	0.31
12	27/05/2025	DLG-26	BDL
13	27/05/2025	DLG-27	BDL
14	28/05/2025	DLG-25	0.21
15	28/05/2025	DLG-28	0.3
16	28/05/2025	DLG-30	0.27
17	28/05/2025	DWSS-29	0.23
18	27/05/2025	DLG-20A	0.31
19	27/05/2025	DLG-34	BDL

विश्लेषणकर्ता Analyst

Atul Sharma

पर्यवेक्षक और समीक्षक
Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized
signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 2/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.



केंद्रीय प्रदूषण नियंत्रण बोर्ड **319** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)
स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	Boron (mg/l)
20	27/05/2025	DWSS-33	BDL
21	28/05/2025	DWSS-31	BDL
22	28/05/2025	DLG-32	BDL

बीडीएल : मापन सीमा से नीचे **BDL :** Below Detection Limit

Remarks (if any) :

नोट : पीएच तथा चालकता ($\mu\text{mho/cm}$) के अतिरिक्त सभी सांद्रता मिग्रा/ली. में व्यक्त की गई हैं। Note: All the concentrations are expressed in mg/l except pH and Conductivity ($\mu\text{mho/cm}$).

Statement कथन :

- परिणाम केवल परीक्षण किए गए नमूनों से संबंधित हैं और प्राप्त नमूने पर लागू होते हैं। The results relate only to the samples tested and apply to the sample as received.
- पूर्ण रिपोर्ट के अतिरिक्त प्रयोगशाला के लिखित अनुमोदन के बिना आख्या की आंशिक प्रतिकृति नहीं की जायेगी। The report shall not be reproduced except in full without written approval of the laboratory
- यह पैरामीटर NABL मान्यता, ISO-17025:2017 (प्रमाणपत्र संख्या TC-7723) के दायरे में है। The parameter is under the scope of NABL accreditation, ISO-17025:2017 (Certificate No. TC-7723).
- नमूनों को परीक्षण रिपोर्ट की तारीख से एक सप्ताह के लिए बनाए रखा जाएगा। Samples will be retained for one Week from the date of Issue of test Report.

मानदंड का नाम Parameter Name	परिक्षण विधि Test Method	इकाई Unit	मापन की सीमा Limit of Detection	माप की अनिश्चितता Uncertainty of Measurement
Boron	34500 - BC Carmine Methdo. 23rd Ed.: 2017	mg/l	0.2	

विश्लेषणकर्ता Analyst

Atul Sharma

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 3/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.

***आख्या समाप्ति END OF REPORT ***



केंद्रीय प्रदूषण नियंत्रण बोर्ड **320** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)

स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

नमूने की पंजीकरण सं. एवं तिथि Samples Registration No. & Date	: WATER/FW/2526/SR00035, 23/05/2025	आख्या सं एवं जारी करने की तिथि Report No. & Date of Issue	: WATER/2526/FW/00080,25/06/2025
नमूना विवरण Sample Details	:	आख्या किसे जारी की गयी (नाम एवं प्रभाग) Report sent to (Name & Address of Indentor)	: RD Chandigarh
नमूने एकत्रित करने वाले का नाम और प्रभाग/संगठन Sample Collected by Name & Division/Organization	: J. P. Meena,Aakash Mishra & Deeksha Garg/RD Chandigarh	नमूना मैट्रिक्स Sample Matrix	: Fresh Water
नमूनाकरण योजना प्राथमिकता Sampling Plan Preference	: N/A	नमूने प्राप्ति की तिथि एवं समय Date & Time of Sample Receipt	: 23/05/2025 12:11 PM
रिपोर्ट स्थिति Report Status	: Final	नमूने के विश्लेषण की अवधि Sample Analysis Period	: 23/05/2025 to 30/05/2025
नमूना लेने की विधि Sampling Method	:		

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	CN- (mg/l)
1	20/05/2025	DWSS-18	BDL
2	20/05/2025	DWSS-19	BDL
3	20/05/2025	DLG-20	BDL

विश्लेषणकर्ता Analyst

Atul Sharma

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 1/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.



केंद्रीय प्रदूषण नियंत्रण बोर्ड **321** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)

स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	CN- (mg/l)
4	20/05/2025	DLG-21	BDL
5	21/05/2025	DWSS-14	BDL
6	21/05/2025	DLG-15	BDL
7	21/05/2025	DLG-16	BDL
8	21/05/2025	DLG-17	BDL
9	20/05/2025	DLG-01	BDL
10	20/05/2025	DWSS-02	BDL
11	20/05/2025	DWSS-03	BDL
12	21/05/2025	DWSS-04	BDL
13	21/05/2025	DLG-05	BDL

बीडीएल : मापन सीमा से नीचे **BDL** : Below Detection Limit

Remarks (if any) :

नोट : पीएच तथा चालकता ($\mu\text{mho/cm}$) के अतिरिक्त सभी सांद्रता मिग्रा/ली. में व्यक्त की गई हैं। Note: All the concentrations are expressed in mg/l except pH and Conductivity ($\mu\text{mho/cm}$).

Statement कथन :

- परिणाम केवल परीक्षण किए गए नमूनों से संबंधित हैं और प्राप्त नमूने पर लागू होते हैं। The results relate only to the samples tested and apply to the sample as received.
- पूर्ण रिपोर्ट के अतिरिक्त प्रयोगशाला के लिखित अनुमोदन के बिना आख्या की आंशिक प्रतिकृति नहीं की जायेगी। The report shall not be reproduced except in full without written approval of the laboratory
- यह पैरामीटर NABL मान्यता, ISO-17025:2017 (प्रमाणपत्र संख्या TC-7723) के दायरे में है। The parameter is under the scope of NABL accreditation, ISO-17025:2017 (Certificate No.TC-7723).
- नमूनों को परीक्षण रिपोर्ट की तारीख से एक सप्ताह के लिए बनाए रखा जाएगा। Samples will be retained for one Week from the date of Issue of test Report.

विश्लेषणकर्ता Analyst

Atul Sharma

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 2/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.



केंद्रीय प्रदूषण नियंत्रण बोर्ड **322** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)

स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

मानदंड का नाम Parameter Name	परिक्षण विधि Test Method	इकाई Unit	मापन की सीमा Limit of Detection	माप की अनिश्चितता Uncertainty of Measurement
CN-	4500 - CN D Titrimetric Method 4500 - CN F cyanide on selective method, 23rd Ed.: 2017	mg/l	0.05	

विश्लेषणकर्ता Analyst

Atul Sharma

पर्यवेक्षक और समीक्षक
Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized
signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 3/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.

***आख्या समाप्ति END OF REPORT ***



केंद्रीय प्रदूषण नियंत्रण बोर्ड **323** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)

स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

नमूने की पंजीकरण सं. एवं तिथि Samples Registration No. & Date	: WATER/FW/2526/SR00041, 29/05/2025	आख्या सं एवं जारी करने की तिथि Report No. & Date of Issue	: WATER/2526/FW/00086,25/06/2025
नमूना विवरण Sample Details	:	आख्या किसे जारी की गयी (नाम एवं प्रभाग) Report sent to (Name & Address of Indentor)	: RD Chandigarh
नमूने एकत्रित करने वाले का नाम और प्रभाग/संगठन Sample Collected by Name & Division/Organization	: J. P. Meena, Nikita Grover, Aakash Mishra & Deeksha Garg/RD Chandigarh	नमूना मैट्रिक्स Sample Matrix	: Fresh Water
नमूनाकरण योजना प्राथमिकता Sampling Plan Preference	: N/A	नमूने प्राप्ति की तिथि एवं समय Date & Time of Sample Receipt	: 29/05/2025 13:15 PM
रिपोर्ट स्थिति Report Status	: Final	नमूने के विश्लेषण की अवधि Sample Analysis Period	: 30/05/2025 to 06/06/2025
नमूना लेने की विधि Sampling Method	:		

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	CN- (mg/l)
1	27/05/2025	DWSS-07	BDL
2	27/05/2025	DWSS-08	BDL
3	27/05/2025	DWSS-09	BDL

विश्लेषणकर्ता Analyst

Atul Sharma

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 1/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.



केंद्रीय प्रदूषण नियंत्रण बोर्ड **324** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)
स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	CN- (mg/l)
4	27/05/2025	DWSS-10	BDL
5	27/05/2025	DWSS-11	BDL
6	27/05/2025	DWSS-12	BDL
7	28/05/2025	DWSS-06	BDL
8	28/05/2025	DLG-13	BDL
9	27/05/2025	DWSS-22	BDL
10	27/05/2025	DWSS-24	BDL
11	27/05/2025	DLG-23	BDL
12	27/05/2025	DLG-26	BDL
13	27/05/2025	DLG-27	BDL
14	28/05/2025	DLG-25	BDL
15	28/05/2025	DLG-28	BDL
16	28/05/2025	DLG-30	BDL
17	28/05/2025	DWSS-29	BDL
18	27/05/2025	DLG-20A	BDL
19	27/05/2025	DLG-34	BDL

विश्लेषणकर्ता Analyst

Atul Sharma

पर्यवेक्षक और समीक्षक
Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized
signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 2/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.



केंद्रीय प्रदूषण नियंत्रण बोर्ड **325** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)
स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	CN- (mg/l)
20	27/05/2025	DWSS-33	BDL
21	28/05/2025	DWSS-31	BDL
22	28/05/2025	DLG-32	BDL

बीडीएल : मापन सीमा से नीचे **BDL :** Below Detection Limit

Remarks (if any) :

नोट : पीएच तथा चालकता ($\mu\text{mho/cm}$) के अतिरिक्त सभी सांद्रता मिग्रा/ली. में व्यक्त की गई हैं। Note: All the concentrations are expressed in mg/l except pH and Conductivity ($\mu\text{mho/cm}$).

Statement कथन :

- परिणाम केवल परीक्षण किए गए नमूनों से संबंधित हैं और प्राप्त नमूने पर लागू होते हैं। The results relate only to the samples tested and apply to the sample as received.
- पूर्ण रिपोर्ट के अतिरिक्त प्रयोगशाला के लिखित अनुमोदन के बिना आख्या की आंशिक प्रतिकृति नहीं की जायेगी। The report shall not be reproduced except in full without written approval of the laboratory
- यह पैरामीटर NABL मान्यता, ISO-17025:2017 (प्रमाणपत्र संख्या TC-7723) के दायरे में है। The parameter is under the scope of NABL accreditation, ISO-17025:2017 (Certificate No.TC-7723).
- नमूनों को परीक्षण रिपोर्ट की तारीख से एक सप्ताह के लिए बनाए रखा जाएगा। Samples will be retained for one Week from the date of Issue of test Report.

मानदंड का नाम Parameter Name	परिक्षण विधि Test Method	इकाई Unit	मापन की सीमा Limit of Detection	माप की अनिश्चितता Uncertainty of Measurement
CN-	4500 - CN D Titrimetric Method cyanide on selective method, 23rd Ed.: 2017	4500 - CN F mg/l	0.05	

विश्लेषणकर्ता Analyst

Atul Sharma

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 3/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.

***आख्या समाप्ति END OF REPORT ***



केंद्रीय प्रदूषण नियंत्रण बोर्ड **326** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)

स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

नमूने की पंजीकरण सं. एवं तिथि Samples Registration No. & Date	: WATER/FW/2526/SR00036, 23/05/2025	आख्या सं एवं जारी करने की तिथि Report No. & Date of Issue	: WATER/2526/FW/00081,25/06/2025
नमूना विवरण Sample Details	:	आख्या किसे जारी की गयी (नाम एवं प्रभाग) Report sent to (Name & Address of Indentor)	: RD Chandigarh
नमूने एकत्रित करने वाले का नाम और प्रभाग/संगठन Sample Collected by Name & Division/Organization	: J. P. Meena,Aakash Mishra & Deeksha Garg/RD Chandigarh	नमूना मैट्रिक्स Sample Matrix	: Fresh Water
नमूनाकरण योजना प्राथमिकता Sampling Plan Preference	: N/A	नमूने प्राप्ति की तिथि एवं समय Date & Time of Sample Receipt	: 23/05/2025 12:34 PM
रिपोर्ट स्थिति Report Status	: Final	नमूने के विश्लेषण की अवधि Sample Analysis Period	: 23/05/2025 to 30/05/2025
नमूना लेने की विधि Sampling Method	:		

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	Phenolic compounds (mg/l)
1	20/05/2025	DWSS-18	BDL
2	20/05/2025	DWSS-19	BDL
3	20/05/2025	DLG-20	BDL

विश्लेषणकर्ता Analyst

Atul Sharma , Aayush Rana

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 1/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.



केंद्रीय प्रदूषण नियंत्रण बोर्ड **327** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)

स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	Phenolic compounds (mg/l)
4	20/05/2025	DLG-21	BDL
5	21/05/2025	DWSS-14	BDL
6	21/05/2025	DLG-15	BDL
7	21/05/2025	DLG-16	BDL
8	21/05/2025	DLG-17	BDL
9	20/05/2025	DLG-01	BDL
10	20/05/2025	DWSS-02	BDL
11	20/05/2025	DWSS-03	BDL
12	21/05/2025	DWSS-04	BDL
13	21/05/2025	DLG-05	BDL

बीडीएल : मापन सीमा से नीचे **BDL** : Below Detection Limit

Remarks (if any) : ,

नोट : पीएच तथा चालकता ($\mu\text{mho/cm}$) के अतिरिक्त सभी सांद्रता मिग्रा/ली. में व्यक्त की गई हैं। Note: All the concentrations are expressed in mg/l except pH and Conductivity ($\mu\text{mho/cm}$).

Statement कथन :

- परिणाम केवल परीक्षण किए गए नमूनों से संबंधित हैं और प्राप्त नमूने पर लागू होते हैं। The results relate only to the samples tested and apply to the sample as received.
- पूर्ण रिपोर्ट के अतिरिक्त प्रयोगशाला के लिखित अनुमोदन के बिना आख्या की आंशिक प्रतिकृति नहीं की जायेगी। The report shall not be reproduced except in full without written approval of the laboratory
- यह पैरामीटर NABL मान्यता, ISO-17025:2017 (प्रमाणपत्र संख्या TC-7723) के दायरे में है। The parameter is under the scope of NABL accreditation, ISO-17025:2017 (Certificate No.TC-7723).
- नमूनों को परीक्षण रिपोर्ट की तारीख से एक सप्ताह के लिए बनाए रखा जाएगा। Samples will be retained for one Week from the date of Issue of test Report.

विश्लेषणकर्ता Analyst

Atul Sharma , Aayush Rana

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 2/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.



केंद्रीय प्रदूषण नियंत्रण बोर्ड **328** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)
स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

मानदंड का नाम Parameter Name	परिक्षण विधि Test Method	इकाई Unit	मापन की सीमा Limit of Detection	माप की अनिश्चितता Uncertainty of Measurement
Phenolic compounds	5530C. Chloroform extraction method	mg/l	0.001	

विश्लेषणकर्ता Analyst

Atul Sharma , Aayush Rana

पर्यवेक्षक और समीक्षक
Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized
signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 3/3
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यह एक कंप्यूटर जनित रिपोर्ट है. किसी हस्ताक्षर की आवश्यकता नहीं है. This is a computer-generated Report. No signature is required.

***आख्या समाप्ति END OF REPORT ***



केंद्रीय प्रदूषण नियंत्रण बोर्ड **329** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)

स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

नमूने की पंजीकरण सं. एवं तिथि Samples Registration No. & Date	: WATER/FW/2526/SR00040, 29/05/2025	आख्या सं एवं जारी करने की तिथि Report No. & Date of Issue	: WATER/2526/FW/00085,25/06/2025
नमूना विवरण Sample Details	:	आख्या किसे जारी की गयी (नाम एवं प्रभाग) Report sent to (Name & Address of Indentor)	: RD Chandigarh
नमूने एकत्रित करने वाले का नाम और प्रभाग/संगठन Sample Collected by Name & Division/Organization	: J. P. Meena, Nikita Grover, Aakash Mishra & Deeksha Garg/RD Chandigarh	नमूना मैट्रिक्स Sample Matrix	: Fresh Water
नमूनाकरण योजना प्राथमिकता Sampling Plan Preference	: N/A	नमूने प्राप्ति की तिथि एवं समय Date & Time of Sample Receipt	: 29/05/2025 13:14 PM
रिपोर्ट स्थिति Report Status	: Final	नमूने के विश्लेषण की अवधि Sample Analysis Period	: 30/05/2025 to 06/06/2025
नमूना लेने की विधि Sampling Method	:		

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	Phenolic compounds (mg/l)
1	27/05/2025	DWSS-07	BDL
2	27/05/2025	DWSS-08	BDL
3	27/05/2025	DWSS-09	BDL

विश्लेषणकर्ता Analyst

Atul Sharma

पर्यवेक्षक और समीक्षक

Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 1/3
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केंद्रीय प्रदूषण नियंत्रण बोर्ड **330** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)
स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	Phenolic compounds (mg/l)
4	27/05/2025	DWSS-10	BDL
5	27/05/2025	DWSS-11	BDL
6	27/05/2025	DWSS-12	BDL
7	28/05/2025	DWSS-06	BDL
8	28/05/2025	DLG-13	BDL
9	27/05/2025	DWSS-22	BDL
10	27/05/2025	DWSS-24	BDL
11	27/05/2025	DLG-23	BDL
12	27/05/2025	DLG-26	BDL
13	27/05/2025	DLG-27	BDL
14	28/05/2025	DWSS-29	BDL
15	28/05/2025	DLG-25	BDL
16	28/05/2025	DLG-28	BDL
17	28/05/2025	DLG-30	BDL
18	27/05/2025	DLG-20A	0.001
19	27/05/2025	DLG-34	BDL

विश्लेषणकर्ता Analyst

Atul Sharma

पर्यवेक्षक और समीक्षक
Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized
signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 2/3
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केंद्रीय प्रदूषण नियंत्रण बोर्ड **331** CENTRAL POLLUTION CONTROL BOARD
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश्लेषण आख्या)
स्वच्छ जल नमूनों की भौतिक-रासायनिक विश्लेषण रिपोर्ट Physico-Chemical Analysis Report for Fresh Water Samples

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	Phenolic compounds (mg/l)
20	27/05/2025	DWSS-33	BDL
21	28/05/2025	DWSS-31	BDL
22	28/05/2025	DLG-32	BDL

बीडीएल : मापन सीमा से नीचे **BDL :** Below Detection Limit

Remarks (if any) :

नोट : पीएच तथा चालकता ($\mu\text{mho/cm}$) के अतिरिक्त सभी सांद्रता मिग्रा/ली. में व्यक्त की गई हैं। Note: All the concentrations are expressed in mg/l except pH and Conductivity ($\mu\text{mho/cm}$).

Statement कथन :

- परिणाम केवल परीक्षण किए गए नमूनों से संबंधित हैं और प्राप्त नमूने पर लागू होते हैं। The results relate only to the samples tested and apply to the sample as received.
- पूर्ण रिपोर्ट के अतिरिक्त प्रयोगशाला के लिखित अनुमोदन के बिना आख्या की आंशिक प्रतिकृति नहीं की जायेगी। The report shall not be reproduced except in full without written approval of the laboratory
- यह पैरामीटर NABL मान्यता, ISO-17025:2017 (प्रमाणपत्र संख्या TC-7723) के दायरे में है। The parameter is under the scope of NABL accreditation, ISO-17025:2017 (Certificate No.TC-7723).
- नमूनों को परीक्षण रिपोर्ट की तारीख से एक सप्ताह के लिए बनाए रखा जाएगा। Samples will be retained for one Week from the date of Issue of test Report.

मानदंड का नाम Parameter Name	परिक्षण विधि Test Method	इकाई Unit	मापन की सीमा Limit of Detection	माप की अनिश्चितता Uncertainty of Measurement
Phenolic compounds	5530C. Chloroform extraction method	mg/l	0.001	

विश्लेषणकर्ता Analyst

Atul Sharma

पर्यवेक्षक और समीक्षक
Supervisor & Reviewer & अधिकृत हस्ताक्षरकर्ता & Authorized
signatory

Bathala Sasi Devi

स्वीकृतकर्ता (प्रयोगशाला प्रभारी) Approved By (Lab InCharge)

Syed M Bilal

Doc: CB/CL/QR/7.4/FWL-1	Issue No.:3	Revision No :3	Issue Date:19/02/2014	Revision Date: 18/09/2020	Page No. : 3/3
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***आख्या समाप्ति END OF REPORT ***



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CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



INSTRUMENTATION LABORATORY (Analysis Report) उपकरणीय प्रयोगशाला (विश्लेषण आख्या)

Heavy Metals(Excluding Mercury)

ULR No: TC772325300000083F

TC-7723

नमूने की पंजीकरण सं. एवं तिथि Samples Registration No. & Date	: INSTR/HM/2526/SR00058, 22/05/2025	आख्या सं एवं जारी करने की तिथि Report No. & Date of Issue	: INSTR/2526/HM/00083,10/06/2025
नमूना विवरण Sample Details	:	आख्या किसे जारी की गयी (नाम एवं प्रभाग) Report sent to (Name & Address of Indentor)	: DH of RD Chandigarh
नमूने एकत्रित करने वाले का नाम और प्रभाग/संगठन Sample Collected by Name & Division/Organization	: J. P. Meena, Aakash Mishra & Deeksha Garg/RD Chandigarh	नमूना मैट्रिक्स Sample Matrix	: Fresh Water
नमूनाकरण योजना प्राथमिकता Sampling Plan Preference	: N/A	नमूने प्राप्ति की तिथि एवं समय Date & Time of Sample Receipt	: 22/05/2025
रिपोर्ट स्थिति Report Status	: Final	नमूने के विश्लेषण की अवधि Sample Analysis Period	: 30/05/2025 to 30/05/2025
नमूना लेने की विधि Sampling Method	:		

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	नमूना मैट्रिक्स Sample Matrix	Arsenic (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Zinc (mg/L)
1	20/05/2025	DWSS-18	Fresh Water	BDL	BDL	BDL	0.01	2.261	0.04	BDL	BDL	BDL	0.119
2	20/05/2025	DWSS-19	Fresh Water	BDL	BDL	BDL	BDL	0.027	BDL	0.019	BDL	BDL	0.056
3	20/05/2025	DLG-20	Fresh Water	BDL	BDL	BDL	BDL	0.039	BDL	0.023	BDL	BDL	0.054
4	20/05/2025	DLG-21	Fresh Water	BDL	BDL	BDL	BDL	0.023	BDL	BDL	BDL	BDL	0.011
5	21/05/2025	DWSS-14	Fresh Water	BDL	BDL	BDL	BDL	0.065	BDL	0.033	BDL	BDL	0.054

विश्लेषणकर्ता Analyst

Dr Nirmal Kumar Sharma

पर्यवेक्षक और समीक्षक & अधिकृत हस्ताक्षरकर्ता

Supervisor & Reviewer & Authorized Signatory

B. K. Jena

स्वीकृतकर्ता (प्रयोगशाला प्रभारी)

Approved By (DH Inst-Lab)

Namita Mishra

Doc: CB/CL/QR/7.8/IL-5	Issue No.:05	Revision No :05	Issue Date:08/12/2020	Revision Date: 08/12/2020	Page No. : 1/3
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333
CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



INSTRUMENTATION LABORATORY (Analysis Report) उपकरणीय प्रयोगशाला (विश्लेषण आख्या)

Heavy Metals(Excluding Mercury)

ULR No: TC77232530000083F

TC-7723

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	नमूना मैट्रिक्स Sample Matrix	Arsenic (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Zinc (mg/L)
6	21/05/2025	DLG-15	Fresh Water	BDL	BDL	BDL	BDL	0.036	BDL	BDL	BDL	BDL	0.031
7	21/05/2025	DLG-16	Fresh Water	BDL	BDL	BDL	BDL	0.025	BDL	BDL	BDL	BDL	0.032
8	21/05/2025	DLG-17	Fresh Water	BDL	BDL	0.012	BDL	4.416	BDL	0.181	BDL	BDL	0.063
9	20/05/2025	DLG-01	Fresh Water	BDL	BDL	BDL	BDL	0.47	BDL	0.045	BDL	BDL	0.025
10	20/05/2025	DWSS-02	Fresh Water	BDL	BDL	BDL	BDL	0.027	BDL	0.03	BDL	BDL	0.025
11	20/05/2025	DWSS-03	Fresh Water	BDL	BDL	BDL	BDL	0.141	BDL	0.024	BDL	BDL	0.011
12	21/05/2025	DWSS-04	Fresh Water	BDL	BDL	BDL	BDL	0.302	BDL	0.023	BDL	BDL	0.029
13	21/05/2025	DLG-05	Fresh Water	BDL	BDL	BDL	BDL	0.0119	BDL	BDL	BDL	BDL	0.028

BDL : Below Deduction Limit न्यूनतम विश्लेषण की सीमा

Remarks (if any) : The calculated result sheet is attached here for reference.

Statement :

- परिणाम केवल परीक्षण किए गए नमूनों से संबंधित हैं और प्राप्त नमूने पर लागू होते हैं। The results relate only to the samples tested and apply to the sample as received.
- पूर्ण रिपोर्ट के अतिरिक्त प्रयोगशाला के लिखित अनुमोदन के बिना आख्या की आंशिक प्रतिकृति नहीं की जायेगी। The report shall not be reproduced except in full without written approval of the laboratory
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- नमूनों को परीक्षण रिपोर्ट की तारीख से 15 दिन के लिए बनाए रखा जाएगा। Samples will be retained for 30 days from the date of Issue of test Report.

विश्लेषणकर्ता Analyst

Dr Nirmal Kumar Sharma

पर्यवेक्षक और समीक्षक & अधिकृत हस्ताक्षरकर्ता

Supervisor & Reviewer & Authorized Signatory

B. K. Jena

स्वीकृतकर्ता (प्रयोगशाला प्रभारी)

Approved By (DH Inst-Lab)

Namita Mishra

Doc: CB/CL/QR/7.8/IL-5	Issue No.:05	Revision No :05	Issue Date:08/12/2020	Revision Date: 08/12/2020	Page No. : 2/3
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CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



INSTRUMENTATION LABORATORY (Analysis Report) उपकरणीय प्रयोगशाला (विश्लेषण आख्या)

Heavy Metals(Excluding Mercury)

ULR No: TC772325300000083F

TC-7723

मानदंड का नाम Parameter Name	परिक्षण विधि Test Method	इकाई Unit	मापन की सीमा Limit of Detection	माप की अनिश्चितता Uncertainty of Measurement
Arsenic	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00049	
Cadmium	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00042	
Chromium	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00056	
Copper	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00035	
Iron	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00067	
Lead	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00031	
Manganese	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00043	
Nickel	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00054	
Selenium	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00113	
Zinc	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00059	

विश्लेषणकर्ता Analyst

Dr Nirmal Kumar Sharma

पर्यवेक्षक और समीक्षक & अधिकृत हस्ताक्षरकर्ता

Supervisor & Reviewer & Authorized Signatory

B. K. Jena

स्वीकृतकर्ता (प्रयोगशाला प्रभारी)

Approved By (DH Inst-Lab)

Namita Mishra

Doc: CB/CL/QR/7.8/IL-5	Issue No.:05	Revision No :05	Issue Date:08/12/2020	Revision Date: 08/12/2020	Page No. : 3/3
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* END OF REPORT आख्या समाप्ति *



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CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



INSTRUMENTATION LABORATORY (Analysis Report) उपकरणिय प्रयोगशाला (विश्लेषण आख्या)

Heavy Metals(Excluding Mercury)

ULR No: TC77232530000094F

TC-7723

नमूने की पंजीकरण सं. एवं तिथि Samples Registration No. & Date	: INSTR/HM/2526/SR00067, 29/05/2025	आख्या सं एवं जारी करने की तिथि Report No. & Date of Issue	: INSTR/2526/HM/00094,18/06/2025
नमूना विवरण Sample Details	:	आख्या किसे जारी की गयी (नाम एवं प्रभाग) Report sent to (Name & Address of Indentor)	: DH of RD Chandigarh
नमूने एकत्रित करने वाले का नाम और प्रभाग/संगठन Sample Collected by Name & Division/Organization	: J. P. Meena,Nikita Grover, Aakash Mishra & Deeksha Garg/RD Chandigarh	नमूना मैट्रिक्स Sample Matrix	: Fresh Water
नमूनाकरण योजना प्राथमिकता Sampling Plan Preference	: N/A	नमूने प्राप्ति की तिथि एवं समय Date & Time of Sample Receipt	: 29/05/2025
रिपोर्ट स्थिति Report Status	: Final	नमूने के विश्लेषण की अवधि Sample Analysis Period	: 10/06/2025 to 16/06/2025
नमूना लेने की विधि Sampling Method	:		

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	नमूना मैट्रिक्स Sample Matrix	Arsenic (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Zinc (mg/L)
1	27/05/2025	DWSS-07	Fresh Water	BDL	BDL	BDL	BDL	0.106	BDL	0.01	BDL	BDL	0.071
2	27/05/2025	DWSS-08	Fresh Water	BDL	BDL	BDL	BDL	0.186	BDL	0.037	BDL	BDL	0.103
3	27/05/2025	DWSS-09	Fresh Water	BDL	BDL	BDL	BDL	0.416	BDL	0.018	BDL	BDL	0.046
4	27/05/2025	DWSS-10	Fresh Water	BDL	BDL	BDL	BDL	0.193	BDL	0.025	BDL	BDL	0.031
5	27/05/2025	DWSS-11	Fresh Water	BDL	BDL	BDL	BDL	0.438	BDL	0.028	BDL	BDL	0.13

विश्लेषणकर्ता Analyst

Dr Nirmal Kumar Sharma

पर्यवेक्षक और समीक्षक & अधिकृत हस्ताक्षरकर्ता

Supervisor & Reviewer & Authorized Signatory

B. K. Jena

स्वीकृतकर्ता (प्रयोगशाला प्रभारी)

Approved By (DH Inst-Lab)

Namita Mishra

Doc: CB/CL/QR/7.8/IL-5	Issue No.:05	Revision No :05	Issue Date:08/12/2020	Revision Date: 08/12/2020	Page No. : 1/4
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CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



INSTRUMENTATION LABORATORY (Analysis Report) उपकरणीय प्रयोगशाला (विश्लेषण आख्या)

Heavy Metals(Excluding Mercury)

ULR No: TC77232530000094F

TC-7723

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	नमूना मैट्रिक्स Sample Matrix	Arsenic (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Zinc (mg/L)
6	27/05/2025	DWSS-12	Fresh Water	BDL	BDL	BDL	BDL	0.258	BDL	0.047	BDL	BDL	0.055
7	28/05/2025	DWSS-06	Fresh Water	BDL	BDL	BDL	BDL	0.206	BDL	0.088	BDL	BDL	0.146
8	28/05/2025	DLG-13	Fresh Water	BDL	BDL	BDL	0.092	0.114	BDL	0.026	BDL	BDL	0.115
9	27/05/2025	DWSS-22	Fresh Water	0.018	BDL	BDL	BDL	0.368	BDL	0.09	BDL	BDL	0.053
10	27/05/2025	DWSS-24	Fresh Water	0.029	BDL	BDL	BDL	0.157	BDL	0.06	BDL	BDL	0.013
11	27/05/2025	DLG-23	Fresh Water	0.039	BDL	BDL	BDL	0.392	BDL	0.068	BDL	BDL	0.044
12	27/05/2025	DLG-26	Fresh Water	BDL	BDL	BDL	BDL	0.172	BDL	0.02	BDL	BDL	0.079
13	27/05/2025	DLG-27	Fresh Water	BDL	BDL	BDL	BDL	0.096	BDL	0.012	BDL	BDL	0.018
14	28/05/2025	DLG-25	Fresh Water	BDL	BDL	BDL	BDL	0.095	BDL	0.015	BDL	BDL	0.062
15	28/05/2025	DLG-28	Fresh Water	BDL	BDL	BDL	BDL	0.129	BDL	0.024	BDL	BDL	0.043
16	28/05/2025	DLG-30	Fresh Water	0.019	BDL	BDL	BDL	0.145	BDL	BDL	BDL	BDL	0.061
17	28/05/2025	DWSS-29	Fresh Water	BDL	BDL	BDL	BDL	0.093	BDL	0.022	BDL	BDL	0.057
18	27/05/2025	DLG-20A	Fresh Water	BDL	BDL	BDL	BDL	4.098	BDL	0.041	BDL	BDL	0.035
19	27/05/2025	DLG-34	Fresh Water	BDL	BDL	BDL	BDL	0.026	BDL	BDL	BDL	BDL	BDL
20	27/05/2025	DWSS-33	Fresh Water	0.325	BDL	BDL	BDL	0.056	BDL	BDL	BDL	BDL	BDL

विश्लेषणकर्ता Analyst

Dr Nirmal Kumar Sharma

पर्यवेक्षक और समीक्षक & अधिकृत हस्ताक्षरकर्ता
Supervisor & Reviewer & Authorized Signatory

B. K. Jena

स्वीकृतकर्ता (प्रयोगशाला प्रभारी)
Approved By (DH Inst-Lab)

Namita Mishra

Doc: CB/CL/QR/7.8/IL-5	Issue No.:05	Revision No :05	Issue Date:08/12/2020	Revision Date: 08/12/2020	Page No. : 2/4
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CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



INSTRUMENTATION LABORATORY (Analysis Report) उपकरणीय प्रयोगशाला (विश्लेषण आख्या)

Heavy Metals(Excluding Mercury)

ULR No: TC77232530000094F

TC-7723

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	नमूना मैट्रिक्स Sample Matrix	Arsenic (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Zinc (mg/L)
21	28/05/2025	DWSS-31	Fresh Water	BDL	BDL	BDL	BDL	0.099	BDL	0.014	BDL	BDL	BDL
22	28/05/2025	DLG-32	Fresh Water	BDL	BDL	BDL	BDL	0.06	BDL	BDL	BDL	BDL	BDL

BDL : Below Deduction Limit न्यूनतम विश्लेषण की सीमा

Remarks (if any) : The calculated result sheet is attached here for reference.

Statement :

- परिणाम केवल परीक्षण किए गए नमूनों से संबंधित हैं और प्राप्त नमूने पर लागू होते हैं। The results relate only to the samples tested and apply to the sample as received.
- पूर्ण रिपोर्ट के अतिरिक्त प्रयोगशाला के लिखित अनुमोदन के बिना आख्या की आंशिक प्रतिकृति नहीं की जायेगी। The report shall not be reproduced except in full without written approval of the laboratory
- यह पैरामीटर NABL मान्यता, ISO-17025:2017 (प्रमाणपत्र संख्या TC-7723) के दायरे में है। | The parameter is under the scope of NABL accreditation, ISO-17025:2017 (Certificate No.TC-7723).
- नमूनों को परीक्षण रिपोर्ट की तारीख से 15 दिन के लिए बनाए रखा जाएगा। Samples will be retained for 30 days from the date of Issue of test Report.

विश्लेषणकर्ता Analyst

Dr Nirmal Kumar Sharma

पर्यवेक्षक और समीक्षक & अधिकृत हस्ताक्षरकर्ता

Supervisor & Reviewer & Authorized Signatory

B. K. Jena

स्वीकृतकर्ता (प्रयोगशाला प्रभारी)

Approved By (DH Inst-Lab)

Namita Mishra

Doc: CB/CL/QR/7.8/IL-5	Issue No.:05	Revision No :05	Issue Date:08/12/2020	Revision Date: 08/12/2020	Page No. : 3/4
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CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



INSTRUMENTATION LABORATORY (Analysis Report) उपकरणीय प्रयोगशाला (विश्लेषण आख्या)

Heavy Metals(Excluding Mercury)

ULR No: TC77232530000094F

TC-7723

मानदंड का नाम Parameter Name	परिक्षण विधि Test Method	इकाई Unit	मापन की सीमा Limit of Detection	माप की अनिश्चितता Uncertainty of Measurement
Arsenic	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00049	
Cadmium	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00042	
Chromium	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00056	
Copper	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00035	
Iron	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00067	
Lead	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00031	
Manganese	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00043	
Nickel	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00054	
Selenium	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00113	
Zinc	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00059	

विश्लेषणकर्ता Analyst

Dr Nirmal Kumar Sharma

पर्यवेक्षक और समीक्षक & अधिकृत हस्ताक्षरकर्ता

Supervisor & Reviewer & Authorized Signatory

B. K. Jena

स्वीकृतकर्ता (प्रयोगशाला प्रभारी)

Approved By (DH Inst-Lab)

Namita Mishra

Doc: CB/CL/QR/7.8/IL-5	Issue No.:05	Revision No :05	Issue Date:08/12/2020	Revision Date: 08/12/2020	Page No. : 4/4
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* END OF REPORT आख्या समाप्ति *



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CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



INSTRUMENTATION LABORATORY (Analysis Report) उपकरणीय प्रयोगशाला (विश्लेषण आख्या)

Heavy Metals(Mercury)

TC-7723

ULR No: TC77232530000060F

नमूने की पंजीकरण सं. एवं तिथि Samples Registration No. & Date	: INSTR/HG/2526/SR00016, 22/05/2025	आख्या सं एवं जारी करने की तिथि Report No. & Date of Issue	: INSTR/2526/HG/00060,30/05/2025
नमूना विवरण Sample Details	:	आख्या किसे जारी की गयी (नाम एवं प्रभाग) Report sent to (Name & Address of Indentor)	: DH of RD Chandigarh
नमूने एकत्रित करने वाले का नाम और प्रभाग/संगठन Sample Collected by Name & Division/Organization	: J. P. Meena, Aakash Mishra & Deeksha Garg/RD Chandigarh	नमूना मैट्रिक्स Sample Matrix	: Fresh Water
नमूनाकरण योजना प्राथमिकता Sampling Plan Preference	: N/A	नमूने प्राप्ति की तिथि एवं समय Date & Time of Sample Receipt	: 22/05/2025
रिपोर्ट स्थिति Report Status	: Final	नमूने के विश्लेषण की अवधि Sample Analysis Period	: 29/05/2025 to 29/05/2025
नमूना लेने की विधि Sampling Method	:		

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	नमूना मैट्रिक्स Sample Matrix	Mercury (µg/L)
1	20/05/2025	DWSS-19	Fresh Water	BDL
2	20/05/2025	DWSS-18	Fresh Water	BDL
3	20/05/2025	DLG-20	Fresh Water	BDL
4	20/05/2025	DLG-21	Fresh Water	BDL
5	21/05/2025	DWSS-14	Fresh Water	BDL

विश्लेषणकर्ता Analyst

Laxmi Narayan Gupta

पर्यवेक्षक और समीक्षक & अधिकृत हस्ताक्षरकर्ता

Supervisor & Reviewer & Authorized Signatory

B. K. Jena

स्वीकृतकर्ता (प्रयोगशाला प्रभारी)

Approved By (DH Inst-Lab)

Dr. K. Ranganathan

Doc: CB/CL/QR/7.8/IL-5	Issue No.:05	Revision No :05	Issue Date:08/12/2020	Revision Date: 08/12/2020	Page No. : 1/3
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CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



INSTRUMENTATION LABORATORY (Analysis Report) उपकरणीय प्रयोगशाला (विश्लेषण आख्या)

Heavy Metals(Mercury)

TC-7723

ULR No: TC77232530000060F

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	नमूना मैट्रिक्स Sample Matrix	Mercury (µg/L)
6	21/05/2025	DLG-15	Fresh Water	BDL
7	21/05/2025	DLG-16	Fresh Water	BDL
8	21/05/2025	DLG-17	Fresh Water	BDL
9	20/05/2025	DWSS-02	Fresh Water	BDL
10	20/05/2025	DWSS-03	Fresh Water	BDL
11	20/05/2025	DLG-01	Fresh Water	BDL
12	21/05/2025	DLG-05	Fresh Water	BDL
13	21/05/2025	DWSS-04	Fresh Water	BDL

BDL : Below Deduction Limit न्यूनतम विश्लेषण की सीमा

Remarks (if any) : Sir, Raw data also attached here

Statement :

- परिणाम केवल परीक्षण किए गए नमूनों से संबंधित हैं और प्राप्त नमूने पर लागू होते हैं। The results relate only to the samples tested and apply to the sample as received.
- पूर्ण रिपोर्ट के अतिरिक्त प्रयोगशाला के लिखित अनुमोदन के बिना आख्या की आंशिक प्रतिकृति नहीं की जायेगी। The report shall not be reproduced except in full without written approval of the laboratory
- यह पैरामीटर NABL मान्यता, ISO-17025:2017 (प्रमाणपत्र संख्या TC-7723) के दायरे में है। | The parameter is under the scope of NABL accreditation, ISO-17025:2017 (Certificate No. TC-7723).
- नमूनों को परीक्षण रिपोर्ट की तारीख से 15 दिन के लिए बनाए रखा जाएगा। Samples will be retained for 30 days from the date of Issue of test Report.

विश्लेषणकर्ता Analyst

Laxmi Narayan Gupta

पर्यवेक्षक और समीक्षक & अधिकृत हस्ताक्षरकर्ता

Supervisor & Reviewer & Authorized Signatory

B. K. Jena

स्वीकृतकर्ता (प्रयोगशाला प्रभारी)

Approved By (DH Inst-Lab)

Dr. K. Ranganathan

Doc: CB/CL/QR/7.8/IL-5	Issue No.:05	Revision No :05	Issue Date:08/12/2020	Revision Date: 08/12/2020	Page No. : 2/3
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CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



INSTRUMENTATION LABORATORY (Analysis Report) उपकरणीय प्रयोगशाला (विश्लेषण आख्या)

Heavy Metals(Mercury)

TC-7723

ULR No: TC77232530000060F

मानदंड का नाम Parameter Name	परिक्षण विधि Test Method	इकाई Unit	मापन की सीमा Limit of Detection	माप की अनिश्चितता Uncertainty of Measurement
Mercury	USEPA-7473	µg/L	0.900	

विश्लेषणकर्ता Analyst

Laxmi Narayan Gupta

पर्यवेक्षक और समीक्षक & अधिकृत हस्ताक्षरकर्ता

Supervisor & Reviewer & Authorized Signatory

B. K. Jena

स्वीकृतकर्ता (प्रयोगशाला प्रभारी)

Approved By (DH Inst-Lab)

Dr. K. Ranganathan

Doc: CB/CL/QR/7.8/IL-5	Issue No.:05	Revision No :05	Issue Date:08/12/2020	Revision Date: 08/12/2020	Page No. : 3/3
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* END OF REPORT आख्या समाप्ति *



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CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



INSTRUMENTATION LABORATORY (Analysis Report) उपकरणीय प्रयोगशाला (विश्लेषण आख्या)

Heavy Metals(Mercury)

TC-7723

ULR No: TC77232530000096F

नमूने की पंजीकरण सं. एवं तिथि Samples Registration No. & Date	: INSTR/HG/2526/SR00017, 29/05/2025	आख्या सं एवं जारी करने की तिथि Report No. & Date of Issue	: INSTR/2526/HG/00096,24/06/2025
नमूना विवरण Sample Details	:	आख्या किसे जारी की गयी (नाम एवं प्रभाग) Report sent to (Name & Address of Indentor)	: DH of RD Chandigarh
नमूने एकत्रित करने वाले का नाम और प्रभाग/संगठन Sample Collected by Name & Division/Organization	: J. P. Meena, Nikita Grover, Aakash Mishra & Deeksha Garg/RD Chandigarh	नमूना मैट्रिक्स Sample Matrix	: Fresh Water
नमूनाकरण योजना प्राथमिकता Sampling Plan Preference	: N/A	नमूने प्राप्ति की तिथि एवं समय Date & Time of Sample Receipt	: 29/05/2025
रिपोर्ट स्थिति Report Status	: Final	नमूने के विश्लेषण की अवधि Sample Analysis Period	: 06/06/2025 to 20/06/2025
नमूना लेने की विधि Sampling Method	:		

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	नमूना मैट्रिक्स Sample Matrix	Mercury (µg/L)
1	27/05/2025	DWSS-07	Fresh Water	BDL
2	27/05/2025	DWSS-08	Fresh Water	BDL
3	27/05/2025	DWSS-09	Fresh Water	BDL
4	27/05/2025	DWSS-10	Fresh Water	BDL
5	27/05/2025	DWSS-11	Fresh Water	BDL

विश्लेषणकर्ता Analyst

Laxmi Narayan Gupta

पर्यवेक्षक और समीक्षक & अधिकृत हस्ताक्षरकर्ता

Supervisor & Reviewer & Authorized Signatory

B. K. Jena

स्वीकृतकर्ता (प्रयोगशाला प्रभारी)

Approved By (DH Inst-Lab)

Namita Mishra

Doc: CB/CL/QR/7.8/IL-5	Issue No.:05	Revision No :05	Issue Date:08/12/2020	Revision Date: 08/12/2020	Page No. : 1/3
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CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



INSTRUMENTATION LABORATORY (Analysis Report) उपकरणिय प्रयोगशाला (विश्लेषण आख्या)

Heavy Metals(Mercury)

TC-7723

ULR No: TC77232530000096F

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	नमूना मैट्रिक्स Sample Matrix	Mercury (µg/L)
6	27/05/2025	DWSS-12	Fresh Water	BDL
7	28/05/2025	DWSS-06	Fresh Water	BDL
8	28/05/2025	DLG-13	Fresh Water	BDL
9	27/05/2025	DWSS-22	Fresh Water	BDL
10	27/05/2025	DLG-23	Fresh Water	BDL
11	27/05/2025	DWSS-24	Fresh Water	BDL
12	27/05/2025	DLG-26	Fresh Water	BDL
13	27/05/2025	DLG-27	Fresh Water	BDL
14	28/05/2025	DLG-25	Fresh Water	BDL
15	28/05/2025	DLG-28	Fresh Water	BDL
16	28/05/2025	DWSS-29	Fresh Water	BDL
17	28/05/2025	DLG-30	Fresh Water	BDL
18	27/05/2025	DLG-34	Fresh Water	BDL
19	27/05/2025	DWSS-33	Fresh Water	BDL
20	27/05/2025	DLG-20A	Fresh Water	BDL

विश्लेषणकर्ता Analyst

Laxmi Narayan Gupta

पर्यवेक्षक और समीक्षक & अधिकृत हस्ताक्षरकर्ता

Supervisor & Reviewer & Authorized Signatory

B. K. Jena

स्वीकृतकर्ता (प्रयोगशाला प्रभारी)

Approved By (DH Inst-Lab)

Namita Mishra

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CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032



INSTRUMENTATION LABORATORY (Analysis Report) उपकरणीय प्रयोगशाला (विश्लेषण आख्या)

Heavy Metals(Mercury)

TC-7723

ULR No: TC77232530000096F

क्रमांक Sr.No	नमूना संग्रहण की तिथि Date of Sample Collection	नमूना स्थल Field Code	नमूना मैट्रिक्स Sample Matrix	Mercury (µg/L)
21	28/05/2025	Dwss-31	Fresh Water	BDL
22	28/05/2025	DLG-32	Fresh Water	BDL

BDL : Below Deduction Limit न्यूनतम विश्लेषण की सीमा

Remarks (if any) : Sir Result submitted raw data also attached

Statement :

- परिणाम केवल परीक्षण किए गए नमूनों से संबंधित हैं और प्राप्त नमूने पर लागू होते हैं। The results relate only to the samples tested and apply to the sample as received.
- पूर्ण रिपोर्ट के अतिरिक्त प्रयोगशाला के लिखित अनुमोदन के बिना आख्या की आंशिक प्रतिकृति नहीं की जायेगी। The report shall not be reproduced except in full without written approval of the laboratory
- यह पैरामीटर NABL मान्यता, ISO-17025:2017 (प्रमाणपत्र संख्या TC-7723) के दायरे में है। | The parameter is under the scope of NABL accreditation, ISO-17025:2017 (Certificate No.TC-7723).
- नमूनों को परीक्षण रिपोर्ट की तारीख से 15 दिन के लिए बनाए रखा जाएगा। Samples will be retained for 30 days from the date of Issue of test Report.

मानदंड का नाम Parameter Name	परिक्षण विधि Test Method	इकाई Unit	मापन की सीमा Limit of Detection	माप की अनिश्चितता Uncertainty of Measurement
Mercury	USEPA-7473	µg/L	0.900	

विश्लेषणकर्ता Analyst

Laxmi Narayan Gupta

पर्यवेक्षक और समीक्षक & अधिकृत हस्ताक्षरकर्ता

Supervisor & Reviewer & Authorized Signatory

B. K. Jena

स्वीकृतकर्ता (प्रयोगशाला प्रभारी)

Approved By (DH Inst-Lab)

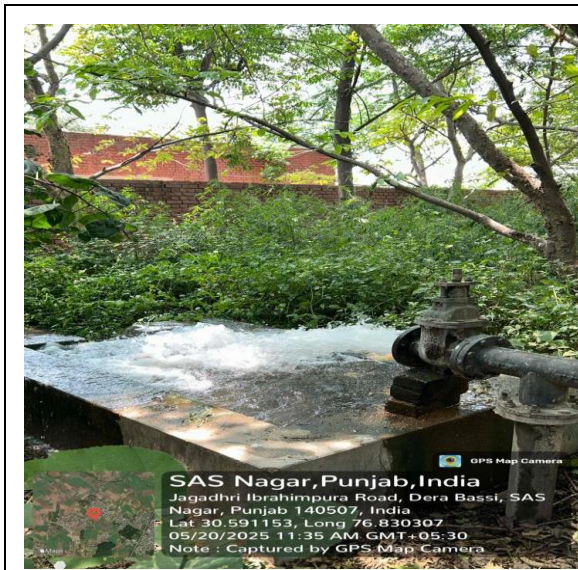
Namita Mishra

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* END OF REPORT आख्या समाप्ति *

Photographs of the Sampling Locations of Department of Local Government



DLG 1



DLG 5



DLG-13



DLG 15



DLG 16



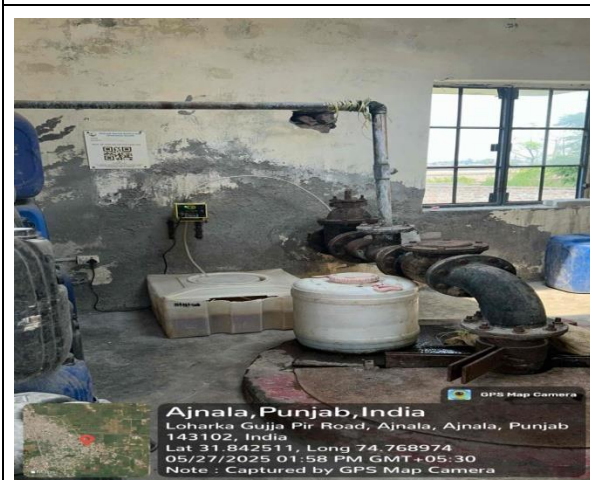
DLG 17



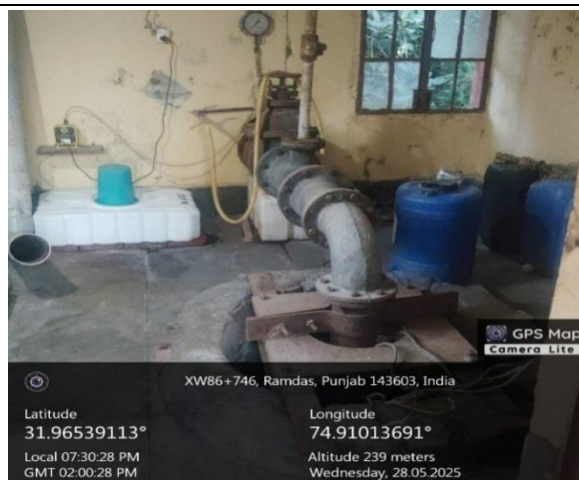
DLG 20



DLG 21

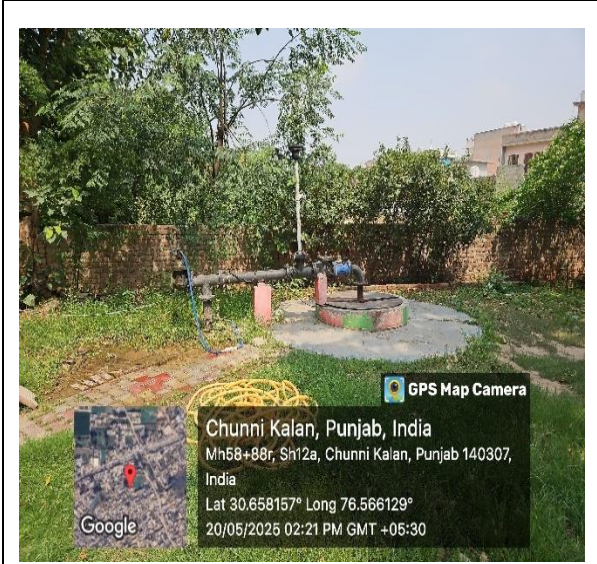


DLG 23



DLG 25

Photographs of the Sampling Locations of Department of Water Supply and Sanitation (DWSS)



DWSS-2



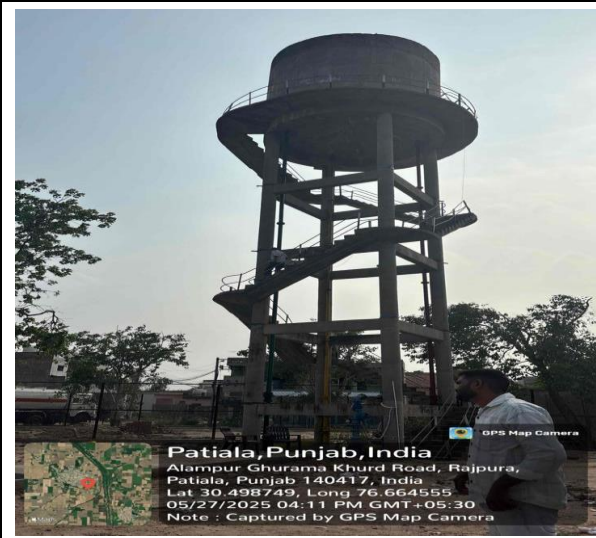
DWSS-3



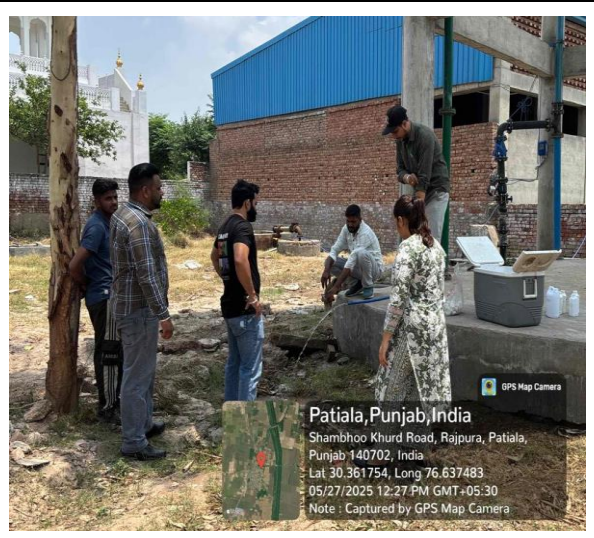
DWSS-4



DWSS 6



DWSS 7



DWSS-8



DWSS-9



DWSS-10



DWSS-11



DWSS 12



DWSS-14



DWSS 18



DWSS 19



DWSS 22



<p style="text-align: center;">DWSS 24</p>  <p style="text-align: right;"><small>GPS Map Camera</small></p> <p>Faridkot, Punjab, India Mohan Ke Uttar Road, Faridkot, Faridkot, Punjab 151212, India Lat 30.741916, Long 74.481822 05/28/2025 12:07 PM GMT+05:30 Note : Captured by GPS Map Camera</p>	<p style="text-align: center;">DWSS 29</p>  <p style="text-align: right;"><small>GPS Map Camera</small></p> <p>Fazilka, Punjab, India Deepulana Bhagewala Road, Fazilka, Fazilka, Punjab 152123, India Lat 30.461319, Long 74.134951 05/27/2025 08:15 PM GMT+05:30 Note : Captured by GPS Map Camera</p>
<p style="text-align: center;">DWSS 31</p>	<p style="text-align: center;">DWSS 33</p>